



FINANCE FOR

**CITY
LEADERS**

HANDBOOK

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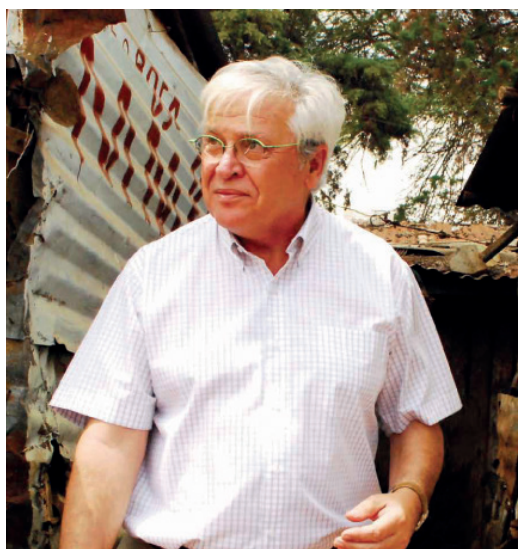
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Foreword

The rapid growth of cities across the globe, and cities' essential role as drivers of economic development, require that city leaders from both the public and private sectors come together in the financing, design, and implementation of urban policies that ensure sustainable and inclusive urbanization. Providing city leaders with adequate financing mechanisms and frameworks that fit the economic, social, and regulatory context is the foundation on which city leaders will achieve the goals of the New Urban Agenda.

A study on financing sustainable urbanization cannot come at a better moment as world leaders are discussing the New Urban Agenda that will be adopted at Habitat III in Quito. The New Urban Agenda is an action-oriented plan that aims at effectively addressing the complex challenges of urbanization, including its financing. It is a set of five strategies consisting of National Urban Policies, Urban Legislation, Urban Planning and Design, Planned City Extensions, and Financing Urbanization. The Habitat III process offers an exceptional opportunity to build a new model of urban development promoting equity, welfare, and shared prosperity.

Finance for City Leaders presents an up-to-date, comprehensive, and in-depth analysis of the challenges posed by rapid urbanization and the various financing tools municipalities have at their disposal. By providing city leaders with a wide array of financing solutions that emphasize sustainability, inclusion, and financial autonomy, this publica-



tion contributes to the growing conversation on how cities can look inward to finance major capital expenditures, infrastructure maintenance and operation, and public services.

It is essential that the new approach to urbanization put forth at Habitat III rises to the challenge presented by changing urban dynamics. It is with enormous pride and a united voice that the United Nations Human Settlements Programme (UN-Habitat) presents Finance for City Leaders—a landmark publication that draws on the combined expertise of over 30 contributing authors from more than 15 public, private, and multilateral institutions all working towards equipping cities with the tools they need to build and sustain urban prosperity.

Dr. Joan Clos
Secretary-General of Habitat III
Executive Director, UN-Habitat

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Considerable effort was provided by a multidisciplinary team who prepared the cross-cutting issues chapter on gender, youth, and human rights. Thanks to **Sonja Ghaderi**, **Judith Mulwa**, **Brian Olunga**, **Javan Ombado**, **Rocío Armillas-Tiseyra**, **Taib Boyce**, and **Hazel Kuria**.

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Introduction

Overview of municipal finance

Cities are a driving force of the 21st century. Through bringing large numbers of people into close proximity, they spark economic growth, foster innovation, and generate prosperity. But they face the pressing challenges of creating a livable environment for their residents, enabling economic activity that benefits all citizens, and fostering urban development that is environmentally sustainable, equitable, and resilient to disruptive forces. Particularly urgent is the need to finance this development: To achieve the Sustainable Development Goals, an estimated \$3 trillion to \$4 trillion is needed annually. In an increasingly urban world, cities play a pivotal role in closing this financial gap.

Decentralization of authority is critical to surmounting all of these challenges. Decentralization provides a path towards responsive governance, enabling local governments to address the specific needs of residents and businesses. However, in many countries, increased local responsibility has not been accompanied by a proportionate increase in local financial resources. In the context of an urbanizing world, cities are being asked to do more with less. In particular, as cities grow (especially in Africa and Asia), the need for infrastructure and basic services also increases—sometimes at a pace even more rapid than population growth, due to low-density sprawling development and disproportionate expansion of the urban footprint. While the need for new capital investments is pressing, the

cost of ongoing service provision and maintenance of existing infrastructure is also growing—and is often unmet. As a result, in many places the social contract between citizens and their local governments has frayed.

Given their finite resources, local governments are asked to make difficult choices, balancing a range of urgent needs. Their actions must promote fundamental human rights for housing and basic services; consider the needs of women, youth, and the poor; and be environmentally sustainable and supportive of economic growth. Moreover, deficiencies in technical capacity, legal frameworks, and governance are high barriers preventing many cities from fulfilling their mandates. Though for cities political issues are intractable and sometimes overwhelming, many other issues are technical in nature and are thus possible for city leaders to overcome.

Indeed, many tools exist to help cities improve their financial situations. The first steps for many cities are to improve basic financial management, including administration of local and endogenous revenues, and to match good planning for a better urban future with the required budgets and financial plans. Local governments must find ways to link revenue generation with their ongoing activities and with urban growth in order for local finances to be sustainable in the long term. National governments can support capacity building in this area, as well as create supportive regulatory frameworks and national-level institutions.

Once basic financial management has begun to be addressed, opportunities for borrowing to support much-needed urban investments become available. These opportunities come in a variety of forms, including municipal bonds, commercial bank loans, and loans from national and regional development banks. Cities, with the assistance of national governments, should match borrowing instruments to their capacity to service debt, ability to bear risk, and capital investment needs.

In addition to traditional financing instruments, there are a range of innovative financing options that have been increasingly tested in middle-income countries. These include green bonds, inter-municipal coordination for pooled financing, and land-based financing instruments.

Cities' immense financial challenges cannot be met through public sector actions alone. The private sector plays a critical role in creating socially, economically, and environmentally sustainable urban development. There are a multitude of ways for cities to work with the private sector to achieve this goal, including various public-private partnership (PPP) structures. Furthermore, improved municipal finance must be integrated with other elements of responsive governance and urban management, including urban planning and regulatory frameworks, in order to support the coordinated realization of a common urban vision by all involved stakeholders.

City leaders' increased familiarity with these various municipal finance instruments can increase the likelihood that these tools are implemented successfully. This is the primary purpose of this publication.

Overview of the publication

Finance for City Leaders is organized into three parts: Principles of Municipal Finance (Chapters 1–3), Designing Financial Products (Chapters 4–12), and Crosscutting Issues (Chapters 13–15). *In Chapters 1 and 2*, Dominic Burbidge and Nic Cheeseman set the context for the rest of Finance for City Leaders. They lay out the guiding principles of municipal finance, explain why municipal finance matters, and introduce a number of tools for raising local own-source revenues discussed in greater detail in Part 2.

Chapter 3, authored by Armando Morales, Daniel Platz, and Leonardo Elias Letelier, examines the theory behind, arguments for and against, and success factors of fiscal decentralization. The authors argue that fiscal decentralization is an important component of sustainable and autonomous municipal finance, and that it must take place within a regulatory and legal context that empowers municipal governments while also holding them responsible for their expenditures and own-source revenue.

Part 2 (Designing Financial Products) begins with *Chapter 4*, by Lourdes Germán and Elizabeth Glass, who discuss non-tax own-source municipal revenues. They introduce a number of non-tax tools for generating own-source revenues including, among others, user fees, fines, and land use fees. This chapter argues that non-tax own-source revenues are essential to boosting municipal revenues and supporting municipal fiscal autonomy.

In Chapter 5, Devashree Saha and Skye d'Almeida argue that green municipal bonds are an effective financing tool for projects that stand to benefit both the environment and society. The authors begin by

explaining what green bonds are and examine the current state of the green bond market. The last half of the chapter reviews some of the challenges to obtaining green municipal bonds and how municipalities can access this important source of financing.

Chapter 6, by Lars M. Andersson and Pavel Kochanov, discusses pooled financing mechanisms in which a group of municipalities aggregate their borrowing needs and raise their total financing needs together on the capital market. The authors argue that this form of raising capital is especially important for small to medium-sized cities to be able to access long-term and fairly priced debt.

In Chapter 7, Le-Yin Zhang and Marco Kamiya discuss the pros and cons of public–private partnerships (PPPs). The authors argue that PPPs are important financing mechanisms that have had widespread success in both developing and developed countries. Despite having their own set of regulatory challenges, they have proven to be a powerful tool for financing important infrastructure projects.

Chapter 8, by Liz Paterson Gauntner and Miquel Morell, develops a methodology for financing planned city extension (PCE). The authors argue that PCE provides the necessary framework for sustainable urban growth, which must be implemented following a “three-pronged approach,” incorporating urban planning and design, rules and regulations, and public financial management.

In Chapter 9, Lawrence C. Walters and Liz Paterson Gauntner review the instruments commonly used to engage in land value sharing and raise revenue based on land value and land attributes. The authors argue that while both theory and practice

support the use of land-based revenue sources, challenges to successful land value sharing must be understood when implementing it.

In Chapter 10, Greg Clark, Tim Moonen, and Doug Carr examine the role of real estate development in developing cities. The chapter begins with a discussion of the merits of managed urban growth, followed by an explanation of how cities can use planning and asset management to create and capture value. The authors then assess the emerging role of city growth planning and the need for analytical frameworks for intelligent planning, followed by an overview of the role and value of coordinated land use planning. The chapter then explores ways in which public authorities can attract private capital co-investment, which is followed by a discussion of the need to acknowledge underlying issues that often affect real estate investment in developing cities. The chapter concludes with an examination of the role of real estate planning and development in making cities competitive.

Chapter 11, authored by Dmitry Pozhidaev and Mohammad Farid, provides an overview of tools for improving capital markets for municipal finance in least developed countries (LDCs). After examining the various methods of using capital markets for municipal finance in LDCs, the authors describe financial and non-financial mechanisms most suitable for municipalities in LDCs. The chapter concludes with a discussion of the decision-making process and specific steps used by municipalities to access market-based funds (conventional or otherwise).

Yoel Siegel and Marco Kamiya conclude the second part with *Chapter 12* on local infrastructure development funds in small and medium-sized cities. The chapter presents both a background and implementation framework for financing local infrastruc-

ture using local infrastructure development funds. The authors emphasize the need for an appropriate legal and regulatory framework for infrastructure development funds, as well as a comprehensive approach to long-term sustainable financing.

Part 3 concludes the book with three chapters on crosscutting issues. In *Chapter 13*, Kerstin Sommer, Katja Dietrich, and Melissa Permezel explain how financing participatory slum upgrading promotes inclusive urbanization, adequate living conditions, and prosperity for all. They also examine the challenges of creating inclusive urban spaces and detail UN-Habitat's Participatory Slum Upgrading Programme, a promising template that exemplifies many of the concepts discussed in the chapter.

Chapter 14, by Taib Boyce, Sonja Ghaderi, Brian Olunga, Javan Ombado, Rocío Armillas-Tiseyra, Judith Mulwa, Douglas Ragan, Imogen Howells, and Hazel Kuria, explains how youth, gender, and human rights—major mandates of the United Nations and issues at the core of the Sustainable Development Goals—relate to municipal finance and why they matter for city leaders. The chapter offers frameworks and specific examples to help city leaders incorporate these issues into their local agenda for promoting city prosperity.

Chapter 15, authored by Younghoon Moon, Marco Kamiya, and Yasuo Konishi, examines local economic development from the perspective of spatial analysis and urban layout bringing value chains and supply analysis into the urban development realm. The chapter introduces an innovative local economic development methodology to help city leaders spur economic growth, promote competitive sectors, and generate jobs, which provides the foundation for sustainable local own-source revenue generation.

Notes of appreciation

A majority of the chapters in this handbook were made possible by voluntary contributions; our greatest gratitude goes to the authors. Ranking from very senior to young researchers, they have combined their experience and insight with great tenacity and dedication. To all authors we extend our sincere appreciation.

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Part 01:



Principles of Municipal Finance

01

Principles of Municipal Finance

Introduction

The world's population is becoming increasingly urbanized, with estimates suggesting that by 2050, two-thirds of humanity will live in cities and towns.¹ This shift will require governmental reforms—particularly on the part of local governments, which will be responsible for managing many of the socioeconomic consequences of large-scale urbanization. The scope and complexity of this transformation precludes a fully accurate prediction of the changes it will require of a particular local government. Nonetheless, by comparing experiences and discussing strategies, it is possible to establish principles that can serve as general guides for reform. It is crucial that this reform process remain grounded in formulating and implementing policy changes that benefit citizens.



The world's population is becoming increasingly urbanized, with estimates suggesting that by 2050, two-thirds of humanity will live in cities and towns.

Because of its role in funding these changes, municipal finance is an essential part of the reform process. Unless municipal governments expand revenue flows to meet this challenge, high levels of in-migration are likely to result in deterioration in the quality of public services and falling living standards. This chapter provides background on municipal finance and explores the principles that guide its management. As with all areas of local government, city leaders can reflect on the extent to which their municipal finances are optimally serving citizens, and what can be done to improve on this position.

What is municipal finance?

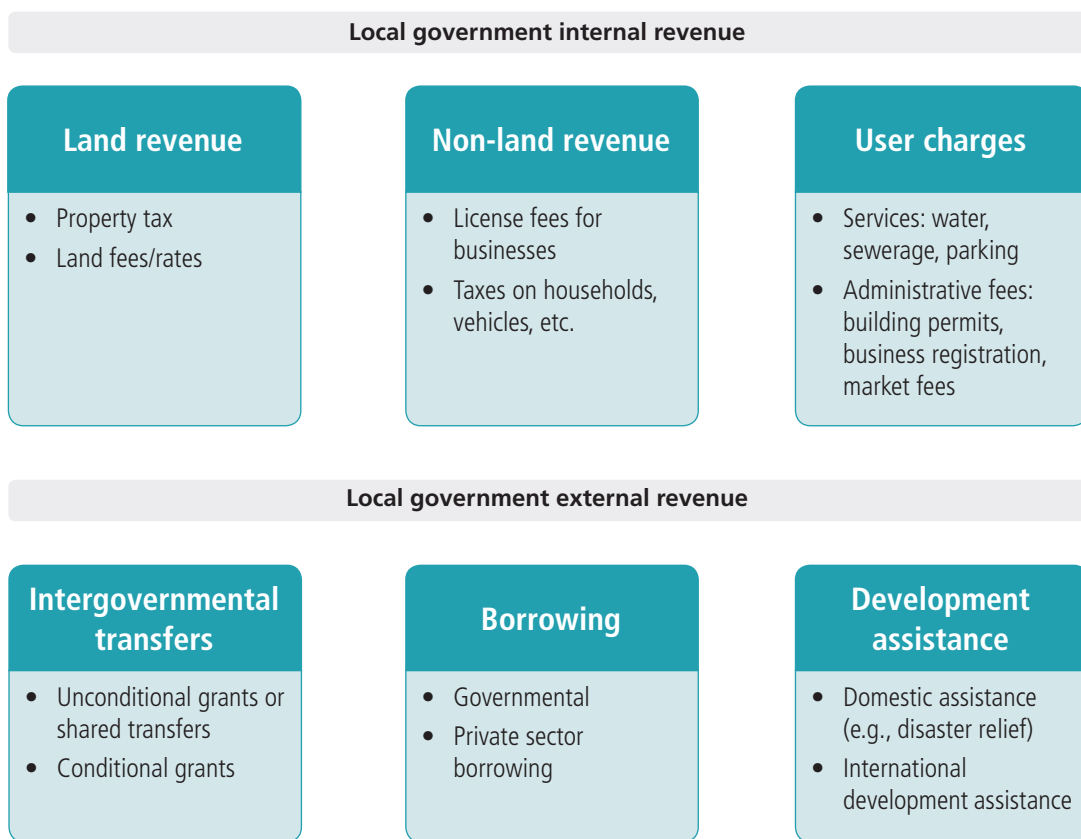
Municipal finance consists of the revenue and expenditure of local government in urban areas. Although the remit and capacities of local governments to engage in financial decisions vary enormously, across countries municipal finance generally aims to generate the resources needed to fund local services to the satisfaction of citizens through fair taxation and use of external resources. This is, of course, a difficult task, but it is a goal shared by the administrative structures and institutions that comprise the world's municipal authorities. Fulfilling the goal depends not only on successful programs of taxation and spending, but also on coordination among local government units, such that they help each other work efficiently, and together enable citizens to easily access government services and assistance.

Local government revenue can be split into two main sources (as depicted in Figure A). The first is internal revenue, which is collected by local governments themselves according to their rules and mandates. The types of revenue that a local government can collect are defined by law and vary enormously among countries. However, generally

speaking, local governments often collect taxes or fees for the services they provide (such as garbage collection or organizing parking spaces), and collect property taxes or rates on privately owned properties within their jurisdiction.

The second form of revenue that local governments receive is external revenue from outside sources. Usually, local governments receive support in the form of intergovernmental transfers, whereby national governments allocate a portion of their revenue to their local counterparts. National governments can also provide backing for local governments to take out loans, if such loans are agreed upon as important for development, and if it is believed the local government can repay them in time. A further type of external revenue is development assistance, which can come directly from the national government in times of need (for example, following an earthquake that has affected some parts of the country more than others), or from international development institutions as part of an aid package. Generally speaking, a municipal government must ensure that over time the sum of its revenue equals the sum of its expenditure.

Figure A: Typical local government revenue sources



Source: Adapted from Hamish Nixon, Victoria Chambers, Sierd Hadley, and Thomas Hart, *Urban Finance: Rapid Evidence Assessment* (London, Overseas Development Institute, 2015), p. 6.

Why does municipal finance matter?

Municipal finance matters for the sustainability of local government provision of goods and services. With global recognition of the need to pursue Sustainable Development Goals (SDGs),² it is clear that these can only be achieved hand-in-hand with the reform and enhancement of municipal governments across the world. Municipal governments are uniquely suited to respond to challenges of poverty, education, water, and the environment; an over-

reliance on central government and international institutions risks the danger that responses become out of touch with local people and therefore harder to implement. Well-functioning municipal governments are especially necessary for SDG 11, which seeks to make cities and human settlements inclusive, safe, resilient, and sustainable.

Developing more effective municipal finance is essential for a number of reasons (Figure B). Without strong and consistent revenue flows, it is not possible to develop sustainable towns

and cities. One implication of this is that municipal authorities will lack the resources that they need to effectively plan for the impact of urbanization. This is likely to have a negative effect both on the livelihoods of citizens but also on the way in which high levels of in-migration impact the environment. In turn, this can have long-term implications for residents' quality of life and for the ability of the area to attract investment in the longer term. At the same time, unless clear lines of revenue generation from local citizens are established, ties of financial accountability—through which society holds the government responsible for its use of tax revenues—are unlikely to develop, which can stymie pressure for good governance.

Figure B: Why does municipal finance matter?



How can local authorities enhance the sustainability of municipal finance?

There is a great need to improve the sustainability of municipal government finances across the world. Given how much depends on the successful performance of local governments, poor finances can make local service delivery faulty and inconsistent, and can damage future development prospects. Unfortunately, attempts at reforming local government revenue through decentralization have often proven more challenging than originally envisaged. International expert Paul Smoke writes:

“Fiscal decentralization has been particularly disappointing given how much consensus there has been on specific reform advice, with own source revenue generation arguably being the most problematic of fiscal concerns. Available empirical literature strongly indicates that subnational revenue generation, more often than not, falls short of expectations.”³

If subnational revenue generation often falls short of expectations, how can it be improved to become a more sustainable feature of municipal government?

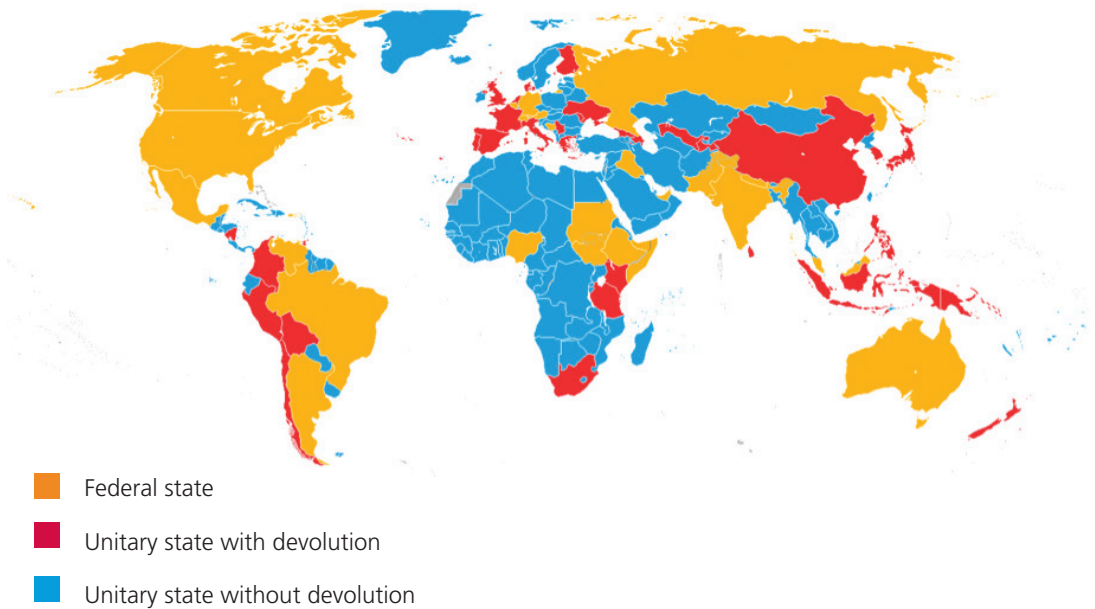
This question is not easy to answer. To begin, it is important to realize that there are many different ways in which countries decentralize political administration to allow for local decision-making. This means it is not always appropriate to recommend the same policy across the board. Some countries allow very little discretion for local governments, while others allow a great deal. The level of discretion afforded depends on the constitutional provisions of what municipal governments can and cannot do.

Figure C illustrates the different levels of decentralization around the world. Those in yellow are federal states: countries where most decision-making power is held at the level of regions, provinces, or sub-national states. Some of the most well-known examples of federal states include Nigeria, the United States of America, and Brazil. Federal constitutions usually provide the greatest degree of regional autonomy, allowing local governments wide discretion over the types of taxes they collect.

Those countries displayed in red are unitary states with a centralized political administration, but whose constitutions provide for devolution. Devolution is a constitutional provision that allows for regional decision-making over a set list of government functions. The functions for which there is local political autonomy are established by the political center, and usually cannot be changed without difficulty (for example, requiring constitutional amendment). In terms of local government finance, some discretion is usually given under devolution for local political actors to set budgets and decide the taxation levels to be implemented. While, like under federalism, this has the potential complication of varied tax rates and levels of spending among different provinces or counties, large benefits can be realized by involving citizens in decision-making through electing local representatives, and through engaging in public participation when planning how to carry out local government functions.

In blue, the map shows non-federal and non-devolved unitary states. This kind of heavily centralized political system prevails in Africa and the Middle East.

Figure C: Level of decentralization, by country



Constitutional law and national legislation dictate what powers local governments hold, and what they can do to meet their costs through revenue generation. This is important not only for ensuring municipal governments do not engage in any activity that lies outside their purview, but also for encouraging appropriate care when drawing comparisons among case studies of success or failure in municipal finance. Some examples, however good, cannot be repeated in one's own jurisdiction because it is not possible to raise funds in that way, given the constitutional and legal context. A starting principle of municipal finance, therefore, is to follow the law at all times—both those laws that pertain to local government and those enumerated in a country's constitution—and to design revenue generation and expenditure plans accordingly.

What should count as local, and what as national?

At times the law provides for discretion over choosing what taxes and public service provision should be done locally, and what should be left to national government. This is a crucial issue for many involved in municipal finance, and can mean the difference between a sustainable municipal government and one bloated with too many duties, or starved with insufficient funds.

A key principle for answering this question is the principle of subsidiarity. The legal philosopher John Finnis describes the principle of subsidiarity as requiring “that larger associations should not assume functions which can be performed efficiently by smaller associations.”⁴ The basic idea is that government is best when it is local, and one should

only take away the decision-making of local actors when there are clear efficiency gains to be realized. As Finnis describes further, “[T]he proper function of association is to help the participants in the association to help themselves or, more precisely, to constitute themselves through the individual initiatives of choosing commitments [...] and of realizing these commitments through personal inventiveness and effort in projects.”⁵ The need for cherishing individual initiative is not just a case of citizens versus government, but among government institutions themselves. At times, the greater authority of those higher up in government can be used to nullify individual creativity among local government practitioners, and this can harm municipal governments’ capacity to grow their revenue base.

Principles of municipal finance: The “benefit principle” and the “ability-to-pay” principle

There are two main principles around which systems of taxation can be arranged. One is the “benefit principle,” a long-held idea put forward by public finance theorists, which argues that “an equitable tax system is one under which each taxpayer contributes in line with the benefits which he or she receives from public services.”⁶ This approach ties taxation to public service delivery, helping develop a close correlation between the money generated in tax revenue and the money spent delivering the particular good or service.

To help understand the benefit principle, it can be contrasted with an alternative approach, the “ability-to-pay principle.” As the name suggests, this principle entails that “each taxpayer is asked to contribute in line with his or her ability to pay.”⁷ The difference between this and the benefit principle is that there is no direct connection with what is

being paid for. Citizens contribute according to their ability without necessarily seeing the results of their contributions.

In reality, most tax systems combine elements of both approaches, with wealthier citizens contributing more, but some contributions being directly linked to services. The advantage of this approach is that linking taxation to services helps to generate a social contract between citizens and the government, such that citizens know what they are contributing to and are able to witness its effects. This, it is believed, will help increase compliance in taxpaying. There is an element of fairness in consumers of a publicly provided service being the ones who pay for it.⁸

In order to maximize the advantages of the benefit principle, some practitioners have recommended earmarking certain taxes for specific uses.⁹ This can make citizens more willing to pay the tax because they know exactly where the money goes, and can also help reduce corruption. Tax expert Wilson Prichard writes:

“The aim of such tax earmarking is to build greater trust between governments and taxpayers, while providing a foundation for improved monitoring of public expenditures. The case for such tax earmarking is particularly strong in low-income countries where trust is frequently limited and monitoring particularly difficult.”¹⁰

Prichard describes the example of increases in value-added tax (VAT) in Ghana, which was implemented by connecting VAT to the provision of specific public services, and “served to increase trust amongst taxpayers while also making it somewhat easier for the public to monitor government performance.”¹¹



Accra, Ghana © Flickr/jdobane

Nevertheless, criticism has been levied at the benefits approach. Some counterargue that tying taxes to specific benefits restricts governments' spending autonomy. Because a government's hands are tied by the decision to earmark the money, it cannot change the way in which the money is used if something more urgent arises. Secondly, this approach may lead to favoritism in the provision of public services; if only some are paying for the service, why should anyone else gain access? Such arguments threaten to turn the public good into a "club" good received only by a select group. Finally, public service provision is good for development in the long term because it can solve coordination problems by adopting a multi-sector approach and providing services on a large scale that generates greater efficiency and reduces costs. However, providing more public services to those who pay more taxes can exacerbate economic inequalities over time by developing more public services in rich areas than in poor areas.

For all of these reasons, a mixture of the benefits approach and the ability-to-pay approach is often thought to be the most suitable.

Principles of municipal finance: Local government autonomy

To meet some of the shortcomings of the benefits approach, theorists have begun placing greater emphasis on the need for local governments to be given the autonomy to determine what works best for their local economy. Among these suggestions are the following:

- Local governments should be allowed to set local tax rates.
- The tax rate should be in line with expenditure responsibilities across the area of jurisdiction.
- Incentives should be in place to help local governments be fiscally responsible.¹²

Development economists such as Amartya Sen believe that it is not just a question of fiscal autonomy, but of providing the freedom for citizens and public policy practitioners to engage with local notions of development when making governance decisions.¹³ If local government is to work for citizens, it must be in dialogue with the goals and aims of local residents.

When it comes to the principles of municipal finance, this new emphasis takes the form of advocating greater freedoms for local governments to experiment, so as to determine what works and what does not in their area. This is not, however, a license for bureaucrats to do whatever they feel like; the aim is to promote a sense of responsibility for decision-making among local government personnel. As much as possible, city leaders should know the revenue coming in and the costs of the services currently provided, and be able to nurture the link between these two so that all involved act with responsibility and care—citizens and bureaucrats alike. Ilias Dirie, a municipal finance expert, explains:

“The development of responsible and responsive local government is thus dependent on local government having at least some degree of freedom with respect to local revenues, including the freedom to make mistakes and be held accountable for them. This means that local government must have control over the rates of some significant revenue source if they are to be fiscally responsible and able to innovate as to the way they finance basic services.”¹⁴

For federal or devolved states, fiscal responsibility can also involve political responsibility as citizens vote on representatives who are in a position to lead and direct local governments. When this is the case, it is all the more important that a social contract is developed between citizens and the government, where both sides understand their duties towards the common good, and both realize the benefits of good governance.

Political representatives also have a responsibility to ensure that national–local relations are fostered in support of the sustainability of municipal finances. As a 2015 UN-Habitat report explains:

“Where local authorities are able to derive revenues from property taxes and service charges, meaningful tax increases are sometimes refused or delayed by central governments for fear of eroding political support from the urban population; or even rejected by the local authorities themselves for fear of political backlash from local taxpayers.”¹⁵

It can be difficult to achieve sustainable municipal finances within the narrow time of an electoral cycle. However, the accountability provided by elections can act as an excellent check on corruption, and the disruptive impact of elections often declines over time.¹⁶ In addition, changes in leadership can create new opportunities for thorough monitoring and evaluation of systems of municipal finance by city leaders.

Conclusion

The demands placed on municipal governments are likely to increase with the growing urbanization of the world's population. At the same time, there are clear principles that allow local government practitioners to guide their finances towards a position of self-sustainability. Robust municipal finances are integral to development, and play a unique role in governance because of the closeness of local governments to citizen needs.

The discussion in this first chapter has generated the following checklist that can foster reflection on the sustainability of one's municipal finances:

- Are the powers of taxation exercised by my government lawful and in line with the constitution?
- Is my government reliant more on internal or external revenue sources?
- Have the benefits of the goods and services my

government provides been tied to specific taxes or service fees?

- Do government decision-makers feel they have the freedom to change policies based on citizen needs? Do they have room for experimentation in seeing what might work better?
- Have we given sufficient care and attention to the need to build citizen support for our taxes and fees, and to the question of how we can form an effective social contract?
- Could our relations with the national government be improved to avoid unnecessary volatility in our budget?

In the midst of all of these concerns and decisions, it is important to keep in mind the principle of subsidiarity: Those duties carried out locally are done so because they can be implemented with efficiency and local creativity. This principle can aid in assessing the appropriateness of government duties at the local level.

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Espargos City, Sal municipality, Cape Verde © UN-Habitat/A.Grimard

02

Expanding Municipal Revenues

Introduction

The costs that municipal governments face are likely to increase every year in line with the processes of urbanization taking place around the world. Thus, raising municipal revenues is among the most pressing challenges facing city leaders today. It would normally be assumed that a growing population increases the tax base proportionately, with a greater number of local residents simply paying in line with the greater number of services provided. However, this common assumption has been proven wrong on two counts. First, changing demographics go hand-in-hand with changes in lifestyle, economic specializations, and income distribution. These shifts mean that citizens do not always have the same needs from their local governments as before, and will change how they contribute to the funding of local government services. Second, local population increases do not usually lead to immediate adjustments by central governments in the amounts transferred to the municipal level. As the “front line” when

it comes to delivering public goods and services, local governments often need to respond immediately to changing circumstances while there are time lags in altering rates of national government transfers.

In the face of this dilemma, municipal revenues are city leaders' best asset. Because they are under the control of local authorities themselves, they can be made to shift in proportion to changing demographics and lifestyles in a way that strengthens the provision of public services. As a population changes, local governments are able to change too.

There are a number of different ways city leaders can increase the funds at their disposal, including new taxes on tourism, property taxes, levies on businesses, and fees linked to the provision of specific services. What is possible depends on careful navigation of legal, technical, and political constraints, which are different in each case. The chapter explains the options available to city leaders and weighs the pros and cons of different strategies. It considers how city leaders can best build public support for revenue generation, which is often critical to the success of their initiatives. To help guide the reader, the chapter provides three different perspectives on tackling this challenge: local government administration, economics, and local politics. Success in achieving stable expansion of municipal revenues depends on balancing these three perspectives and harnessing each of their strengths.



Municipal revenues are city leaders' best asset. Because they are under the control of local authorities themselves, they can be made to shift in proportion to changing demographics and lifestyles in a way that strengthens the provision of public services.

What generates local government revenue?

Municipal revenues are raised from taxes or fees charged to local residents, usually in return for the goods and services the local government provides. The amount generated varies enormously among countries, as there is wide variety in countries' legal provisions concerning what taxes and levies are allowed to be collected locally. Figure A displays the percentage of GDP collected through local government fees, with data taken from five OECD countries. The gradual upward trajectory over the past 15 years reflects the growing relevance of these types of fees and taxes for 21st century governance.

At this point it is important to delineate the differences between taxes and fees, and to provide examples of each:

- **Taxes** refer to charges levied on citizens and businesses to enable the government to fund its core activities. Although taxes may be enforced for a specific purpose, such as to fund a particular infrastructure project or to deal with a specific challenge, they typically generate income that the government can allocate to a range of different activities as it sees fit. Depending on a country's constitutional and legal framework, subnational taxes can include:
 - Property taxes

- Income taxes (e.g., pay-as-you-earn, or PAYE)
- Consumption taxes
- Tourism taxes
- Sales taxes (e.g., value-added tax, or VAT)
- Business taxes
- Trade taxes (excises)

● **Fees and levies** (sometimes called “rates”) typically refer to charges directly incurred by citizens or companies in return for the delivery of specific services. They are therefore analogous to the kinds of charges that would be imposed by a private company. Subnational fees and levies can include:

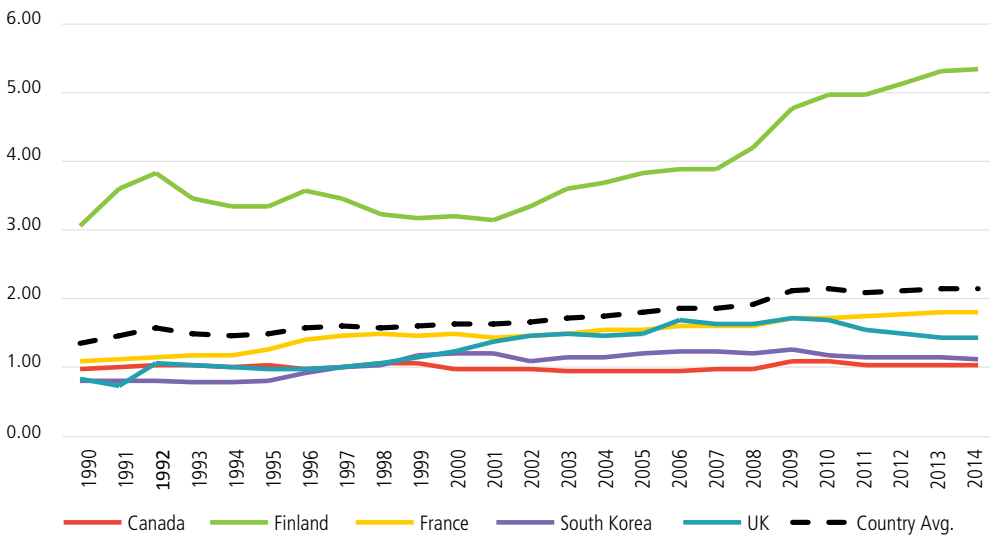
- Garbage collection fees
- Electricity fees
- Water fees
- Permit and license fees

In seeking to expand municipal finances, the question is not only which of these can be added,

but also which are already being used but are in need of reform or, in cases of gross inefficiency, in need of cutting.

Each option for revenue generation must serve a dual aim of making local government financially sustainable and fostering a general culture of tax compliance among citizens. Even if a tax or levy is profitable for local government, it should be administered in a way that enhances citizens’ feelings of inclusion and ownership, and that makes citizens proud to pay their taxes. In this way, the administration of each tax or levy has repercussions for the way taxes in general are viewed by the citizenry, affecting levels of compliance and citizen-led mechanisms of accountability. This is particularly significant in new democracies and less-developed contexts, where the idea of tax payment at the subnational level may be relatively new, and the enforcement mechanisms to ensure compliance may be limited.

Figure A: OECD local government user fees as a percentage of GDP, 1990–2014



Note: The graph shows the five OECD countries with the longest longitudinal dataset. Data on locally generated user fees is not inclusive of user fees collected at the state or provincial level. Countries that only collect user fees at the state or provincial level were excluded from analysis.

Source: OECD, Fiscal Decentralisation Database, available from <http://www.oecd.org/tax/federalism/oecdiscaldecentralisationdatabase.htm>.

A government perspective: Expanding municipal revenues through internal reform

Significant and sustained revenue is essential if cities are to provide services to their populations, and to upgrade their infrastructure to cope with increasing numbers of residents. Most cities receive a portion of their income from central government transfers, but are empowered to collect certain revenues locally. A predictable and sustainable income stream is essential to ensure that key financial commitments, such as the salaries of government officials, can be met not only in the short-term but also in years to come. Thus, most experts recommend that, where possible, city governments generate a diverse portfolio of income streams so that they are not dependent on any given flow of revenue. This requires city leaders to think about how revenue can be generated not just from differ-

ent taxes, but also from taxes on a diverse range of economic activities. Building a city's income in this way ensures that a shock to one part of the economy will not undermine its revenue base.

The source of income also matters for other reasons. A number of academic studies have found that the more dependent subnational governments are on central government transfers to fund their budget, the more likely they are to embrace national policy priorities. This can stymie local innovation and make it difficult for city leaders to respond to local concerns.

Four starting principles can help guide thinking about expanding revenue collection:

1. The greater the share of revenue generated locally, the more the local authority will be able to set its own priorities, free from national agendas and constraints.



A view of Hargeisa, Somalia © UN-Habitat

2. A diverse portfolio of revenue sources is important to ensure a local authority can cope with shocks to any specific income stream.
3. The greater the share of revenues raised through fees and levies, the more careful and accountable local authorities are likely to be in their expenditures.
4. Long-term stability and self-sufficiency is key, so government should manage expectations of tax and levy generation to ensure that targets given to tax collectors can be communicated reasonably to citizens.

As discussed in Chapter 1, many governments have found it beneficial to earmark certain tax or fee payments towards specific goods that citizens enjoy, because voluntary compliance is more likely when citizens consider their payments worthwhile. In a local government context, this link is often already present when fees are paid by citizens for specific services such as garbage collection or parking spaces. However, it is important to note that the manner in which money is collected can also greatly affect citizen perceptions. For example, issuing receipts for parking fees can help citizens feel that the money is accounted for and less likely to be misappropriated. When public infrastructure is being developed, a simple sign saying the upgrade is funded by the city's tax contributions can go a long way towards helping local residents see the benefits of paying their taxes.

However, one of the least explored strategies for expanding municipal revenues has nothing to do with choosing what fees to charge but, instead, looks at enhancing the training of tax collectors. Collecting taxes is a difficult job, and one that lies at the forefront of many citizens' dissatisfaction with poor local public service provision. As such, it is important to bear in mind that government employees can suffer from:

- Lack of awareness of the good things the collected money goes towards
- Lack of training on how best to collect taxes and fees, especially those fees newly introduced
- A preference to do things according to an outdated system, even though that older method may involve serious costs and impose an undue bureaucratic burden on local residents
- A low opinion of their profession in the eyes of citizens, and a feeling that there is little to no upward career trajectory
- A low salary, increasing the attractiveness of short-term gain through corruption
- A feeling that some policies they are implementing are ultimately unfair to citizens, without knowing of a safe route for communicating this to their superiors

These challenges to the work of tax collection can be allayed through additional training, the widening of channels of communication with superiors, and affirmation of the value of tax collectors' work. In this way, effective public relations exercises about the benefits of tax payment can help both taxpayers and tax collectors fulfil their roles.

An economics perspective: Expanding municipal revenues through efficient taxation

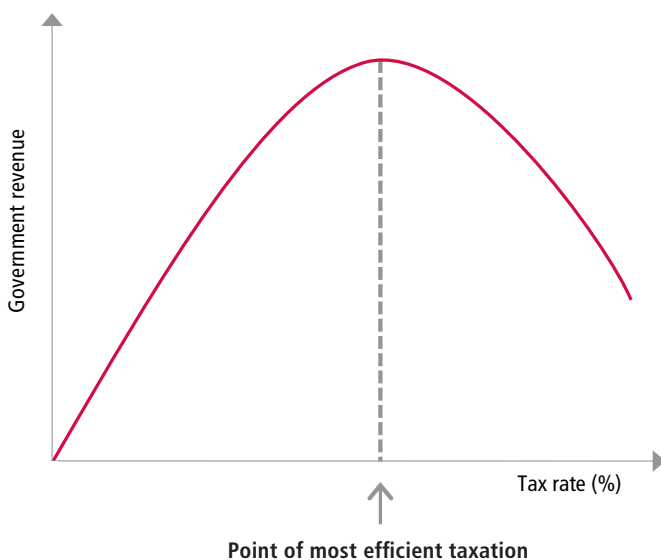
In addition to administrative feasibility, it is important to think about taxes' economic impact. Economists ask whether a tax is being collected efficiently. By this, they do not mean whether the tax is being collected quickly, but rather how it affects other parts of the economy. It may be that a tax is so high that it is slowing the economy as a whole, or placing an undue burden on doing business in particular sectors. To succeed in expanding municipal revenues, it is crucial to be aware of taxes'

and fees' effects on local economic growth. Even though the provision of public services tends to help speed economic growth by providing things that would be costly for individuals to provide on their own, it is important not to impose taxation levels that are rejected by the public or that lead to a fall in overall revenues because they discourage economically productive activities.

To help understand what should count as efficient taxation, the economist Arthur Laffer helped describe the relationship in graph form, outlining how the tax rate relates to government revenue. Before the "Laffer curve" was popularized, it was commonly assumed that the more a government taxes, the more it receives in revenue. Laffer helped explain, however, that after a certain point businesses and the population can be taxed too much, such that the decrease in economic activity caused by the taxes reduces overall government revenue. Figure B presents the graph.

As the tax rate increases, the amount of government revenue at first increases. However, at a certain point any further increase in the tax rate will not increase government revenue as citizens stop seeing the value in doing business or spending their money, or international companies take their production chains elsewhere. City leaders must be aware of this dilemma, and tailor their decisions regarding local taxes and fees to ensure they are economically efficient. For example, they should consider questions such as: Given all of the fees and taxes that local residents pay, is the overall total an undue burden on their economic activity? Does effective taxation require greater data and knowledge sharing between local and national governments to ensure there is a clear picture on how local entrepreneurs are to continue producing goods and services, and ensure their employees receive a fair wage?

Figure B: The Laffer curve



It is also important to consider the different costs of collecting taxes, which vary depending on the type of tax. After reviewing the costs of collection, it may become evident that a certain tax or fee does not generate sufficient revenue for the local authority. This is not necessarily a reason for immediately abandoning it, however. The following checklist should be consulted before deciding to abandon a tax:

- Is the decrease in revenue from this tax a short-term dip or a long-term trend? If the former, it could be advisable to avoid wholesale change until the longer-term trends become clear.
- Is the tax's lack of profitability caused by unnecessarily high collection costs? Rather than abandoning the tax, it could be that a different way of collecting would render its relatively low revenue stream profitable.
- Is the tax connected to the provision of a good or service that citizens deem essential? If so, although the removal of the tax could save money, there could be large and potentially destructive repercussions in removing its associated services, which could undermine confidence in the local government as a whole.
- Will the current costs of administering the tax be entirely removed if the tax is abandoned? At times, employee and institutional costs are not eliminated when a tax is cancelled. There must be some evaluation, therefore, of whether the network of personnel, institutions, and administration will remain a burden on local government even if a tax is cancelled. If so, the municipal government will not save money overall by abandoning the tax.

A political perspective: Expanding municipal revenues through democratic dialogue

A third, again complementary, point of view can be found by examining the challenge from the perspective of local populations and their relationship to the political sphere. Most constitutions encourage a clear distinction between the civil service and politicians. This is, of course, a very positive thing, as it helps avoid the manipulation of government employees for the purposes of short-term political goals. A clear separation of roles also helps protect civil servants by making sure they are chosen based not on their political opinions or party affiliations, but on their professional expertise. These lines of distinct professional roles should not be crossed. However, there is still a need for understanding different actors' goals in order to implement any reform successfully. Nowhere is this more the case than in expanding municipal revenues. Taxes are often unpopular, which makes an increase in local taxes or fees something that a local politician will often want to oppose. In the context of local political leadership, how can a tax increase find public support?

Increasing municipal revenues and garnering public support need not be in opposition to one another. Indeed, the two can run in tandem if there is the right leadership on the part of city leaders. The provision of public goods and information about how tax revenue is being used can have a strongly positive impact on citizens' willingness to pay taxes. If citizens feel the fees, levies, and taxes they pay are being put to good use, this increases trust in, and support for, the government itself. This makes sense both for purposes of tax compliance and for obtaining support for tax reform from local politicians.

What is required is to identify what services or goods citizens think are most important, and to begin by demonstrating a real commitment to using tax revenues to improve these areas, thereby publicly demonstrating the link between tax payment and service provision. When this is done well, tax payment and service delivery can interact to generate a positive cycle. If greater government revenue is used to provide highly visible public goods (e.g., roads, hospitals, public parks), this is likely to increase public support for the local government and local politicians together.

Political leaders often lack high-quality information about the least-well-provided services in their jurisdiction, which means they can sometimes neglect to improve those items most in need of reform. This problem is often especially pronounced in Africa, where comprehensive data on local service provision is often difficult to collate. Such data deficien-

cies can lead to inefficiencies in the distribution of resources, with too many goods and services deployed in some places and too few in others. At first it can seem that politicians are simply biased towards a particular area, but the real reason may be that they are simply unaware of the benefits to be gained from diverting small amounts of government resources to help previously neglected areas.

Budget plans must therefore start with an effective mapping exercise to record what is already being provided and to identify priorities that jointly make sense to civil servants, politicians, and citizens. This should involve assessing which areas, and which citizens, live farthest away from key services, and so are in greatest need. Civic engagement and public participation are critical to this process, because they offer an important and valuable mechanism to gather ideas and share information on what the government plans to do.



Lagos skyline, Nigeria © Wikipedia

Case Study 1: Lagos, Nigeria, under Governor Fashola

In 2007, Babatunde Fashola won the governorship, having been chosen as successor to the previous governor, Bola Tinubu, with a modest majority. In the years that followed, he furthered Tinubu's earlier efforts to expand state revenues by introducing a new consumption tax on hotels and eateries, and pursuing higher levels of tax enforcement throughout Lagos State. These measures initially drew criticism from some sectors, but because these resources were chan-

nelled into issues of major public concern—reducing crime, improving roads, providing health clinics, etc.—they actually increased his popularity over time. Significantly, his political strategy, including a heavy emphasis on the link between tax payment and public service delivery, built support for the expansion of the tax net. Ultimately, he won the 2011 elections with a significantly increased majority, securing just over 80 percent of the vote.

Civic engagement and public participation offer a range of very important benefits to municipal governments. Recent research shows that “greater access to public information together with effective public engagement can help reduce corruption and enhance socioeconomic development.”¹ Most obviously, effective participation and communication means that local governments are more likely to implement policies that match citizens' preferences, and are more likely to be given credit for doing so. Less obviously, significant benefits can be reaped in terms of revenue generation and popular support for the government. The case study explains how Governor Fashola of Lagos, Nigeria, successfully expanded local government revenue generation while increasing his vote share through successfully communicating the value of these tax increases to local citizens.²

One of the most important issues to keep in mind when seeking to build a social contract and increase

tax payment is the difference between regressive and progressive forms of taxation. Regressive taxes are those that have a uniform rate, applied to everyone regardless of each person's income level (e.g., sales tax or value added tax [VAT]). Progressive taxes modify the rate of payment based on the payees' income or wealth level (e.g., income tax). Regressive taxes are generally understood to affect poorer citizens disproportionately. There is also a second important difference when it comes to the form of taxation: Citizens tend to be more aware that they are paying direct taxes, such as income tax, than indirect taxes, such as VAT. As a result, researchers have often suggested that direct taxes are more significant when it comes to forming an effective social contract around tax payment and public service delivery.

These variations are relevant because when evaluating which local taxes or fees will expand municipal revenues, it is important to pay attention to citizen

perceptions of fairness, which can be connected to whether the tax is being progressively or regressively administered. At the same time, it is not as simple a question as saying that all progressive taxes are fairer than their regressive counterparts. For example, while a sales tax on diamonds affects everyone who buys diamonds, it is mainly the rich who buy diamonds in the first place, and so it is they who will pay the regressive tax in this case. It is also possible to make certain goods, such as food, books, or shoes, exempt from regressive taxes altogether, which means an increase in regressive taxes need not affect all consumption groups in the same way. All these points help to demonstrate how decisions regarding the expansion of municipal revenue must keep in mind the effect on the local economy as a whole, and local citizens' perceptions of the fairness of taxes and fees.

Public–private partnerships: Costs versus benefits

Public–private partnerships (PPPs) came into vogue in the late 1980s as a way to help expand government activities while avoiding the inefficiencies normally associated with government service delivery and procurement processes. For the purposes of expanding municipal revenues, there are many potential benefits to partnering with the private sector—for example, when it comes to the difficult job of tax collection—but also some potential pitfalls.

The benefits include gaining efficiency in tax collection by incentivizing collection performance, and encouraging competition among tax collection service providers. Further, PPPs can allow public sector employees to learn management and leadership skills from their counterparts in the private

sector. Additionally, partners usually share in the risks of failure, which is particularly relevant when deploying a new tax collection initiative.

In terms of potential costs, PPPs generate fresh ideas and manpower for the government, but mean that a cut of revenues goes to private providers in order to cover their fees. This reduces the overall amount that goes to local government—although of course this may still increase through a PPP if the total amount of revenue collected goes up by a greater amount. The use of the private sector can also give the impression among citizens that the tax or levy is not going to the government at all but to a third party, reducing citizen trust in government. Additionally, the private sector may have less-direct channels for citizen accountability. This is relevant in cases where private operators break the law, where there is an increase in corruption, or where citizens feel themselves to have been mistreated. Because private partners cannot be removed by citizens through normal democratic channels, it can take longer to identify these issues. It is thus particularly important for the government to establish good oversight mechanisms where this strategy is pursued. Finally, private actors often have less legal authority over citizens who fail to comply with tax payments, which means that they can struggle to enforce the collection of unpopular taxes. This can increase the costs to local government of following up on cases of tax evasion.

These pros and cons show that the choice to engage in PPPs should be guided by an informed awareness of how suitable a particular tax or fee is for third-party implementation, and how partnerships can be established to ensure transparency and effective coordination.

Conclusion

This chapter has reviewed various mechanisms and strategies for expanding municipal revenues. In particular, it has explored the issue from three distinct, but complementary, perspectives: government, economists, and political leaders. Each helps us to see core issues at stake. Expanding municipal revenues is not simply a question of increasing the number of taxes and fees, but also of exploring how taxes can be implemented that are both efficient and locally popular. Ideally, local government revenue should be considered by citizens to be fair, appreciated by the whole economy as conducive to growth, and understood by politicians to be a necessary part of their communication strategies and relationships with voters.

The preceding discussion has generated the following checklist for considering how a city leader can increase his or her municipality's revenues:

- Are there taxes, levies, or fees that other countries regularly use that my municipality could adopt?
- Do local residents of my area view the taxes and fees we charge as fair? Do they feel they are getting something back for what they are charged?
- Are the collectors of taxes and fees in my local area properly trained? Do they see the purpose behind the money they collect? Are they paid enough to ensure they do not need to seek supplementary income?
- Are the taxes and fees that we charge efficient? Do they lead to a decline in overall revenues, or inhibit the growth of the economy and therefore stifle future tax revenue?
- Do local politicians understand the value of local government revenue generation? Are they committed to communicating the work done by local government in this regard, and do they realize the political capital they can obtain through showing citizens how important tax payments have been to the provision of services and infrastructure?

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Endnotes

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03

Decentralization and Local Government Financing

Introduction

Fiscal decentralization—which entails shifting some responsibilities for expenditures and/or revenues to lower levels of government—has become a mainstream alternative framework for fiscal policy. It is generally a response to unsatisfied political demand for greater regional autonomy, or the result of a large economic divide between rich and poor regions. In a few cases, linguistic and cultural divides explain such trends. In many emerging and low-income countries, all these factors play a role, with tensions among ethnic groups an additional factor exerting pressure for decentralized public service delivery.

The debate over decentralization entails political, administrative, and fiscal dimensions. The philosophical debate can be traced to Alexander Hamilton and Tocqueville in the 18th and 19th centuries. A new wave of academic and political interest in the subject arose in the wake of



the Soviet collapse as a framework to assess policy options for the so-called transition economies. Soon after, the wave hit Latin American countries, coinciding with the recovery of democracy in some cases, and the end of violent internal conflicts in others. Some conservative governments in Europe also promoted decentralization in the 1980s and 1990s, in part because of a pro-market impulse promoted by globalization.¹

More recently, fiscal decentralization has emerged as an effective policy tool for improving the efficiency of public expenditures and revenue generation. This chapter reviews how fiscal decentralization is implemented, arguments for and against fiscal decentralization, challenges facing subnational governments in managing their local finances, tools that local governments can use to enhance their fiscal autonomy, and international experience with fiscal decentralization in both developed and developing countries.

How does fiscal decentralization work?

The fiscal decentralization process varies by country. Unitary and federal governments differ in the way that central governments interact with local governments. In unitary governments, some degree of decentralization is possible, depending on the framework for interaction among central and subordinate levels of government (e.g., central, provincial, and district levels). In comparison, federal governments, by definition, are composed of subnational governments with greater autonomy granted in legislation. Decentralized decision-making allows for local participation in development in line with national objectives.

Public services are allocated to local or regional governments based on the combination of different criteria. These may include population size, fiscal capacity, development needs, and idiosyncratic socio-economic features. Specific functions are usually shared between higher levels of government, which exercise a regulatory or policy role, and

Fiscal decentralization has emerged as an effective policy tool for improving the efficiency of public expenditures and revenue generation.

lower levels of government responsible for service delivery. For example, the technical specifications for bridge construction might come from a higher level of government, with the local government being in charge of construction and maintenance at the local level.

The allocation of resources to local governments must be consistent with their expenditure responsibility, as this will result in better accountability for service delivery. Additional institutional arrangements are needed for intergovernmental coordination, planning, budgeting, financial reporting, and implementation. For such arrangements to work, transparency and accountability to local constituencies should be encouraged by adequate reporting and oversight of local fiscal performance. By contrast, detailed central control may render decentralization ineffective. Clear rules for the transfer and use of fiscal resources combined with appropriate coordination between different levels of government could go a long way towards ensuring efficient use of resources thanks to more effective service delivery.

Pros and cons of fiscal decentralization

Two questions are useful for understanding the pros and cons of fiscal decentralization: (1) Why are some countries more fiscally decentralized than others? and (2) What are the potential effects of decentralization on the quality of the delivery of public goods? If decentralization were the result of exogenous factors such as median voter income, the degree of demographic heterogeneity, or the type of political institutions involved, there would be little room for the national government to promote decentralization from above. If instead decentralization is seen as the best way to ensure optimal public service delivery, it should be treated as an integral part of fiscal policy.

Arguments in favor of fiscal decentralization

One of the powerful normative arguments in favor of decentralization is the proper representation of local voters. Limited knowledge of individual preferences by central government officers has often translated into sub-optimal decisions on the best allocation of public resources. This line of thought is an extension of Hayek's lucid defense of the market economy.² In this view, local bureaucrats and political leaders are likely to know more about people's preferences than are central government officers. A variation of this argument is that, while centralization is associated with the homogenous provision of public services for all citizens across the nation,³ this may collide with heterogeneous local preferences across jurisdictions. Thus, devolution of fiscal and political powers to lower tiers of government would be a way to promote an efficient allocation of resources through which local demands are fully understood and properly attended to at the local (subnational) level of government.

A second strand of normative arguments sees local political jurisdictions as operating in the same way as an efficient and competitive private market.⁴ Local governments come to exist in the same way as private firms enter a particular industry, in response to demands from a particular community. Likewise, they can eventually be removed from the "local public goods industry" if the administrative cost of operating a particular jurisdiction becomes too high with respect to residents' tax-revenue-generation capacity. Local jurisdictions may become "spatialized" by providing specific types of local services in the same way as different firms produce different varieties in line with differences in consumer desires and in the intended use of market products. Autonomous jurisdictions would compete in the provision of local public services tailored for different communities based on their own preferences. Conceptually, voters would "reveal their preference" for local public goods through the political process, by supporting (penalizing) good (poor) performance of local governments, holding them accountable for the quality of local service delivery. This "accountability advantage" would be diluted at the national level, in which political responsibilities are widespread, and voters' capacity to oversee government performance is weaker.⁵

An alternative view depicts the government as a "rent seeking" economic agent trying to take advantage of its power to extract Ricardian rents from taxpayers. Following this line of reasoning, decentralization may be seen as an institutional device to protect individuals from governments,⁶ in the same way as central banks safeguard monetary policy from undue influence from government. National governments are regarded as being no different from private monopolies, to the extent that they are the sole entities collecting taxes and/

or delivering public goods. As a result, they would tend to charge higher prices (taxes) and deliver lower-quality public goods relative to a competitive situation. As voters become more aware of the dangers of the “Leviathan,” this theory predicts that the median voter will automatically bias his political preferences towards more decentralized institutional arrangements. This partly explains why high-income countries tend to be more decentralized.⁷ In line with this hypothesis, an extensive empirical literature has attempted to provide evidence that fiscal decentralization leads to a lower tax burden, with inconclusive results.

Arguments against fiscal decentralization

Alternative views challenge three major assumptions of theories that treat the dynamics of the “local public goods industry” as equivalent to those of private competitive markets. These alternative views challenge the assumptions that (1) local governments are genuine representatives of their constituencies and try to compete to please residents through the best possible combination of prices (taxes) and local public goods quality; 2) the “local public goods industry” is broadly competitive, with no externalities among jurisdictions, and with all local costs and benefits fully internalized by local residents, and 3) local voters not only vote at the ballot box, but also do so with “their feet” by choosing the jurisdiction where they want to live, taking into account the type of local government they want to have.

At the core of these challenges is the fact that the revelation of citizens’ preferences may be rather imperfect, seeing as how many national and local governments do not face the necessary incentives to compete and/or maximize the welfare of their constituencies. This is because a well-function-

ing democracy is not always in place at both the national and the local levels, especially in developing countries.⁸ Moreover, decentralization in imperfect democracies could result in excessive closeness between local authorities and big local private interests, which may lead to corruption and elite capture. Finally, there is some empirical evidence pointing to stronger professional qualifications and better availability of information for central government officers relative to local authorities.

Additionally, the assumption of high mobility across jurisdictions is not confirmed by empirical evidence. First, family and labor ties may prevent mobility from occurring in a Tiebout fashion. In other words, for various reasons, citizens may be unable to change locations in order to maximize their individual utility. Political scientist Daniel Treisman argues that poorly performing local governments are unlikely to be disciplined by residents’ mobility,



Central market in Honiara, Solomon Islands © UN-Habitat/Benhard Barth

as the quality of local services is mainly capitalized into property prices, making “voting with their feet” a costly affair for homeowners and tenants.⁹ Moreover, subnational governments may not have the necessary incentives to target the local poor, for which mobility is more costly. In addition, excessive mobility across jurisdictions could also be a problem, as it may translate into additional fiscal pressures on local governments showing above-average performance because of an increasing number of potential beneficiaries coming from other jurisdictions.

The potential for fiscal imbalances resulting from fiscal decentralization deserves separate mention.¹⁰ A moral hazard problem may arise if local governments expect a “guarantee” from the national government at the time they decide on tax bases and tax rates, leading to over-borrowing.¹¹ A moral hazard problem arises because of the possibility of a bailout of local governments by the central government.¹² This is more likely in countries with

weak and poorly designed institutions, often found in developing countries.

The case for fiscal decentralization

The case for decentralization is necessarily empirical. Recognizing that government functions encompass a wide range of specific tasks, Letelier and Saez postulate that two effects should be distinguished when it comes to the optimal degree of decentralization.¹³ On the one hand, if power is delegated to jurisdictions that are too small, a loss in economies of scale could result (“scale effect”), raising the cost of public goods and rendering decentralization a cost-inefficient solution. On the other hand, the “Von Hayek effect” over time would lead to better knowledge by local governments about people’s needs as decentralization takes root and allows collective demands to arise from below. Thus, the optimum degree of decentralization would depend on the balance between both effects.



Nairobi skyline, Kenya © UN-Habitat

How to maximize potential benefits and contain fiscal risks in decentralized fiscal systems

Fiscal decentralization should be seen as part of a comprehensive fiscal framework. Isolated changes may eventually create inconsistencies across government levels, undermining the effectiveness of fiscal policy and increasing macroeconomic risks.¹⁴ Case Study 1, which examines decentralization in sub-Saharan Africa, and Case Study 2, which looks at the decentralization process in Colombia, illustrate the challenges entailed in containing fiscal risks in decentralized systems.

Experience suggests that the essential elements of a comprehensive decentralization framework that maximizes potential benefits while minimizing risks include (1) clarifying spending responsibilities across levels of government, (2) allowing subnational government to raise own-source revenues to

increase fiscal responsibility, (3) designing a transfer system that aligns incentives, and (4) imposing a hard budget constraint on subnational governments.

Clarity in spending assignments is required for efficient provision of public services. For example, separating investment and maintenance functions risks suboptimal outlays for both categories, as no level of government is fully accountable for the delivery of the final good. In Mexico, for instance, the education sector suffered a deterioration of physical infrastructure precisely because of this vicious circle.¹⁵ Physical capital such as water supply systems, sewerage systems, roads, and power plants also require long-term maintenance to ensure services provided are of high quality. Unfortunately, asset management has often been neglected in developing countries because of capacity constraints.¹⁶



Pedestrians in Guadalajara, Mexico © Flickr/Carlos Rivera

By contrast, a prolonged mismatch between spending responsibilities and the allocation of resources could lead to waste and/or to deterioration in the quality of service delivery. In some cases (e.g., China and Brazil) the devolution of resources significantly outpaced that of spending, leading to inefficiencies in the use of resources. In other cases (e.g., the transition economies in the early 1990s) available resources were not consistent with spending mandates, leading to the accumulation of debt or arrears and/or the significant deterioration in the quality of decentralized public services.

Potential incentives to relax fiscal discipline in the process of fiscal decentralization should be addressed. A common pool problem opens up when local governments have a reasonable expectation of receiving significant transfers from the central government over a sufficiently long period of time and therefore are encouraged to spend beyond their nominal budget constraints.¹⁷ In addition, soft budget constraints, interregional competition, unfunded mandates, and short electoral cycles could make the common pool problem even more complex.¹⁸

Market discipline should be instilled by limiting government financing or guarantees within a well-defined transfer framework. However, this may conflict with the aspirations for greater autonomy by local governments. Alternatives to be considered include administrative constraints (debt ceilings, government guarantees); the introduction of fiscal rules at the county level in an effort to minimize the risk of reporting distortions aimed at escaping the rule (such as off-balance transactions in the case of China, or improper reclassification of current spending as capital expenditure in Denmark); and/or cooperative schemes to raise awareness among local governments of the implications of their deci-

sions (e.g., Australia). A combination of all these alternatives would require strong leadership by the central government and high management standards to avoid a bureaucratization of the process.

A particular problem arises in the case of countries with sizable actual or potential natural resources. The challenge of managing resource revenue exhaustibility and volatility while transforming sub-soil assets into financial, physical, and human capital assets becomes more complex for federal or decentralized systems. Regions feel entitled to benefit directly from fiscal resources coming from the exploitation of natural resources in their jurisdiction. This may lead to a detraction of resources from their optimal use, especially in the absence of fiscal rules addressing demand management (short term) and inter-temporal solvency (long term). The fiscal policy framework should be country-specific by incorporating particularities of regional needs, the resource horizon (temporary versus long-lasting), sensitivity to revenue volatility (high or low), domestic capital scarcity/development needs, absorption capacity, and public investment efficiency. As a general rule, a high proportion of resource revenue should go to savings and domestic investment, while smoothing spending by delinking it from resource revenue dynamics.¹⁹

Financing arrangements for subnational governments

Increased urbanization and political decentralization have led to large subnational infrastructure financing needs around the globe. Successful decentralization will increase local expenditure responsibilities as well as local governments' capacity to fund them, including financing arrangements to enable subnational govern-

ments to mobilize sufficient resources for capital investments. Capital investment is needed to construct, retrofit, restore, or upgrade capital assets related to the provision of social infrastructure (water supply, sanitation, sewage disposal, education, and health) and physical infrastructure (transportation, power, and information and communication technologies). Implementing the 2030 Agenda for Sustainable Development at the local level, including the mitigation of or adaptation to climate change, will further increase the need for green infrastructure investments.

Long-term finance can help address large upfront costs of infrastructure projects and their long amortization periods. Access to long-term finance would also allow local governments to smooth out the pro-cyclicality of intergovernmental capital transfers or excessive volatility of revenue sources. However, when municipalities take out loans to finance their infrastructure requirements, local own-source revenues and intergovernmental transfers need to be sufficient to cover repayment in the long term. Local revenues need to be strengthened before local authorities can become creditworthy borrowers. Domestic financial markets need to be developed as well, since even the most creditworthy municipalities may be ill-equipped to borrow sufficiently from international markets without additional guarantees. Thus, lack of creditworthiness at the local level is the major demand-side constraint to optimal decentralization, while shallow financial markets constitute a major supply-side constraint. As demand- and supply-side constraints are removed, well-designed and engineered financing arrangements can unlock the long-term funds needed for local infrastructure investments.²⁰

Overcoming demand constraints: Achieving creditworthiness

Raising subnational borrowing necessarily requires a demonstrated ability to maintain a reliable surplus of revenues over expenditures. Local revenue sources may include user fees and charges, taxes/levies, and intergovernmental transfers, sometimes supplemented by bilateral or multilateral development assistance. Further potential sources include investment income, property sales, land value capture, and licenses. User charges and fees are mostly levied where people pay for the benefits and utilities they receive (e.g., water supply, sanitation, energy, parking space). At the same time, taxes are the more appropriate tool to finance the provision of public goods for the entire community, such as police, ambulance, firefighters, streetlights, etc.

Local governments in developing countries remain largely dependent on intergovernmental fiscal transfers and tax-sharing mechanisms to fund priority investments. Resource flows from higher to lower tiers of governments average 70–72 per cent of local government funding in developing countries and 38–39 per cent in developed countries.²¹ If well-designed, these transfers may further crowd-in local revenue generation. In Tanzania, a one per cent increase in intergovernmental transfers has led to an extra 0.3–0.6 per cent increase in own-source revenue generation for local government authorities.²² Governments and donors should provide incentives for local governments to improve their capacity for revenue generation. For example, performance-based grants and subsidized lending followed by market-based incentives would help local governments develop borrowing practices over time, empowering them to fund the capital investment needed to meet their sustainable development objectives.²³

Sound management will support local governments' financial health. The four tenets of sound financial management include budgeting, accounting, reporting, and auditing. Funds should not only be appropriately spent and monitored, but availability of information should be adequate for proper planning and budgeting. More broadly, good management has a direct impact on the quality of services that may translate into higher revenue potential. A successful experience in Kampala, Uganda, shows significant progress in expanding the city's rates and fees base by updating its property register, licencing taxis and other businesses, and improving debt collection, which translated into an 80 per cent increase in internal revenue in two years.

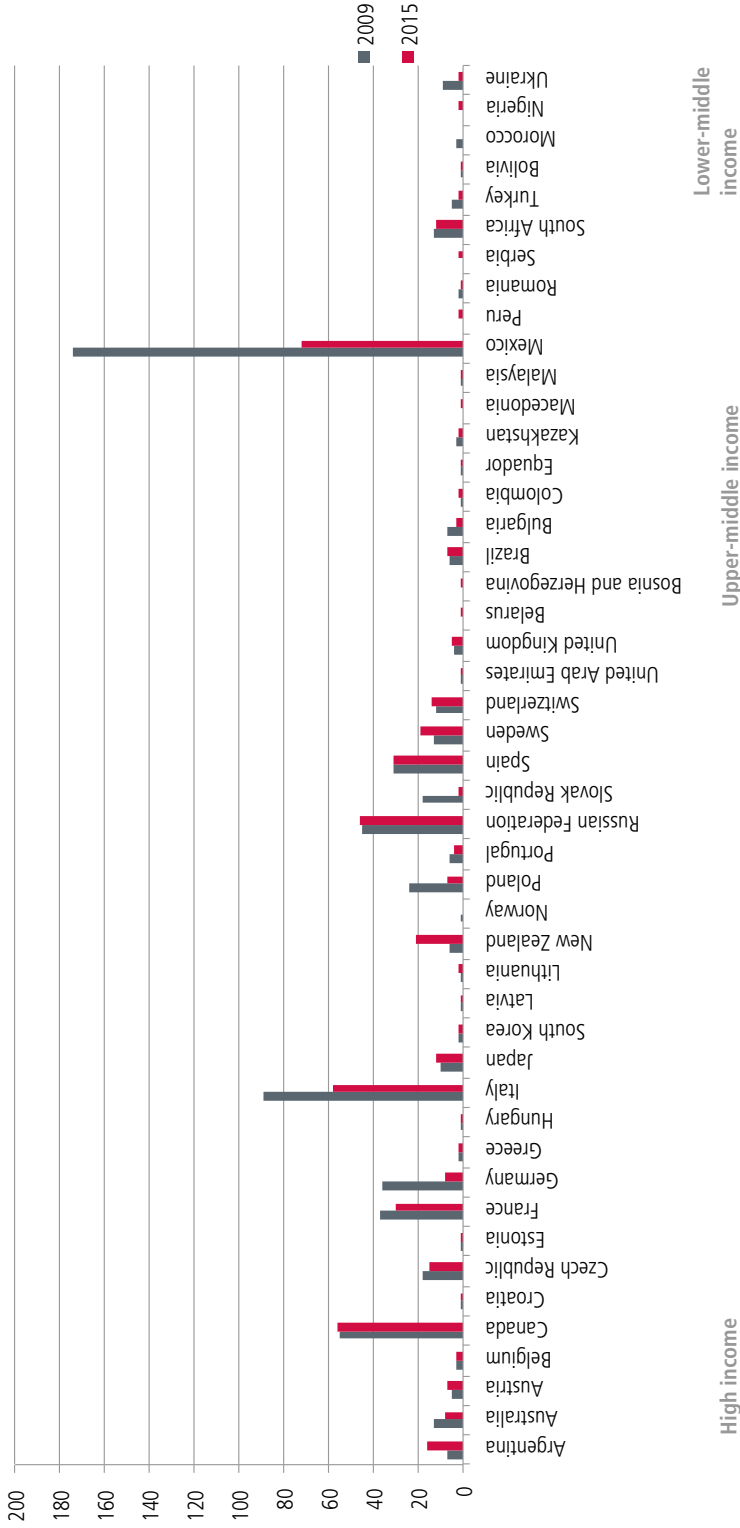
Strengthening the supply side: Building inclusive and resilient local credit markets

Policies that build active government bond markets create benchmarks for investors interested in subnational debt. In the Addis Ababa Action Agenda, countries agreed to strengthen long-term bond markets as a source of development finance, along with capital market regulations designed to reduce excess volatility and promote long-term investment aligned with sustainable development. Recent research shows that local currency bond market development is positively related to sound regulatory frameworks, adequate rule of law, and greater trade openness.

A proper legal and regulatory environment is crucial for a sustainable municipal credit market. Effective judicial frameworks, including a government bankruptcy framework (e.g., Chapter 9 in the United States), help sustain the municipal bond market by protecting the rights and obligations of creditors and debtors at the subnational level. In some countries, mandatory provisions for municipal revenue cushions ("master trusts") and mandatory issuer ratings have promoted investor interest in municipal bonds and increased municipalities' access to long-term bank loans.

Rating agencies can help overcome the lack of investor familiarity with the risk profile of local capital investments. At the local level, the challenge is the municipalities' lack of engagement (Figure A). Indeed, even in developed countries outside the United States (where over 12,000 municipalities are rated by S&P alone), few subnational entities have requested ratings from any of the three major rating agencies. For subnational entities in many low-income countries, ratings are simply not affordable, as the major agencies are not active in these countries. International development agencies can play a critical role in lowering the entry barrier of rating agencies by paying for the first few municipal credit ratings so that the first issuers do not have to bear the costs.

Figure A: Number of local authorities that have received ratings from at least one of the three major global agencies, by country and income group (2009 and 2015)



Note: In the United States (not included in the figure), over 12,000 municipalities are rated by one of three major agencies.

Source: Information provided by Fitch, Moody's, S&P.

Promoting local rating agencies could create a more favorable environment to rate local governments less familiar with international agencies. For example, in recent years a few regional rating agencies have emerged in Africa and gained reputational capital with investors, such as the West African Ratings Agency (established in 2005) and Bloomfield Financial (established in 2007), joining the ranks of older agencies such as Agosto and Co. (1992) and the Global Credit Ratings Company (GCR). Dakar and Kampala in Uganda have received high ratings from local agencies. Kampala received an A in the long term from GCR, its highest global rating.

Entering the municipal credit market

Lending from banks—often government-owned financial institutions and development banks—is the primary source of local credit financing in most advanced economies outside the United States. Municipal bonds are dominant in the United States, where even the smallest of towns can raise millions of dollars in bond issuances. Its US\$3.7 trillion municipal bond market remains unique in the world. Other large cities have only gradually entered the municipal bond market. In middle- and low-income countries, subnational access to capital markets is circumscribed to larger cities; some municipal bonds are floating in African markets such as South Africa, Nigeria, and Cameroon. Local governments without access to private or public credit rely entirely on capital grants from central governments to fund large-scale investments.

Project design matters. General creditworthiness of the municipality is crucial, but infrastructure projects need to be carefully planned, engineered, and costed to be successfully financed. This requires upfront investment in project development

services from market demand analysis to detailed engineering design. Many municipalities and public utilities, especially in developing countries, do not have the resources to pay for this initial work. Specialized “project development facilities” could help overcome this problem. They can play different roles depending on specific needs. For instance, in the early 2000s, bilateral donors supported the Municipal Infrastructure Investment Unit (MIIU) in South Africa, which then successfully provided financial, technical, and managerial support to municipalities and public utilities. More recently, the Rockefeller Foundation and the International Finance Corporation have created a “Project Development Facility for Resilient Infrastructure” to finance legal, technical, and financial advice from highly skilled consultants for cities seeking to finance infrastructure projects.

Different forms of credit enhancements can further help subsovereign issuers lower default risk. Credit enhancement mechanisms can take the form of revenue cushions for payback (e.g., “sinking funds” in the United States, “federal tax-sharing grants” in Mexico, or “bond service funds” in Tamil Nadu, India), partial or 100 per cent external guarantees for bond repayment (e.g., USAID partial guarantees for repayment of the first Johannesburg bond), or the use of pooled financing. A well-structured bank loan or bond may make use of several credit enhancement mechanisms at the same time. Complementarily, national, regional, and multilateral development banks play a crucial role, as they can lend to municipalities directly under favorable conditions (both in terms of rates and maturities). Development banks can build investor confidence by underwriting, guaranteeing, or investing in municipal debt, including securities, enabling local governments to build up their credit histories.

The global landscape of municipal credit markets

Advanced municipal finance tools are available once demand- and supply-side barriers are overcome (see Table 1). These include local government-based financing options (e.g., general obligation bonds, revenue bonds, green bonds), development exactions (e.g., linkage fees, impact fees), public and private options (e.g., public-private partnerships [PPPs], pay for performance), and mechanisms to leverage the private sector (e.g., loan guarantees, tax increment financing). Although the use of such market-based financing mechanisms is growing, they are largely confined to prosperous municipalities in advanced economies (e.g., the United States, Western Europe, and some other OECD countries). Some require the participation of several partners, including private capital, and others largely rely on the coercive power of local governments.

A number of borrowing mechanisms have been used by municipalities that are not yet investment-grade



Pedestrians in New York, USA © Flickr/Stefane Georgi

creditworthy but have undertaken significant efforts in this direction:

- Municipal development funds operated by national or state government entities mobilize resources from private lenders, the central government, and donor agencies, and on-lend these resources to subnational governments to finance capital investment programs. Terms are normally concessional, although capacity to repay debt obligations is an important criterion to access these funds. More complex arrangements may pursue the dual objective of financing local infrastructure investments and strengthening local credit markets. In Colombia, the Findeter Fund used external borrowing to rediscount loans made by private commercial banks to public local authorities and local private entities for investing in urban services and utilities. The success of a model like Findeter depends on the depth of the local financial markets and the availability of capable financial institutions that can take on credit risk related to municipal and urban services loans at a substantial scale.
- In poor countries, hybrid financing, a combination of market loans and grants, helps local authorities keep debt service affordable. In Burkina Faso, the hybrid financing for the reconstruction of Ouagadougou following the destruction of its central market by fire, comprised access to long-term resources from the Agence Française de Développement (AFD) and a €3 million grant, without using a central government guarantee.²⁴
- Many large cities across the globe have used land-based revenues to finance capital investments. For example, in Shanghai, 46 per cent of urban growth was funded through land-based financing mechanisms by which the city sold developed land to operators of commercial or industrial zones, and revenues

were reinvested in municipal infrastructure. In the case of land development or concession development PPPs, land is sold to developers for the construction and operation of an infrastructure facility. Other methods to capture revenues from land include buying land and reselling it at a higher value following service improvements (e.g., through public transportation improvements) or levying impact fees on the population that benefits from development projects. While these mechanisms are not without practical hurdles (particularly in terms of evaluating gains and identifying beneficiaries), their potential has to be fully tapped, especially in cities where most land is held by the central government.²⁵ However, it is important to recognize that land value can also be exposed to market volatility, and sharp increases in value during economic booms can lead to excessive borrowing, creating macroeconomic risks.²⁶

- Assisted pooled financing holds potential in developing countries with heterogeneous municipalities. In this case, a credible intermediary, such as the national or state government, issues a single debt instrument backed by a diversified pool of loans to municipal utilities and covered by a pre-established debt service fund. This scheme offers investors access to a diversified portfolio of borrowers. For example, the State of Tamil Nadu, India, used a pooled financing facility to finance water and sanitation projects for 13 small municipalities, at longer tenors and lower cost than would have been otherwise possible. However, coordination costs could be high, and highly rated subnational governments may be reluctant to participate. Combining pool financing with credit enhancements supported by donors and private sector companies to identify and put together a pool of investable infrastructure projects could allow access to local bank and capital market financing on a non-recourse basis.²⁷

Table 1: Advanced municipal finance tools

Government-based finance options	Development exactions	Public and private options	Private sector leveraging
General obligation bonds	Dedication requirements	Public-private partnerships	Loan loss reserve funds
Revenue bonds	Linkage fees	Pay for performance	Debt service reserves
Industrial revenue bonds	Impact fees	Securitization and structured finance	Loan guarantees
Green bonds		Catastrophe bonds	On-bill financing
Qualified energy conservation bonds			Pooled bond financing
Social impact bonds			Pooled lease-purchasing finance
Public benefit funds			Tax increment financing
Linked deposit programs			Value capture
Energy efficiency loans			
Property-assessed clean energy programs			
Greenhouse emissions allowance auctions			

Source: Center for Urban Innovation, *Smart Cities Financing Guide* (Tempe, Ariz., Arizona State University, 2015).

Conclusion

Fiscal decentralization can serve as an effective policy tool for improving the quality and provision of public services, government accountability, and the efficient use of local financial resources. However, in order to achieve successful fiscal decentralization, central and local governments must be strategic in how they decentralize fiscal responsibilities to local governments both in terms of revenue generation and expenditures. Moreover, the decentralization of fiscal authority to subnational governments must consider both the local capacity of municipal govern-

ments and the legal and regulatory framework in which they will assume these responsibilities.

Delegating local expenditure and revenue generation responsibilities to municipal governments connects the consumers of public goods and services directly with local government officials who determine how public funds are allocated and what tax policies are implemented. If strong institutions, good governance, and a supportive legal and regulatory framework are in place, fiscal decentralization can support and enhance municipal finance.

Case Study 1: Challenges in building institutions in sub-Saharan Africa

In the case of sub-Saharan Africa, rapid fiscal decentralization has been introduced in part as a way to defuse ethnic tensions. In sub-Saharan African countries there is a clear legal definition of powers and functions in the various levels of government. Functions assigned to the national level relate mainly to policy and standard setting, and the provision of public goods such as national security. Subnational governments, on the other hand, are responsible for policy implementation and local service delivery, such as health, water, local roads and transportation, most agriculture extension services, and primary education (except for Kenya, where only preschool education is provided by subnational governments). In Kenya (2010) and Nigeria (1967) devolution started as an alternative to ethnic dominance in centralized systems, while in Uganda (1986) it followed a civil war. In South Africa fiscal decentralization followed the collapse of the

apartheid system in 1994. Initial capacity limitations in South Africa led to the introduction of a reporting system by subnationals, which eventually led to the implementation of a multi-year budget framework. In Kenya, initial challenges pertaining to service delivery are being addressed, but there are lingering budget preparation problems at the national level and particularly at the county level.

Efforts to improve budget processes appear more urgent in the face of fiscal decentralization. Kenya and South Africa addressed simultaneously the problems of capacity, information, and financial management. In South Africa, the authorities showcased the subnational governments that had demonstrated their capacity to perform through a peer learning and mentorship approach, combined with benchmarking to identify and address the main cost drivers. In that context, improv-

ing budget formats, introducing a new fiscal classification system, improving accounting standards, and reforming the chart of accounts were essential elements for reforming the financial management system, and improving information for benchmarking. In Kenya, inter-governmental coordination during the transition has been supported by a Transition Authority and by the Intergovernmental Budget and Economic Council, with the participation of all 47 county governors and the cabinet secretary for the National Treasury, chaired by Kenya's Deputy President of the Republic.

Sound fiscal rules have been generally successful so far at preventing excessive borrowing by subnational governments. Specifically, borrowing by subnational governments is limited to financing development projects and for short-term liquidity management. In addition, any long-term borrowing in Kenya, Nigeria (for external debt only), and Uganda is subject to approval by the national government (this

requires a guarantee in the case of Kenya and Nigeria), and there is an overall cap on the stock of debt for subnational governments in both countries (20 per cent of last year's audited revenue in Kenya, 50 per cent in Nigeria, and 25 per cent in Uganda). In South Africa, legislation prohibits the guaranteeing of subnational government debt by the national government. Instead, a transparent mechanism for public bankruptcies is in place, complemented by tough sanctions if subnational governments ignore public finance management rules. In Nigeria, sharing oil proceeds with oil-producing states has exposed the latter to large swings in revenue, undermining the regional income equalization objective. As a result, the reduction in federal and state revenue has been larger than the related fall in oil prices.²⁸ This has conspired against a sound budget process, often leading to salary arrears, default on bank obligations, and partial bailouts by the federal government.



Downtown Nairobi, Kenya © UN-Habitat/Baraka Mwaui

Case Study 2: Improving fiscal management and decentralization in Colombia²⁹

During the 1990s, fiscal decentralization policies in Colombia mandated sizeable intergovernmental transfers to subnational governments. While there is good reason to believe that subnational governments are better positioned to provide local public goods and services and respond to local needs, intergovernmental transfers should be matched with spending mandates that reinforce subnational expenditure accountability. In the absence of such mandates, fiscal discipline at the subnational level was significantly weakened. Moreover, Colombia's fiscal decentralization policy lacked incentive mechanisms that would support own-source revenue generation at the local level.

In an effort to address these policy shortcomings, several reforms were implemented beginning in the mid 1990s. For example:

“Law 819 improved fiscal coordination among different levels of government, requiring both

the central administration and local governments to present each year a consistent 10-year macroeconomic framework...budgets would need to be balanced over a 10-year period. It further stipulated that fiscal management at all levels of government, including expenditure authorization and revenue collection, had to be consistent with the medium-term macroeconomic framework.”³⁰

Other reforms addressed incentive mechanisms for subnational governments to generate own-source revenues, municipal expenditure requirements, and earmarking policies that had proven ineffective.

The case of Colombia demonstrates the importance of establishing a legal and regulatory framework that aligns the goals of fiscal decentralization with expenditure incentives and accountability mechanisms. Moreover, this case highlights the importance of reforming fiscal decentralization policies over time and incorporating lessons learned into policy design and implementation.



Rocinha in Rio de Janeiro, Brazil © Wikipedia

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Part 02:



Designing Financial Products

04

Non-Tax Own-Source Municipal Revenues

Introduction

The revenue available to local governments is a key determinant of a city's ability to provide the services citizens need and to meet expenditure requirements. In cases where revenue is constrained, infrastructure investments often suffer, and government services are reduced.¹ Consequently, the need to diversify, grow, and mobilize revenues is one of the most pressing challenges city leaders face in various regions of the developed and developing world. Building a solid revenue base depends on a number of factors, including empowering city leaders to grow and diversify their own-source revenue pool to complement external revenue flows (e.g., intergovernmental transfers) over which local government officials lack direct control. It also requires enabling city leaders to mobilize own-source revenues, after they are raised, by harnessing financial tools that can support their strategic priorities

(e.g., land-based financing instruments, debt instruments, and public–private partnerships, among others).

This chapter examines how city leaders can mobilize non-tax own-source revenues to help establish a strong foundation for fiscal governance.² It focuses on a wide variety of non-tax own-source revenues, ranging from charges and fees directly related to citizens' use of a service (e.g., consumption of water, removal of trash, etc.), to charges levied on the value or physical attributes of the property being serviced, in order to capture some of the benefits resulting from public investments in land (e.g., betterments).³ To that end, the chapter begins with a typology and overview of the various sources and types of non-tax own-source revenues used by cities across the world. It then examines the global variation in revenue reliance at the subnational government level.

It is clear that reliance on non-tax own-source revenues, particularly charges and fees, is not the only path to sound fiscal stewardship. This chapter advances the principle that a combination of all municipal revenue sources is important for achieving strong municipal fiscal health. The chapter identifies select key considerations that can be instructive to government officials who seek to evolve and reform the non-tax own-source revenue components within their jurisdiction. The aim is to highlight the merit of empowering city leaders with strategies that help them harness non-tax own-source revenues appropriately for the maximum benefit of their municipalities.

To guide the reader who seeks a bridge from theory to practice, this chapter includes illustrative case studies of jurisdictions that have successfully grown and mobilized non-tax own-source revenues to support different strategic priorities.

Overview of the types of non-tax own-source revenues

Non-tax own-source revenues are often raised from charges, fees, fines, and other special assessments related to a variety of government services and assets. Examples include rent collected from government-owned property, charges for goods and services, business licence fees, and marriage licence fees, to name only a few. While it is impossible to classify all the types of non-tax own-source revenues that exist across the developed and developing world, Table 1 presents a selection of different revenue types, their general characteristics, and representative jurisdictional examples.



The revenue available to local governments is a key determinant of a city's ability to provide the services citizens need and to meet expenditure requirements.

Table 1. Select examples of government non-tax own-source revenues⁴

Revenue source	General characteristics	Jurisdictional example
Utility and service charges	Charges for sewer, water, publicly provided electricity, and other similar services (paid by a citizen, organization, or institution) where the benefits accrue to specific individuals and payment for the service varies according to consumption.	South Africa Water User Charges and Rights Policy; Constitution of 1996; Constitution Act 108 ⁵
User fees	Fees for voluntary services such as entry to public museums, marriage licences, tolls, motor vehicle registration, permits, and others paid by a citizen, organization, or institution. Cost is typically set at specific market prices, and subsidies are at times offered to certain users.	Kingdom of Bahrain, Municipal Urban Planning Building Permits & Commercial Companies Laws ⁶
Fines	A penalty assessed on a citizen, organization, or institution as a result of a violation of law, or as a consequence of a civil or criminal infraction.	State of Michigan (United States) Municipal Civil Infraction Legislation ⁷
Surcharges	An additional sum added to a particular, pre-existing charge, such as a tax, fee, fine, or penalty paid by a citizen, organization, or institution.	Commonwealth of Massachusetts (United States) Surcharge for Motor Vehicle Infractions ⁸
Special assessments	Compulsory payments, in the form of development fees or betterments, imposed on the owners of real property for specific benefits generated from public investments. Costs imposed are typically aligned with the benefits received.	Colombia <i>Contribucion De Valorizacion</i> Betterment Levies Framework, including the Law 388 of 12997 ⁹
Payments in-lieu of taxes (PILOTS)	Voluntary payments made by private non-profits and other tax-exempt entities to compensate a local government for the loss of tax revenue due to the nature of the ownership or use of a particular piece of real property.	Canada's PILOTS system for federally and provincially owned real property ¹⁰
Royalties	Payments arising from the assignment of the right to harvest and exploit naturally occurring resources (oil, gas, minerals, etc.) by citizens, institutions, or organizations. Royalties may be structured via agreement or in the form of a lease.	United States Mineral Leasing Act of 1920 ¹¹
Rents and land-use fees	Payments arising from the right to use and occupy government property or land by citizens, institutions, or organizations. Often structured pursuant to a lease or other agreement providing for the payment of fees for specific land-use rights.	China Urban Land Management Practices, and Land Administration Law ¹²

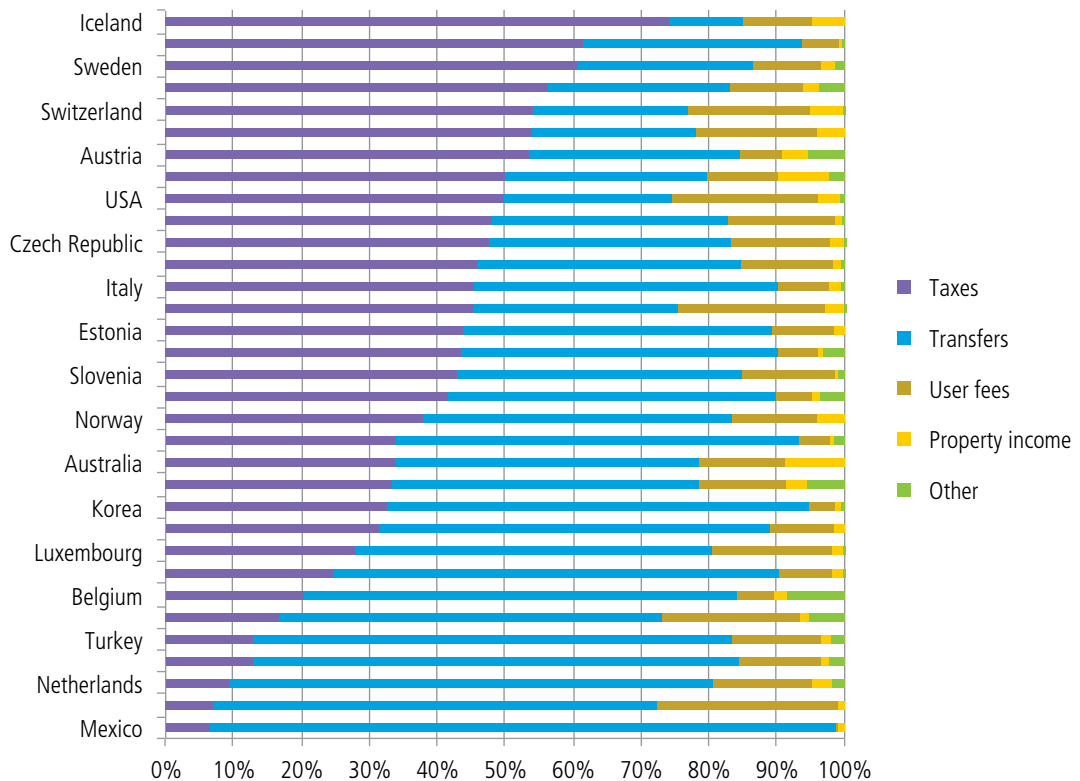
The autonomy to grow and mobilize the various classes of non-tax own-source revenues described in Table 1, and others, often depends upon a particular municipality's experience with the twin processes of urbanization and fiscal decentralization. For instance, does the legal enabling framework authorize local governments to mobilize various types of non-tax own-source revenues? Where enabling

authority is present, does the municipality have autonomy to implement, control, and manage the administration of the non-tax own-source revenue base? When a local government is tasked with new expenditure requirements, is there a parallel devolution of financial resources to support the expenditures via the mobilization of non-tax own-source revenues?¹³ Answers to these questions depend on

the jurisdiction's particular enabling legal framework, the political context, the structure of fiscal governance established vis-à-vis higher levels of government (e.g., national, state, and provincial), and the extent to which fiscal decentralization is in an ongoing and progressive state of reform. Additionally, jurisdictional size and composition may also be a factor that impacts own-source revenue mobilization and fiscal capacity. Commentators have observed that, in some instances, large cities and metropolitan areas often have greater fiscal capacity resulting from their ability to levy, collect, and administer own-source revenues to cover expenditure mandates.¹⁴

As a result, there is a wide range of variability across governments in the use of and reliance on non-tax own-source revenues (when compared with revenues raised by taxation and intergovernmental transfers), as illustrated in Figure A.

Figure A. Source of subnational government revenues in OECD countries, 2012



Source: Adapted from OECD, *Regions at a Glance 2013* (Paris, OECD, 2013). Available from http://www.oecd-ilibrary.org/sites/reg_glance-2013-en/04/01/index.html?contentType=&itemId=%2Fcontent%2Fchapter%2Freg_glance-2013-27-

Evaluating non-tax own-source revenues

Each class and type of non-tax own-source revenues carries different strategic considerations that are important to evaluate when framing policy recommendations.¹⁵ At present, among the most widely used types are user charges and fees related to government services.¹⁶ User charges are most appropriate for public goods and services such as public transit, water, sanitation, tolls (as described in Case Study 1), and others where the majority of the benefits of the particular good or service are confined to the consumer.¹⁷

Proponents of the “benefit principle” support the idea that a citizen who benefits from a government service should pay for it. Charges and fees are often determined based on the quantity consumed. This provides local governments an indication of service needs and therefore allows local officials to maximize efficiency by proactively matching supply and demand.¹⁸ Additionally, when effectively implemented, user charges and fees provide information to consumers about how much public goods and services cost, thereby enhancing the efficient allocation of services and achieving pricing transparency. This can produce an added benefit of boosting fiscal transparency and local government accountability, ultimately resulting in more effective and responsive government entities.

However, an additional important consideration is the potential for charges and fees to disproportionately impact the citizens least able to pay, particularly low-income citizens.¹⁹ This concern is magnified in the context of essential government services, such as water, sewer, sanitation services, and others. This gives rise to the important question of whether the provision of these goods and services should have a

redistributive focus, or whether it should instead be guided by cost-based principles (including marginal cost pricing and others focused on efficiency).²⁰

Civic engagement dynamics can also potentially play a role in the success of non-tax own-source revenue frameworks that are reliant on charges and fees, particularly where there is a visible disagreement between governments and citizens with respect to the price citizens pay for public services. This dynamic can deter the establishment of a “users-pay” culture, which can be necessary for non-tax own-source revenue frameworks to succeed from an administrative and collections standpoint. This dynamic is particularly visible in the widespread resistance to the payment of user fees within the impoverished segments of some countries’ urban populations.²¹

The political climate surrounding a particular public-service pricing regime, as well as the regime’s perceived legitimacy, can also impact the strength of a charges and fees framework.²² In some jurisdictions, a user charge can help support services that would otherwise be financed in a general fund and shift the funding of those activities to a self-supporting enterprise fund. Scholars have commented on this phenomenon, observing that

“municipalities facing financial and political obstacles often use the fee-supported service model for many of their public services outside of the tax-supported general fund services, because fee-supported services charge customers, not the community as a whole, and possibly generate profits. ... Since a user charge is a market-like financing which shifts general fund activities to fee-supported enterprise fund activities, the usage of user fee-supported goods and services has become a popular strategic effort for cities.”²³

Revenues generated from government-owned assets are another important, and often underutilized, source of non-tax own-source revenues—one that carries unique strategic considerations. While these revenues can be particularly useful for financing local infrastructure and other important investments, it is important to consider the revenue generation capacity of each asset.²⁴ Equally important is the consideration of any constraints and of the sustainability corresponding to the asset, particularly where naturally occurring resources (oil, gas, minerals, etc.) are harvested.²⁵

Some classes of non-tax own-source revenues from government-owned assets—such as PILOTs—may be limited if they can only be generated from certain discrete institutional actors. PILOTs, as noted in Table 1, have emerged as voluntary payments made by private non-profits and other tax-exempt entities. For municipalities that rely heavily on property taxes, or are working to strengthen their local property tax base, PILOTs may become an important source of non-tax revenue. In recent years, they have gained popularity in Canada and the United States, where several cities—including Boston, Philadelphia, Baltimore, and Pittsburgh—have begun collecting PILOTs. Given that PILOTs are voluntary, municipalities that collect PILOTs have developed a number of incentives to encourage non-profits and other tax-exempt entities to participate. For example, “non-profits may agree to make PILOTs because they realize that they share an interest in the fiscal health of the local government.”²⁶ In other instances, non-profits agree to PILOTs because they depend on public goods and services and on the cooperation of municipal authorities in granting building permits and zoning changes. PILOTs thus constitute a new and potentially strong revenue stream from this discrete user base.²⁷

Betterment levies, or special assessments, also harness the value of land as an asset, but the application of revenues resulting from such sources can carry some limitations. A typical betterment levy is imposed by a government on the owners of a select group of properties. It is used to either entirely or partially fund the cost of a specific improvement or service that benefits the public (generally) and confers a special benefit upon the owners of certain specific properties.²⁸ The enabling legal framework in some jurisdictions—for example, Colombia—provides for the consideration of “benefit factors” when calculating and assessing the levy, and can include defining a “virtual area” and using select factors to determine which entities benefit within the designated physical area.



Public space in Medellín, Colombia © Eduardo Feuerhake

Developing a checklist of best practices for expanding and harnessing non-tax own-source revenues

As noted previously, city leaders' ability to harness non-tax own-source revenues can depend on the enabling legal framework that establishes the system of fiscal governance; the degree of fiscal, administrative, and public sector decentralization; the political climate and history; and relations with higher levels of government. Accordingly, policy reform in this realm should begin with an evaluation of these elements to chart a tenable and politically feasible path forward. The following checklist can guide city leaders who are considering reform in a wide range of global socio-political contexts. It is followed by expanded recommendations and best practices related to each item.

- First, determine the areas where policy reform is necessary. Focus on policies aimed at achieving revenue sufficiency, supporting the sound operations of government, and meeting citizen needs.
- Second, evaluate how, and whether, policy reform can enhance the local government's ability to use non-tax own-source revenues to help support infrastructure investments (which typically require large-scale capital raised via external financing mechanisms, including debt, land-based financing tools, and public-private partnerships).²⁹
- Third, create a technical roadmap to carry out the desired policy reforms.
- Fourth, identify ways to build the local government's technical capacity to implement the desired reforms, as well as future reforms.

First, to determine the areas ripe for policy

reform, a city leader must first clearly articulate the goals of reform (e.g., revenue sufficiency, supporting the sound operation of government, or meeting citizen needs) and assess the current framework. Next, city leaders should examine the current presence and function of each type of non-tax own-source revenue currently used by the municipal government. It may then be prudent to evaluate current and past trends in collection rates, and compare these with the costs of collecting each type of revenue, among other factors. This will assist in evaluating the extent to which the existing non-tax own-source revenue framework generates the funds necessary to finance service delivery and the day-to-day operations of government.

Key questions to ask in this regard include: Should user charges or benefit charges be structured to support cost recovery, especially in the cases of transportation and public utilities? Should certain user charges that form the financial backbone of public enterprises evolve to support the delivery of urban services on an area-wide basis? If so, this will require an understanding of current expenditure needs (relating to both capital and government operations) and forecasted needs (informed by projections of population growth, externalities, and other factors). This process can identify potential gaps in funding and also evaluate the efficiency of the current revenue collection system. This can be measured by a number of criteria, including "cost of collection" ratios that provide insight into how efficiently revenue is collected.³⁰

Second, when evaluating the scope of reform, city leaders may want to consider how non-tax own-source revenues can enhance access to, and use of, financial instruments to fund major infra-

structure investments. Many local governments cannot fund large infrastructure projects via “pay-as-you-go” funding from current revenues and must resort to loans, debt, public–private partnerships, or land-based financing instruments.³¹ As a result, a strong base of non-tax own-source revenues can position a municipal government to leverage several of these financial tools.

For example, a municipality can expand the base of capital for water and sewer projects via issuance of municipal revenue bonds supported by local water and sewer fees.³² Municipal revenue bonds are bonds funded from a specific revenue source. They allow municipalities to dedicate discrete streams of revenues to support multi-year borrowings that produce capital for infrastructure investment.³³ To pay principal and interest on the bonds, such borrowings require a pledge of specific assessments and charges—in this case, those related to water and sewer services.

It is important to note that debt finance is not an additional source of revenue—it is a mechanism for raising large-scale capital by dedicating current and future revenues to debt service payments.³⁴ The local government seeking to expand use of debt instruments should consider reforms to the pricing regime of the dedicated revenue source pledged to support revenue bonds (i.e., water fee, sewer assessments, tolls, etc.) and ensure that such revenue streams are not inhibited by any superior claims on the assessments, as well as other factors.³⁵ (See Case Study 2 for an illustration of the intersection of these principles in the context of municipal bonds.)

Third, once priority areas for reform have been identified, city leaders should attempt to create the technical roadmap that will guide the implementation of the desired reforms. The path to reform begins by answering certain foundational questions that include: What changes are necessary to the legal framework governing the jurisdiction? Is a constitutional or statutory change required? To support reform, should the level of decentralization present in the jurisdiction be re-examined or changed? What role do higher-level governments play in ensuring reform is successful? Is the political will to implement reform present?

Finally, an important component of the implementation process is supporting city leaders charged with administering new and existing programs or policies by providing avenues for technical capacity building. Significant impediments to the harnessing of non-tax own-source revenues can include the burden and costs of administration, collection, and enforcement of the user fees (or related fines), particularly where institutional capacity is low and relevant training for local officials charged with implementation is absent.³⁶ Areas of capacity building can include reforms to improve revenue administration, assessment, and collection; and introducing means-testing to make revenue generation more progressive, while retaining a high level of revenues. An integrated plan for technical capacity building that is aligned with broader financial management principles can help local government officials steward resources effectively so they can meet their short- and long-term financial and operational obligations—and do so with accountability.³⁷

Conclusion

The various types of non-tax own-source revenues have their respective pros and cons. However, they can form an important part of the municipal revenue base and enhance the provision and quality of public goods and services. They can also provide an important diversification of the revenue base, contributing to improved municipal fiscal health and creating a foundation for fiscal autonomy. Irrespective of the type of non-tax own-source revenue deployed, be it a user charge or rent collected from a local government-owned asset, municipalities must have the appropriate legal, regulatory, and administrative framework in place to enable revenue mobilization.

To maximize sustainability and ensure prolonged success, it is particularly important that the administrative framework for each non-tax own-source revenue stream takes into account the specific strategic considerations unique to each type of revenue. Furthermore, it is important to acknowledge that not all non-tax own-source revenues are sustain-

able streams of municipal revenue, particularly those emanating from government assets (e.g., rent collected from natural resource extraction). Harmful externalities can result if such considerations are not properly evaluated and balanced. Additionally, in the context of user charges and fees, establishing pricing regimes in ways that balance the considerations discussed earlier in this chapter, including the needs of the population and cost of service delivery, is essential to maximize efficiency and the likelihood of a strong “users-pay” culture.

Where these and other conditions are present, it is also imperative that municipal leaders have appropriate technical capacity to manage and mobilize the non-tax own-source revenue instruments available to them, in accordance with the prevailing laws and regulations. A promising area for policy reform is enhancing this technical capacity so as to improve administration, collection, efficiency, and accountability, in alignment with the municipality’s goals.

Case Study 1: Tolling system in South Africa

The growing popularity of user fees, specifically tolling systems, reflects efforts to broaden non-tax revenue bases. Tolling systems are now in use in countries such as Lesotho, Mozambique, and the United States. These systems require users of roads to pay tolls (fees) in exchange for the infrastructure’s use. This can be an effective means of mobilizing non-tax own-source revenues to finance both the maintenance and construction of local and regional transportation infrastructure. Moreover, tolling

systems and user charges in general have the added bonus of pushing consumers towards the optimal level of consumption. This in turn provides the necessary information governments need to make efficient decisions regarding the provision of transportation infrastructure.³⁸

The history of toll roads in South Africa dates as far back as 1700, when the governor of the Cape Colony collected tolls to fund road repairs.

Currently, toll roads in South Africa are run by a state agency called the South African National Roads Agency Limited (SANRAL). SANRAL is responsible for managing the Republic of South Africa's road system and taking charge of the development, maintenance, and rehabilitation of national roads. However, SANRAL does not operate tollgates; tolls are collected by contracted private companies that have appropriate technology, infrastructure, and human capital to operate tollgates on SANRAL's behalf.

In total, there are 51 tollgates located throughout South Africa, which, since 2015, have generated enough revenue to finance the construction of 584 kilometres of additional lanes and 47 new bridges, widen 134 existing bridge structures, and provide 186 kilometres of lighting and 127 kilometres of concrete median barriers. Overall more than 64 per cent of the country's road infrastructure has been renovated solely using toll funds, and toll funds have entirely funded the construction of new roads.

Despite public protests, in 2011 SANRAL introduced an urban tolling system in major cities such as Johannesburg and Cape Town. At the time, many claimed that urban tolling would significantly increase the cost of transportation in cities, particularly affecting lower- and middle-income families. However, in Johannesburg, for instance, urban tolling has not considerably increased the cost of transportation. Commuters who travel by public transport are exempt from tolls, provided such vehicles have an account with SANRAL. In contrast, those with private vehicles pay an affordable capped

monthly rate, with light vehicle owners paying just US\$0.02 per kilometre. Urban tolls have also generally reduced travel times and congestion, resulting in lowered greenhouse gas emissions and substantial savings on vehicle running costs; the tolling system in Johannesburg has cut time on the road by as much as 50 per cent. Furthermore, urban tolls have proven efficient, as only 17 per cent of the collected toll revenue goes towards collection costs. The remaining balance is allocated to the initial capital costs of road upgrades, road maintenance, interest payable on debt, and other operational costs.

Overall, the tolling system in South Africa is an effective source of non-tax own-source revenue and serves as a successful example of mobilizing such revenues to finance and maintain local and national infrastructure.



BRT station in Johannesburg, South Africa © Flickr/AfricanGoals2010

Case Study 2: Municipal bonds supported by non-tax own-source revenues

Cities face increasingly complex responsibilities, complicated by chronically insufficient funding to meet local needs.³⁹ In Latin America, Africa, and the United States, municipal governments are using project revenue bonds and general obligation bonds with greater frequency as a source of infrastructure financing, particularly when private capital is needed to close multi-billion-dollar shortfalls in spending for needed infrastructure.⁴⁰ Debt financing is feasible only where municipalities have the ability to service their debt from own-source revenues in a sustainable manner and where a robust enabling regulatory framework for municipal borrowing is in place.⁴¹ The City of Dakar illustrates how one municipality adopted a comprehensive strategy to enhance its credit profile and build a sustainable revenue base that will position it to potentially leverage municipal securities to raise capital for infrastructure investment.

In 2011, the City of Dakar launched the Dakar Municipal Finance Program (DMFP) to begin to strategically position itself as a creditworthy issuer that could attract funding from investors in regional capital markets.⁴² Proceeds from municipal borrowing were expected to be in the range of approximately CFA20 billion/US\$40 million, and would have enabled the municipality to finance a large market that would benefit the economically active poor.⁴³ Specifically, the financing would provide for the relocation of city markets currently located in informal commerce zones, such as sidewalks and roadways, to a central market that will be constructed to accom-

modate and improve the livelihoods of approximately 3,000 vendors.⁴⁴

To position itself to raise capital from investors, Dakar had to take several steps. In most African countries where subnational entities are allowed to borrow, they face significant challenges establishing creditworthiness due to limited cash flows, lack of debt management experience, and other factors.⁴⁵ Dakar faced several challenges in this regard, including self-generated income and resources that were considered small, as well as a budget substantially dependent on a central government and limited technical capacity.⁴⁶ From 2008 to 2012, the city increased its own revenues by almost 40 per cent, mostly from advertising billboard fees.⁴⁷ The city accomplished this despite challenges posed by low levels of fiscal decentralization; the city had control over less than 10 per cent of its total revenues. The city also established a Department of Planning and Sustainable Development capable of demonstrating that Dakar had a credible development strategy.⁴⁸ Additionally, the city augmented its technical capacity by partnering with a number of institutions—including The Bill and Melinda Gates Foundation (managed by the Cities Alliance Initiative), USAID, the Public-Private Infrastructure Advisory Facility (PPIAF), and the French Development Agency (Afd)—to create a comprehensive program that included rigorous fiscal training and that developed detailed assessments of potential investment projects.⁴⁹ It also institutionalized a participatory process that gave voice to the urban

poor population, a critically important user base of the project that was to be funded.⁵⁰

Following a significant improvement in the city's finances and fiscal management, the City of Dakar was awarded its first investment-grade credit rating of BBB+ in 2013 by Bloomfield Investment.⁵¹ Although an inaugural planned bond issue has not yet been brought to market, Dakar's Municipal Finance Program demonstrates the importance of addressing institutional and structural issues that impact revenues and municipal fiscal health. It also highlights the importance of developing technical capacity programs to position cities to leverage their revenue base and to use financial instruments.⁵²

A recent World Bank, AfD, and Cities Alliance report estimates Africa's yearly municipal finance gap, an indicator of the magnitude of investment needed to sustain growth, is approximately US\$25 billion, and estimates African local government investment capacity at only US\$10 billion over 10 years.⁵³ In this context, the City of Dakar's approach to establishing a creditworthy profile, and to achieving revenue diversity to support future debt service, will likely be followed closely by cities in Africa and other developing regions that want to mobilize project revenue debt and similar financial instruments to raise scale capital from investors.⁵⁴



A view of Dakar, Senegal © Flickr/Jeff Attaway

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Gonguptop Rotary in Ulsan, South Korea © Flickr_Scott Rotzoll

05

Green Municipal Bonds

Introduction

The rapid growth of the market for green bonds—the proceeds of which are used to finance projects that will improve the environment—has sparked interest among stakeholders worldwide. Municipalities, cities, and state-owned utility companies have begun to emerge as strategic issuers of green bonds in the United States, Europe, and South Africa. The growth in green bonds comes amid greater awareness of climate change and expanding investor appetite for environmentally friendly investment products. Green municipal bonds are an important area for future growth as cities and other sub-national entities look to low-cost and long-term sources of capital to finance climate mitigation and adaptation infrastructure requirements.

This chapter explains what green municipal bonds are, describes the growth and composition of the green municipal bond market, examines

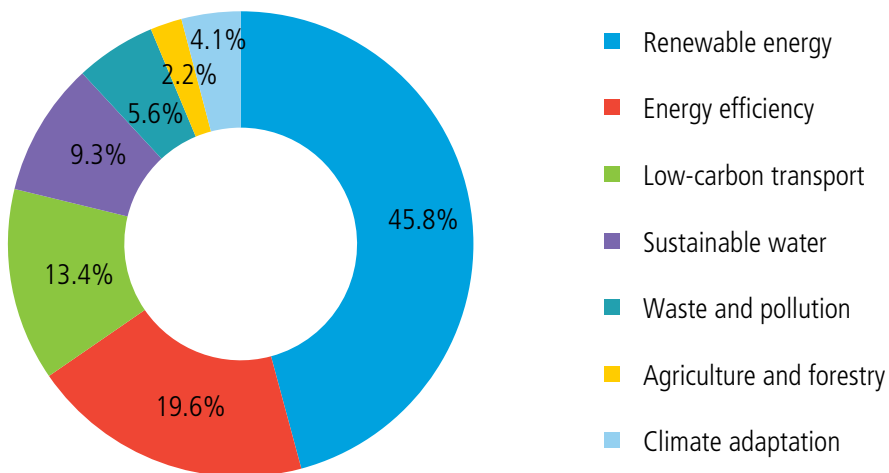
the benefits of issuing green bonds, details the challenges facing the green municipal bond market, lays out how to issue a green bond, and assesses the key considerations for green municipal bond issuers, especially in emerging economies.

What are green municipal bonds?

A green municipal bond is a fixed-income financial instrument for raising capital through the debt capital market. As with any other bond, the bond issuer raises a fixed amount of capital from investors over an established period of time (the “maturity”), repays the capital (the “principal”) when the bond matures, and pays an agreed-upon amount of interest (“coupons”) during that time.

The key difference between a green bond and a regular bond is that the former is explicitly labelled as “green” by the issuer, and a commitment is made to use the proceeds of the green bond to exclusively finance or re-finance projects with an environmental benefit. Eligible projects include, but are not limited to, renewable energy, energy efficiency, sustainable waste management, sustainable land use, biodiversity conservation, clean transportation, clean water, and various climate adaptation projects (see Figure A).

Figure A: Green bond proceeds have been used for a variety of green projects (2015 green bond proceeds)



Source: Climate Bonds Initiative

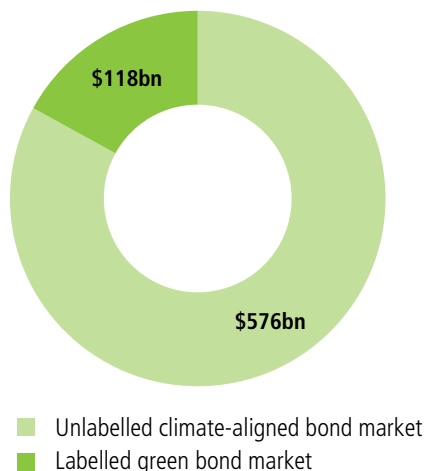
Except for the above-mentioned difference, green municipal bonds are similar to regular bonds and to date have been largely identical in structure, risk, and return to regular bonds.

There is also the need to differentiate labelled green bonds from the unlabelled green bond market. Unlabelled green bonds are those that are not explicitly marketed and branded as green but nonetheless help finance projects that provide environmental benefits. The labelled green bond market is valued at US\$118 billion and is small relative to the larger universe of bonds financing climate-aligned assets that do not carry a green label, which is valued at US\$576 billion (see Figure B).¹

Green bonds can be categorized into four types (see Table 1). The majority of green bonds issued are green general obligation bonds backed by the issuer’s entire balance sheet. The other types are

green revenue bonds, green project bonds, and green securitized bonds.

Figure B: Labelled green bonds account for 17 per cent of climate-aligned bond universe



Source: Climate Bonds Initiative

Table 1: Types of green municipal bonds

Type	Use of proceeds	Debt recourse	Example
General obligation bond	Earmarked for green projects	Full recourse to the issuer; same credit rating applies as to the issuer’s other bonds	City of Johannesburg issued a US\$143 million general obligation bond in June 2014. The 10-year bond was rated BBB, based on the rating of Johannesburg as an issuer.
Revenue bond	Earmarked for green projects	Revenue streams from the issuer, such as taxes or user fees, provide repayment for the bond	Arizona State University issued US\$182.6 million of green revenue U.S. muni bonds in April 2015. The issuance was backed by the university’s revenues, including student tuition and fees and facilities revenues, instead of the full balance sheet of the university.
Project bond	Ring-fenced for the specific underlying green project(s)	Recourse is only to the project’s assets and revenue	No issuance seen in the market yet
Securitized bond	Either (1) earmarked for green projects or (2) go directly into the underlying green projects	Recourse is to a group of financial assets that have been grouped together as collateral	Hawaii state government issued US\$150 million, AAA-rated green asset-backed securities in November 2014. The bonds were backed by a Green Infrastructure Fee applied to the bills of the state utility’s electricity customers. The securities were issued in two tranches: US\$50 million, 8-year, 1.467 per cent coupon, and US\$100 million, 17-year, 3.242 per cent coupon.

Source: Adapted from Climate Bonds Initiative

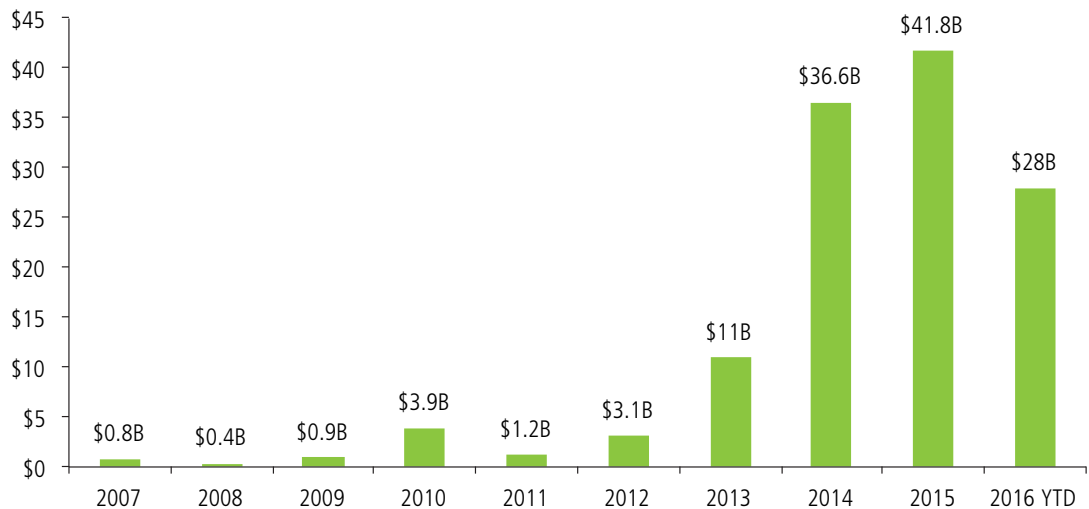
What is the growth trend and composition of the green municipal bond market?

While still a developing market, green municipal bond issuance has grown rapidly since 2013. According to the Climate Bonds Initiative, the global green bond market reached an all-time high of US\$41.8 billion in 2015, with new offerings in France, Sweden, Germany, China, and India (see Figure C). While this represented a 13 per cent increase from the US\$36.6 billion sold in 2014, it was a much slower increase than the roughly 220

per cent growth from 2013 to 2014. Over USD\$28 billion have been issued up to the end of May 2016.² Of last year's US\$41.8 billion of green bond issues, over US\$5 billion came from regional governments or municipalities, making this the third-largest category of issuer after development banks and corporations.³ According to Bloomberg, U.S. state and local governments have issued US\$7.5 billion of green-labelled bonds since 2010, with a record issuance of US\$3.8 billion in 2015—a 55 per cent increase over 2014 (see Figure D).⁴

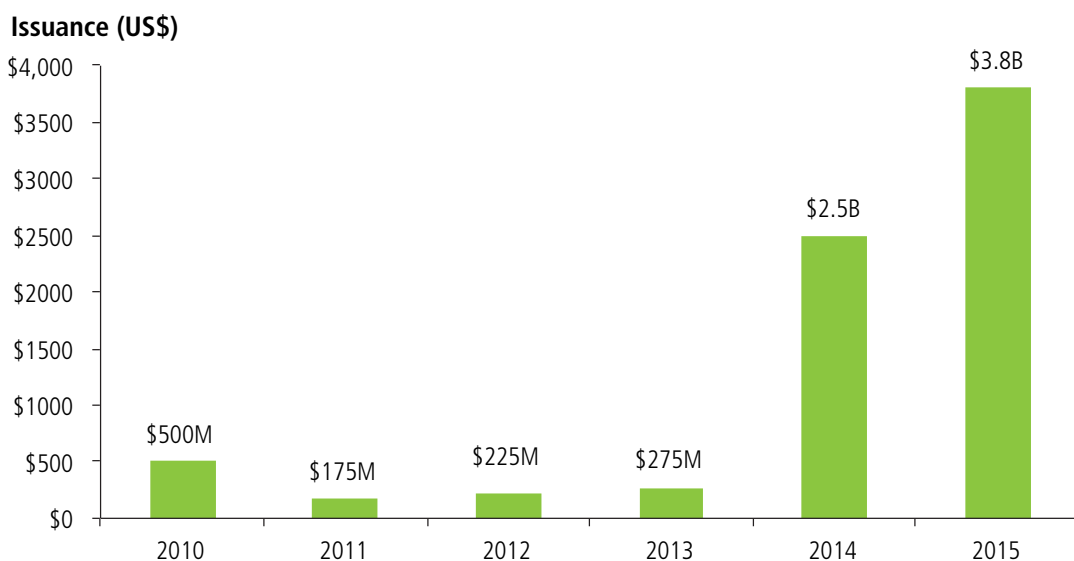
Figure C: The global green bond market continues to grow

US\$ in billions



Source: Climate Bonds Initiative

Figure D: Issuance of green municipal bonds in the United States has soared



Source: Bloomberg

The bulk of green municipal bond issuance continues to be in the United States and Europe. The first green municipal bond was issued in the United States by the State of Massachusetts in June 2013. Proceeds from the sale were earmarked to finance the state's Accelerated Energy Program, which aims to reduce energy consumption by 20 to 25 per cent at over 700 sites across the state.⁵ The District of Columbia Water and Sewer Authority (DC Water) has been another active participant in the green bond market over the past few years. DC Water first entered the market in July 2014 with a US\$350 million taxable fixed-rate green bond with a 100-year final maturity—making it the first U.S. municipal water/wastewater utility to issue a century bond and the first U.S. green bond issuance to include an independent second-party opinion.⁶ Since then, a number of other U.S. states and municipalities including Indiana, Iowa, and Chicago have issued green water bonds.

European cities and municipalities have also been issuing green bonds. After Ile-de-France and Gothenburg entered the market in 2012 and 2013, respectively, Europe has seen a steady growth in green municipal bonds, with repeat issuances and new entrants.⁷

Emerging markets are also expected to play an important role in issuing green municipal bonds. June 2014 saw the first emerging market green municipal bond, when Johannesburg issued a US\$136 million green bond (see Case Study 1). India and China are also witnessing rapid growth in the green bond market. In India, the first corporate green bond emerged from Yes Bank in February 2015 to finance renewable energy projects, followed by the Export Import Bank of India issuing a larger US\$500 million green bond to finance transport and renewable energy projects. China plans to grow a large, regulated green bond market. In April

2015, China's central bank announced ambitious proposals that cover the development of green definitions, an evaluation system for allocation of funds and environmental impacts of green bonds, tax incentives, preferential risk weighting in bank capital requirements, and fast track issuance of green bonds.⁸

While green municipal bonds account for a very small share of the broader \$3.7 trillion bond market, this market is expected to grow as issuers look to diversify their buyer base and appeal to the expanding investor class using environmental, social, and governance criteria to screen their investments ("ESG investors"). Investor demand for sustainable debt is a key factor driving the growth of the green bond market. Mission driven, institutional investors are increasingly seeking to combine financial and environmental goals into their decision-making and, in the process, embracing green bonds. In December 2014, an investor statement to support the green bond market was signed by asset owners and fund managers with a combined US\$2.62 trillion in assets under management.⁹ There are other indicators too of the strong investor appetite for green bonds, as evidenced in a high level of over-subscription. For instance, Massachusetts's first US\$100 million green bond was over-subscribed by 30 per cent and its second green bond issuance by 185 per cent.¹⁰

Growing global awareness of climate change risks and desire to invest in environmentally friendly projects and assets will further fuel the development of this burgeoning segment of the fixed-income market. The growing need for energy efficient and clean technologies globally, especially in emerging economies, will help drive issuance going forward.

What are the benefits of issuing a green bond?

Most cities have a pipeline of projects they are seeking to finance in the areas of water, waste, transit, land use, and energy. Green bonds offer municipal governments the opportunity to raise large-scale capital to invest in sustainable infrastructure and services in these sectors in accordance with the Green Bond Principles—voluntary guidelines developed by a group of banks in early 2014 that recommend transparency, integrity, and disclosure in the development of the green bond market. The instrument is relatively straightforward for cities with experience issuing bonds and can offer additional benefits relative to regular municipal bonds.¹¹ Green bonds are useful for:

- **Growing or diversifying the investor base.** By issuing a green bond, municipalities have attracted investors who do not typically buy municipal bonds, including environmental, social, and governance (ESG) investors and institutional investors. For example, ESG investors purchased US\$100 million of the US\$350 million green bond issuance by DC Water in 2014, and the chief financial officer of DC Water stated this would not have occurred with a regular, non-green bond.¹² Investors who have signed up to ESG investment principles under the United Nations Principles for Responsible Investment are estimated to manage US\$45 trillion in assets, and green bonds can help cities attract this investor class.¹³
- **Generating greater cross-agency collaboration.** The process of structuring and issuing a green bond can also promote cross-agency cooperation within a city by bringing together departments responsible for finance, sustainability, infrastructure, and planning. Cities

like Johannesburg have reported this as a key benefit, helping to break down information silos and promoting greater teamwork across different areas of government.

- **Publicly promoting a commitment to sustainable development.** Green bonds can also help cities send a strong, public signal regarding their commitment to sustainable development, with green bond issuances commonly reported in online and print media. Johannesburg received international sustainability awards and considerable positive media coverage for its 2014 green bond issuance (see Case Study 1). Some municipal issuers have also generated awareness and engagement among their citizens by making the green bonds available for purchase by retail investors. For example, retail investors purchased an unprecedented US\$260 million of the US\$350 million Commonwealth of Massachusetts green bond in September 2014.¹⁴
- **Leveraging demand to achieve better bond terms.** The demand for green bonds currently outstrips supply, and green bond issuances are regularly oversubscribed. The issuer can try to leverage this demand to seek more favourable terms. Some issuers have achieved a better price (cheaper debt) through green bonds, though most green bonds have a similar price to their “non-green” equivalents. There is also anecdotal evidence to suggest that green bond investors may be willing to accept a longer term to maturity (i.e., a later principal repayment date). A good example of this is the \$350 million 100-year bond issued by DC Water in 2014 to fund construction of a stormwater and sewage tunnel to a treatment plant to reduce sewage overflows to waterways. DC Water was also able to increase the size of the issuance and the price, reducing the interest payable by 15 basis points (or 0.15 per cent).¹⁵

What are the challenges facing the green municipal bond market?

The remarkable growth of the green bond market—including green municipal bonds—has not come without a number of challenges, many of which are still to be resolved. The future growth of the green bond market hinges on many factors. This includes policy and regulatory frameworks that create demand for green projects, as well as future market conditions, such as interest rate development and the credit cycle.¹⁶ These conditions will vary across jurisdictions and geographies.

Key challenges facing this market include:

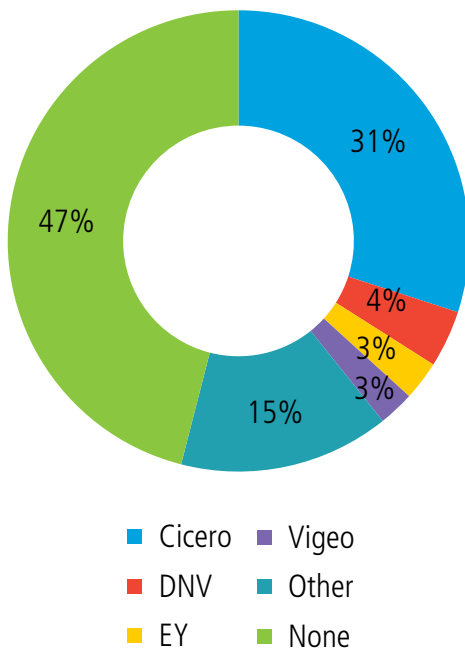
- **Lack of commonly accepted green standards.** The absence of clear and widely accepted guidelines around what is green has given rise to concerns about a risk of “greenwashing,” where bond proceeds are allocated to projects and assets that have little or dubious environmental value.¹⁷ The lack of commonly accepted standards means investors and governments can incur significant transaction costs in evaluating the environmental credentials of labelled green bonds. In addition, there is also a wide range of technology and infrastructure whose green credentials are in doubt, such as nuclear power, natural gas extraction and generation, and biofuels.

For the green bond market to grow, a more standardized approach to defining what is “green” is necessary. Investors must be able to discern what they are buying, compare products, and ensure that products meet their financial and environmental investment goals and mandates.

In response to this challenge, a significant amount of market-led effort has gone into

shaping and cultivating green standards and definitions, as well as promoting external review of the environmental credentials of a green bond issuance. External review has yet to become common practice, with about half of the green bonds issued in 2015 and the first six months of 2016 obtaining second opinions (see Figure E).

Figure E: Only half of labelled green bonds have obtained independent review (2015–June 2016)



Source: Climate Bonds Initiative

Currently, the main tools in the market to address the issue of definitions and standards for green bonds are the Green Bond Principles and the Climate Bonds Standard and Certification Scheme. Municipal green bond issuers can provide greater confidence to investors on the green credentials of their bonds by adhering to the Green Bond Principles, meeting relevant Climate Bond Standards, seeking independent

verification, acquiring a green bond rating, or undergoing formal certification of the planned issuance. These options are discussed in more detail later in this chapter.

- **Reporting of the “use of proceeds.”** For the green bond market to have long-term credibility, investors and other stakeholders need to know that the projects funded have delivered the intended environmental benefits. Shortcomings in the disclosure of information about the use of proceeds can be, to some extent, alleviated by the guidelines set out in the Green Bond Principles. However, these are voluntary guidelines and do not currently spell out requirements for the type and nature of reporting. More detailed guidance on reporting has been developed by leading international financial institutions and is discussed later in this chapter.

While green bonds have so far been successful with voluntary reporting mechanisms, as the market grows, transparency in the reporting of the “use of proceeds” will become a key issue.

- **Limited bankable green projects and robust project pipelines.** Another challenge facing green bond issuance is a lack of bankable green projects, especially in emerging markets, that can be financed through the bond market.¹⁸ The development of a robust pipeline of green projects has been hampered by lack of prioritization of green projects by governments, around which private sector sponsors and investors could then be mobilized. Investors, for their part, are less likely to devote resources to develop capacities required to invest in this space if they perceive that there is a limited number of investable green projects. This creates a vicious cycle because with limited investor capabilities, governments also become less certain that they will be investors ready to provide capital for the green projects they are developing.

Many cities have projects that could be eligible for green bonds that they have previously funded through vanilla bonds, including mass transit and water projects. New projects will also emerge through the Compact of Mayors, Habitat III, and other international and domestic initiatives where cities are making significant climate change and sustainable development commitments, which will help to grow the pipeline of projects eligible for green bonds. Additionally, project preparation support is increasing through initiatives like the C40 Cities Finance Facility to develop a pipeline of green, bankable projects.

- **Small-scale projects and lack of aggregation mechanisms.** A significant challenge in scaling up the green bond market is the lack of aggregation mechanisms such as asset-backed securities and covered bonds.¹⁹ Without suitable aggregation mechanisms, the typical small-scale green projects can find it difficult to tap into the bond market. In developed bond markets, investors generally look for issuance sizes of US\$200 million and above, preferably US\$1 billion deals, while in emerging markets smaller sizes of US\$100 million are acceptable. Most renewable energy and energy efficiency projects are much smaller than this.

Currently barriers exist that prevent governments and private market actors from using aggregation mechanisms at scale. The development of securitization and covered bond markets for any asset requires the creation of a sufficient pipeline of underlying assets and standardization of the underlying asset. In emerging economies, the challenge is further complicated by the fact that legal frameworks have to be created to enable asset-backed securities and covered bonds as financial instruments.

New aggregators are expected to emerge if there are suitable market or government incentives. For

example, aggregators may enter the market to act as an intermediary between projects and bond investors to aggregate, manage, and underwrite renewable energy or energy efficiency projects in the presence of high energy prices where there are favorable project payback periods.²⁰

- **Low credit ratings for potential green bond issuers and green projects, especially in emerging economies.**²¹ In addition to aggregation challenges, green bonds are often not as competitive on risk–return as other similar projects in more established sectors such as oil and gas. For the green bond market to take off, the risk–return of green bonds must be as attractive to institutional investors as non-green bonds. However, the green bond market is still in early stages of development, with unknown risks associated with new technologies, which make green projects potentially higher risk from the investor perspective. Furthermore, even though green general obligation bonds—where the risk–return of the bond is independent of the risk associated with the green project and the credit risk is based on the full balance sheet of the issuer—make up the majority of the market to date, it can be challenging to achieve a sufficiently high credit rating for green municipal bond issuers in emerging markets. The World Bank and others are working with municipal governments to help improve their creditworthiness, but more support is needed to scale up these efforts.
- **Underdeveloped bond markets in emerging economies.** Weak and underdeveloped bond markets in emerging economies can slow the pace of green bond growth. Except for select larger emerging economies such as China, India, and Malaysia, the bond market in the remaining developing countries is often very small, with access limited to a small range of participants. These capacity constraints of the local

bond market can determine how far and fast the green bond market can grow in emerging economies.

However, the development of the general bond market and the green bond market can happen in parallel and can even be mutually reinforcing. Emerging economies can identify their green infrastructure needs early on as key regulations guiding the development of their bond market are put into place. At the same time, green infrastructure players can form a part of the issuer base, growing the overall bond market. In short, the development of green bonds can allow emerging economies to hit two birds with one stone—facilitate investment in climate-friendly projects and enable the growth of a robust domestic debt capital market.

In short, for all the benefits provided by green bonds in financing low carbon and climate resilient projects, the market is not without its own risks and challenges. All of these challenges need to be addressed if the market is to build credibility and continue its rapid growth.



Kuala Lumpur skyline, Malaysia © Flickr/Daniel Hoherd

How is a green municipal bond issued?

As the green municipal bond market grows, it is important that issuers understand the process of issuing green bonds before entering into a transaction. Generally speaking, issuing a green municipal bond involves five phases:²²

- **Identifying qualifying green projects and assets.** Municipalities, city governments, and states should first define the kind of green projects they seek to support with green bonds, while clearly stipulating that the proceeds from the green bond sale would be earmarked for green projects or assets.

Similar to the process of re-financing, proceeds of a green bond can be applied to existing assets, such as public transportation assets. For instance, a municipality can issue a green municipal bond to refinance an existing metro rail line project and use the funds to repay or increase the existing financing for the rail line. Proceeds can also be allocated to upcoming capital investment, though investors generally prefer that the funds are used within a reasonable period in order to achieve green impact in a timely manner.

The identification of qualifying projects and assets will entail close cooperation among different municipal agencies, such as the finance, transport, energy, or environmental departments. Establishing effective coordination among all stakeholders early on will save time and eliminate unnecessary confusion down the road.

Guidance about qualifying projects and assets can be obtained from the Green Bond Principles, which set out broad green asset categories, and the Climate Bond Standards Scheme, which sets

out more specific standards for what qualifies within these asset categories. It is important to note that these are all currently voluntary. It is, therefore, recommended that green municipal bond issuers apply the most rigorous and transparent approach they can to the selection of green criteria within the guidance and standards to promote environmental integrity of the green bond issuance and generate investor confidence.

- **Arranging independent review.** Issuers of green municipal bonds should use independent review to further increase investor confidence in funded projects. Ultimately green investors want to make sure that their investment is being used to support genuinely green projects. Independent reviewers look at the green credibility of the proposed green municipal bond investments and the processes established for tracking funds and for reporting. Independent reviewers can also help identify green projects and assets, and help set up a green bond framework for the issuer.

Independent reviews are funded by the issuer and are not a requirement. The cost depends on the firm conducting the review, the type of review undertaken, the complexity of the issuance, and other factors, but generally ranges from US\$10,000 to US\$50,000. The firms CICERO, Vigeo Rating, and DNV GL have undertaken the majority of independent reviews for green bonds to date.

Different independent review options are available that vary in terms of their rigor and level of assurance. Issuers can engage a consultant with climate expertise to undertake second-party consultation on eligible green projects and choose whether to make the results of the consultation public. A more rigorous approach involves engaging an expert consultant or auditor to verify the criteria and processes in

place for tracking proceeds, evaluating environmental outcomes, and preparing reports. The latter approach is generally conducted in line with professional standards such as the International Standard on Assurance Engagements 3000 (ISAE 3000) to ensure the integrity and independence of the review.²³

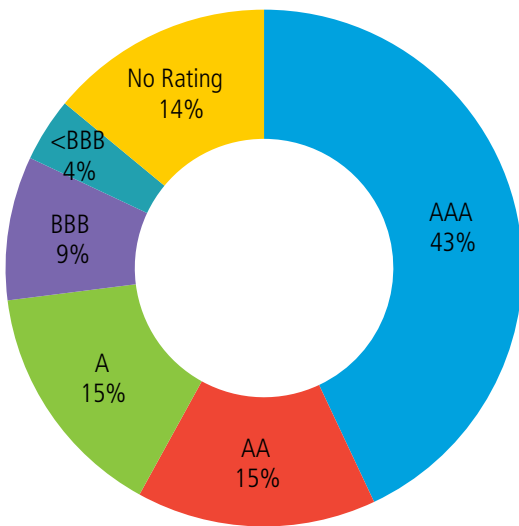
Issuers can go even further to verify and certify their bond against a set of climate bond standards available for solar, wind, geothermal, low carbon transport, and low carbon building projects and assets. The Climate Bond Standards Advisory Board oversees a certification system and verification process for potential municipal issuers.

- **Setting up tracking and reporting.** It is critically important that issuers of green municipal bonds always maintain full disclosure on the allocation of proceeds. A few key rules should be kept in mind: (1) Since the proceeds from green municipal bonds must be used only for specified projects, there should be systems in place to segregate green municipal bond proceeds and keep track of their use; (2) monitoring procedures must be set up to make sure proceeds are not placed in non-green investments throughout the life of the green bond; and (3) the nominal value of the pool of assets or projects must stay equal to or greater than the amount of the bond. Municipal issuers should be tracking all this and also be able to show how they are tracking; transparency is essential.

In this regard, green bond issuers should design monitoring and evaluation processes in advance, and implement key performance indicators and data collection systems to monitor environmental outcomes of projects over time. Issuers may also benefit from quantifying the environmental and social value created by their bonds in financial terms using one of the emerging quantification methodologies, such as KPMG True Value.²⁴

- **Issuing the green bond.** As with any conventional bond, issuers of green municipal bonds will follow the usual steps. They should first seek required issuance approval from regulators. Second, working with an investment bank or advisor, they should structure the bond. Any sort of structure, from vanilla bonds to asset-backed securities, can be used as long as proceeds are allocated to green projects or assets. Finally, they should market and price the green municipal bond. It should be noted that creditworthiness is judged the same as for other bonds. Issuers should expect to get credit rated in the usual manner. Currently 82 per cent of the labelled green bond market is investment grade (see Figure F).²⁵

Figure F: Investment grade green bond issuance dominates



Source: Climate Bonds Initiative

- **Reporting regularly.** To maintain the status of a green municipal bond, the issuer would need to provide confirmation to investors at least once a year that the funds are being used for qualifying green projects. The confirmation can take the form of either a public letter from the municipal auditor or a letter signed by an authorized officer of the municipal or city government. Confirmation should also include a brief report that sets out the current use of the green municipal bond proceeds as well as highlights the environmental impact to investors, shareholders, and other stakeholders.

Leading international financial institutions have created guidance for green bond issuers under the initiative “Working towards a harmonized framework for green bond impact reporting.”²⁶ The initiative developed a set of principles and recommendations for the reporting of green bond use of proceeds, and offered an example template for project-by-project reporting. The focus of this guidance is renewable energy and energy efficiency, but the principles could be broadly applied to other projects until the scope of the guidance has been expanded to other sectors.

Reports should be made publicly available, such as on the issuer’s website, in the interest of maximum accountability and transparency.

Subsequent green municipal bond issuance will become even simpler. Repeat green municipal bond issuers can use the same framework for identifying green projects and assets, the same independent reviewer, and the same processes for management of proceeds and reporting.

What are key considerations for green municipal bond issuers, especially in emerging economies?

To begin with, issuers of green municipal bonds need to determine, based on potential benefits and drawbacks of issuing green bonds, whether they should label a bond as green. There is a wider market of bonds that also has environmental benefits but is not specifically labelled as green. As such, state and municipal issuers should figure out whether a green bond is the most appropriate financing tool to raise capital. As discussed earlier, the benefits of green bonds can be significant. Green bonds can give issuers access to a wider range of investors, especially those focused on environmental, social, and governance performance, than regular bonds or other asset classes. Over time, increased demand can drive favourable terms and a better price for the issuer, compared with a regular bond from the same issuer. For instance, Massachusetts issued both a green bond and a regular corporate bond in 2013 that were priced identically. Yet the green bond was 30 per cent oversubscribed while the regular bond was undersubscribed. Despite these benefits, there are challenges associated with green bonds that issuers should be aware of. As compared with a regular bond, there could be additional costs associated with tracking, monitoring, and reporting processes as well as up-front investment to define the bond's green criteria. In addition, issuers risk subjecting themselves to criticisms and accusations of greenwashing if they do not meet their green objectives.

Issuers of green municipal bonds should follow the most rigorous standards in defining what makes the bond green. As discussed earlier, there are several voluntary, evolving standards and sources of

guidance on green bonds that issuers can follow, such as the Green Bond Principles and the Climate Bonds Standard. In addition, public sector and various market actors in emerging economies can develop country-specific definitions and standards. China has made considerable progress in creating country-specific green bond guidelines. At the end of 2015, the People's Bank of China released its Green Financial Bond Guidelines—making China the first country in the world to create official rules for the issuance of green bonds.²⁷ In January 2016, India's capital markets regulator—the Securities and Exchange Board of India—finalized its official green bond requirements after going through a public consultation process late last year.²⁸ While country-specific frameworks can be beneficial in meeting the environmental priorities of the country in question, it should be recognized that too much country-specific focus can lead to fragmented markets and increase transaction costs for global investors.

Finally, issuers of green municipal bonds in emerging economies should also invest in capacity building for investors.²⁹ Currently the majority of proven investor demand is in developed countries, while the institutional investor base is weak in emerging markets. It is therefore critical that public sector entities engage in capacity building to facilitate private investment in green bonds. To that end, the public sector can provide educational materials, workshops, and support market-led initiatives for green bond investor engagement and training. Facilitating investor demand can also encourage more green bond issuance into the market.

Conclusion

The growth in green bonds and green municipal bonds has coincided with a greater awareness of climate change and expanding investor appetite for environmentally friendly investment products. The pace of growth of these bonds is likely only to rise, as they provide both public and private sector organizations with an important source

of funding for projects that can bring significant benefits to environment and society. Over the next few years, guidance and requirements over the use, management, and reporting of proceeds and project performance are likely to be streamlined and tightened, which will lead to standardization, lower transaction costs and better prices for issuers, greater investor interest, and the issuance of more green bonds.

Case Study 1: Green bonds in Johannesburg

Green bond snapshot

Issuer: City of Johannesburg

First green bond? Yes

Issue date: June 2014

Maturity: 10 years

Size: US\$143 million

Annual coupon: 10.18 per cent (payable semi-annually)

Credit rating: A1(za)/AA-(za)

Bond type: General obligation bond

Johannesburg was the first city in the C40 Cities Climate Leadership Group and the first city from an emerging economy to issue a green bond. The US\$143 million bond was issued in June 2014 with an AA- rating.³⁰ The bond was priced at 185 basis points above the R2023 government bond, was 1.5 times oversubscribed, and is a 10-year bond. Johannesburg had previously issued a total of seven general obligation bonds, and this eighth bond issuance was the first to be labelled green, as it was specifically for funding green projects. The coupon rate of 10.18 per

Investors: Domestic

Use of proceeds: Renewables, energy efficiency, electricity grid extensions, fuel switching, low-carbon transport, waste management, and water conservation

Reporting: Annual

Independent second opinion provider: None

Lead managers: Standard Bank Group and Basis Points Capital

cent was 60 basis points lower than the preceding “non-green” issuance in March 2011, reducing the cost of finance for Johannesburg.³¹

Use of proceeds

Johannesburg issued its green bond to help fund infrastructure and services to support goals set out under its Growth and Development Strategy. The Sustainable Services pillar of its strategy promotes “a resilient, liveable, sustainable urban environment that is underpinned by infrastruc-

ture supportive of a low-carbon economy.” This includes goals to reduce the city’s carbon footprint, provide equitable and affordable access to basic services, create a safe and walkable city with access to eco-friendly transport and sustainable services, maintain healthy ecosystems, and improve resiliency to successfully adapt to challenging conditions. The city’s intention is to strive towards minimal resource reliance and increased preservation of natural resources.

The bond also supports Johannesburg’s Energy and Climate Change Strategy and Action Plan, with part of the proceeds to be used for mitigation and adaptation projects.

According to the first annual investor report, over 50 projects are benefitting from the green bond proceeds. Project categories and examples of projects to be funded by the bond are set out in the table below.³²

Project category	Examples
Transport	<ul style="list-style-type: none"> • Bus rapid transit system • Cycling lanes and sidewalk construction to connect to clinics, train stations, educational facilities, and other key services • Hybrid fuel buses
Energy	<ul style="list-style-type: none"> • Rollout of smart grid to all substations • Smart meter installation • Installing new public lighting • Solar panel power generation
Water conservation	<ul style="list-style-type: none"> • Replacement of water and sewer pipes • Renewable electricity generation from biogas at wastewater treatment stations • Increasing the capacity of wastewater treatment facilities • City parks and zoo wetland rehabilitation and wetland studies
Waste	<ul style="list-style-type: none"> • Waste to energy plant and equipment • Waste separation and recycling facilities

Unique features and lessons learned

Adapting IFC and World Bank selection criteria

The City of Johannesburg followed the Green Bond Principles and identified projects with elements related to renewable energy, water conservation, energy efficiency, climate change; and waste and wastewater management within the water, power, transport, and waste sectors. To select eligible

projects, the city defined criteria based on the IFC Performance Standards on Environmental and Social Sustainability and the World Bank criteria related to climate change mitigation and adaptation projects.

Establishing a framework for performance reporting

Environmental Resources Management (ERM) assisted the City of Johannesburg with establishing a green bond reporting framework to monitor and annually report performance to the investment stakeholders. The environmental indicators used for reporting are monitoring indicators based on international reporting practices. Impact reporting will include details regarding the progress of projects against environmental-related metrics and, where specific indicators cannot be measured directly for certain projects, the numbers will be estimated.

When asked what advice Johannesburg would give to other cities based on their experience issuing their first green bond, the city offered the following:

- Quantify carbon emission reductions for each project upfront.
- Have a green project implementation strategy.
- Transparency and communication breeds confidence—sell the credit and talk to investors.
- The quality of leadership and management of an issuer goes a long way towards providing confidence and comfort—cities need to know their problems, have a plan to deal with them, and show some progress.
- Keep the market abreast of developments in the municipality. This could also be facilitated by a good long-term strategy and planning.

Benefits

Investor base diversification: New types of investors who have not previously purchased Johannesburg's regular bonds invested in this green bond issuance. This includes those with environmental, social, and governance investment criteria. Issuing a green bond therefore helped Johannesburg by diversifying the city's investor base and growing the potential market for future issuances.

Access to finance: The city had a pipeline of planned projects that could not be undertaken due to insufficient capital. The green bond issuance enabled the city to finance these projects, which are expected to deliver considerable benefits to its citizens in terms of waste and water management, reduced traffic congestion, better air quality, and lower energy costs in low-income areas.

Promoting cross-agency collaboration: The process of preparing a green bond for issuance required Johannesburg to engage multiple city government agencies to work together to identify suitable projects to be funded by the proceeds. Johannesburg identified this as one of the key benefits of its first green bond, creating new and productive connections between the finance team and the environment team that had not existed previously.

Putting Johannesburg on the map as a sustainable city leader: The issuance generated considerable positive domestic and international media coverage highlighting the city as a leader in promoting sustainable development. The Mayor of Johannesburg was honored in Paris in December 2015 during COP21, receiving the C40 Cities Climate Leadership Award for the green bond issuance.

Case Study 2: Green bonds in Paris

Green bond snapshot

Issuer: City of Paris

First green bond? Yes

Issue date: November 2015

Maturity: 15.5 years

Size: US\$321.5 million (€300 million)

Annual coupon: 1.75 per cent

Credit rating: AA

Bond type: General obligation bond

Investors: 51 per cent insurers and pension

funds, 49 per cent asset managers. 83 per cent domestic investors, 9 per cent Benelux, 3 per cent Switzerland, and 3 per cent Nordics.

Use of proceeds: Renewables, low-carbon transport, energy efficiency, and climate adaptation

Reporting: Annual

Independent second opinion provider: Vigeo

Lead managers: Credit Agricole CIB, HSBC, and Societe Generale

The City of Paris issued its inaugural green bond in November 2015, raising US\$321.5 million (€300 million) to be used exclusively for climate mitigation and adaptation projects. The bond aligns with the Green Bond Principles and will be used to fund green projects for the entire 15.5-year life of the bond. Where projects are completed before the maturity date of the bond, the bond proceeds will be reallocated to other green projects.³³

The general obligation green bond was highly rated at AA and had an order book exceeding €450 million (1.5 times oversubscribed). Over 80 per cent of the issuance was purchased by domestic investors, with over half purchased by pension funds or insurers and the remainder bought by asset managers. The City of Paris is an experienced bond issuer, and the bond's coupon of 1.75 per cent is comparable to those of "non-green" bonds with similar maturity dates that were privately placed by the city in September 2015.³⁴

Use of proceeds

Paris determined that projects must correspond to one of the categories in the table below to be eligible for funding from the bond proceeds. These categories align with broader climate policies of the city, including the "Europe Energy and Climate Plan" and the Paris "Climate & Energy Plan 3x25 for 2050."

Project Categories	Definition	Sub-categories (examples of projects)	Climate benefits
Reduction of GHG emissions	Projects aiming at developing low-carbon energy transport (bicycle, electric vehicles, etc.) and public transport	<ul style="list-style-type: none"> Public transport: high quality transit line, tramway line extension Alternative transport: cycling plan Electric vehicles: support for the development of electric cars for residents and professionals, network of charging stations for electric and GNV vehicles 	Reduction of GHG emissions, due to low-carbon transport
Energy efficiency and savings	Projects aiming at reducing the energy consumption of buildings and public lighting, while maintaining equivalent level of service (existing situation vs. standard), with performance goals and energy poverty focus	<ul style="list-style-type: none"> Buildings: construction of energy efficient, thermal insulation for buildings (schools, social housing, nursing homes, etc.) Public lighting and signals: replacement of energy consuming appliances Renovation of heating systems 	Energy savings
Production of renewable energy	Projects aiming at developing local renewable energy production and/or energy recovery	<ul style="list-style-type: none"> Renewable energy power plants (solar panels) Geothermal energy Energy recovery (from wastewater networks, data centers, etc.) STEGC's heating network 	<p>Increased production of renewable energy</p> <p>Reduction of GHG emission, due to low-carbon energy use and/or energy recovery</p>
Adaptation to climate change	Projects aiming at reducing the impacts of climate change, especially the heat island effect, through the expansion of green area surfaces in Paris	<ul style="list-style-type: none"> New green areas: areas opened to the public, green roofs, facades, and walls Tree planting programmes 	Increased green areas and biodiversity in Paris

Source: Vigeo, *Second Party Opinion on Sustainability of City of Paris "Climate Bond"* (Paris, Vigeo, 2015).

Unique features

Projects must meet environment, social and governance (ESG) criteria

The project selection process also involves evaluation against ESG criteria consistent with the city's Sustainability Policy. To be eligible, the projects must meet 12 sustainability criteria relating to biodiversity, air and water quality, environmental management, waste management, social cohesion, improved living conditions, local sustainable development, human rights, and business ethics.

Independent opinion to provide investor confidence

Some green bond issuers have sought second-party verification to provide investors with confidence that the green bond will meet minimum standards for environmental sustainability. The City of Paris is one of the few municipal issuers to have undertaken this verification process.

Vigeo was commissioned by the city to provide its opinion on the sustainable credentials of the green bond, and its analysis confirmed that the

bond was in line with the Green Bond Principles.

In forming its opinion, Vigeo analysed:

- the sustainability credentials of the city;
- the framework for selecting projects to be funded by the bond; and
- the framework in place to report the use of proceeds.

Comprehensive reporting framework

The City of Paris has committed to detailed reporting on the use of proceeds, providing a high level of transparency to investors on the progress and impact of the projects supported by the green bond proceeds. Its annual reports will include detailed project-level information on the environmental and ESG performance of each project supported by the bond. It will also report the estimated environmental impacts at the project and aggregate bond level, including the reduction of greenhouse gas emissions, energy savings, and extension of green areas.

Benefits

Diversifying their investor base: The green bond attracted domestic and international investors, with international institutional investors from Benelux, Switzerland, and the Nordics collectively purchasing close to one-fifth of the issuance.

Promoting Paris' commitment to tackle climate change: Paris hosted the COP21 climate negotiations in December 2015 and issued its green bond in the preceding month, sending a strong signal about the city's climate leadership.

Funding adaptation and resilience: The bond includes dedicated funding for the city to increase its climate change resilience by reducing urban heat island effects. This enables the city to access finance to increase green areas in the city by aggregating them with other climate mitigation projects to be funded through the bond.

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A street in Maputo, Mozambique © UN-Habitat

06

Municipal Pooled Financing Mechanisms

Introduction

As the world's population becomes increasingly urbanized—driven largely by population and migration trends in Africa and Asia—demand is rising for mechanisms to finance the requisite infrastructure development. One tool with great potential for many cities in the developing world is municipal pooled financing mechanisms (PFMs).

Broadly speaking, pooled financing entails gathering the borrowing needs of a group of municipalities and raising the combined debt on the capital market or from other sources of finance. This can be done either through a state governmental agency or through cooperation among local authorities.

PFMs do not remove the decision-making power of the individual local authority, and should be viewed as a complement to other funding



sources. Large local governments like capital cities and their close peers can continue to benefit from direct access to bank financing and bond markets, choosing the most efficient source at a particular point in time. However, for most medium-sized and small local governments, municipal pooled financing may be the only mechanism that provides access to long-term and adequately priced debt financing.

PFMs have mainly been applied in the developed world; in the last 10–15 years, there have been few PFM experiments in developing countries. However, there is nothing preventing PFMs from becoming a much more common strategy around the world if the trend towards decentralization in developing countries continues; PFMs are a by-product of fiscal decentralization and the growing importance of local governments. Moreover, PFMs can be proactively initiated and implemented by policymakers in developing countries to deepen fiscal decentralization and increase its benefits. Thus, PFMs can play a crucial role in financing growing local infrastructure needs by giving local governments access to capital markets and by providing institutional investors with a new, attractive asset class. PFMs also foster participating local governments' financial management capacity, accountability, and creditworthiness, making them stronger and more capable institutions. Financing infrastructure and building independent capacities in local authorities are particularly crucial concerns in the OECD economies, but even more so in places that are less economically developed.

Theoreticians did not create the PFM concept. It emerged organically and matured in several different economic and institutional environments through collaboration among local authorities and negotiations with other stakeholders. When thinking of the transfer of this experience to devel-

As the world's population becomes increasingly urbanized—driven largely by population and migration trends in Africa and Asia—demand is rising for mechanisms to finance the requisite infrastructure development.

oping countries, the PFM concept should be viewed as malleable and variable in composition considering the economic situation, local government structure, and other factors on the ground. It is not a one-size-fits-all scheme, but a project that needs to grow from the bottom-up to service particular contexts.

This chapter examines different types of PFMs around the world and describes how they function, explains how to develop PFMs, outlines the advantages and challenges entailed in implementing PFMs, and discusses the prerequisites for PFMs.

PFMs around the world

PFMs exist in many countries and have many different forms. In Europe, local government funding agencies (LGFAs) dominate. An LGFA is a special-purpose agency owned and, in most cases, guaranteed by local authorities and, in some instances, with minority shareholding by central government or other public stakeholders. It issues bonds in capital markets, domestically and internationally, and on-lends the proceeds to local authorities that are members/shareholders of the agency.

LGFAs have a long and successful history in Northern Europe. The oldest is the Danish agency Kommunekredit (see Case Study 1), created in 1898. The newest additions in Table 1 are the French Agence France Locale and the UK Municipal Bond Agency, created during the last few years.

Table 1: LGFAs around the world

LGFA	Country	Year of creation
Kommunekredit	Denmark	1898
Bank Nederlandse Gemeenten (BNG)	Netherlands	1914
Kommunalbanken	Norway	1926
Nederlandse Waterschapsbank (NWB)	Netherlands	1954
Kommuninvest	Sweden	1986
Munifin	Finland	1990
JFM	Japan	2008
New Zealand LGFA	New Zealand	2011
Agence France Locale (AFL)	France	2013
UK Municipal Bond Agency	UK	2014

U.S. municipal bond banks have a slightly different set-up. They are usually closely related to various state governments. The oldest municipal bond banks are in the New England states, but the concept has also spread to other parts of the country. In Canada, there are provincial entities for financing local authorities in a number of provinces, including British Columbia (see Case Study 2) and Alberta.

The state-owned Japan Finance Corporation for Municipal Enterprises was converted into Japan Finance Organization for Municipalities (JFM), and in 2008 Japanese local governments became its owners.

The New Zealand LGFA was created in 2011 and, recently, the Australian state of Victoria formed its Local Government Funding Vehicle.

Also in emerging and developing countries, municipal pooled financing has been developed with the help of international development institutions. Two examples are the Indian Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) and

bond banks in Mexico. TNUIFSL is a public–private partnership with a wider scope of activities than, for example, the European LGFAs, since members of its staff also act as consultants and investment advisors. Mexican bond bank–type entities exist in the states of Hidalgo and Quintana Roo.

How do PFM's work?

To illustrate the fact that PFM's differ significantly in their operation, below we briefly explain how U.S. municipal bond banks operate and how select PFM's in other parts of the world function.

The municipal bond bank concept

Municipal bond banks exist in most cases as agents of state governments, organized as independent authorities with their own commissioners or boards of directors, many times appointed by the state governor.

There are around 15 U.S. bond banks in the same number of states. The oldest, Vermont Municipal Bond Bank, was created in 1969, and the youngest,

Michigan Finance Authority, was the result of the merging of various public finance authorities in the state in 2010. The most intense period of creation of bond banks was in the 1970s and 1980s, with only four bond banks created over 1990–2015. Bond banks are generally small and under the ownership and control of state governments. They are also directly or indirectly guaranteed by the states, and/or their bond issues are secured with interbudgetary transfers. Bond banks are predominantly found in smaller states.

The largest bond bank in terms of liabilities is the recently amalgamated Michigan Finance Authority. This entity has a broad scope, lending not only to municipalities, but also to schools (public and private), healthcare providers, and private colleges and universities. It also handles student loans in the state. The second-largest bond bank, Virginia Resources Authority, has a more typical set of customers and raises funds mainly for local infrastructure.

Overall, the size of U.S. bond banks' activities is limited. Many bond banks administer statewide revolving funds from which loans are supplied to local authorities for specific purposes, often clean-water projects.

The cooperational approach

The cooperational approach is based on cooperation in the country in question among local authorities that have voluntarily joined forces to achieve long-term cost-efficient funding of local infrastructure projects.

The European LGFAs are examples of the cooperational approach. These agencies are frequent issuers in capital markets and are often market leaders in

municipal loans in their respective countries.

Another example is found in Japan. Japan Finance Corporation for Municipal Enterprises was originally created as a central government institution in 1957. In 2008 this company was transformed into a new entity with the capital fully contributed by all local governments (prefectures, cities, towns, villages, and special wards of Tokyo) and became a joint fundraising organization for local governments.

Another example is found in New Zealand. The New Zealand Local Government Funding Agency (NZLGFA) was created in December 2011, after three years of preparations. Local authorities own 80 per cent of NZLGFA, and the central government retains the remainder. There are 31 shareholding local authorities; among these are the Auckland Council, the Christchurch City Council, and the Wellington City Council.

How is a PFM developed?

Development of a PFM can be divided into three levels: the preliminary level, the basic level, and the advanced level.

Preliminary level

A number of actions can be taken to prepare for the introduction of a PFM. A first step is the establishment of close cooperation among local authorities focused on financial issues, without actually borrowing together. This could entail the coordination of borrowing activities and exchange of best practices regarding, for example, risk policies. This can include using similar procurement processes in relation to banks and other creditors.

Basic level

The basic level is a so-called club deal. This is a bond issue in which two or more cities participate, and it is done without a special purpose vehicle. Each participating city is responsible for its part of the payment of interest and capital. The main advantages of club deals are that they give small and medium-sized local authorities access to capital markets and that they are flexible in the sense that the group of issuers (local authorities) could be differently compounded for each club deal (bond issue). The disadvantage is that they are structurally and legally complicated, which produces costs that, to some degree, could offset a good pricing of the bonds.

The basic level is suitable for countries with institutional and/or legal constraints preventing the development of a PFM at the advanced level (see below). It could also be a step towards the advanced level, while giving involved local authorities experience with capital markets and testing the spirit of cooperation among these authorities.

Advanced level

The next step is to create an LGFA to act as an intermediary between the cities and the capital markets. The big advantage with an LGFA is that it can reach sufficient volumes in its borrowing to diversify its funding operations and achieve cost-efficient pricing in the capital markets. Diversification also means the reduction of risk given that the LGFA is not reliant solely on one source of funding or even on one market. The fact that an LGFA can employ financial experts to run the operations also reduces risk. This kind of entity must have economic strength to be credible to investors. Economic strength, which in this case is the same as creditworthiness, can be gained through sufficient capitalisation and can be reinforced by guarantees. The guarantors can either be the participating cities, central government, a third party (e.g., public sector pension funds), or a mix of these. The advantage of having a guarantee from the participating cities is that it reinforces the local responsibility for the LGFA.



Aerial view of residential area in Grenada North, Wellington, New Zealand © Flickr/D.Coetzee

What are the advantages and challenges of PFMs?

Applying PFMs has several potential advantages:

- **It gives small and medium-sized local authorities access to capital markets.** Capital markets require volume, and PFMs make it possible for small and medium-sized local authorities to coordinate their borrowing in bond issues that have the size required to attract investors.
- **It reduces borrowing costs.** In all countries where PFMs for local authorities are applied, the cost of borrowing has been substantially reduced.
- **It reduces processing costs.** Processing costs for pooled financing are considerably lower than if the local entities borrowed on their own.
- **It reduces market risk through diversification.** Diversification of borrowing can be achieved by the use of different markets and different instruments, and by targeting a number of different investor groups. Because of the size of its operations, a PFM entity has far more potential to diversify its funding than a single local authority. Diversification can be achieved by using a number of loan products, loan programmes, and markets.
- **It improves debt management capacity by providing financial expertise.** Financial expertise is often scarce in local authorities, since their primary focus is on providing appropriate basic services to the public. Cooperation provides opportunity to employ financial experts, which reduces risks.
- **It provides incentives to improve creditworthiness.** The participating local authorities have to agree to be supervised by their peers, because local authorities' creditworthiness is the

enterprise's most important asset. This supervision can result in peer pressure to increase local creditworthiness. Peer pressure has often proven to be the most efficient way of improving local performance.

- **It is a conduit for the transfer of knowledge.** The existing PFM entities regularly organize conferences, workshops, and consultations.
- **It increases transparency.** A PFM entity has to apply a high degree of transparency for a number of reasons. First, the capital markets and international credit rating agencies will require full disclosure of financial information of the agency and participating authorities. Second, the most important asset of a PFM entity is its creditworthiness. The latter, in turn, is built upon the creditworthiness of the participating cities, which is why the financial status of these has to be monitored on an ongoing basis. It is also essential that the entity is transparent and that it issues comprehensive reports of its activities for the benefit of the involved cities and other stakeholders. Thus, financial information has to be freely supplied by the cities in the PFM. A large portion of this information will be public, which means that it will enhance public understanding of the authorities' activities and thus support local democracy.

There are also several challenges entailed in applying PFMs:

- **Administrative challenges:** The central government has in many countries shown an initial hesitation to support local government initiatives to introduce PFMs. It is crucial that the central government is aware of the project's benefits to the country's development and hence to economic growth. It should also be made clear that a PFM entity's activities will be guided by strict internal risk management regulations.

- **Market challenges:** If there is one or a group of dominating lenders to local authorities, they are likely to feel challenged and to find weaknesses in the PFM plan. It is thus important to find ways to cooperate with existing lenders. The other market challenge is to raise interest among investors for bonds issued by a PFM entity. Contacts with investors should be made at an early stage to investigate how investors' interests could be accommodated within the project and to give the investors time to prepare for the first bond issue. This might mean amending their internal investment regulations, among other things. Well before the first bond issue, an extensive program of so-called road shows must be executed.
- **Cooperation challenges:** In many countries, local authorities are not accustomed to cooperating with each other. Clear governance rules have to be put in place. In addition, a need to supervise the creditworthiness of the participating local authorities could complicate cooperation. It is crucial that every member/shareholder fully accepts the need for continuous scrutiny and acknowledges that membership/shareholding does not secure an unconditional right to borrow from the entity.

For entities in emerging and developing countries, a further challenge is to build a system for secure repayment of the loans. This might mean that the entity and its members create a fund to secure future payment of the borrowing activities and/or acquire a third-party guarantee, which could be underwritten by other domestic stakeholders (central government, developing banks, etc.) or by development finance institutions. It should be stressed that external guarantees will have to be structured in a way that does not remove the responsibility of the local authorities that have created the entity. For example, a partial credit guarantee with recourse claim

may help to improve the credit rating of the debt issued by the entity to make it eligible for institutional investors, without alleviating credit pressure on local governments.

What are the prerequisites for a PFM?

In order to introduce a PFM, the following basic conditions should be in place:

- A willingness among the local authorities to cooperate
- Sufficient creditworthiness of the participating local authorities
- A legal system that allows local authorities to borrow, even though it could be within limits set by the central government or other central authorities
- A legal system that allows local authorities to cooperate and to jointly assume commitments
- A domestic capital market that has reached a certain degree of maturity with investors that could potentially be interested in local government bonds with medium- and long-term maturities

Even if all these conditions are met, non-market or concessional lending of national and international development institutions, state-owned banks, or central governments themselves can potentially undermine a PFM. Although concessional financing is not sufficient and not flexible enough to cover all the borrowing needs of local governments, it still makes it more difficult for local authorities to justify the development of market-based borrowing practices. And PFMs are indeed market-based mechanisms, which significantly reduce a need for debt interventions by central governments and development finance institutions.

These are the basic conditions, but above all there must be a need, obvious to local authorities, for new financing solutions. These local authorities must also be convinced that pooled financing could be a way forward. The next step is to get the support from central government.

Unfortunately, in many countries there has been an initial hesitation for municipalities to cooperate. This is probably because municipalities often see themselves as competitors to the neighboring local authority. Sometimes there could also be an element of distrust among municipalities. This can stem from different political parties being in power or a number of other reasons.

In countries where municipal funding agencies have been created, these challenges have been present. Fairly soon in the process it is recognized by the local authorities that a PFM is for the benefit of all participants, but it is still important to, in different ways, enhance trust among municipalities. The process needs to start with a few motivated stakeholders that can lead the way for others. These initiators must clearly state their interest in studying the introduction of a PFM in order to build a strong enough foundation for a project.

The work to create a PFM entity should be properly organized. A local government association could host the project and supply administrative support. It is important to remember that it is the local authorities that should drive the project. A step that is key in this type of process is the recruitment of leaders, both political and professional. A need for entrepreneurial skills cannot be underestimated. It is a question of breaking new ground, and it requires hard work and creativity combined with diplomacy.

The value of the process

All uses of financial markets for borrowing purposes are built upon good creditworthiness. The situation for local authorities varies greatly among different countries. For some developing countries a PFM is perfectly feasible, while other countries' local authorities lack steady income streams and a solid regulatory framework. Nevertheless, all countries and their local authorities could make substantial gains from the process towards a PFM.

A project that aims to put in place financial cooperation among cities in a developing country addresses almost all the questions that are vital for well-functioning local authorities. These include:

- What is the relationship between local authorities and central government, both legal and financial?
- What is the flow of income (including stability, predictability, diversification, trends [especially of tax bases], system for collection, collection rates, and the possibilities to tap new local taxes)?
- What is the cost structure?
- What is the debt outlook (e.g., size, interest payments, maturities, payment record, and central government restrictions)?
- What institutional factors are present (e.g., organization, accounting system, audit, level of knowledge, and skills)?

All of the above constitute a well-functioning local authority with high creditworthiness.

Asking these questions in connection with a project that aims to solve a major problem, such as financing infrastructure investment, can be very efficient. It would enable putting needed reforms in the context of a vision for the future. A project would be orga-

nized in a way that makes clear the inter-relations among the different steps required for a stronger city. The fact that this kind of project encompasses a group of cities means that the demands on the central government could be stronger and more stringent. The negotiating power that such a project would gather is great, because it strives to resolve an undisputable need for financing for local infrastructure and it would be formed by a group of strong local authorities with comparably high creditworthiness.

In the global arena, the implementation of municipal pooled financing mechanisms is still to be recognized as an essential element of an effective fiscal decentralization—one that is intended to make local government fiscally stronger, more creditworthy, and more capable of addressing local infrastructure challenges. Otherwise, decentralization can only shift greater responsibility for infrastructure to local governments without helping equip them with the proper tools, such as access to capital markets.

Conclusion

The use of PFMs has the potential to not only provide cost-efficient funding for local infrastructure investments, but also to increase transparency and facilitate capacity-building among local authorities. The creation of PFM schemes is always dependent on the specific circumstances of each country. And there are many ways to organize PFMs, from a first step of inter-city cooperation to the creation of a special vehicle or agency. Such agencies can assume the role of local infrastructure development agencies, which would, together with cities and other local authorities, play the important role of facilitating efficient and resilient local infrastructure investment activities, with the potential to promote countrywide growth.

Case Study 1: Kommunekredit, LGFA of Denmark

Denmark has a population of 5.6 million and is divided into 98 local authorities. The country is one of the most decentralized in the world. Danish local authorities created Kommunekredit in 1898 as a cooperative society. It is voluntary to join and over time all local authorities have become members.

Kommunekredit's business model is similar to that of other European LGFAs. It issues bonds

in domestic and international capital markets and on-lends the proceeds to local authorities and to related entities (for example, municipal-owned companies). When bond issues are made in foreign currencies, they are exchanged into domestic currency by the agency through the use of swaps. All lending is made in domestic currency. Kommunekredit has now achieved almost a 100 per cent market share in lending to local authorities.

Like the Swedish Kommuninvest, Kommunekredit is backed by a joint-and-several guarantee signed

by all members. Neither Kommunekredit's nor Kommuninvest's guarantees have ever been invoked.

Kommunkredit has credit ratings of AAA/Aaa from S&P and Moody's, respectively.

Unlike all other European LGFAs except the UK Municipal Bond Agency, Kommunkredit is not

considered a financial institution under domestic or EU law.

At the end of 2015, Kommunekredit's total lending reached DKK157.7 billion (US\$23.7 billion). It is administered by 62 full-time employees at a cost, in relation to the lending, of six basis points.

Case Study 2: Municipal finance authority (MFA) of British Columbia, Canada

The province of British Columbia (BC) has a population of 4.6 million and is divided into 162 local authorities within 28 regional districts.

The MFA is a non-share capital corporation and was established in 1970 under the provincial Municipal Finance Authority Act to provide long-term and short-term financing for regional districts and their member municipalities, regional hospital districts, and other public institutions in British Columbia.

Long-term debt requirements of local governments (five to 30 years), excluding the City of Vancouver, must be borrowed through the MFA.

Over the years of its operation, MFA's objectives and activities have expanded to include short-term investment opportunities, interim financing, and leasing.

The MFA is independent from the province of British Columbia and operates under the gover-

nance of a board of members with 39 members appointed from each of the 28 regional districts within the province of British Columbia. A board of 10 trustees is elected annually from the members to exercise executive and administrative powers including policy, strategy, and business plans.

The MFA has Aaa/AAA/AAA ratings from Moody's, S&P, and Fitch, respectively. These credit ratings are broadly based on the fact that the MFA's borrowing is backed by a joint-and-several guarantee of members within the regional districts (but not jointly for all regional districts) and on the fact that it has unlimited taxing powers on all taxable properties in the province of British Columbia.

At the end of 2015, the MFA's outstanding loans reached CAD4.6 billion (US\$3.5 billion). It is administered by nine employees at a cost, in relation to lending, of less than one basis point.

Lars M. Andersson is a local government finance expert, who in 1986 initiated the creation of the Swedish LGFA, Kommuninvest, and is now a board member of both the French LGFA, Agence France Locale, and the Global Fund for Cities Development (Le Fonds Mondial pour le Développement des Villes, or FMDV).

Pavel Kochanov is a senior subnational specialist at the International Finance Corporation, where he specializes in credit and governance risks of sub-sovereign government entities.

Further reading

For more information about PMFs, please see these resources:

Lars M. Andersson, *Finance Cooperation Between Local Authorities in Developing Countries* (Stockholm, Mårten Andersson Productions, 2014).

Lars M. Andersson, *Local Government Finance in Europe: Trends to Create Local Government Funding Agencies* (Stockholm, Mårten Andersson Productions, 2014).

Lars M. Andersson, *What the World Needs Now... Is Local Infrastructure Investments Challenges and Solutions with a Focus on Finance* (Stockholm, Mårten Andersson Productions, 2014).

Lars M. Andersson, *Overview of Municipal Pooled Financing Practices* (Washington, International Finance Corporation, 2015).

Barbara Samuels, *The Potential Catalytic Role of Subnational Pooled, Financing Mechanisms* (Paris, FMDV, 2015).



A street in Maputo, Mozambique © UN-Habitat

07

Public–Private Partnerships

Introduction

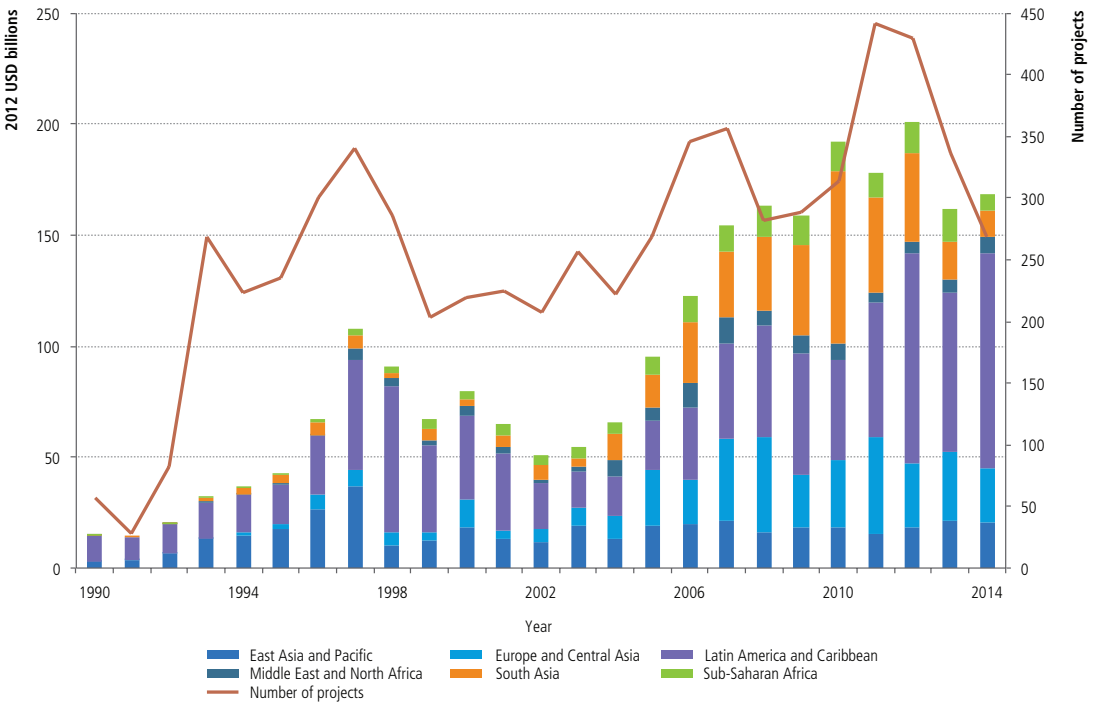
Urbanization in developing countries is projected to add between 68 million and 71 million people to the world’s urban population annually between 2015 and 2025.¹ This will only exacerbate the large infrastructure gaps already affecting the developing world.² Remedying this situation and meeting Sustainable Development Goals require increased infrastructure investment, especially from the private sector.³ Of many methods of private financing of infrastructure, public–private partnerships (PPPs) have shown much promise in recent decades.

Private-sector involvement in developing countries’ infrastructure has risen from less than US\$20 billion in 1990 to more than \$200 billion in 2012—an all-time high—thanks to the growing popularity of PPPs as an investment model (see Figure A). However, the private sector currently contributes less than 10 per cent of the total estimated investment needs

of emerging markets and developing economies.⁴ Thus, there remains significant scope for increasing the use of PPPs.

This chapter explains what PPPs are and how they work, detail the pros and cons of PPPs relative to public procurement, describes how to measure the success or failure of a PPP, and lays out the factors to consider when deciding upon a PPP.

Figure A: Private-sector involvement in developing countries' infrastructure, 1990–2014



Source: World Bank, *Private Participation in Infrastructure* database.

Of many methods of private financing of infrastructure, public–private partnerships (PPPs) have shown much promise in recent decades.

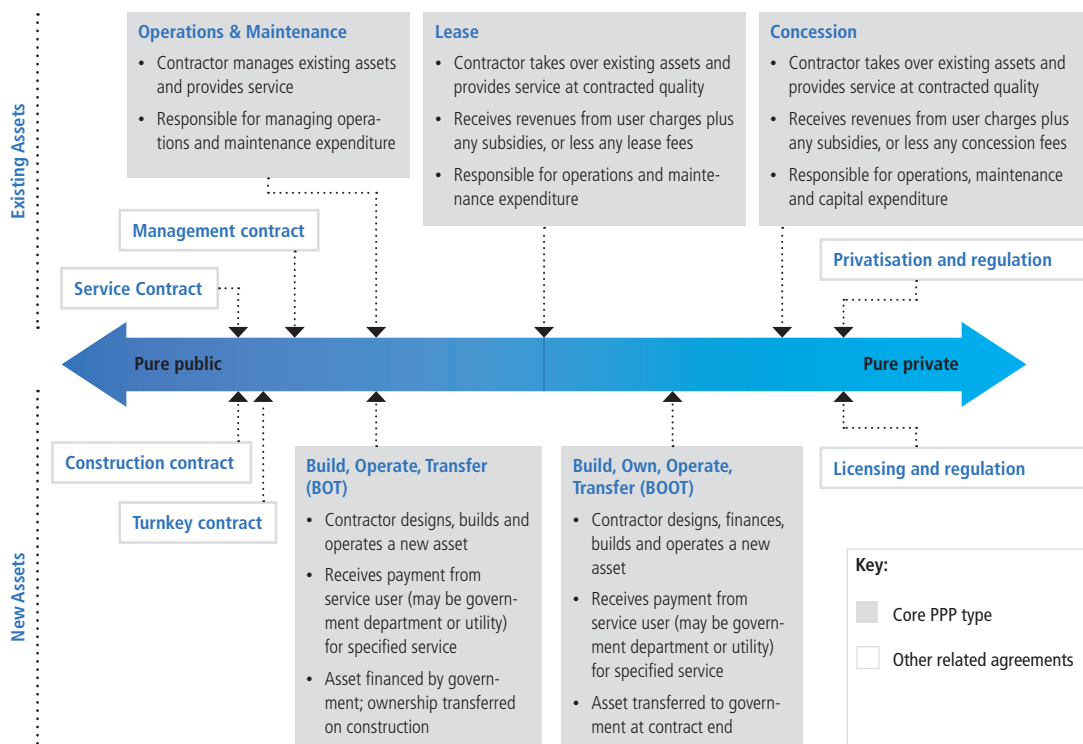
What are PPPs, and how do they work?

PPPs are long-term contracts between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility.⁵ As Figure B and Table 1 show, PPPs encompass many forms of public–private collaboration, including operation and maintenance contracts; leases; concessions; build, operate, transfer (BOT); build, own, operate, and transfer (BOOT); and so on.

PPPs often take the form of concessions, where a public entity grants the right and the obligation

to provide an infrastructure service to a private company that takes over an existing asset (see Case Study 1). This allows the state to delegate service provision to the private sector, but retain some control over the sector by incorporating in a concession contract or license the terms and conditions governing the infrastructure project or company. Payments are usually made by users or are substantially connected to the number of users (e.g., shadow tolls). In contrast, under BOOT, a private entity is contracted to design, finance, build, and operate a facility for a specified period before the final transfer of the asset ownership to the government (see Case Study 2).

Figure B: Examples of “core” PPP contract types



Source: Adapted from PPIAF, Note 1: PPP Basics and Principles of a PPP Framework (Washington, PPIAF, 2012), p. 3.

Table 1. Common types of PPPs and relevant terms

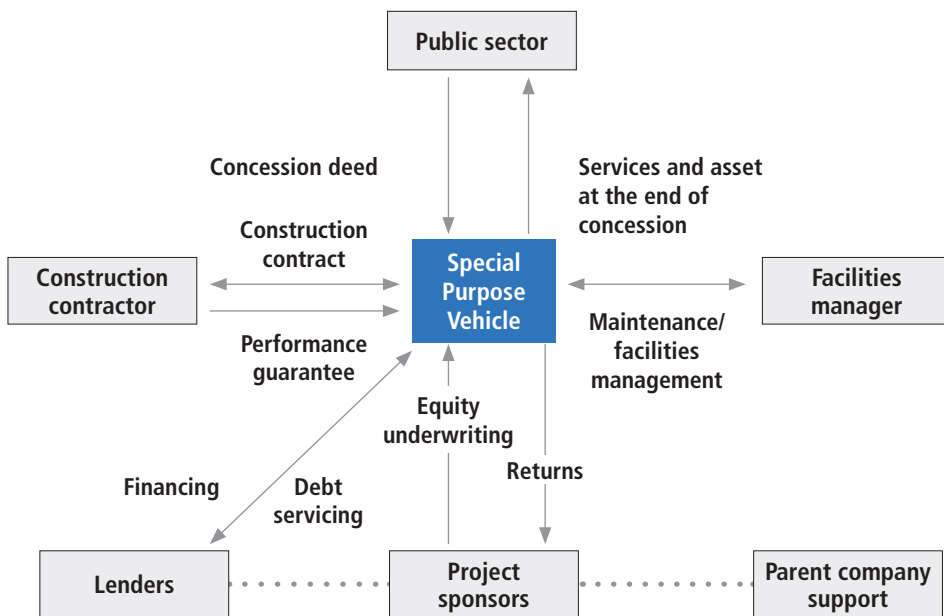
Term	Description
Buy-build-operate (BBO)	Transfer of a public asset to a private or quasi-public entity usually under contract to upgrade and operate assets for a specific period of time. Public control is exercised through the contract at the time of transfer.
Build-own-operate (BOO)	The private sector finances, builds, owns, and operates a facility or service in perpetuity. The public constraints are stated in the original agreement and through ongoing regulatory authority.
Build-own-operate-transfer (BOOT)	A private entity receives a franchise to finance, design, build, and operate a facility (and to charge user fees) for a specified period, after which ownership is transferred back to the public sector.
Build-operate-transfer (BOT)	The private sector designs, finances, and constructs a new facility under a long-term concession contract, and operates the facility during the term of the concession, after which ownership is transferred back to the public sector if not already transferred upon completion of the facility. In fact, such a form covers BOOT and BLOT, with the sole difference being the ownership of the facility.
Build-lease-operate-transfer (BLOT)	A private entity receives a franchise to finance, design, build, and operate a leased facility (and to charge user fees) for the lease period, against payment of a rent.
Design-build-finance-operate (DBFO)	The private sector designs, finances, and constructs a new facility under a long-term lease, and operates the facility during the term of the lease. The private partner transfers the new facility to the public sector at the end of the lease term.
Finance only	A private entity, usually a financial services company, funds a project directly or uses various mechanisms such as a long-term lease or bond issue.
Operation and maintenance contract (O&M)	A private operator, under contract, operates a publicly owned asset for a specified term. Ownership of the asset remains with the public entity. (Many do not consider O&Ms to be within the spectrum of PPPs and consider such contracts as service contracts.)
Design-build (DB)	The private sector designs and builds infrastructure to meet public sector performance specifications, often for a fixed price, turnkey basis, so the risk of cost overruns is transferred to the private sector. (Many do not consider DBs to be within the spectrum of PPPs and consider such contracts as public works contracts.)
Operation license	A private operator receives a license or rights to operate a public service, usually for a specified term. This is often used in IT projects.

Source: S. Baizakov, *Guidebook on Promoting Good Governance in Public-Private Partnership* (Geneva, UNECE, 2008). Available from <http://www.unece.org/fileadmin/DAM/ceci/publications/ppp.pdf>.

In public-private partnerships, it is common practice for a project company, called a special purpose vehicle (SPV), to be established by the private firm or group of private firms running the project. It is the SPV that signs the PPP contract with its public entity counterpart, which then allows the company to build, own, and operate the infrastructure project.⁶ SPVs are especially useful for private firms engaging in PPPs because they offer additional security and reduce the risk of undertaking major infrastructure projects by acting as “a legally distinct entity to the parent company, and...[financing] large new stand-alone projects off the corporate balance sheet.”⁷ Figure C shows the structure of a typical SPV composed of the financier (major shareholder), the developer, facilities manager, and occasionally the government. The financing structure in terms of debt and equity is a key aspect of a PPP project and can have a big impact on its costs and affordability.

Especially in limited or non-recourse situations, SPVs are often the preferred form of PPP project implementation because “the lenders rely on the project’s cash flow and security over its assets as the only means to repay debts.”⁸ However, in these cases, the creditworthiness of the project is highly dependent on its expected cash flow. Nevertheless, there is mounting evidence that SPVs improve the financing options for PPPs and can overcome many of the traditional financial and legal barriers that have stalled successful private–public partnerships in the past.⁹

Figure C: Typical structure of a PPP



Source: Adapted from Cities Development Initiative for Asia (CDIA), *Linking Cities to Finance: Overcoming Bottlenecks to Financing Strategic Urban Infrastructure Investments* (Shanghai, KPMG, 2010), p. 38.

The pros and cons of PPPs, relative to public procurement

To provide a service or build an asset, a public entity can either use a traditional mode of public procurement or enter into a PPP. A distinctive feature of PPP projects is that their requirements are defined in terms of outputs rather than inputs. This allows the public sector to focus on specifying the level and standards of the services required, giving the private entity the task of meeting the requirements. This enables the public sector to transfer certain project risks relating to designing, building, operating, and financing the project to the private sector.¹⁰

The pros of PPPs include better value for money (VfM), project sustainability, and additionality. As for cons, questions regarding the accountability and flexibility of PPPs have raised some concern among academics and policymakers.¹¹

PPPs can improve the VfM of some projects. The VfM criterion of PPPs is defined as the expected reduction of life cycle cost and the estimated value of the risk transferred.¹² This is evident in a higher positive net present value (NPV) in cost-benefit analysis (CBA). To establish whether a PPP represents better VfM, it is usually compared with a hypothetical public sector alternative, also known as a public sector comparator (PSC), which delivers the same service. The theory behind improved VfMs via PPPs is based on the assumption that the private sector is more effective at managing construction processes and risk.

PPPs can improve the sustainability of public services by reducing the overall costs and the variability of the cost of that service to government. Again this arises from sharing the risks of service provision with the private sector.¹³ The reverse side

of the coin is that flexibility is limited in PPPs.¹⁴ This can be a problem if government wishes to introduce regulatory changes or alter the nature of the asset after the signing of a PPP deal. Renegotiation and cancellations of PPP contracts are costly.

In addition, commercial confidentiality and the work of SPVs as closed companies may diminish the accountability of PPPs.¹⁵ On the other hand, the reverse has also been argued; by transferring service delivery risk to the private sector, accountability may be improved.¹⁶

Finally, PPPs provide an alternative source of finance to traditional government borrowing, thus offering the benefit of additionality. This is especially important for developing countries, where domestic resources are limited and the cost of doing nothing is high due to lost economic growth (and development) incurred when infrastructure is absent and/or inadequate.¹⁷

How to measure the success or failure of a PPP?

In measuring the success or failure of a PPP, a crucial question is whether it has produced the benefits that PPPs are supposed to generate.

First, a successful PPP should deliver better VfM in comparison with a PSC. This depends on whether risks have been effectively transferred to the private sector at a reasonable cost. This is not always easy to establish though, as the comparison relies on a counterfactual (i.e., a PSC). Through a PPP, the public sector is effectively buying an insurance policy from the SPV for the project, the price of which is the difference between the base cost and what is paid to the SPV.¹⁸ Due to limited competition among the SPVs, there is high risk that the public sector

may pay too high a premium. Research shows that the estimated premium is about 25 per cent, not so different from those quoted for the overrun on publicly financed projects.¹⁹

Neither CBA nor PSC analysis is straightforward. The choice of the discount rate in CBA can significantly impact the NPV. Moreover, the CBA exercise tends to favour a PPP relative to a PSC when the discount rate is high, since many of the costs for a PSC would occur early on, but later for a PPP. In terms of a PSC, it is not always possible to find one comparable to a PPP in terms of outputs.²⁰ On the other hand, ex-ante VfM analyses focus on the risk-adjusted financial costs and may underestimate the non-financial benefits of PPPs.²¹ These “socio-economic” benefits to service users or wider society from a PPP may take three forms: accelerated delivery (delivering service earlier), enhanced delivery (delivering service to a

higher standard), and wider social impacts (greater benefits to society as a whole).²²

A total cost approach is needed in this assessment. A project represents better VfM only if the PPP option delivers the same level of services at less cost to the public after all costs, benefits, and risks are taken into account. It is important to assess whether the greater operational efficiency of the PPP option is likely to outweigh factors that might make the PPP option more costly due to the latter’s high transaction, monitoring, and financing costs.

Second, a successful PPP ensures additionality and sustainability that provides the long-term availability of investment capital. A PPP that is aborted, that delivers poor service at too high a price, or that excludes large sections of the population cannot be considered as successful.



Public space in Shanghai, China © Flickr/Setiadi

What are the prerequisites for PPPs?

There are two principal requirements for successful PPPs. First, the local government must have the authorization of upper-level government to do so. Usually, this means that the national government would have an established regulatory framework for such undertakings, including rules regarding contract enforcement and disagreement resolution.

Second, the project must offer a good risk-adjusted return that is attractive for the private sector. This may involve good cash flow based on project revenue (paid by users) or service fees (paid by authority). PPPs are considered less viable for the provision of basic infrastructure, as there might be a problem of affordability. In the event of debt financ-

ing, the public sector might be asked to provide guarantees. Alternatively, the public entity can either purchase a guarantee from private providers or access an increasing number of guarantee schemes that multilateral and bilateral agencies have set up.

Key steps and considerations in deciding a PPP

The PPP project cycle involves four phases: 1) project identification, 2) detailed preparation, 3) procurement, and 4) project implementation (see Table 2). Each phase can in turn be broken down into further stages and steps.²³ The first phase (project identification) is crucial and, therefore, is the primary focus here. It involves two stages and a series of steps, as shown in Table 2.

Table 2. PPP project cycle: phases, stages, and steps

Phases	Stages	Steps
1. Project identification	1.1 Project selection and definition	<ul style="list-style-type: none"> ■ Identification ■ Output identification
	1.2 Assessment of the PPP option	<ul style="list-style-type: none"> ■ Affordability ■ Risk allocation ■ Bankability ■ Value for money ■ Tax and public finance treatment
2. Detailed preparation	2.1 Getting organised	...
	2.2 Before launching the tender	...
3. Procurement	3.1 Bidding process	...
	3.2 PPP contract and financial close	...
4. Project implementation	4.1 Contract management	...
	4.2 Ex post evaluation	...

Source: Adapted from European PPP Expertise Centre (EPEC), *The Guide to Guidance: How to Prepare, Procure and Deliver PPP Projects* (Luxembourg, EPEC, 2011), p. 7.

The first stage involves project selection and definition. A key task here is to specify the outputs, as altering this specification will involve expensive renegotiation.

In assessing the PPP option, in the second stage, the authority and its financial advisors need to answer four key questions:²⁴

1. Is the project affordable? This considers the capacity of the project to pay by either the users of the services or the authority (or a combination of both). Services can be paid in two different ways: the user-pays type, or the unitary charge type.²⁵ The first type transfers more risk to the private sector. Investors will be interested in the “annual debt service cover ratio” (ADSCR), which is defined as the ratio of free cash (i.e., cash left to the project after payment of operating and essential capital costs) available to meet annual interest and principal payments on the debt.²⁶

2. What are the key sources of risks of the project? What are the optimal risk allocation and risk management strategies? There are three broad types of risks: commercial (including supply-side and demand-side

risks), legal, and political. Best-practice principles of risk management suggest that risks should be allocated to the party best-placed to manage or absorb them. Thus, the private sector assumes the commercial risks, while the public sector assumes legal and political risks.

3. What are the financing sources for the project? Questions include whether it is bankable (i.e., whether lenders would be willing to finance it) and whether it would attract equity capital or public funding. A bankable project would be cheaper to finance, but it requires a healthy cash flow.

4. Even if the project is affordable and bankable, does the project represent value for money? This requires the conduct of the CBA and PSC exercises described earlier.

In addition, depending on the institutional and regulatory context of the country, it is necessary to consider the tax and public finance treatment of the PPP. For example, returns on bonds may be exempt from capital gains tax, thus reducing the financing cost of the PPP deal.

Conclusion

PPPs provide a financing mechanism by which local governments and private firms partner together to deliver important infrastructure projects and improve the efficiency and quality of public facilities and services. Various PPP arrangements exist to satisfy the specific requirements and context of the proposed project and protect private sector interests that want to finance important public infrastructure projects. While the private sector holds a large share of the responsibility for financing and arranging PPPs, the public sector and municipal authorities must critically

assess the long-term viability of the PPP project and its capacity to generate adequate returns on investment.

The success of PPPs in developed and developing countries alike confirms the broad applicability and effectiveness of this financing instrument. While PPPs present their own legal and regulatory challenges, the success of PPPs in financing a wide range of projects from transportation infrastructure to hospitals make them a promising financing instrument for municipal authorities to consider.

Case Study 1: Water services in Manila

Metropolitan Manila's water system in the 1990s suffered from extreme inefficiency and poor maintenance. Approximately two-thirds of the water produced was lost because of leaks and illegal connections, and only eight per cent of homes were connected to the municipality's sewage line.²⁷ Meanwhile, the government agency in charge of the city's water and sanitation services, the Metropolitan Waterworks and Sewage System (MWSS), was in debt and lacked the necessary financial resources for maintaining Manila's water system.

Following the National Water Crisis Act of 1995, the Philippine government decided to privatize MWSS in order to improve the operation, coverage, and quality of the city's water system. The government awarded two concessions for operating Manila's water and sanitation system. One concession went to the Manila Water Company, and the other was awarded to Mayniland Water Company. The concession contracts allowed the two private companies to collect revenues from water tariffs, but were responsible for all operational and maintenance costs in addition to payment of a concession fee to the government.²⁸

The tariffs were set according to recommendations made by the regulatory office of MWSS and accounted for a number of external factors such

as inflation and other shocks that would affect the price of water and sanitation services. The collaboration between the private entities responsible for operating and maintaining Manila's water and sanitation system and MWSS's regulatory office created an environment in which public and private interests were able to improve the access to and quality of the city's water system.

Ultimately, this public-private partnership was enormously successful. Today, Manila Water Company and Mayniland Water Company service 99 per cent and 97.8 per cent of their concession areas, respectively, and are operational 24 hours a day. In addition to improved coverage, the efficiency of the city's water and sanitation has dramatically improved. While Manila's experience with public-private partnerships was largely a major success, it did face challenges along the way. For example, the tariff formulas were determined inadequate and had to be restructured following the PPP agreement, and later on, financial difficulties with one of the concessionaries resulted in the government stepping in to provide funding in order to ensure the continued operation of water and sanitation services across the city. Nevertheless, this case provides a useful example of how private operators can improve the efficiency of public facilities and services while working in collaboration with government agencies and regulatory offices.

Case Study 2: Landfill greenhouse gas emissions in Vancouver²⁹

The City of Vancouver in British Columbia, Canada, owns and operates a large landfill site approximately 20 kilometres south of the city, which serves approximately one million people and receives over half a million tons of solid waste each year. The decomposition processes of solid waste sites such as this one produce large amounts of methane and carbon dioxide gas that contribute significantly to Vancouver's greenhouse gas emissions. Initially, the city installed a landfill gas collection system in 1991 in order to control the environmental impact of the landfill. Then, in 2001, the city decided to delegate the responsibility of managing and operating the landfill's greenhouse gas emissions to a private company that would transform the gas emissions into an energy source for the municipality. As part of the selection process, the municipal government requested that the private company selected be responsible for designing, building, operating, and financing the project. In 2002, Vancouver selected Maxim Power Corporation as its private sector counterpart for a co-generation power plant at the landfill site, which was completed in November 2003.

Under the PPP agreement, Maxim Power built a 2.9 kilometre pipeline to transport gas from the landfill to a co-generation plant. The co-generation plant run off of the landfill's gas emissions produces approximately 7.4 megawatts of electricity, which is then sold to the provincial energy

provider BC Hydro. Any waste heat is recovered and used by Village Farms Greenhouses to produce vegetables, and further excess heat is also utilized directly in the provision of heating to the landfill's administrative and maintenance buildings.

The city continues to maintain and operate the landfill site, which includes the management and operation of the gas collection facility. In this way, the government assumes the risk associated with gas supply, but avoids the initial capital investment required for the co-project. Maxim Power has invested approximately CAD10 million, and signed a purchase agreement with BC Hydro in addition to a 20-year agreement with the City of Vancouver. Maxim Power retains all proceeds from the sale of the power and thermal energy, with the exception of a 10 per cent royalty fee that is paid to the City of Vancouver. The city's project costs and royalties are approximately CAD250,000 and CAD400,000 per year, respectively.

Vancouver's partnership with Maxim Power confirms that innovation and efficiency gains are often triggered when private operators are introduced in the management and operation of public facilities and services. This case study also provides an example for other countries of how private companies can be incorporated into public sphere in innovative ways.

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08

Financing Planned City Extension

Introduction

In the world's rapidly urbanizing countries, the question is not if cities will grow, but how. Planned city extension (PCE) is an alternative to unplanned urban expansion. In many countries, the pace of urban expansion is surpassing what is planned and served by public infrastructure. The result is informal, unplanned, segregated, and sprawling developments on the urban periphery. Wealthier communities create disconnected private infrastructure surrounded by walls, and poorer communities form neighborhoods without access to basic services. Planned extension strategies are explicitly called for in the New Urban Agenda as a means to improve connectivity, enhance productivity, and support resource efficiency.

It is critical that cities begin to plan in advance of urban expansion. Such planning must specify the urban spatial patterns that reinforce



economic efficiency, social integration, and environmental protection. These patterns are compact, connected, and mixed. They include the provision of a quality and connected street network, sufficient public space, a mixture of land uses, socially mixed neighborhoods, and adequate density.

In many countries, the pace of urban expansion is surpassing what is planned and served by public infrastructure.

PCE is a methodology to address sustainable urban growth at a required scale, creating an adequate supply of serviced buildable plots to accommodate population growth without the loss of affordability or the creation of informal settlements. In short, PCE sets the stage for sustainable urban growth.¹

Implementation of PCE should follow an integrated “three-pronged approach,” incorporating urban planning and design, rules and regulations, and public financial management. If these three elements are not well-integrated, implementation will be disjointed or piecemeal, and the vision of the PCE will be divorced from reality.

Local governments in particular sometimes struggle to pay for what they plan, and should integrate a financial strategy into the planning process in order to support improved prioritization and leveraging of available resources. As such, creating a realistic financial implementation strategy for PCE is the subject of this chapter.

The chapter begins by explaining the self-financing PCE approach, wherein PCE pays for itself. The chapter then discusses how to tailor financial planning to a city’s financial and economic capacity. Next it explains how to conduct a rapid financial feasibility assessment to help ensure the plan is realistic. This is followed by a discussion of various ways to calculate private sector potential, as in many instances the implementation of a PCE falls to private actors. The chapter concludes with a list of key considerations for making an initial analysis of financial feasibility.

Linking development with revenues: The self-financing PCE approach

In an ideal situation, planned city extension will pay for itself. As development occurs, it should generate tax revenues to pay the municipality for services, including sufficient revenue to cover debt service on investments in infrastructure. For this situation to materialize there are two core requirements:

- **Financial capacity:** There must be a source of sufficient upfront capital funds for initial investments in public infrastructure and services through borrowing, grants, a revolving fund, or other sources, as well as a functioning mechanism to generate revenue from land or activities in the PCE as it develops.

- **Economic capacity:** There must be enough income-generating economic potential to support the required revenue streams.

Unfortunately, these two conditions do not hold true in many of the world's fastest-growing cities. Many local governments lack sufficient capital budgets and do not have the ability to borrow or manage debt. This can be due to legal barriers, insufficient revenue, or poor financial management capacity. Local government also may lack the capacity or legal authority to generate public revenues from urban development.

Economic capacity is another common issue among growing cities that may lack a broad productive base and have high levels of poverty. Those expected to live in the city extension, particularly if they are rural-to-urban migrants, may struggle to find income-generating activities that can support their basic needs, much less make payments towards taxes or other PCE funding streams.

Despite the commonality of financial and economic challenges, PCE can still be a financially viable strategy; however, it may require support from the national level or donors, and may not be self-financing in the near term. Even urban improvement projects in high-income countries often get grants from national or philanthropic sources, so this should not be seen as an indication of financial failure. As the economy and municipal management capacity grow, PCE should begin to generate revenues.

In considering the ability of the PCE to generate public revenues, it is useful to pay special attention to land value sharing instruments. Land value sharing refers to the idea that land values frequently rise in response to public actions to improve a

city or neighborhood, and that the windfall gains to private landholders can be shared in the form of public revenues to pay for public services and investments. These instruments can serve as the link between public investments and public revenues, enabling financial sustainability.

There are many instruments that can be used for land value sharing. These include value-based annual land taxes, local capital gains taxes, sale of development rights (for example, height exemption fees), special levies where property owners pay directly towards the cost of specific improvements impacting them, and many others. Land value sharing is covered more in depth in Chapter 9.²

Cities with varying levels of financial and economic capacity should consider a financial strategy for the PCE that suits their situation. This is discussed in detail in the following two sections.



Herat town, Kabul © Wikipedia

Private–public division of responsibilities

The idea of planned city extension is that the municipal government should provide an adequate supply of serviced developable plots for socially, economically, and environmentally sustainable urban growth. Embedded in this description is the idea that the private sector (developers or individual households) is responsible for what is developed within private plots, and the public sector is responsible for what is developed outside private plots, including roads, parks, schools, etc. However, in cities with higher rates of poverty, the government may choose to support private housing and businesses through subsidies or assistance programs. Conversely, in cities with a strong economic base, private sector developers may be sophisticated enough to play the lead role in implementing infrastructure and services in the PCE.



Traffic in Rubavu, Rwanda © UN-Habitat

Classic PPP concession agreement models where users pay a fee for services received are one way the private sector can pay for infrastructure, particularly infrastructure used for delivery of services such as water, sanitation, and electricity. PPP models are further addressed in Chapter 7.

Broader private infrastructure provision, including roads, drainage, parks, and amenities, can be financially lucrative if combined with income-generating real estate development. In this case, a developer may play the role typically envisioned for the municipality, seeking the capital for improvements and collecting revenues from development (in the form of sales and rent instead of taxes). If it is determined that such an arrangement has significant advantages over publicly led infrastructure development, perhaps due to differences in access to financing or management capacity, the public sector may even contribute to privately led implementation through instruments such as tax abatement, assistance in land pooling, direct subsidies, or a risk-sharing arrangement.

When negotiating joint development agreements, it is critical that the public sector independently assess the level of profitability of planned real estate developments in order to give the government the information needed to seek a fair share of costs and risks.

Whether the private sector plays a large or small role in implementation, it is essential that municipal leaders ensure that private developers and households will comply with the plan and its core components, such as a connected street grid, adequate public space, density, mixed use, and social mix.

Tailoring financial planning to the city's financial capacity

In cities with existing capacity to generate revenue through property taxes or similar means, the financial planning for the PCE will rely on ensuring the PCE's economic success and the creation of a solid tax base. Financial planning can focus on structuring efficient and clear agreements with implementing partners, including national agencies, utility companies, and private developers, about the contributions to the PCE, as well as selecting the best financial instruments for low-cost financing and revenue generation. The PCE may present an opportunity for testing new financial instruments such as betterment levies, sale of development rights, tax increment financing, etc. Selection of existing or new financial instruments should care-

fully weigh their potential impacts, both intended and unintended. For example, some financial instruments may risk displacing lower-income households through increased taxes or land values. Such impacts should be carefully examined and mitigated if necessary.

In cities with low financial capacity, city leaders will undertake two complementary lines of work towards financial planning for the PCE. The first is to create an immediate-term plan to garner enough contributions to launch critical early investments. The second line of work is to create a strategy to improve local financial capacity so that in 5–10 years, the local government will be able to assume more financial management of PCE implementation, including both capital and operating expenditures. These two lines of work are discussed below.



Lilyfield - Midrand, South Africa © NURCHA

Immediate-term financial coordination plan

The major hurdle in the minds of many local leaders is the first task, involving financial planning for PCE investments in the immediate term. These contributions must be secured without any promise that they will be repaid through PCE-generated revenues. This may sound like an impossible undertaking, but can often be seen as a matter of coordination of existing grants from donors and national agencies.

One example of such a situation is a planned city extension in Rubavu, Rwanda, where the district government is only generating 17 per cent of the local budget through own-source revenues, amounting to less than US\$7 per district resident. The district's capital budget, the main source of funds available for the PCE, is 100 per cent funded through national transfers. In order to create a feasible PCE financial strategy, the PCE plan was adjusted to reduce costs by making changes to the highest-cost planned investments (for example, one change was the recommendation to pave only some roads). Contributions from private developers and potential for a water concession agreement were explored. Under the proposed scenario, the bulk of initial investments in the PCE will be paid for by central transfers to the district's capital budget, in coordination with some developer contributions to infrastructure, and a pilot water concession agreement. Water tariff levels were determined by a prior UN-Habitat study at levels that could both cover costs (including investments costs) and be affordable for lower-income households. Simultaneously, the national government is pursuing major reforms to tax administration to make decentralized revenue generation more effective.³

A PCE with even fewer resources is that in Nacala-al-Velha District, in northern Mozambique, where the district has a capital budget that is only able to

cover 4 per cent of the Phase 1 cost and has no authority to collect taxes due to its administrative classification. Key stakeholders met to discuss PCE implementation, and the district was able to identify funding to pay for an additional 29 per cent of the investment costs for Phase I from national agencies working in the area. Even these funds will rely on the ability of stakeholders to agree to direct their investments in ways that comply with the PCE rather than previously planned uncoordinated investments. The remaining funding gap (67 per cent) can potentially be met by two large private-sector funding sources. One is the Nacala Logistics Corridor Consortium led by Vale, which has expressed interest in the PCE and willingness to fund investments that will contribute to the sustainable development of the area through their Social Investment Plan. Another is infrastructure planned and implemented through GAZEDA, Mozambique's agency in charge of industrial development, which has significant activities in the region and has not yet coordinated funding or planned investments with the District's PCE. After a recent stakeholders meeting, an action plan was agreed upon that includes formation of an Implementation Working Group composed of key stakeholder agencies, a fundraising conference, and a legal examination of the district's possibilities for own-source revenue generation.⁴

Takeaways from the experiences of Rubavu and Nacala-al-Velha are that the most critical capital investments for success of the PCE can be funded through coordination of existing funding streams from (a) local capital budgets, (b) national funding agencies and infrastructure funds, and (c) the private sector, which has an economic interest in the orderly development of the city. However, coordination of these funding sources is critical, and the capacity of the lead coordinating agency must therefore be an immediate focus of financial planning actions.

Financial capacity and revenue enhancement

Finding sources of funding for Phase I of PCE implementation should be paired with efforts to improve own-source revenue generating capacity. If successful implementation of PCE is not paired with good financial management, particularly the ability to generate public revenue from land, there will be a huge missed opportunity for the city: As the value of the land within the PCE increases due to good planning and public investments, there will be large unearned windfalls to private landholders at the city's expense. Furthermore, failure to appropriately generate public revenues from the PCE is a threat to the sustained health of the area. Without public revenue, maintenance of investments will not keep pace with deterioration, and the quality of services will degrade. Disinvestment in the PCE after initial implementation will cause enormous losses for both the city and its residents.

Revenue enhancement should begin with an assessment of current weaknesses and opportunities for improvement. This assessment can examine both policy and administration. Successful administration of land value sharing instruments will include up-to-date records, a fair and efficient valuation system, and functioning systems for billing, collection, and enforcement.

Beyond basic tax administration, taxpayer compliance is likely to be better where there is a strong social contract between taxpayers and the local government. Taxpayers should be able to see that payment of taxes benefits them through the services the local government provides. All else equal, the more visible the benefits of taxes are, the more willing taxpayers will be to comply with timely payments.

Tailoring financial planning to the city's economic capacity

Cities with a solid economic base should focus on economic linkages and planning to support the needs of businesses in order to generate a productive PCE. The PCE should also attract a mixture of income types in order to prevent a socially isolated poverty trap.

One example of good planning for social mix and a variety of uses is a PCE in Cagayan de Oro, Philippines. An elevated part of the city has been envisioned as the location of a new commercial hub with the relocation of municipal government offices away from a high-risk flood zone. The surrounding area will include a network of parks and green spaces and adequate space for natural drainage. The site already has a high-income development planned and existing social housing, as well as lower-middle-income housing nearby. Additional housing mix as well as neighborhood services will contribute to a vibrant and attractive area. The area is also adjacent to a potential ecotourism site and includes the road linkage to agricultural areas that may support an agro-processing centre at one edge of the PCE, with the potential to create a range of jobs for PCE residents.⁵

Whether the city has high or low economic capacity, one of the goals of the PCE will be to support the economic functionality of the city. Good design (density, mixed use, connectivity, etc.) is the foundation of the economically successful PCE. The PCE should also draw upon national and subnational economic strategies to ensure that the needs of target industries are well-supported by land use and public services. This may include facilities for these industries, well-serviced space for other industries

in the same value chains or clusters, or housing that meets the needs of the specific labour force in terms of location, amenities, and transport options. Working with business leaders, entrepreneurs, and investors from the private sector can help ensure that the PCE will be designed and implemented to foster firm competitiveness.

In lower-income cities, economic planning related to the PCE is even more critical and will determine the financial sustainability of the PCE in the long term. Coordination with economic policy implementation at national and subnational levels can help to foster linkages to national, regional, and global value chains.

If the economic role of the PCE is not clear after review of relevant economic policies, it is important to conduct an economic assessment specific to the PCE and form a task force with both public and

private participation to leverage the development of the PCE for job creation and prosperity.

In Silay, Philippines, planning for a PCE was done in conjunction with a new local economic development strategy for the city. Historically, Silay's economy has been largely based on sugarcane farming, but a reduction in trade protections will reduce the competitiveness of Philippine sugarcane and could put many out of work in Silay. After a business survey and an analysis of strengths, weaknesses, opportunities, and threats (SWOT analysis), the city has identified three sectors for job creation: tourism, diversified agriculture, and IT, as well as the strategies to improve the business environment and support these sectors. These strategies have been incorporated into the PCE planning process. Additionally, a group of land owners is working with the city to attract new industries to an enterprise zone being planned in conjunction with the PCE.



Pedestrian crossing in Silay, Philippines © UN-Habitat

Rapid financial feasibility assessment: Key steps and considerations

During the PCE process financial planning should go hand-in-hand with urban design and physical planning. It is useful to do a rapid financial planning exercise as the urban design is developed in order to ensure the plan's financial feasibility and help planners create a realistic plan. At an early stage, a back-of-the-envelope rough calculation of costs and available funds is enough to get a sense of financial feasibility. Rapid assessment has the added benefit of facilitating initial conversations among funding agencies about implementing the PCE.

The idea of rapid financial feasibility assessment is to identify who will pay for what and when. This exercise will result in a sources and uses statement identifying the major costs of PCE implementation (uses) and the sources of funding for each (sources), including both initial investments and recurring costs.

Rapid financial feasibility assessment: Basic steps

1. Assess the financial situation.

- List general financial roles and responsibilities. (Who typically pays for what?)
- Examine the municipal budget and available budget from other agencies.
- Check available financing options, including borrowing, PPP, and land-based instruments (even if not currently used).
- Assess opportunities for improved financial performance of the municipality.

2. Calculate the cost of the plan.

- Determine which investments and operating costs will be the public sector's responsibility.
- Estimate quantities of infrastructure and services based on the conceptual plan.

- Multiply quantities by generalized unit costs for each type of investment (e.g., per m² or per household).
- Assess ongoing costs based on population and expected infrastructure maintenance.

3. Assign funding responsibility.

- Draw upon available agency budgets.
- Use municipal borrowing if available and if projected revenues cover debt service.
- Consider private sector potential to contribute.

4. Balance sources and uses.

- Adjust the plan if needed.
- Explore alternative financing options and options for revenue enhancement.
- Modify implementation phasing if needed.

The costs of initial implementation can be estimated from the conceptual plan, multiplying the quantities of public infrastructure and services by basic unit costs for each. This can be done for multiple planning scenarios, including business as usual, and can be useful in demonstrating the higher costs of sprawling, disconnected development. This initial rough estimate of costs will have a high margin of error; however, the figures will be updated later, as the detailed plan is created and implementing agencies conduct their own studies.

Recurring annual costs should be estimated based on the current operating budget, expected population growth, and infrastructure lifecycle costs.

Note that rapid financial feasibility assessment will focus on costs and funding for areas of public responsibility. However, an assessment of private sector financial feasibility can be useful as a separate exercise, particularly when assessing whether planned land uses and densities are realistic under market conditions and whether private developers have high enough profitability to support exactions or other negotiated contributions to infrastructure, services, or social housing (see the next section).

Matching sources with uses is the next step, and will likely involve conversations with multiple implementing agencies about their available budgets and financing options. This may include utility companies, donors, and national ministries in charge of roads, education, health, and/or social housing. After initial conversation with these agencies and organizations, it may become clear that their plans or the plan for the PCE may need to change. For example, in the case of the PCE in Nacala-al-Velha, Mozambique, a large housing investment was planned by the national Housing Fund (Fundo de Fomento de Habitação) outside of the boundar-



Women walking in Nacal Porto, Mozambique © UN-Habitat

ies of the PCE, and without corresponding roads or utilities. The PCE planning process has opened communication about this planned development, and the Housing Fund will hopefully adjust its plans to fit into the district's vision of a compact, connected, and serviced urban core.

In addition to vertical coordination, horizontal coordination may also be important, particularly in urban areas where development extends beyond the municipal administrative limits. City extension planned for an area that falls partially or totally outside the municipal boundaries of the primary city presents an administrative challenge that is reflected in financial planning for implementation. In such a case the municipality must coordinate carefully with the other jurisdictions involved to develop a fair and equitable distribution of financial responsibilities and revenues. There are various models available for metropolitan coordination, and various types of metropolitan governance structures. Some approaches are summarized below.

Approaches to metropolitan governance

Excerpt from M. Andersson, "Metropolitan Governance and Finance," in C. Farvacque-Vitkovic and M. Kopanyj, eds., Municipal Finances: A Handbook for Local Governments (Washington, World Bank, 2014), p. 51.⁶

The main models and approaches to metropolitan governance are the following:

- Cooperation among local governments
 - Case-by-case joint initiatives
 - Contracting among local governments
 - Committees, commissions, working groups, partnerships, consultative platforms, etc.
- Regional authorities (sometimes called "special purpose districts")
 - A metropolitan council of governments (COG)
- A regional planning authority
- A regional service delivery authority
- A regional planning and service delivery authority
- Metropolitan-level government
 - Metropolitan-level local government
 - A regional government established by a higher tier of government (federal, state, or provincial)
- Annexation of territory or amalgamation of local governments.



After an initial attempt to match costs and funding, adjustments may need to be made to achieve financial feasibility.

If debt financing is an option, the municipality will need to assess whether the PCE will generate sufficient revenues to cover debt service. Risk assessment, as well as sensitivity testing under scenarios where revenue projections fail to materialize, is prudent to ensure that the municipality will be able to meet its financial obligations. In cities where debt financing is an option, legal regulations and internal procedures governing borrowing will play a role in assessing whether debt financing is a viable alternative for the PCE. For example, planners who designed a city extension in Iloilo, Philippines, could count on good compliance with property taxes from residential and commercial developments in the PCE. This opened the option of borrowing to finance a portion of public investments with plans to pay debt service through property tax revenues. This borrowing will comply with debt service limits established by the legal code.

After an initial attempt to match costs and funding, adjustments may need to be made to achieve financial feasibility. These adjustments can fall into three categories: changes to planned expenditures, development of alternative financing strategies, or changes to implementation phasing.

Changes to planned expenditures

It may be necessary to alter the plan or forgo some planned improvements due to their cost. This prioritization process must consider economic, social, and environmental goals. The views and priorities of key stakeholder groups, including vulnerable populations such as women, youth, and low-income households, should be considered.

One example of adjusting planned expenditures is the PCE in Rubavu District, Rwanda. The initial plan far exceeded the district's capital budget. To improve feasibility, UN-Habitat recommended that the three largest capital costs be reduced. The first was the piped sewerage system originally planned, which would require huge investments, including a costly wastewater treatment facility. Instead, subsidies for high-quality on-site sanitation would reduce capital costs while still providing adequate sanitation for the city. As the city grows economically and in population, both the need and the revenue for a piped sanitation system will increase.

The second major planned expense was for social housing. UN-Habitat recommended that instead of providing fully built houses for low-income households, the district could instead facilitate access to low-cost serviced land, allowing households to build incrementally on well-planned plots that will transform over time. Under such an arrangement, the dramatic reduction of costs would allow the district to reach more households while ensuring that funding for basic infrastructure and services remains. While housing quality will likely be low at first, access to services and security of tenure provide stability for gradual self-upgrading. At the same time, the lowest-income families may still need support to obtain a basic dwelling.

The third major cost reduction was based on the idea that the district doesn't need to pave all Phase I roads immediately, but can leave local connections unpaved as well as some of the width of major roads. Importantly, adequate space for street paving and widening for the long-term transformation of the district will still be reserved and protected from private development. In cases like Rubavu, less-than-ideal services should be planned in a way to allow for upgrading at a later stage of development.

Another example of alterations to an extension plan based on financial analysis is the City of Galt, California, U.S.A. Galt is a small agricultural town, but in 2011 decided to update its land use plan due to projected population growth that will likely more than double the city's size by 2030. The city analyzed the public expenditures and revenues associated with a residential expansion plan and found that its initial plan was not financially feasible. From there, the City considered alternative scenarios involving higher densities and a mixture of uses, and determined that mixed-use development was the best option from the standpoint of public finances, providing enough revenues to complete payback of public loans within the required 30-year time limit. The financial model showed a fiscal gap of approximately US\$600 per unit for the original fully residential plan, showing that the city could implement it only with additional fees totaling \$600 per new unit.⁷

Development of alternative financing strategies

A planned city extension provides an opportunity to pilot new financing strategies. Because the government will be creating value through good planning and public services, this value can be leveraged to generate public revenues or in-kind private sector

contributions. The municipality should consider the possibility of developer exactions and public–private partnerships, in addition to land-based financing instruments such as betterment levies and sale of development rights. In most cases, some of the PCE’s residents will be less able to bear the burden of taxes and fees than others. This should be incorporated into financial planning for the sake of both financial feasibility and social equity. A community serving only middle- to high-income households does not serve the core purpose of a PCE, which is to serve as an alternative to informal, unplanned, and unserved development. If the PCE excludes poor households, they will settle elsewhere.

Piloting of new financial instruments may require creation of a new agency or coalition with capacity to manage implementation, such as a municipal development corporation or a special purpose vehicle. If the municipality lacks authority or capacity to use new financial instruments, the new agency may need to exist at a higher level of government, with municipal representation.

Changes to implementation phasing

The buildout of infrastructure and services can be spread over time to reduce the financial burden and make revenues from the initial phases available for reinvestment in later phases. This can be particularly useful where investments in Phase I will provide a substantial increase in local revenue. Some PCE-wide investments will be necessary early on (for example, connector roads or a solid waste facility), while others may be built out at a pace to match population growth and avoid unplanned development spillover.

Typically, delineating road and public space reserves for the entire extension during the first phase of

implementation is a shrewd tactic to ensure that if unplanned development does occur, public spaces will be protected. It can be legally, financially, and socially difficult to reclaim this space later if it becomes occupied.

Calculating private sector potential

As previously noted, the implementation of the PCE may fall to either public or private actors, or some combination of the two. Many times, the private sector focuses on the development of built real estate products within publicly serviced plots. Government leaders may still wish to conduct a financial assessment of planned private development in order to (a) ensure that planned land uses can be supported by the private real estate market and (b) check the level of profitability for the sake of negotiating developer exactions. This type of private sector feasibility assessment should be based on traditional methods of analysing real estate investment. These will be influenced by the basic concepts examined briefly below.

Risk and time as the basic financial principles

Every planned city extension project is implemented over a period of time that, in many cases, spans several decades.

Bearing this in mind, the time factor takes on crucial importance in these kinds of projects, and must be taken into account and incorporated as another cost to be considered in the feasibility of the PCE.

There are two fundamental financial principles that illustrate the importance of time and risk as indispensable variables to be taken into consideration: 1) A dollar today is worth more than a dollar

tomorrow, because a dollar today can be invested to start earning interest immediately, and 2) A safe dollar is worth more than a risky one, for which reason most investors avoid risk if they can do so without sacrificing profitability.⁸

Time as a cost in an investment project

Imagine an investment project that requires an initial investment of \$150,000 and in the following two years will generate a positive cash flow of \$100,000 and \$300,000, respectively. A first look at the economic results of the project involves calculating the total cash flow balance generated by the project (\$250,000).

Equity contribution				
Year 0	Year 1	Year 2		
-\$150,000	\$100,000	\$300,000	=	\$250,000

This static approach does not include time as an additional cost of the project. In order to include the time costs, it is necessary to determine what rate of return a typical investor interested in carrying out the project would demand to accept this deferred income. This is called the opportunity cost of capital, discount factor, or hurdle rate. If we assume the opportunity cost of the invested capital is 7 per cent, we can see that the project's economic and financial results change, and that the surplus economic resources are now \$205,400. Part of the previously shown economic returns has had to be reduced to offset the time factor, evaluated as the opportunity cost of the capital invested by the typical investor (\$44,600 in this example).

Equity contribution				
Year 0	Year 1	Year 2		
-\$150,000	\$100,000	\$300,000	=	\$205,400
 (1+7%) ¹ (1+7%) ²		

Risk as a cost in an investment project

There are a number of risk factors involved in investments related to the development of a particular area (e.g., management risk, liquidity risk, legislative risk, inflation risk, interest rate risk, environmental risk, archaeological risk, etc.), and not all investments entail the same level and type of risk. Real estate development is, generally speaking, more risky than government bonds (i.e., gilt-edged securities), and the development of rural land into serviced urban parcels is likely even more risky than the construction of the final real estate product.

Therefore, depending on the risk inherent in each investment project, we need to add a risk premium to the opportunity cost of the capital, as appropriate for that particular project.

$$\text{Discount factor} = \frac{1}{(1 + r)}$$

$$r = \text{RFR}_{[\text{Risk Free Rate}]} + \text{RP}_{[\text{Risk Premium}]}$$

Net present value and internal rate of return as metrics of financial feasibility

Net present value (NPV) is the indicator par excellence, and its purpose is to update, at any given moment, all cash flows generated by the investment project under analysis:

$$VAN = CF_0 + \frac{CF_1}{(1+i)^1} + \frac{CF_2}{(1+i)^2} + \dots + \frac{CF_n}{(1+i)^n}$$

CF = Estimated cash flow for each time unit (year, six-month period, etc.)

i = Discount factor applied to each time unit

n = Number of time units estimated for the investment project (years, six-month periods, etc.)

A project with a positive NPV means that:

1. It has returned all capital invested.
2. It has paid back the cost of all resources used to fund it.
3. It has generated an additional surplus equivalent to the volume indicated by the NPV in question.

NPV is the best indicator for the economic and financial assessment of any urban transformation project since it is the indicator, along with the internal rate of return (discussed below), that takes into account the time value of money and that is based solely on the inflow and outflow of economic resources provided for in the project and on their opportunity cost.

The internal rate of return (IRR)

IRR is defined as the interest rate at which the NPV would be zero.

$$0 = CF_0 + \frac{CF_1}{(1+i)^1} + \frac{CF_2}{(1+i)^2} + \dots + \frac{CF_n}{(1+i)^n}$$

CF = Estimated cash flow for each time unit (year, six-month period, etc.)

i = Discount factor applied to each time unit

n = Number of time units estimated for the investment project (years, six-month periods, etc.)

Thus, the IRR tells us the maximum discount rate that the investment project can incur to achieve a NPV equal to zero. Above this rate, the NPV will be negative. This implies that the higher the IRR, the higher the chances of the project having a positive net present value with regard to the discount rate used. The IRR provides the criteria for us to choose the investment projects that offer return rates higher than the opportunity cost of capital.

Many operators, both public and private, prefer the criteria of the IRR to the NPV. Although both criteria, when properly laid out, are formally equivalent, we must point out that the IRR has some weaknesses that we must consider when using it as a benchmark (multiple rates of return, mutually exclusive projects, etc.).⁹

Types of private developers involved in PCE implementation

Investors in the real estate market can be individuals, partnerships, corporations, or corporate entities specifically designed for real estate investments, such as real estate investment trusts (REITs). The common theme is that all are seeking to utilize

available market knowledge and financial tools in order to acquire profitable real estate investments. One of the differentiating factors among these entities is the cost of capital and the financial structure available to execute urban development.

It is obvious that, depending on the type of investor implementing the plan, the economic and financial results of the project will be different. For example, short-term investors will likely be more interested in standard and market-tested real estate products where serviced plots are already available. Similarly, some real estate development firms have the capacity to construct buildings but lack experience and interest in infrastructure provision. On the other hand, some developers also specialize in land development, including infrastructure provision, which can be useful for projects where the government lacks management capacity or ability to borrow. Additionally, if the plan seeks to promote new real estate products that are not yet prevalent in the market (e.g., mixed-use buildings in a city where all land uses are separate), the government may need to actively seek a developer with a longer-term social vision and willingness to experiment.

The sources of real estate capital are diverse, ranging from individuals to large organizations and institutions and, depending on the financial cost of these sources of capital, the economic and financial results of the transformation project may be larger or smaller. For example, a real estate project that is executed by an asset-based operator that makes its profit in the long term by renting its assets along with equity-based financing will not produce the same result if it is implemented by a real estate operator whose profits are based on the sale of housing off-plan and a liability structure based on bank debt.

The financing structure of an urban transformation project is usually based on one of the two main sources of finance, debt and equity, and there are numerous financial actors involved in each of these two sources. In the case of debt financing, for example, the actors include banks, commercial mortgage-backed securities, insurance companies, mortgage REITs, government credit agencies, pension funds, and private, nonbank, untraded funds. In the case of equity financing, there are other actors, such as private investors (developer assets and equity, local investors, landowners, opportunity funds, hedge funds, sovereign funds, private financial institutions, family offices, etc.), equity REITs, and pension funds. To ensure the success of a project, it would be advisable for it to be undertaken by a specific operator that can guarantee the capital cost of the operation.

The ability to forecast future market behaviour

When assessing the financial feasibility of real estate projects, it is important to forecast the sales price of the final constructed units. To do this requires forecasting future supply and demand scenarios of real estate products; however, even a meticulous analysis will never be able to reduce the risk of future uncertainty to zero. This component of uncertainty is an integral part of an investment project, equivalent to risk—a cost that, as explained earlier, must be included if the intention is to attract private resources to execute the urban planning project.

Forecasting future real estate prices can begin by examining market trends, population growth, and whether the supply of real estate has generally kept up with housing demand. Population projections paired with economic projections can help determine the demand forecast, and previous supply-side behaviour can be projected forward. Information about other real estate units entering the market, the land management and planning regulations in force, future planning strategies, the market absorption rate for current real estate products, the phase of the real estate cycle, the ability of households to purchase a property or to acquire one by alternative means such as renting, etc., can also influence projections.



The financing structure of an urban transformation project is usually based on one of the two main sources of finance, debt and equity, and there are numerous financial actors involved in each of these two sources.

One of the most serious problems city leaders face when considering future market behaviour is obtaining transparent and accurate data with which to make a reasonable estimate of supply and demand. Independent private firms with experience in real estate can be contracted to assist with market analysis; however, this can be costly and should not be done if the potential benefits to forecasting do not outweigh the costs or if there is a conflict of interest.

There is an added layer of complexity when considering price forecasts for a planned city extension, since one of the goals of the PCE is to provide a large enough supply of buildable land to preserve urban affordability. If the PCE will achieve its goals, one could assume that property values will be similar to current prices or that they will be affordable to the majority of the expanding population. A cautionary note is that flooding the real estate market to alleviate price increases is against the developer's profit interest. Therefore, planners who intend to have an impact on real estate affordability should work with other city leaders to prevent build-out by a small number of large developers who can restrict supply.

Depending on the market conditions and income status of the urban population, it may not be financially feasible for PCE beneficiaries to pay the prices required by the real estate sector. In such cases, private market-based development should be paired with subsidized housing options and/or models where lower-income households can obtain land and build incrementally, using designs that enable future densification.

Summing up, the ability to forecast the future market behaviour is not easy. However, forecast-

ing and planning is not a theoretical exercise but rather a road map for the person or agency taking on the risk by leading the process, whether in the public or private sector. This lead actor will need to take into account both macroeconomic and microeconomic variables such as the land management and planning regulations in force in the region in question, future planning strategies, the market absorption rate for the real estate products included in the plan, the phase of the real estate cycle, the ability of households to purchase a property or to acquire one by alternative means such as renting, etc.



Housing in the outskirts of Lima, Peru © Flickr/Alex Proimos

Concluding recommendations

PCE implementation can be expressed as a succession of expenditure flows corresponding to the cost of land development and subsequent real estate development, in addition to the revenue flows corresponding to the income obtained from the real estate products once placed on the market. The temporary balances between negative and positive flows demand a financing proposal that determines the profitability of the urban development.

There are a variety of methodologies available, some more complex than others, for evaluating the financial feasibility of implementation, but whichever is used must be adapted to the specific circumstances of the particular plan. If common sense is not used, a rigid analysis could lead to a misleading or even nonsensical outcome.

The following is a list of key considerations for making an initial analysis of financial feasibility:

1. The public and private sector actors responsible for each planned element
2. Phasing of implementation allocating the investments in each phase
3. The total costs attributable to each element of plan implementation
4. The potential revenue to both the public sector (taxes and fees) and private sector (rents and sales)
5. The options available for financing investments, and the financial cost/cost of capital
6. Metrics of financial feasibility, such as NPV, IRR, or other metrics of private developer profitability
7. The ability of implementing actors to finance and manage planned implementation
8. The ability of intended beneficiaries to utilize the PCE based on their needs and income status
9. The tax balance sheet for the plan measured in terms that guarantee future sustainable economic management
10. The balance between the investments assigned by the proposal to the different public administrations involved and their economic and financial capacity to assume them throughout the planned timescale

With these considerations in mind, local governments can test whether their plans are financially feasible for those who will implement the plan. If PCE adjustments are required, it is better to discover this while still in the planning process and to make necessary adjustments.

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Endnotes

1 Complementary to planned extension, planned infill and redevelopment of the existing urban core can and should also contribute to the absorption of expanding urban populations. This is particularly important for cities with insufficient density or large amounts of underutilized land in the existing urban area. Regulatory and land issues are often at the heart of whether redevelopment and infill are attractive to the private real estate sector. Infill can be a legally and politically complex process in cities with land titling issues, speculation, or political control of land. The existence of ground pollution or unusable structures on potential brownfield redevelopment sites can add cost and complexity to infill. Due to differences in financial and legal issues related to planned city infill, this chapter only focuses on PCE.

2 Additional resources on this topic include UN-Habitat & GLTN, *Land and Property Tax: A Policy Guide* (Nairobi, UN-Habitat, 2011), available from <http://unhabitat.org/books/land-and-property-tax/>; and UN-Habitat & GLTN, *Leveraging Land; Land-Based Finance for Local Governments* (Nairobi, UN-Habitat, 2016).

3 For more information, see Paterson, Morell, Kamiya, and Möhlmann, *Rubavu District Planned City Extension Phase I (2015-2025) Financial Plan* (Nairobi, UN-Habitat, 2015).

4 For more information, see UN-Habitat, "Rapid Financial Feasibility Assessment for Planned City Extensions (PCE)" (Nairobi, UN-Habitat, 2016).

5 For more information, see UN-Habitat, *Cagayan de Oro Planned City Extension (PCE) Final Report* (Manila, UN-Habitat, 2015); and UN-Habitat, *Planning City Extensions for Sustainable Urban Development: A Quick Guide for Philippine Local Governments* (Manila, UN-Habitat, 2016).

6 For a more in-depth look at models of metropolitan government, including international examples, see E. Slack, "Innovative Governance Approaches in Metropolitan Areas of Developing Countries," in *The Challenge of Local Government Financing in Developing Countries* (Nairobi, UN-Habitat, 2015). Available from <http://unhabitat.org/books/the-challenge-of-local-government-financing-in-developing-countries/>.

7 Sacramento Council of Governments (SACOG) & AECOM, *Utilizing the Integrated Model for Planning and Cost Scenarios Tool to Understand the Fiscal Impacts of Development: A Spotlight on the City of Galt* (Sacramento, SACOG, 2011).

8 B.A. Brealey and S.C. Myers, *Principles of Corporate Finance*, 5th Edition (n.p. McGraw-Hill/Interamericana de España, SAU, 2001).

9 For detailed information see UN-Habitat, *Draft Technical Guidebook for Financing Planned City Extension: The Economic and Financial Feasibility of Urban Planning* (Nairobi, UN-Habitat, 2016).

09

Sharing the Wealth: Private Land Value and Public Benefit

Introduction

Sustainable development includes the public financial resources to invest in and maintain the physical infrastructure and urban services necessary to support urban living. The need for additional resources to meet the demands of urban growth is nearly ubiquitous. This need has led many thoughtful observers to advocate greater use of land as a basis for raising additional revenues. For example, the editors of *The Economist* recently argued:

*"[G]overnments should impose higher taxes on the value of land. In most rich countries, land-value taxes account for a small share of total revenues. Land taxes are efficient. They are difficult to dodge; you cannot stuff land into a bank-vault in Luxembourg. Whereas a high tax on property can discourage investment, a high tax on land creates an incentive to develop unused sites. Land-value taxes can also help cater for newcomers. New infrastructure raises the value of nearby land, automatically feeding through into revenues—which helps to pay for the improvements."*¹

The need for additional resources to fund growth-related needs is not limited to developing countries. In 2014, the National Bank of Canada published a discussion paper promoting land value capture to fund public transit for Montreal.² That report concludes in part:

“There is significant evidence to show that the improved connectivity supplied by new transit services generates increased land and development value. This is well recognized by the development industry. It therefore seems fair and equitable that a proportion of this additional wealth, generated by the new transit, should go to funding the transportation facility.”

This chapter briefly reviews the instruments commonly used to engage in land value sharing and raise revenue based on land value and land attributes. Both theory and practice support the use of land-based revenue sources. However, the challenges associated with effective implementation should not be understated.

Land value sharing: Theory

In the fields of urban public finance and international development, the concept of land value sharing (also commonly referred to as land value capture) has become a standard argument for implementing or reforming taxes based on land. Often the value of privately held land increases as a result of public investments in infrastructure, publicly approved changes in land use, or broader changes in the community, such as population growth. Proponents of land value sharing argue that governments should use taxes and fees to collect some share of this increase in value for public purposes, including funding infrastructure and service improvements. The concept of land value sharing has been in circulation at least since 1776 when Adam Smith wrote *The Wealth of Nations*. Smith considered the topic of taxes on agricultural land (which he called “the ordinary rent of land”), houses (“house-rents”), and residential land values (“ground-rents”) and concluded:

“Ground-rents, so far as they exceed the ordinary rent of land, are altogether owing to the good government of the sovereign, which, by protecting the industry either of the whole people, or of the inhabitants of some particular place, enables them to pay so much more than its real value for the ground which they build their houses upon. ... Nothing can be more reasonable than that a fund, which owes its existence to the good government of the state should be taxed peculiarly, or should contribute something more than the greater part of other funds, towards the support of that government.”³

”
The need for additional resources to meet the demands of urban growth is nearly ubiquitous.

Whether or not one agrees that increased land value is due to the quality of governance, it is clear that in most instances increases in land value are not due to actions taken or investments by the land holder. This led John Stuart Mill to write in 1848:

“Suppose that there is a kind of income which constantly tends to increase, without any exertion or sacrifice on the part of the owners: ... In such a case it would be no violation of the principles on which private property is grounded, if the state should appropriate this increase of wealth, or part of it, as it arises. This would not properly be taking anything from anybody; it would merely be applying an accession of wealth, created by circumstances, to the benefit of society, instead of allowing it to become an unearned appendage to the riches of a particular class.

“Now this is actually the case with rent. The ordinary progress of a society which increases in wealth, is at all times tending to augment the incomes of landlords; to give them both a greater amount and a greater proportion of the wealth of the community, independently of any trouble or outlay incurred by themselves. They grow richer, as it were in their sleep, without working, risking, or economizing. What claim have they, on the general principle of social justice, to this accession of riches?”⁴

The strongest historical proponent of a tax on land value was 19th century political economist Henry George, who believed that society should abolish all taxes except the tax on land values. He viewed this tax as a remedy for the unequal distribution of wealth and argued that it could be used to prevent speculation and support productivity. In his immensely popular 1879 book *Progress and Poverty*, he wrote:

“The tax upon land values is, therefore, the most just and equal of all taxes. It falls only upon those who receive from society a peculiar and valuable benefit, and upon them in proportion to the benefit they receive. It is the taking by the community, for the use of the community, of that value which is the creation of the community....”

“And to shift the burden of taxation from production and exchange to the value or rent of land would not merely be to give new stimulus to the production of wealth; it would be to open new opportunities. For under this system no one would care to hold land unless to use it, and land now withheld from use would everywhere be thrown open to improvement.”⁵

Contemporary economists favor land taxes for another reason: Land taxes are economically efficient. Normally taxes reduce the supply of goods



Commercial area in Honiara, Solomon Islands © UN-Habitat

produced and/or raise prices, which detracts from the welfare of producers and consumers.⁶ However, a land value tax does not reduce the supply of land, which is fixed. When supply of a good is completely inelastic, economic theory predicts that the full price of the tax will be borne by the seller—i.e., the price of land will be reduced by the amount of the tax. This is an efficient outcome since the seller did not exert any effort to create the value of the land itself. In fact, counterintuitively, a value-based tax on land can actually decrease the price of residential and non-residential units. This is because it can deter speculation and incentivize landholders to put their land into use, adding to the supply of units in the market.

Several modern noted economists have commented on the theoretical strength of land taxes. Nobel laureate William Vickery observed:

“The property tax is, economically speaking, a combination of one of the worst taxes—the part that is assessed on real estate improvement ... and one of the best taxes—the tax on land or site value.”⁷

Even conservative economist Milton Friedman grudgingly acknowledged the merits of land taxes:

“There’s a sense in which all taxes are antagonistic to free enterprise – and yet we need taxes. ... So the question is, which are the least bad taxes? In my opinion the least bad tax is the property tax on the unimproved value of land, the Henry George argument of many, many years ago.”⁸

Thus, the current view on the use of land value sharing reflects a substantial consensus that “unearned increments” in land value can and should be recaptured, at least in part, by the community. Few disagree with the Vancouver Action Plan—the founding document of UN-Habitat—which states:

“The unearned increment resulting from the rise in land values resulting from change in use of land, from public investment or decision, or due to the general growth of the community must be subject to appropriate recapture by public bodies (the community).”⁹

Most experts agree with economists H. James Brown and Martim O. Smolka, who conclude that in theory (1) publicly created value should be captured, (2) substituting land-based taxes for other taxes to pay for investments is economically efficient, (3) land-based taxes tend to lower prices and reduce speculation, and (4) land-based taxes could cover a major part of public infrastructure improvements.¹⁰ Given this consensus it is reasonable to ask why the instruments are not more widely used.



Challenges of land value sharing in practice

Land value sharing and land-based revenue systems in developing nations can be extremely useful and fundamental in building an adequate and stable revenue system, but they are not without challenges. Even with a sound legal foundation for land-based revenues (something not always present), three cross-cutting challenges are common in developing countries: administration, valuation, and taxpayer resistance.

Administration: Land-based revenue systems require strong and effective local government administration, and collaboration among multiple levels of government. Such administrative capacity is often lacking in local governments, especially in rapidly expanding small and medium-sized urban areas.

The challenge is compounded because even well-administered systems are unlikely to yield enough revenue to fully fund all operations and needs.¹¹ Many land-related revenue reforms in particular have been largely unsuccessful because the cost of making administrative improvements is higher than the potential yield at tax rates deemed politically acceptable.¹²

Valuation: A second common problem with instituting land value sharing and land-based revenue systems is the difference between market values and assessed or taxable values. In theory, many land-based revenues should be collected based on the fair market value of a property. In reality, discrepancies commonly exist both between and within classes of property since assessment is as much art as it is science, and is fraught with judgments and administrative discretion.¹³

It is common for valuations for tax purposes to fall below what a property would sell for in an open market, resulting in a loss of taxable value for the local government. In many instances, these shortfalls and the resulting revenue losses develop due to irregular and outdated valuations, and inadequate valuation processes. If taxable value fails to keep pace with actual value, the ability of land-based taxes to recoup and share the benefits of public investments is compromised.

Taxpayer resistance: A third problem with land-based revenue instruments lies in taxpayer resistance. Because they are often paid in lump sums, many of these taxes are extremely visible to taxpayers compared with other taxes levied on or through businesses.¹⁴ It can be difficult for taxpayers to compare the relative fairness of alternative taxes, especially if there is only a vague connection between taxes paid and benefits received. This often results in opposition to land-based taxes.¹⁵ Because land-based revenue instruments are often unpopular in developing nations, they are rarely a priority for elected officials.¹⁶

Political support is a key ingredient for land-based finance success.

- High-level political officials must be committed.
- Key stakeholders and the public must be informed and supportive.

Often the best way to generate public support for revenue collection is to spend the revenue on needed and visible public services.

While there are noteworthy challenges to effective use of land-based finance instruments, none is insurmountable. Land-based tools are used effectively in various countries around the world, and many developing countries are making significant progress in implementing or improving such instruments.

Defining and classifying land-based financing instruments

Land-based finance instruments are called by different names in different countries and settings. No attempt is made here to provide a comprehensive list of synonymous names or to cover local variations of the instruments. Rather, the basic features of the instruments are set forth in this section, and the reader is simply cautioned to be aware that ambiguity in names exists. Table 1 summarizes the land-based finance instruments commonly in use. For each instrument, the table provides:

- A very brief description of what the instrument is
- The “timing” of the instrument, meaning when the tax or fee is assessed and with what frequency
- The initial incidence of the tax or fee, meaning who is required to actually pay the obligation

The issue of incidence, or who pays the tax or fee, requires a bit more explanation. Public finance economists draw a distinction between statutory incidence and economic incidence.¹⁷ Statutory incidence refers to who must pay the tax or fee to the government. Economic incidence refers to who must ultimately bear the economic burden of the tax.

Since the statutory incidence does not describe who really bears the burden of the tax, from a policy perspective, the economic incidence is the more important concept. Consider the following example.

One-time versus ongoing revenues

Some land-based finance instruments seem to have an advantage because they can fund capital projects upfront (e.g., sale of public land and sale of development rights).

However, a system that successfully collects an ongoing revenue stream from land can open the door to creditworthiness and give local governments options to finance capital projects through borrowing.

Suppose that a developer purchases additional residential development rights from a city. The statutory incidence of the cost of those rights falls on the developer. But if the developer simply increases the price charged for finished residential flats by the amount paid for the development rights, it is the final purchaser of the flat who bears the economic incidence. In terms of assessing equity and social impacts, the economic incidence is thus of greater interest than the statutory incidence.

Unfortunately, determining the economic incidence of land-based finance instruments is not always straightforward. For example, there is an unresolved debate about the economic incidence of the annual tax on land and buildings.¹⁸ The economic burden of an annual property tax may depend upon whether public services are transparently delivered in proportion to tax payments, whether there is good information available to buyers and sellers about present and future taxes, and whether real estate markets have the time and ability to respond to incentives for the expansion of the supply of built units. In any event, Table 1 reports the statutory incidence. In a subsequent section, the economic incidence and social impacts of the instruments are discussed in greater detail.

Table 1: Land-based finance instruments

Instrument	Description
Recurring land value tax	<ul style="list-style-type: none"> • Recurring tax based on an estimate of the value of land or on land attributes
Recurring building value tax (included for comparison)	<ul style="list-style-type: none"> • Recurring tax based on the value of immovable improvements or on the attributes of the improvements
Betterment levies	<ul style="list-style-type: none"> • Charges assessed in connection with specific infrastructure improvements • Limited to recovery of actual costs incurred
Special assessments	<ul style="list-style-type: none"> • Charges assessed in connection with specific infrastructure improvements • Limited to recovery of actual costs incurred
Developer exactions	<ul style="list-style-type: none"> • Charges assessed in connection with development approval • Can be paid in cash, in land, or in kind
Land value increment tax	<ul style="list-style-type: none"> • Tax assessed as a percentage of the increase in land value due to public actions or general market trends
Sale of development rights	<ul style="list-style-type: none"> • Payments received in exchange for permission to develop or redevelop land at higher density or changed land use • Rights can either be sold at auction or at fixed price • Rights may be transferable to other locations or resold
Sale of public land	<ul style="list-style-type: none"> • Payment received in exchange for freehold title to public land
Lease premiums	<ul style="list-style-type: none"> • Payment received in exchange for right to occupy and benefit from public land • Permitted land use is specified • Terms vary from 2 to 99 years
Recurring lease payments	<ul style="list-style-type: none"> • Payment received in exchange for right to occupy and benefit from public land • Permitted land use is specified • Terms vary from 2 to 99 years
Transfer taxes and stamp duties	<ul style="list-style-type: none"> • Charge assessed for recording the transfer of a land title from one private party to another • Can be either a fixed fee or a percentage of the value of the property being transferred

Classifying land-based finance (LBF) instruments

It is helpful to consider the relevance of each instrument for land-related policy goals. Table 2 provides one such summary. In the table five potential land-related policy goals are listed, along with the 11 instruments. Table cells in green indicate that

the instrument listed at the head of that column is potentially relevant for the goal listed on that row of the table. For example, if the goal is to recover the cost of public infrastructure investments, the appropriate land-based finance instruments to consider include:

- Recurring taxes on land value

Timing	Statutory incidence
<ul style="list-style-type: none"> Assessed annually Can be collected in installments 	Either the landowner or the occupant
<ul style="list-style-type: none"> Assessed annually Can be collected in installments 	Either the landowner or the occupant
<ul style="list-style-type: none"> Assessed and collected as a one-time charge 	Existing landholders whose land benefits from the improvements
<ul style="list-style-type: none"> Assessed once Collected over a period of time, often as a temporary addition to the recurring property tax 	Existing landholders whose land benefits from the improvements
<ul style="list-style-type: none"> Assessed once Collected as project is approved and completed 	Land developers seeking city approval
<ul style="list-style-type: none"> Can be assessed when land title transfers or when specific public actions result in increased land values Collected when land title transfers or by special billing 	<ul style="list-style-type: none"> Either the original title holder, the new title holder, or both if tied to title transfer Existing landholders if by special billing
<ul style="list-style-type: none"> Collected once 	Purchaser of the development right
<ul style="list-style-type: none"> Collected once 	Purchaser of the land
<ul style="list-style-type: none"> Assessed and collected once 	Purchaser of the leasehold
<ul style="list-style-type: none"> Recurring payments Payment amount reviewed and updated periodically 	Purchaser of the leasehold
<ul style="list-style-type: none"> Assessed and collected once 	Either the original title holder, the new title holder, or both

- Recurring taxes on building value
- Betterment levies
- Special assessments
- Sale of development rights
- Sale of public land
- Lease premiums

The other four instruments are better suited for achieving other goals. Further, the text in some of the cells indicates any special issues that should be considered in pursuing the instrument in that column with the desired goal listed in the row.

Some of the Table 2 entries also suggest that some instruments are more appropriate than others for some settings. For example, if the goal is to collect a user charge for private use of public land (last row

in the table), it makes a difference whether the land occupancy is formal or informal. If the land use is authorized, it makes more sense to use recurring lease payments built into the agreement that grants the right to use the land. On the other hand, if it is an informal settlement on public land, a formal lease agreement is not practical. However, some cities have been successful in levying a land value tax, especially if paying the tax is linked to eventual regularization of tenure.

Table 2: Land-based finance instruments and land-related policy goals

Land-related goal	Land-based finance instrument					
	Recurring land value tax	Recurring building value tax	Betterment levies	Special assessments	Developer exactions	
Recover the cost of public infrastructure investment	May need to be paired with local borrowing			Requires landholder approval		
Claim a portion of increased private land value created by public action	If the tax rate is high enough				If law permits exactions beyond those that benefit the site	
Collect payments for public services proportional to the benefits provided to landholders						
Avoid direct expenditures for new infrastructure						
Collect a “use charge” for private use of public land	Informal settlements					

Note that sometimes the design of the land-based finance instrument can change its achievement of policy goals. For example, recurring lease payments could be used to recover the cost of public infrastructure investments if priced accordingly and used to repay loans for an investment project. The ability to adapt instrument design is important in settings where the best-suited instrument for the policy goals is unavailable, requiring adjustment of other instruments to fit the intended purpose.

	Land value increment tax	Sale of development rights	Sale of public land	Lease premiums	Recurring lease payments	Transfer taxes and stamp duties
				If priced appropriately		
	If local government administers and retains the revenue					If tax is high; see land value increment tax
					Can be combined with land use charge	If tax is modest
		If the sale takes place before new infrastructure is installed				
					Formal occupancy	

Case Study 1: Sale of development rights in Mumbai, India

In Mumbai, building density is limited by the floor space index (FSI), which is calculated based on the ratio of the allowable floor space to the plot area. For example, a plot with an allowable FSI of 1 could accommodate a building with the same amount of floor space as the total plot area. With an allowable FSI of 2, the built space could be twice the land area. Currently, in the city the allowed FSI is 1.33, and FSI can be up to 1 in Mumbai's suburbs.

Property owners can sell unused FSI from their plots to be used elsewhere. This type of system is called tradable development rights (TDRs) and is sometimes used in other cities internationally as a way to redirect development intensity without disenfranchising the owners of land that should not be further developed. In Mumbai, developers can also purchase up to 0.33 of additional FSI from the government, which provides public revenues to help maintain urban infrastructure under pressure from intensive development. This is called sale of development rights.

Mumbai's government also leverages the value of development rights to incentivize affordable housing construction. Developers who build affordable housing can sell all the development rights for their property. In this way, the private sector (i.e., the buyer of additional FSI) pays developers who build affordable housing.

Some have critiqued the restrictive levels of allowable FSI in Mumbai, saying that they are below market demand, driving development towards the periphery and causing sprawl. The government of the state of Maharashtra, which encompasses Mumbai, is considering increasing the allowable FSI to 2 in a new development plan. Such a move would intensify development in the core, causing some to worry about added congestion. Public revenues generated by the sale of additional allowable FSI should be used to mitigate negative impacts caused by additional development.



Street in Mumbai, India © **Thamara Fortes**

Sources: CNBC-TV18, "Mumbai's Base Floor Space Index Likely to Be Rationalized," 27 May 2016, available from http://www.moneycontrol.com/news/cnbc-tv18-comments/mumbais-base-floor-space-index-likely-to-be-rationalized-srscs_6763981.html; GLTN/UN-Habitat, *Leveraging Land: Land-Based Finance for Local Governments* (Nairobi, United Nations Human Settlements Programme, 2016).

Case Study 2: Special assessments in Cuenca, Ecuador

In addition to the annual value-based property tax, the city of Cuenca, Ecuador, uses a special assessment to collect payments for infrastructure-upgrading projects requested by communities. This payment is called the *contribución especial de mejoras* (CEM), or betterment contribution. The CEM has been successful in raising significant revenues accounting for over 10 per cent of own-source revenues, slightly more than the regular property tax.

The CEM began as a neighborhood improvement program but expanded after initial successes. Use of the CEM is determined based on a competitive process where communities apply for projects, with the knowledge that they will pay the cost after project completion. Interested communities work with technical experts to develop their proposals and ensure they comply with municipal standards. Projects are prioritized for implementation on the basis of social, political, and technical criteria.

Project implementation includes community involvement. The contracting process favours the hiring of many local contractors, and sometimes benefiting households can make their contributions in-kind through labour. Additionally, the recipient community elects a supervisor to oversee the project in conjunction with the city and to serve as the community liaison.

Project costs are paid through a revolving fund that is repaid from beneficiary contributions. Project costs are divided between landowners by formula, 40 per cent based on street frontage and 60 per cent based on property valuation. Projects with citywide significance have their costs divided among all urban prop-

erties. Contributions are limited to half of the increased value to benefiting properties. The maximum repayment period is seven years, but many beneficiaries pay early to receive a discount; only 3 per cent of required contributions are late.

The program has been successful in building government trust, raising infrastructure funds, increasing property values, and responding to the needs of communities.



Housing in Cuenca, Ecuador © Flickr/Laura Evans

Source: GLTN/UN-Habitat, *Leveraging Land: Land-Based Finance for Local Governments* (Nairobi, United Nations Human Settlements Programme, 2016).

Many of the entries in Table 2 make assumptions about the level of the tax rate, the administrative capacity of the agencies involved, etc. Table 3 provides a more detailed statement of the minimum requirements for each instrument.

Two requirements are common to all land-based finance instruments. First, there must be strong political support from senior political leaders. Second, there

must be a solid enabling legal framework. Beyond that, the requirements for each vary somewhat. All require strong administration, but the administrative tasks vary depending on the instrument. In *Leveraging Land: Land-Based Finance for Local Governments*,¹⁹ the features of each instrument are spelled out more completely, along with the requirements for their use and the likely impacts on the community.

Table 3: Minimum requirements for each instrument

Instrument	Minimum requirements for implementation
Recurring land value tax and recurring building value tax	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Fiscal cadaster (land registry) that includes all taxable land plots • Appropriate estimate of taxable value • Administrative ability to calculate tax due, deliver bills, and collect tax
Betterment levies	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Identification of all land plots whose value is affected by the improvements • Estimated impact of the improvements on the land value of each affected plot • Accurate estimate of the cost of the improvements • Method for allocating the improvement costs to individual plots based on the share of benefit received • Adequate one-time billing and collection system
Special assessments	<ul style="list-style-type: none"> • All points included for betterment levies • Agreement of a majority of land owners • Adequate installment billing and collection system
Developer exactions	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Estimate of the impact of the proposed development on existing infrastructure • Administrative coordination with city planning functions • Method for calculating the amount of exaction due • Adequate billing, collection, and project monitoring system
Land value increment tax	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Estimate of the “before” and “after” land values • Administrative capacity to identify when the tax is due • Adequate billing and collection system

Instrument	Minimum requirements for implementation
Sale of development rights	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Effective control of existing development rights • Demand for additional development rights • Administrative and planning capacity to determine acceptable amount of additional development • Capacity to manage the process of selling additional development rights • Capacity to monitor use and any resale of rights sold
Sale of public land	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Administrative and planning capacity to determine which lands should be privately developed • Capacity to manage a transparent and fair sales process • Capacity to allocate and manage sales proceeds
Lease premiums and recurring lease payments	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Administrative and planning capacity to determine which lands are available for lease • Appropriate estimate of market value of land to be leased • Administrative ability to solicit and negotiate leases • Administrative ability to monitor leases for the duration of the lease • Administrative capacity to allocate and manage lease proceeds
Transfer taxes and stamp duties	<ul style="list-style-type: none"> • Appropriate enabling legal framework • Effective land registration system • Administrative capacity to identify when the tax is due • Capacity to estimate taxable value • Adequate billing and collection system

Actions for implementation or improvement of land value sharing

In the past several years, the Global Land Tool Network (GLTN) and UN-Habitat have partnered in the production of three notable works with recommendations and guidance for implementing land value sharing and, more broadly, on land-based finance. The first was a land value sharing scoping study,²⁰ which concludes in part that:

- Effective land value sharing and land-based finance systems require a political champion, good property tax law, and decentralized authority to implement the system.
- The effectiveness of the land value sharing and land-based finance system is greatly improved if it is embedded in an effective land use management system.
- Land value sharing and land-based finance systems require adequate training for at least three separate groups (policymakers, administrators, and land developers).
- Efficient, accurate, and timely land valuation is essential.
- Countries should consider and evaluate all the available tools for land value sharing.

The second work is *Land and Property Tax: A Policy Guide*.²¹ This guide notes that in designing the land value sharing and land-based finance system, decision-makers should carefully consider four aspects of the local environment:

- How land and property rights are defined in the community
- How such rights are publicly recorded, or at least recognized, and defended
- The maturity of local land and property markets

- The administrative capacity of those public agencies charged with implementing the land value sharing and land-based finance system.

Most recently, GLTN and UN-Habitat have produced extensive training materials for local and national leaders on land value sharing and land-based finance, including a reader, case studies, and a trainer's guide.²² Much of the material presented in this chapter is derived from this publication.

Steps towards initial implementation

For city leaders interested in implementing land value sharing for the first time or in a new form, there are some generalized steps that can be followed towards initial implementation, including goal identification, assessment, instrument design, action planning, implementation, and monitoring. These basic activities can be tailored to fit the city's specific situation. These are each discussed in turn:

- (1) **Goal identification:** Carefully selected goals can guide the choice of the appropriate instrument. Potential goals may include improving ongoing revenues, raising revenue for a capital improvement project, or incentivizing more productive and sustainable land use. City leaders may also identify intended impacts (social, economic, and environmental) to guide both the assessment of potential instruments and the design of selected instruments.
- (2) **Legal assessment:** City leaders should check to see which land value sharing instruments are available according to the legal code, likely with the assistance of legal counsel.

They should also take note of the regulations governing the available instruments. Of particular note are regulations specifying what is taxable and exempt, how value is determined, statutory incidence, the specified rate or rate-setting process, agencies responsible for administrative functions, and the allocation of revenues received. City leaders should also note which land value sharing instruments (if any) are specifically prohibited and which instruments are not explicitly mentioned in existing laws.

- (3) **Administrative assessment:** Evaluating current administrative capacities will inform city leaders of potential implementation issues related to various land value sharing instruments and will identify areas that must be improved before implementation. Table 3 lists specific areas of administrative capacity required for each instrument.
- (4) **Assessment of political will:** Successful implementation of land value sharing will rely on high-level political commitment as well as the political acceptability to those subject to the tax or fee. Some immediate gauge of both types of political will should be done early on, with further engagement about the potential benefits of land value sharing and opportunities for success as specific ideas are developed.
- (5) **Instrument selection and design:** Stakeholders such as municipal agencies, national ministries, and the private sector should provide input into this process. Selection of the right instrument is important, but just as

important are decisions about who will be required to pay the tax or fee, how contributions will be calculated, and which agencies will be involved in assessment and collection. These details can determine whether the instrument is fair, socially equitable, revenue-generating, and administratively feasible.²³

- (6) **Action planning for implementation:** An action plan should specify the critical steps to be taken for implementation, the responsible parties, and the timeline. Potential actions may include the drafting of a local ordinance. Revision of a national law may also be desired; however, this will likely require more lead time and commitment from a broader group of national stakeholders. One option for instruments requiring national policy revision is to obtain legal permission for a pilot case at the local level. The action plan should also assign responsibility for monitoring and evaluation. A single agency or working group may oversee execution of the action plan in order to keep responsible parties on track.
- (7) **Instrument implementation:** Implementation may be phased or begin in a pilot area. It will require training for administrators and an information campaign targeting those responsible for tax or fee payments.
- (8) **Monitoring, evaluation, and adjustment:** It is critical that local leaders track the functionality and impacts of administration (including unintended impacts) to ensure that the instrument is achieving its goals.

Case Study 3: Establishment of the recurring property tax in Makeni, Sierra Leone

In Sierra Leone, the Local Government Act of 2004 set the stage for decentralization of a highly centralized financial system. Under this law, property taxes are permitted, but at the time of passing, most cities' cadasters (land registries) were incomplete, outdated, or nonexistent.

The city of Makeni began the process of improving the recurring property tax in late 2006, with initial work by an international surveyor hired through the local UNDP office. Some early success led to a more structured program with five elements:

- (1) **Discovery:** Properties were put into the cadastral registry by a group of local surveyors with hand-held GPS units who recorded each property's location and owner.
- (2) **Assessment:** Property valuation was done using a formula based on the property's visible characteristics in order to provide transparency about the valuation process. These characteristics included land use (residential, commercial, etc.), structure dimensions and facilities, construction type, location, and accessibility of public services. Valuation officers visually assessed each property.
- (3) **Billing:** Notices were delivered to each household specifying the tax due as well as the formula used to calculate it.
- (4) **Sensitization:** The local government used media including radio, TV, and call-in shows featuring public leaders such as chiefs and religious leaders who volunteered to talk about the tax. The information shared included:
 - The calculation of tax liabilities
 - The ultimate purpose of the taxes collected
 - Procedures and timelines for tax payment
 - Available options for appealing tax assessments
- (5) **Collection:** Revenues increased by 600–700 per cent in one year and continued increasing over the next few years. The municipal finance department asked those involved with Makeni's tax system to spread knowledge to other cities in Sierra Leone.



Market in Freetown, Sierra Leone © Flickr/jbdodane

Source: Samuel S. Jibao and Wilson Prichard, "The Political Economy of Property Tax in Africa: Explaining Reform Outcomes in Sierra Leone," *African Affairs*, vol. 114, no. 456 (2015), pp. 404–431.

Improving administration of existing land value sharing instruments

Many cities already have land value sharing instruments in place, but they are not achieving their full potential. This is particularly common with the recurring property tax since it is frequently assigned to local governments, but those governments may not have adequate capacity or incentives for successful administration. See the box titled “The revenue relationship” for an overview of the elements behind collection efficiency of the recurring property tax.

The revenue relationship

The actual revenue collected through the annual tax on land and/or improvements is a function of two policy variables:

- The value of the property tax base as legally defined (base)
- The property tax rate as set by law and policy (rate)

And three administrative factors:

- The proportion of all land that should legally appear on the tax rolls that actually is included in the fiscal cadaster (coverage)
- The proportion of taxable value identified by the valuation process (valuation)
- The proportion of the tax levied that is actually collected (collection)

The total revenue collected will be the product of all these factors. This mathematical identity defines the revenue relationship:

$$\text{Revenue} = \text{Base} * \text{Rate} * \text{Coverage} * \text{Valuation} * \text{Collection}$$

For example, suppose that the base is defined as market value and the legal tax rate is 1 per cent. But:

- Only 70 per cent of the property that should be on the tax rolls has actually been registered (70 per cent coverage rate)
- The valuations are out-of-date and reflect only 80 per cent of actual market value (80 per cent valuation rate)
- Only 80 per cent of the tax billed is actually collected (80 per cent collection rate)

Under these conditions, the revenue actually collected will be less than 45 per cent of what should be collected ($0.7 \times 0.8 \times 0.8 = 0.448$).

The three administrative factors listed in the box—land registry coverage, valuation, and collection—pose common difficulties for cities in implementing land value sharing instruments. Attention to improvements in these three areas can have substantial dividends for the local government, particularly when addressed together, even if there is no change in the legally defined base or an increase in the tax rate.

Coverage of the fiscal cadaster

A fiscal cadaster is a land registry that links each property to the person liable for paying land-based taxes and/or fees. The level of detail of fiscal cadasters vary. The most detailed type of land records include precise geolocated boundaries, a record of the property's features, the history of ownership and sales prices, information about zoning and administrative districts, etc. The simplest fiscal cadaster simply records occupant names, tax payment information, plot size, and an address or XY coordinate.

Simplification of the fiscal cadaster can improve the prospects of updating it regularly. The goal of a fiscal cadaster differs from a cadaster to be used for land management. Consequently, the information included in the registry may be less detailed and can sometimes avoid the lengthy and costly legal process of title verification. This is particularly the case if taxes and fees are charged to the occupant instead of the owner. The necessary features of a fiscal cadaster depend upon the design of the land-based tax or fee system, including the system for valuation.

GLTN and its partners have developed a tool called CoFLAS: Costing and Financing of Land Administration Services.²⁴ The goal of the tool is to examine the range of land administration system charac-

teristics and help governments estimate the costs and financing options of a fit-for-purpose land management system. An additional tool developed by GLTN is the Social Tenure Domain Model (STDM), which is a simple system for recording the geographic points of plots and the relationships of people to those plots, including informal and customary relationships. It is an excellent option for quickly and affordably creating a simple system of registration in areas where land tenure is informal or complicated.²⁵

Valuation

Some land-based financing instruments rely upon observable land values. For example, the sale of public land, if done by open public auction, can provide a fair assessment of value. Similarly, land value increment taxes are based on actual sales values. However, recurring taxes on land value require an official estimate of the value of the land apart from an observable sale. Valuation systems should be designed to match the administrative capabilities of



Street in Bogotá, Colombia © Flickr/CucombLibre

the valuation agency and the level of sophistication of the property market. In active markets where property is bought and sold in open arms-length (i.e., between strangers) transactions, market-based approaches to valuation may be appropriate. Otherwise, non-market approaches can be used. Table 4 summarizes some common approaches to valuation.²⁶

Table 4: Approaches to valuation

Market-based approaches	
Comparable sales approach	Comparison of property to recent sales of similar properties to estimate value
Cost approach	Cost of buying land and constructing the building
Income approach	Capitalized annual income that could be generated by the property
Annual rental value approach	Annual rent that could be collected for leasing the property
Non-market approaches	
Area-based approach	A constant value per square meter (of land and/or floor area), dependent on zone is applied to the property
Cadastral value approach	Average market value per square meter within the zone and land use class is applied to the property
Formula-based approach	Area and other plot and/or building characteristics (e.g., street frontage, proximity to specific amenities) used to calculate value based on a standardized formula
Value banding approach	Same tax for each property within a range of values

Some valuation approaches rely more heavily on experienced and highly trained valuers (e.g., comparable sales approach), while others are more GIS-technology intensive (e.g., cadastral value approach). All approaches require technical capacity and training, which is sometimes easier to develop at a higher level of government (i.e., state, provincial, or district) with more staff than the municipality.

In order to ensure the accuracy of valuation, it is important to update valuations regularly. Ideally the frequency of valuation updates will be legally pre-established, rather than relying on the initiative of local governments that do not want to appear

to be raising taxes, a politically unpopular decision. However, the most important aspect of the valuation system is not its accuracy but its fairness. If all properties are systematically undervalued to the same degree, the impact is the same as if the tax rate were lower (and can be compensated for with a higher tax rate). However, if only some properties are undervalued, the system is unfair. If more valuable land or wealthier neighborhoods are generally undervalued to a greater degree than less valuable land or poorer neighborhoods, then the system is both unfair and inequitable. At the level of individual properties, fairness can be supported by providing a clear valuation appeals process to resolve claims of unfair valuation quickly and fairly.

Case Study 4: Updating property valuations in Bogotá, Colombia

Bogotá has a well-functioning value-based property tax that generates 40 per cent of local revenues. However, in 2008, property taxes only accounted for 20 per cent of revenues, and valuations had fallen behind markets, with listed values only representing about 68 per cent of market values.

Mayor Antanas Mockus needed to improve the performance of the local property tax in order to finance a new subway transit system for the city. He decided to pursue a valuation update, despite its political unpopularity.

A complex method for valuation, established by a previous law, added time and cost to the process and decreased the transparency of valuations, leading to complaints and valuation appeals. The

valuation standard specified independent assessments for buildings and land, with building value based on a mathematic model using physical characteristics of the structure, and land value requiring assignment to zones based on location and accessibility factors.

The city hired approximately 830 additional staff to assist with the valuation. The total project cost was US\$7.8 million, with 47 per cent of costs associated with fieldwork. However, the effort paid off, raising an additional US\$171 million in tax revenues over two years.

Since the 2009 valuation update, the city has worked to streamline the valuation process so that it can be done without excessive costs on an annual basis.

Source: GLTN/UN-Habitat, Leveraging Land: Land-Based Finance for Local Governments (Nairobi, United Nations Human Settlements Programme, 2016).

Collection and taxpayer compliance

Poor taxpayer compliance can be related to a number of issues. Sometimes there are barriers connected to billing and the ease of payments. Taxpayers should be provided good information about their tax bill, including amount, due date, how to make payments, and penalties for late payment. The process to make payments should be as easy as possible, ideally with an online or mobile money option. Requiring tax payments be made in person at central government offices puts an undue burden on taxpayers if lines are long, offices have inconvenient hours or location, or the payment process is unclear. Additionally, such difficulties may create openings for corruption as middlemen become involved.

Compliance will also be more likely where there are operational and fair enforcement mechanisms, including a credible penalty for nonpayment. Property confiscation should be a real threat, although it should be put into practice infrequently. In order to achieve this balance, there should be a set of clearly communicated steps before confiscation takes place, and opportunities for delinquent taxpayers to settle their outstanding bill in a way they can reasonably afford (such as negotiating a payment plan). In cases where the property owner or resident objectively cannot afford to pay the tax, exemptions should be possible; however, this should be established in advance of delinquent payment.

In cultures that consider access to land as fundamental to the achievement of human rights, confiscation of land for nonpayment of taxes may not be feasible. In such cases, a national taxpayer identification system that links all banking, motor vehicle, and other asset accounts to the landholder can be an effective alternative. After exhausting other remedies, the tax authority may be able to seize bank accounts, motor vehicles, or other assets in lieu of seizing property.

It should be stressed that seizing land or other assets is a last resort and should only be pursued in cases where taxpayers are seriously delinquent over an extended period of time. Other options can and should be employed early in the collection process.

At a more fundamental level, taxpayers are generally more willing to pay taxes when they can see the benefits of publicly funded services to their community. In places where the social contract between the local government and citizens is broken, there is likely to be resistance to attempts to improve tax collection. To improve trust in government, provision of services should be visible and address the felt needs of communities. An information campaign may help to highlight the link between taxes and local services. Another method for building community trust is participatory budgeting, where local communities vote to determine how a portion of tax revenue is spent.

Conclusion

Many thoughtful observers are calling for increased use of financing instruments that allow public entities to share in the private wealth created by public actions. Economists have advocated the use of land taxes for over 200 years. Of course, there are both political and practical reasons why such instruments have not been more widely used in the past. But the challenges associated with effective use of land value sharing are not insurmountable.

How the instruments can work is well understood and demonstrated. How to adapt and apply them in a given context requires political champions, an understanding of the relevant context, and often a bit of outside coaching from experienced practitioners. Well-designed and effectively administered land value sharing instruments are efficient and fair mechanisms for raising revenues needed to meet the demands faced by urban governments. In addition to the revenue generated, the use of land value sharing improves land use and enhances access to land for vulnerable populations. Every urban government should carefully consider whether land value sharing can be implemented or improved in their community.



Many thoughtful observers are calling for increased use of financing instruments that allow public entities to share in the private wealth created by public actions.

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Resources for more information

A 2011 UN-Habitat policy guide on land value sharing, Land and Property Tax, can be found at <http://unhabitat.org/books/land-and-property-tax/>.

Bahl, Martinez-Vazquez, and Youngman's 2013 book, *Making the Property Tax Work: Experiences in Developing and Transitional Countries*, provides further information on administration of property taxes and can be found at http://www.lincolninst.edu/pubs/1374_Making-the-Property-Tax-Work.

For information on tools related to land management and cadastral updates, see www.gltm.net.

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10

The Role of Real Estate Development in Urbanizing Cities

Introduction

The world is more than halfway through a 200-year cycle of population growth and urbanization, at the end of which close to 85 per cent of humanity is projected to live in cities. Leaders, planners, and policymakers in cities and urban regions are increasingly recognizing the accelerated pace of urban change, and in particular the challenge of spiralling demand coupled with supply-side constraints. City leaders must cope with unprecedented enthusiasm for urban living and urban jobs, but with limited fiscal tools, institutional frameworks, and political will.

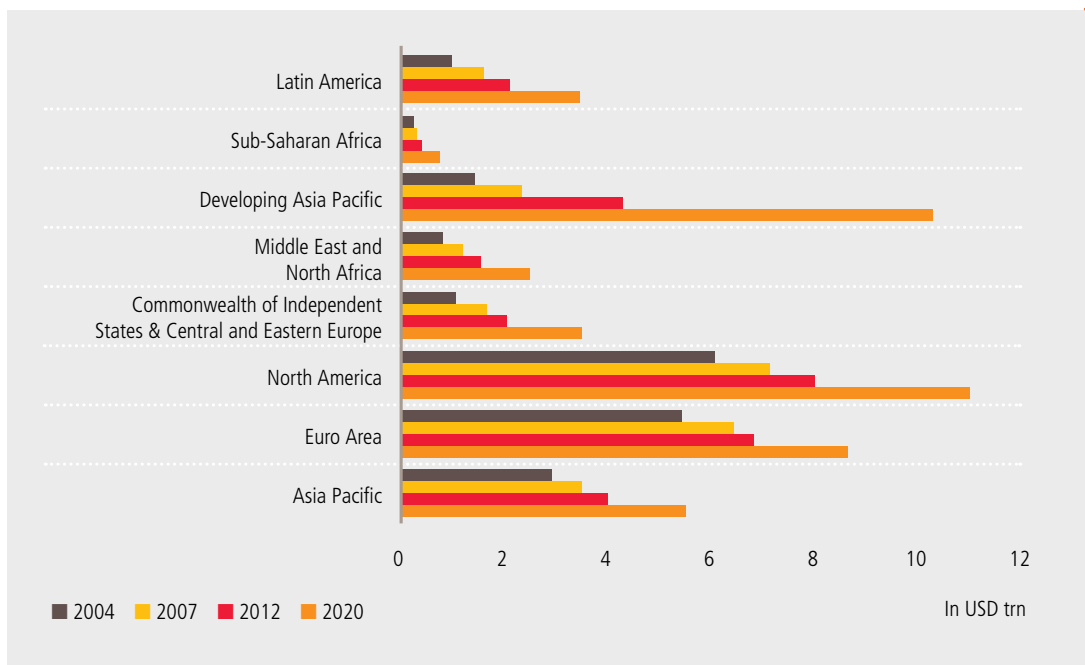
Urbanization and economic growth are major drivers of real estate markets; the rate of building construction is currently faster than at any time in recorded history. There has been an enormous increase in demand for private capital investment for real estate and surrounding



infrastructure in emerging cities, due largely to the pace and scale of urban migration, and the rising pool of middle-class and middle-income consumers (as shown in Figure A). In more established cities, where the pace of change is usually slower, shifts in technology, demography, and sustainability imperatives have also become important drivers of real estate change.

City leaders must cope with unprecedented enthusiasm for urban living and urban jobs, but with limited fiscal tools, institutional frameworks, and political will.

Figure A: Institutional-grade real estate by region, 2004–2020¹



Source: Pricewaterhouse Coopers, *Real Estate 2020: Building the Future* (New York, Pricewaterhouse Coopers, 2015). Available from <https://www.pwc.com/sg/en/real-estate/assets/pwc-real-estate-2020-building-the-future.pdf>.

The current era is notable for several global phenomena vis-à-vis urban development and real estate:

- The urbanization of capital, with over half of all sovereign wealth funds (SWFs) investing in real estate, the proliferation of real estate-focused asset management (AM) companies, and increasing investment from pension funds, insurance companies, and high-net-worth individuals
- The emergence of very large-scale, professional real estate managers, builders, and investors

- A wider range of risk and return, from low-risk/low-yield opportunities in established cities to high-risk/high-yield potential in emerging cities
- Increasing cost of urban land assets per square metre and scarcity of developable land, resulting in increased urban density, demand for smaller apartments, and pressures to optimize space
- Increased role of next-horizon technologies (e.g., prefabrication, modular units, 3-D printing) enabling faster, more affordable, and more sustainable developments
- Disruption to production and consumption models that is changing the demand for real estate

Private and institutional investment offers a number of important benefits and advantages to cities pursuing long-term goals. First, these investors are critical suppliers of capital in the context of under-investment from the public sector. Second, their experience and interest in long-term value creation means they provide access to valuable financing and development expertise. Third, they can help signal the maturity of financial/banking systems, which can result in lower long-term interest rates. Fourth, international capital adds diverse perspectives, ideas, and solutions to city development, which can influence other important areas such as city design, education, and industrial development. And fifth, such capital is often patient, seeking long-term returns and income to support pensions and insurance systems or underpin diversification from national assets.

This chapter examines the role real estate development plays in emerging cities. It begins with a discussion of the merits of managed urban growth. It then discusses how cities can use planning and asset management to create and capture value.

The chapter next discusses the emerging role of city growth planning and the need for analytical frameworks for intelligent planning. This is followed by an overview of the role and value of coordinated land use planning. The chapter then explores ways in which public authorities can attract private capital co-investment, which is followed by a discussion of the need to acknowledge underlying issues that often affect real estate investment in developing cities. It concludes with an examination of the role of real estate planning and development in making cities competitive.

Managed growth versus unmanaged growth

Cities today rarely face a choice between having growth or not having growth. Rather, the real choice is between whether growth is managed and complemented by investment, adaptation, and infrastructure, or whether it is unmanaged and stresses the existing infrastructure and natural and built environments.

As cities grow, the myriad challenges facing them sometimes lead analysts to be critical of mismanaged growth.² Yet for many cities, the challenge has become one of dealing with externalities associated with success and prosperity, which can stress housing markets as well as infrastructure networks. For example, housing demand is a reflection of cities' attractiveness, and increased demand can present issues of affordability while also taxing existing infrastructure capacity. Congested infrastructure results when high employment density is not properly aligned with public transport and other infrastructure systems. Yet these phenomena are a reflection, usually, of urbanizing cities experiencing consequences of unmanaged growth. City

leaders are increasingly facing pressures of balancing quality of life and sustainability with productivity and growth. This requires a shift towards a managed growth model, which leads to more sustainable long-term development and improved quality of life, which is a key indicator of city attractiveness and health. Attention to cities' progress towards these goals is one reason for the rise of city benchmarking and index exercises around the world.³

Features of more managed cities and metropolises include their ability to:

- Meet the needs resulting from new and sustained population growth and recognize the long-term character of this growth and the need to plan differently and adopt a new planning paradigm
- Grasp opportunities and compete in a globalized system of trade and investment and participate in sectors that are increasingly traded globally
- Address investment deficits resulting from institutional weakness or lack of coordination at the city, regional, state, or national level
- Withstand and bounce back from shocks that result from vulnerability to events such as extreme weather, terrorism, public health epidemics, and civil unrest
- Adjust to a change of circumstances or perceptions about existing patterns of development and employ innovative approaches to new problems

The consequences of mismanaged growth are exacerbated by trends and forces of urbanization. Poor planning and decision-making are magnified and become costlier as population densities increase. In contrast, steady management resulting from a methodical approach to property and land development can provide a measure of stability, which

is a key to attracting private capital and external investment. This presents the best opportunity to leverage and maximize government investments, by exploiting synergies with real estate development opportunities.

Managed growth is critical for cities to compete in an era of globalization and to achieve broader economic development goals. These goals present new imperatives for cities to optimize their assets and leverage private investment for improving sustainability, growing entrepreneurship, creating critical mass in new sub-centres, and increasing housing supply.⁴

Using planning and asset management to create value

The objective of real estate development and investment is value creation. The public sector plays a key role in value creation, whether through land use approvals using planning and regulatory tools, infrastructure and utilities provision, environmental improvements, or creating a business environment conducive to commerce. The private sector, including real estate professionals, may also add and unlock value, first during the process of assessing project feasibility, undertaking design and development management, defining a targeted tenant mix, and beginning dialogue with potential tenants, followed by the stage of direct investment in new buildings and facilities, comprehensive master-planning, and destination branding and marketing.

A key challenge for cities is therefore how to increase, and capture, asset value so it can be put to use for the public good. One way for cities to optimize their assets is value capture finance (VCF). VCF has emerged as an important tool for driving sustainable urban development because its finance

mechanisms, when properly structured, share both the risks and rewards of urban projects among public and private actors.

VCF can take on many forms and transaction structures (such as public–private partnerships and joint ventures), but the ultimate goal remains the same: to identify a way to capture and leverage increases in land and property values. The public sector captures enhanced asset values, whether in the form of land transfers, local taxation and tax increments that enable revenues to be reinvested, development levies and infrastructure tariffs, local service agreements, or private-led local amenity provision and enhancement. Then, the captured value (in monetary form or “credit” to leverage in-kind contributions from the private sector) can be recycled or reinvested in the same development scheme for the public good.⁵

There have been many examples of using value capture to finance urban projects over the past 20 years. Most commonly it is used to finance rail projects, as has occurred frequently in Japan, Hong Kong, Canada, Germany, the United States, and the United Kingdom.⁶ Beyond transport, value capture has also been employed to fund other urban infrastructure and public space improvements, most notably in Latin America, where betterment contributions and development rights charges are increasingly common.⁷ Reviews of value capture in developing countries show it is often very effective in cities that have an inadequate property tax system.⁸ Value capture holds great promise, although many other parts of the world have not yet recognized the opportunity associated with these finance models, partly due to political opposition, regulatory opacity, and the technical and operational complexity of these projects.⁹

The emerging role of city growth planning

Urban planning plays an essential role in the urban growth management process and the successful creation and capture of value. Planning plays a pivotal role in regulating urban land use and development, but also has a key “place-shaping” role in the built environment, which is a source of value and benefit to real estate developers. Confidence in a city’s urban planning approach can reduce planning and development risks, which are key factors for private investors as they assess risk/reward opportunities. The ability of planning to manage the components of the built and natural environments so that they work together properly is at the heart of how developments can achieve efficiencies, cost-effectiveness, and added value.

Planning is not just the means to zone land and to identify what is desired or permissible in a certain location. It plays a key role in upholding the value of investment in real estate by protecting it from unforeseen or unplanned competition or from unwanted neighbouring uses. It encourages development that meets economic market demands, as well as public demands, to ensure planned uses are absorbed and put to productive use. For investors, planning is the main means to ensure that the market in which an investment is made remains stable.

The role and esteem of urban planning systems around the world varies. Planning is sometimes viewed as unnecessarily slow, restrictive, and costly.¹⁰ But there is a growing sense of the imperative to recognize the potential and benefits of joined-up planning to support physical and spatial change in cities. Over time it has become recognized that the management of a largely built-out



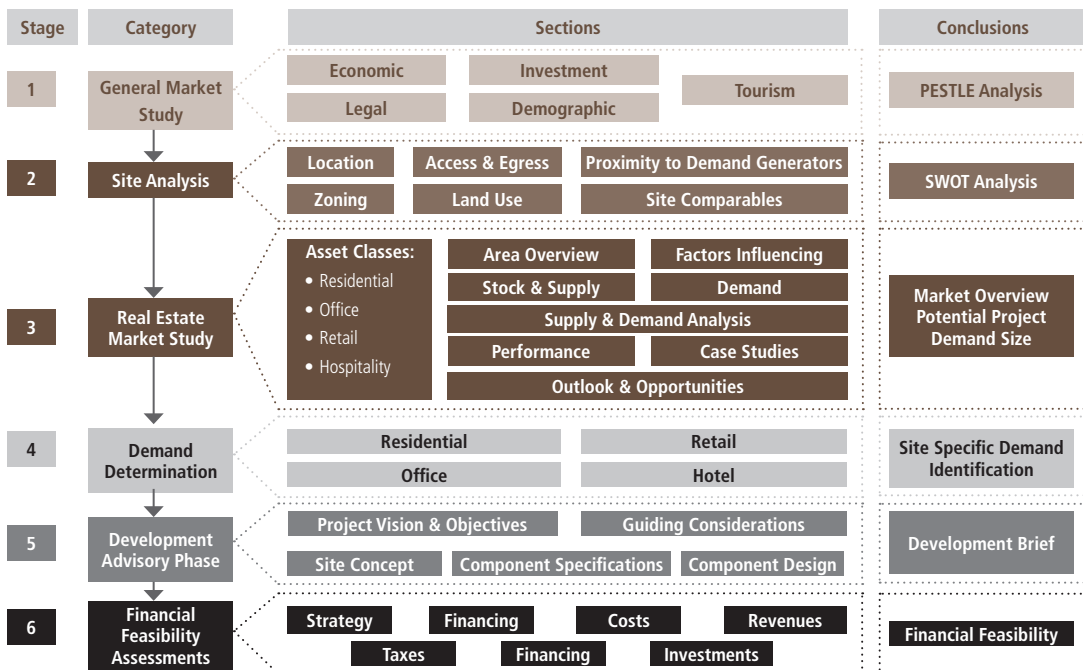
Urban planning plays an essential role in the urban growth management process and the successful creation and capture of value.

urban landscape in a sustainable manner requires collaboration between urban planners and real estate professionals. This collaboration is key, since interactions with real estate professionals can offer insight into the private sector’s approach to risk evaluation and mitigation. The fundamental perspective on how to approach property development and land valuations can be helpful when evaluating a variety of development proposals.

Analytical frameworks for intelligent planning

Increasingly, cities are engaging real estate professionals to assist throughout the planning stages, and in part to ensure development initiatives represent optimal uses of land. This type of analysis, often referred to as a “highest and best use” study, can offer an analytical framework to help understand value and make informed decisions about issues such as zoning changes, resource allocation and prioritization, development phasing, and accommodating public sector needs. Figure B illustrates a typical approach to large-scale development planning, and the steps involved when analyzing a development’s highest and best use.

Figure B: Typical approach to performing a highest and best use study



Source: JLL Public Institutions - Municipal Advisory Practice

Establishing an analytical framework based on market data—where various development proposals and scenarios can be evaluated and compared—can help urban planners and city leaders better understand project values and potential. Urban planning best practices show that taking a disciplined and analytical approach to urban planning and development can help preserve and maximize development values. Overall, strong property and land values stand to benefit both public and private sectors alike.

The role and value of coordinated land use planning

It is common in many cities for haphazard land use patterns to emerge from ad-hoc and informal decisions about where to locate new developments, or whether or not to consider re-zoning requests. The integration of these decisions into a coherent vision, considerate of broader development initiatives, is one of the most important tasks for cities today. Coordinated land use master planning is an important means to this end.

Planning and local government: Key tools for shaping managed growth

Master planning and land use coordination has been a key spatial planning objective in many parts of the world. In European cities especially, the concentration of spatial development within “activity centres” or “opportunity areas” has been an important enabler of redevelopment and densification. This is especially important as policies, plans, and regulations proliferate in a complex environment. Meanwhile master planning powers may reside with municipalities, or with separate planning authorities in place of municipalities, which can provide a “one-stop shop” for

investors and developers seeking advice and planning permission. Among the most successful examples of citywide and metropolitan master planning are Hong Kong and Tokyo. These cities have clearly identified rail systems as the backbone of urban development, designated satellite centres accordingly, and formulated plans for future corridors and nodes based on market demand, developable land availability, and long-term transport investment. They also have prioritized public transport-oriented policies and investment throughout sector plans and local master plans.¹¹

Land assembly is a core element of how land use is coordinated, and is often a necessary precursor to initiating large-scale development. Local governments usually have land acquisition authorities, and can serve as a catalyst to spur complex and large-scale development projects. In addition, a government’s ability to establish and regulate zoning can be a mechanism that can drive financial value and feasibility.

The utilization of zoning to permit and encourage new uses is a key trigger of redevelopment and adjustment in cities. It is common in many cities to find exclusionary zoning that forbids rezoning from industrial purposes in order to preserve a certain mix of uses that may no longer be viable. The existing use designations of public land can sometimes delay attempts to adapt sites for new uses and development. Equally, re-designation can provide permission for taller buildings, while form-based zoning to regulate form rather than use is also popular, as it allows the market to select the most appropriate use.

A clear delegation of land use powers to local and city governments has become important to cities because it allows different actors to take a strategic approach to future land uses.

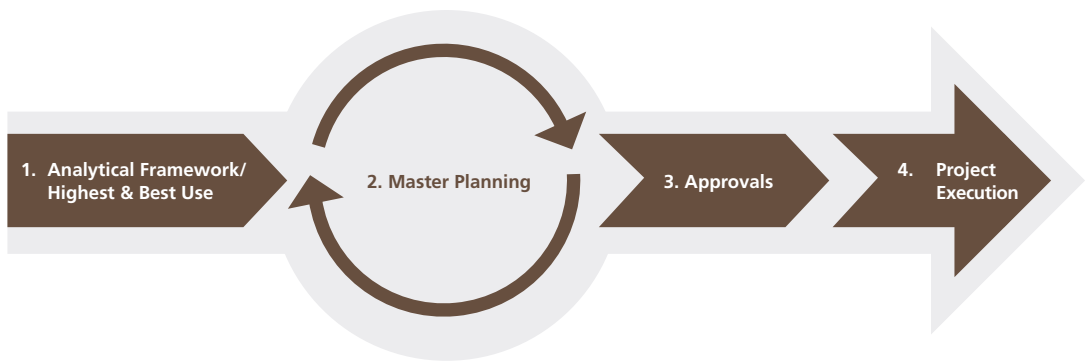
Many cities have also benefited from more flexible development planning techniques that accept inevitable changes over a 20–30 year development cycle and seek to build an infrastructure framework that supports long-term development. It is important to emphasize that comprehensive master planning efforts are not intended to be a static exercise. Development plans should be dynamic and responsive to evolving market conditions. Figure C illustrates the iterative nature of the master planning process. The analytical framework (step 1) is used to evaluate performance of master plan concepts, and can be adjusted to respond to changing variables and market conditions to provide sensitivity analyses of various scenarios, which are used in turn as inputs to refine and optimize subsequent versions of the master plan (step 2). This process can be particularly useful when developing specific project plans for execution such as an acquisitions plan, phasing strategy, infrastructure needs assessments and projections, and financing plans.

Land use planning is likely to play an increasingly significant role in the New Urban Agenda because of its capacity to deliver coordinated development and overcome ad-hoc incrementalism that can lead to sprawl, social and spatial segregation, and lower quality of life. Land use planning is most effective if it is flexible in the face of changing market conditions, and when alignment among different levels of planning and across different agencies is achieved, thereby enabling the simplification of complex developments and the sequencing of them with other infrastructure and services.

**Land use, infrastructure, and amenities:
Getting the basics right**

In addition to coordinated land use master planning, other tools and other provisions also play an influential role in the development process for cities. Planning often supports a multi-faceted and organic process supported by other public sector interventions and investments.

Figure C: The master planning process



Source: JLL Public Institutions - Municipal Advisory Practice

Perhaps most important among these is infrastructure investment. Infrastructure systems are the backbone of city competitiveness and long-term success and are critical especially in emerging cities, where metropolitan infrastructure is often the most severe deficit.¹² For example, rail transport with rapid links to residential and employment districts, and to nearby port and airport infrastructure, is perhaps the most potent catalyst to unlock new development and densification. Integrated public transport and road connections can spread demand across a city and improve access for different communities. In addition, upfront capital investment in digital and utilities infrastructure provides an important source of attractiveness and long-term efficiency that is a solid platform for future development.

High-quality amenity investments are also central to place shaping and development. Investment in public spaces and parks, waterfront development, and environmental improvements is necessary to provide a welcoming environment for businesses and workers, and can open up new or under-used sub-centres in cities. Amenities improve the relative attractiveness of city areas but also encourage more mixed-use and “live/work” neighbourhoods, which have other knock-on effects including a reduction in peak travel demand, lower energy use, and smaller environmental footprint.

Together, infrastructure and amenity investments can help improve land values by providing sites with key competitive advantages, thus increasing site desirability while also offering broader social and environmental benefits.

District development agencies are also created in many cities to manage the complex process of economic transition and building re-use. Development agencies help build a consistent brand and

identity for areas, as well as offer professional management of key assets.

Additionally, district management has become an important element of maintaining the attractiveness of areas. Street-scaping, security, marketing, and business partnerships are increasingly specialized and influential activities. Business improvement districts (BIDs) are a common model that has played a very important role in many cities, especially in North America and Europe, but also in South Africa and Latin America. BIDs have even become statutory consultees on local planning. They also provide leadership, place-making management, and even small-scale capital investment.

Relocation incentives or negotiations to persuade the relocation of “urban anchors” such as universities, teaching hospitals, airports, stadia, or high-profile companies are also noted catalysts of development. Coherent branding and messaging of neighbourhoods is also an important function that can bring international visibility and activity to an area.

Benefits of strategic, proactive planning

Effective and strategic planning can have a number of important social and economic benefits over the long term. In addition to achieving a balance of environmental, economic, and social interests, the benefits of planning include:

- **Minimizing uncertainty:** Planning adds certainty to the market, by stating within local plans and other guidance the kind of development that may be planned and built. This includes identifying areas of opportunity or intensification, preventing oversaturation of a certain use class, or offering reassurance about what may be built nearby.

- **Coordination:** Planning helps coordinate and sequence effectively with other kinds of development.
- **Cost management:** Planning can help reduce high upfront infrastructure costs, which may act as a barrier to development.
- **Balanced, mixed-use centres:** Planning helps minimize housing and job mismatches and the social and economic costs these create.
- **Catalyst for social amenities:** Planning triggers investment in social infrastructure, helping to create communities that are attractive to residents and businesses, thereby raising value.
- **Increased competitiveness:** Planning can enhance an area's competitive advantage as businesses cluster to benefit from supply chains, skilled labour, and competitors.
- **A metropolitan perspective:** Planning can encourage growth decisions to take place at the functional economic level.
- **Cross-sector partnership:** Effective planning can improve cooperation and a sense of duty and responsibility between public and private sectors.

The consequences of poor development planning

The effects of poor development planning include:

- **Oversupply:** A common planning failure of city governments is the failure to protect investments made by retailers and retail property sector companies, by embracing multiple retail parks and shopping malls. This causes oversupply that limits yields and leads to investor frustration and withdrawal.
- **Overly hasty lowering of barriers for new businesses:** Loose planning can assign locations

that later become obsolete or detached from cluster formations.

- **Short-termism and lack of flexible space:** There are many examples of when cities fail to consider how commercial sites will evolve over a whole business cycle, denying start-ups the ability for future growth.
- **Lowering of environmental standards:** Zoning for industrial investment can have negative environmental externalities, which aside from the immediate impact on local populations, also leave strategic sites unattractive and subsequently constrain growth when cities try to move up the value chain.
- **Inefficiencies:** Poor planning can result in inefficient travel patterns, higher costs, and diseconomies of agglomeration.
- **Fiscal disparities:** As business activity and tax retention is concentrated in a small proportion of municipalities, fiscal disparities can result.

How public authorities attract private capital co-investment

For cities around the world, the sources and systems of investment in real estate, infrastructure, and other hard assets have changed quickly and dramatically. Cities must negotiate this new pattern of investment with different risk and return patterns from the past, and with investment cycles that have changed time frames and dynamics. These changes require them to become more focused on the conditions that will attract investment.

What is an investment-ready city?

Investment-readiness has become an important attribute to ensure flows of investment can achieve wider social and sustainable development goals. Investment-readiness has been defined as:

“The demonstrated capacity of a city to prime itself towards the needs of external investors, by providing a credible and efficient framework and process for external investment, coupled with a development pipeline of bankable propositions and opportunities that meet the specific process, asset, scale, and risk management requirements of the investors”¹³

Investment-ready cities cultivate a reliable supply of opportunities for inbound capital. To accomplish this they prepare the opportunities and assets to meet investor funding demands and risk/scale appetites, and seek to understand how different forms of investment capital need to be structured. It is critical for city leaders to plan ahead and prepare an analytical framework that will help understand the implications of various capital structures and transactions structures. Similarly, in public–private partnership transactions, where there is some form of shared ownership stake between public and private entities, it is imperative to understand both invest-

ment perspectives, and the meaning of partnership, to structure mutually beneficial arrangements. Working with experienced real estate professionals throughout the planning and partner solicitation phases can streamline the project financing and development phases. Once a city is investment-ready, they then look to maintain conditions to ensure projects are bankable.

Governance framework and transparency

The quest for cities to become ready for investment has invited concern that they are engaged either in a destructive race to the bottom, or in a pursuit of a quick windfall that does not protect business and investor interests over the longer term. There are certainly many instances where cities have inadvertently compromised their ability to compete across whole cycles or multiple cycles by impulsively accepting business investments of all types, in any requested location and at any time.



Busan, Korea © United Nations

This raises the question of the right governance framework for cities to be effectively investment-ready. City governments have to be mindful of the investment demands of today's firms, so that core framework attractiveness can be complemented with real channels for capital to find its way into the city. They also need a full understanding of the market and market evolution, and how it can be shaped over whole business cycles.

Investors are responsive and supportive towards coherent city visions that provide a clear and evidence-led pathway for sector and spatial growth. Credible leadership at the city level is almost always a key concern. The experience of cities such as Manchester and Brisbane shows that cities need to have not just a clear plan and vision but also a "chief negotiator" who acts as a high-profile single point of contact and is able to reach a binding agreement with an investor or locator that produces durable benefits on both sides.

For a city to have hard assets that are investment-ready, it tends to need:

- a stable, predictable, transparent, and consistent environment for external investment, with planning that minimizes the risk of oversupply, or firm cannibalization;
- a process for investment characterised by low risks and predictable costs;
- attractive risk-adjusted returns for different classes of investors; and
- the ability to leverage its own assets, including public land and contracts.

Cities cannot achieve all of these outcomes by themselves. The national system remains pivotal for providing the transparency, political stability, and legal predictability to attract rather than deter invest-

ment. Any overlap and friction between city-level and national-level policies can create serious regulatory complexity, especially if it is accompanied by governance misalignments. The challenge is for cities to be strategically open for investment while maintaining consistency and coherence among the legal, regulatory, and legislative institutions at the local and national levels. Cities whose governance and institutional frameworks have been rated most highly for business and investment attractiveness include Singapore, Vancouver, and Auckland.¹⁴

Developing a pipeline of bankable projects

The potential of investors to commit capital hinges on the availability of investible sites and on the regulatory and planning frameworks that support and enable such investment to take place.¹⁵ Many cities have developed an investment framework that identifies and prioritizes a pipeline of commercial and physical projects according to a wider growth strategy and measurable impact. A robust pipeline of financially viable propositions and opportunities is one that meets the specific process, asset, scale, and risk management requirements of investors, including institutional investors (e.g., pension funds). This means that cities need the technical capacity to mount their own programme of development.

How to capitalize on private capital's interest in diversification

Diversification is widely viewed as a hallmark of a strong investment portfolio. Long-term investments in urban real estate are opportunities to diversify a portfolio of stocks and bonds, and pool risk. This option is also pursued by smaller scale investors who may prefer to invest in real estate investment trusts (REITs), limited partnerships, mutual funds, or

exchange-traded funds. Today institutional investors rarely allocate more than 10 per cent of their portfolio to real estate.

Investors also increasingly prefer to diversify their own real estate portfolio. Diversification is achieved by location, property type, tenant, sector, or lease term. This allows different investment strategies to take form whereby capital is deployed according to different combinations of risk appetite. As this diversification approach takes hold, more cities have an opportunity to benefit from real estate investment.

Underlying issues

It is crucial to acknowledge underlying issues that often affect real estate investment in developing cities. These include spatial development in fast-growing cities, densification, technology, and metropolitan areas with multiple jurisdictions. Adapting plans to take into account these often-unavoidable realities is essential.

Spatial development in fast-growing cities

With the global population currently growing at a rate of 75 million people a year, urban populations are accommodated in a number of different ways. The default mode is sprawl and metropolitanization, with cities expanding into a regional hinterland developing a new polycentric and dispersed growth pattern. Over the last two decades most cities in the world have become less dense because they are growing outwards. Cities in developing countries, where almost all urban growth will take place, are expected to triple their land area between 2005 and 2030. Urban footprint growth is expected to be almost as significant in industrialized countries

(2.5 times overall growth), despite overall slower rates of population growth.¹⁶

Especially in Asia and the Middle East, it is also common to plan and construct new cities or districts from scratch in order to absorb part of the urbanizing labour force. However, there is increasing consensus around the need to accommodate more people and activities through an increase of density within existing boundaries. When thinking carefully about how to support population growth, the preferred choice is well-managed and well-served densification, especially among those cities that have not yet reached their natural sizes, or matched previous population peaks. But many cities struggle to accommodate their rising population growth, and do not easily find space for new housing, schools, amenities, and parks. They resist density and additional population, and they fear over-crowding, loss of privacy, or the insecurity of a more anonymous city.

Intensification, densification, and mixed use

It is widely agreed that densifying cities can accommodate population growth within a contained environmental footprint, and that they can enjoy better connectivity, amenities, open spaces, and social interaction. (For an overview of the outcomes of good density versus those of bad density, see Figure D.) A joint ULI/Centre for Liveable Cities report notes that the lower-density cities of the United States use about five times more energy per capita in gasoline than the cities of Europe, which are in turn about five times denser on average.¹⁷ Dense cities in principle are able to become more productive and host innovation. Significantly, dense cities are also more investment-ready because of their ability to assemble and package large sites to institutional investors and other sources of capital.

Cities with a rigorous framework and plan for densification can:

- Achieve density through mid-rise projects, without having to build extremely high throughout the inner city
- Offer lifestyle benefits to a range of different income and demographic groups
- Reduce congestion, carbon footprints, and inefficiencies by minimizing time and distances to work and leisure
- Offer more amenities and opportunity in areas that have been under-invested

Figure D: Outcomes of good density versus bad density

Mixed Use	Connected	Planned	Spacious	Monotonous	Isolated	Unmanaged	Unliveable
Liveable	Outcomes of Good Density		Cohesive	Crowded	Outcomes of Bad Density		Conspicuous
Incremental	Designed	Green	Appropriate	Segregated	Inflexible	Ugly	Polluting

Source: ULI, *Drivers, Debates and Dividends* (London, ULI, 2015).

Cities can do a number of things to densify successfully and attract capital:

- Create a citywide framework for density and compact development
- Utilise PPPs in order to establish and finance projects at the local level
- Concentrate efforts on prioritized areas to create critical mass in less-developed districts, allowing streamlining of time and resources and focusing investments in targeted areas
- Ensuring that density is accompanied by liveability and attractiveness

Technology, real estate, and urban development

Most commercial buildings in larger, established cities around the world were designed for the industrial or corporate economy. They were constructed, owned, and managed with older business models in mind. But technology, the innovation economy, and their spin offs, such as the sharing economy, co-working, and the digital economy, are major disruptors for the real estate industry. Real estate developers and investors are now responding quickly to meet the needs of firms in innovative sectors such as digital media, IT, life sciences, clean tech, and others.

The rise of high-tech, innovation-led industries is a disruptor across the spectrum. At the macro-scale, the innovation economy is fuelling the demand to locate in cities. Cities are the 21st century “laboratories” for commercial innovation and cross-fertilization. They bring together a wide range of sectors, deep international networks, customer and client opportunities, and cultural and artistic quality. At the meso-scale, areas or neighbourhoods are being re-built to serve innovation as part of a broader process of re-urbanization and re-densification. The management and design of real estate have therefore become key ingredients to support and leverage this process for shared benefit. And at the micro-scale, many of the existing buildings in cities need to be re-purposed to fit the needs of new occupiers. For the innovation economy, workplace is a key enabler of organizational success, talent attraction, and company brand.

Innovation in particular sectors today has specific real estate requirements. In pharmaceutical and biotech, for example, the rise of independent research and development (R&D) providers means there is demand for wet and dry lab space. Almost all occupiers will have exacting technology needs, including high-quality fibre broadband connectivity and power systems. These new requirements are no longer solely the demands of innovators, as their influence is now stretching to more traditional occupiers in business and financial services firms. In short, the innovation economy has kick-started a revolution in real estate demand.

Meeting the new demands of the innovation economy (and increasingly of other sectors that are following its lead) presents challenges for the business models of real estate owners and landlords. The real estate industry—developers, investors, owners, and planners—has had to re-think

spatial form and business models. Many are making project and property adaptations to enhance the attractiveness and utility of their real estate assets to innovation firms—workspace innovations, new kinds of commercial space, adaptable buildings, and advice and support for start-ups. As part of real estate’s shift towards providing stewardship, management, and services in addition to the raw asset, real estate is becoming more active to create a more supportive operating framework for innovation, for improving finance and access to capital, and enhancing city- and district-wide attractiveness by managing housing, social infrastructure, and civic and public space.

The overall impact of technological change on real estate is that the industry is beginning to adopt more of a service-provider mindset and align interests and transparency between owners and occupiers. New imperatives have emerged to ensure commercial buildings have a robust technology platform, that routes to capital for growing firms are clear, encourage collaboration with mature institutions, and grow value over time through involved property management.¹⁸ These needs align with those of cities more broadly. Cities that seek to become centres of innovation require high-quality IT and utilities infrastructure. This will help universities and knowledge systems attract and support innovators and the next generation of technology-oriented workers.

Multi-jurisdictional metropolitan areas and real estate development

Real estate does not only look for investable sites and willing development partners in cities. The typical investor also looks for particular qualities in their public sector partners. They look to invest in cities that act in predictable ways—that have

a well-defined long-term vision, clear planning frameworks, and rational land use policies. Cities that have good infrastructure that is appropriately supported by revenues are desirable, as are places that can leverage their own assets, including publicly owned land. And although clear frameworks are essential, investors will inevitably favour cities that have the ability and desire to be flexible in their approach to planning in order to reach their development goals. Finally, cities with competent, efficient, and investment-savvy management teams make strong partners.

Most cities do not yet represent this “model” partner. They may have opaque spatial policies, or inefficient processes for investment that can lead them to act unpredictably or unproductively. They may be limited by underpowered or inexperienced decision-makers.

For cities that embrace a “managed metropolis” approach, there is the promise of improved tools to promote urban development and attract property investment. These tools can include:

- **A move towards spatial development strategies and longer-term planning that provides greater vision and clarity to future development.** Cities that are empowered to develop and deliver their own long-term strategic plans have a mechanism through which to crystallize clear and defined, spatially and sectorally integrated options for the future. Long-term plans can act as an investment prospectus for private sector sources of investment capital.
- **Elected mayors with increased land use planning decision-making powers and roles in housing, transport, and economic development.** Strong, visible metropolitan leaders, elected with a clear mandate, can provide reassuring certainty to investors as a single “go-to” accountable figure,

as opposed to the opacity of local authorities.

- **Better-integrated capital investment budgets.** Fiscal devolution can lead to a greater certainty of funds for local governments, enabling integrated capital investment budgets and long-term capital planning. Integrated budgets make the use of single appraisal frameworks possible and facilitate prioritization of projects in line with strategic objectives. In this way devolution can be an important catalyst for cities to develop their capacity to manage their funding and become more competent partners for private finance.
- **Better integration of transport investment with land use planning.** Transport and land use planning under centralized systems are too often subject to silo-based thinking, with individual ministries creating rigid frameworks for local decision-making. Devolution of responsibility provides the potential for a more joined-up approach, which can result in efficient transport systems that are a major factor in quality-of-life assessments and a city’s broader attractiveness to talent and firms.
- **Greater coordination of public land portfolios for development.** Devolution of powers can enable local authorities to proactively assemble land parcels of the necessary scale to stimulate the market and create attractive projects for investors. Hafen City in Hamburg is one of many examples of autonomous local authorities creating attractive mega-sites for private sector investment. A city or metro’s devolved powers might also include the ability to designate special development corporations for major parcels of redevelopment land that can be more nimble partners for the private sector.
- **Increased access to business rates and value capture financing techniques.** Retaining business rates at the local level both incentivizes local

governments to grow their economies, which in turn can encourage them to take more strategic development decisions, and can also provide greater freedom as to how funds are spent on local development (e.g., pooling for major projects). Equally, the opportunity to participate in value capture financing techniques such as tax increment financing, planning gain supplements, local taxation, or development levies can help local governments to leverage their assets in innovative ways, enabling developments that may not be possible under a system of hand-outs from higher tiers of government.

Any one or combination of these tools can help metropolitan areas to become more competent partners for real estate, providing them with the ability to make their city more investment-ready. The types of reforms that metropolitan leaders can make using enhanced powers may include:

- **Densification of land/increased brownfield development**
- **Promotion of polycentric land-use patterns**

- **Promotion of mixed-use development**
- **Reform of planning policy/design codes**
- **Infrastructure expansion to support development of new nodes**
- **Development of long-term strategic city development plans¹⁹**

Role of real estate planning and development in making cities competitive

Cities have a number of distinct imperatives depending on their size, prosperity, economic strengths, political roles, quality of life, and spatial development patterns. They can be grouped into many different classifications based on these attributes, as work by Jones Lang LaSalle in 2015 shows.²⁰ These groups of cities tend to share imperatives, and this section identifies ways in which real estate can play a shaping role in addressing and solving the respective challenges of three of these groups (see Figure E for an overview).



Kuala Lumpur, Malaysia © Flickr/Daniel Hoherd

Figure E: Strategic imperatives for three different kinds of world cities

	Established World Cities	Emerging World Cities	New World Cities
Population	Maintain population growth from international in-migration.	Implement a more managed approach to population growth and to rural migration.	Build an alliance around talent attraction.
Housing	Boost new supply in housing markets and confront NIMBY-ist tendencies.	Provide attractive entry level housing efficiently and quickly enough.	Monitor housing range and affordability to suit under 35s.
Inequality	Address challenges of urban under-class.	Tackle polarisation of income and service access.	Ensure a strong focus on inclusive growth via skills development and mixed-use housing.
Sustainability	Tackle climate change adaptation and resilience.	Reduce vulnerability to climate change, flooding, earthquakes.	Active leadership on energy efficiency and mix, low pollution, green economy, resilience.
Land	Undertake big redevelopment efforts to shift from old to new modes and recycle land effectively.	Rationalise land use and spatial governance to achieve coherent urban and metropolitan forms.	Agreed spatial strategy managed by lead agency. Ensure projects are investment ready.
Business framework	Maintain competitive business climate and tax regime and IP environment.	Improve productivity and business climate, especially legal and regulatory framework. Focus on transparency and confidence.	Improve information and co-ordination. Foster start-up growth.
Talent	Maintain public support for openness, especially at national level.	Ensure openness to international talent, while fostering cosmopolitanism and multi-lingualism.	Gain visibility among international talent and entrepreneurs. Maintain affordability.
Infrastructure	Undertake infrastructure modernisation, e.g. transport, water, waste, energy.	Tackle major infrastructure and basic housing deficits.	Enhance international air and port links, especially to growth markets. Focus on digital connectivity.
Economic development	Ensure affordability for new entrants in the emerging innovation economy.	Give sufficient support to new entrants and emerging sectors.	Expert specialisation, innovation, digital and science. Leverage big events.
Brand and identity	Maintain clear identity in highly competitive environment.	Establish identity and live up to brand promise.	Build a business and investor brand to complement its other stronger brands. Improve work-life balance.
Metro governance	Promote networked and collaborative governance across the functional region.	Promote maturity of institutions, municipal governments' capacity and tools.	A broader leadership platform, involving business, universities and civil society. Embrace the metropolitan agenda.
Inter-governmental relationships	Improve fiscal arrangements with national government.	Attain recognition of urban agenda and spatial economy by national government.	Build story from scratch and gain active support for internationalisation programme.

Source: Jones Lang LaSalle and The Business of Cities, *Globalization and Competition: The New World of Cities* (Chicago, Jones Lang LaSalle, 2015).

Established World Cities' imperatives

Established world cities (e.g., London, New York, and Paris)—the large globalized cities that have experienced significant international demand from people, firms, investors, and visitors—face a number of critical issues as they look to manage their growth. Most pertinently, they need to boost new supply in housing markets and confront opposition of existing asset-owners to new development, if they seek to avoid becoming prohibitively expensive to the younger workforce. The role of real estate here is multi-faceted, as they are valued partners in the effort to increase the rate of housing supply in collaboration with public authorities. Real estate can drive a diversification of ownership models, and institutional investment can increase the viability of long-term rental.

Real estate also has a role to play in densifying to bring forward mixed-income and mixed-use developments, and for undertaking redevelopment efforts to shift from old to new modes and recycle land effectively. And for this group of cities to maintain a competitive business climate and affordability for new entrants, it is important real estate provides innovative, affordable, and flexible office solutions for the growing innovation sectors. Finally, real estate will be a critical partner in the process of infrastructure modernization for these aging cities, and for undertaking integrated projects that span several jurisdictions in those established cities that lack a proper metropolitan leadership.

Emerging World Cities' imperatives

For major cities in emerging economies (e.g., Shanghai, Sao Paulo, and Mumbai), a very different set of challenges is visible for which real estate will

play an important role in addressing. This group of cities urgently relies on a more managed approach to population growth and to rural migration. Real estate planning has a big contribution to make in terms of the provision of mass housing, and place-making and renewal in monolithic suburbs and ribbon development. These cities also experience severe polarization of income and service access, and here real estate planning requires projects that build in public amenities and social infrastructure (child care, schools, health), and which militate against enclave urbanism.

Real estate development must also support these cities' attempts to reduce vulnerability to climate change, flooding, and earthquakes through first-mover adaptation to resilient and sustainable building design. The sector also has a role to play to improve transparency, and to establish these cities' identities so that they live up to and exceed their promise to international markets.

New World Cities' imperatives

The most recent cycle of globalization since 2008 has seen a large number of cities become more intentionally global in their economic orientation. These "new" world cities (e.g., Auckland, Tel Aviv, and Vienna) are usually medium-sized cities, with a small number of distinct specializations, and a reputation for high quality of life. Their challenges revolve around increasing their connectivity to international markets, and creating a more metropolitan approach to adjust to increased scale, become more polycentric, and manage the externalities of growth.

Real estate planning and development can help these cities create critical mass in new sub-centres by sequencing infrastructure, amenities, and

housing to achieve the necessary level of vibrancy and demand. Because these cities rely on their capacity to host entrepreneurship, real estate planning can also play a role in ensuring availability of housing in inner-city locations, near the main “innovation districts.” The need for these cities to cultivate expert specialization in innovation, digital, and science means planning should promote synergies among universities, civil society, and firms. These cities also take an active leadership role in terms of energy efficiency and mix, and low pollution and green economy initiatives, and real estate planning has to accelerate the shift to compact growth within a wider strategy.

Conclusion

The process of urbanization is one of the most significant trends of the 21st century, and is inextricably linked to land use, property development, and real estate markets. Cities now influence social, political, and economic relations at every level and are major factors in creating land use agendas and priorities. Employing a coordinated, disciplined approach to planning across both public and private sectors, and supporting those efforts with a transparent regulatory environment, are fundamental factors in reducing development-related risks and attracting investment capital. Managed growth and effective planning approaches can positively impact and preserve a balance of key social, environmental, and economic interests.

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11

Improving Capital Markets for Municipal Finance in Least Developed Countries

Introduction

Adopted in September 2015, the United Nations' Sustainable Development Goals (SDGs) established an agenda for the next 15 years for developing and developed countries alike. These goals place a special emphasis on environmental issues in addition to reducing poverty and promoting quality education, good health, and gender equality.¹

Over 80 per cent of the world's population lives in less-developed regions—13 per cent of them in least developed countries (LDCs) that lag significantly in key social and economic indicators. It is especially important to ensure effective SDG implementation in these LDCs.

A key challenge for LDCs is financing the implementation of the SDGs. Modern infrastructure is a key component in achieving the SDGs, and meeting only the basic infrastructure investment needs of developing

countries amounts to an estimated US\$1 trillion to \$1.5 trillion annually.² Moreover, economic growth in many LDCs is weak (for instance, annual GDP growth in the Middle East and North Africa region has averaged only 1.8 per cent over the last five years, whereas the growth in sub-Saharan Africa has slowed from an impressive 6.4 per cent during 2002–2008 to 4.6 per cent in 2014 and 3.5 per cent in 2015),³ domestic revenues are low,⁴ capital markets are weak or sometimes non-existent, political instability is high, and the taxation system is inefficient, with a narrow tax base. Lack of developed capital markets and inadequate financial institutions pose additional significant challenges to financing SDGs in LDCs. The private sector in the majority of LDCs is also under-developed, and despite an overall increase in foreign direct investments,⁵ large foreign companies are wary of high political and economic risks in these countries.⁶

Developing countries receive large amounts from official development assistance (ODA), international donors such as the World Bank and the UN, and other international development agencies (in 2014, LDCs received an estimated US\$135 billion from OECD's Development Assistance Committee).⁷ Concessional official finance remains an extremely important source of financing, accounting for about 45 per cent of total international capital flows to the LDCs.⁸ Domestic resource mobilization is also an important factor in overcoming the financing deficit and propelling LDCs towards achieving the SDGs.

Municipalities are the engines of economic growth in LDCs and play an important role in generating higher domestic revenue, even in the poorest countries.⁹ Yet, despite significant domestic efforts and international support, municipalities in LDCs struggle to ensure adequate basic services and quality infrastructure for local development. Whereas the focus on own-source revenue generation should be maintained and intensified, domestic capital markets may offer additional opportunities for municipal development.

However, LDCs' structural economic weaknesses restrict municipalities' access to capital markets for infrastructure financing. In addition, the legal and regulatory frameworks for subnational borrowing often make access to capital markets difficult or even impossible.¹⁰ This is exacerbated by inadequate governance and fiscal management and by a lack of understanding about how capital markets operate at the local government level. As such, as shown in Table 1, municipalities rely primarily on transfers from the central government through grants and other mechanisms, as well as on own-source revenues from taxes, fees, and charges, with the latter often amounting to no more than 10 per cent of the entire municipal budget (with the exception of capital cities).

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Average annual GDP growth in the Middle East and North Africa region over the last 5 years:

1.8%

Table 1: Local government capital revenue sources and average shares (LDCs)

Categories	Capital revenues	Average budget share in LDCs
Own-source revenues	Asset sales	5–10%
	Betterment fees	
	Contributions	
	Current surplus	
Revenues from higher government levels	General capital grants	80–85%
	Earmarked grants	
External revenues	Loans, bonds, and equity	0–5%
Direct international development partners' support	General capital grants	0–5%
	Earmarked grants	

Source: Commonwealth Secretariat, Municipal Infrastructure Financing (London, Commonwealth Secretariat, 2010); World Bank, Municipal Finances: A Handbook for Local Governments (Washington, World Bank, 2014); UNCDF, Local Fiscal Space in Myanmar (Bangkok, UNCDF, 2014); UNCDF, Infrastructure Financing Market in Ethiopia (Addis Ababa, UNCDF, 2016)

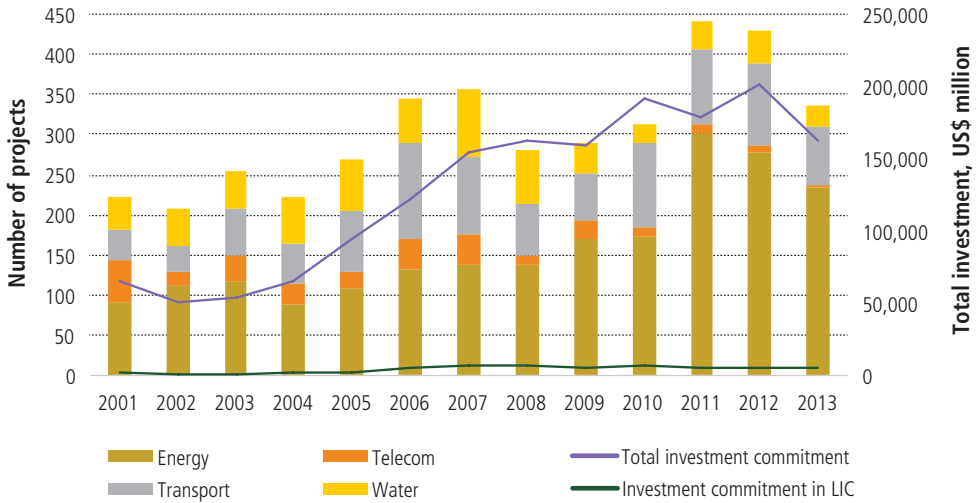
Reliance on central government transfers limits the size of investment capital and places the full economic burden of funding long-term infrastructure development on the present generation. It also contradicts the global trend of municipalities and other sub-sovereigns increasingly relying on infrastructure financing from the private sector.¹¹

Figure A offers clear evidence of the growing global trend in public–private partnership (PPP) infrastructure projects,¹² which increased more than three-fold between 2001 and 2012. The involvement of private capital in financing infrastructure in LDCs has increased by an impressive 3.5 times from US\$1,495 million to \$5,190 million; however, it started from a very low base and accounts for just 3 per cent of global private infrastructure financing.



Over 80 per cent of the world’s population lives in less-developed regions—13 per cent of them in least developed countries (LDCs) that lag significantly in key social and economic indicators. It is especially important to ensure effective SDG implementation in these LDCs.

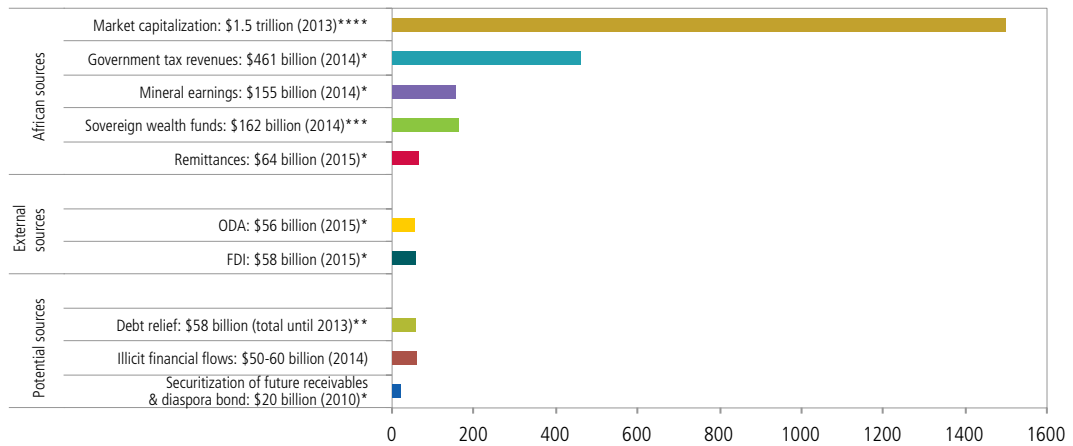
Figure A: Private sector involvement in infrastructure financing, 2001–2012



Source: World Bank and PPIAF, PPI Project Database

Figure B indicates that in Africa, where 34 LDCs are located, private resources in terms of market capitalization (US\$1.5 trillion) by far surpass government revenues or ODA as sources of infrastructure financing. As capital markets in LDCs mature in terms of sophistication, scope, and capitalization, and municipalities improve their financial position and expertise, it is fair to expect that private capital will play an increasingly important role in financing municipal infrastructure in LDCs.

Figure B: Sources of financing for African development



Sources:

* AfD, OECD, UNDP, *African Economic Outlook* (n.p., AfD, OECD, UNDP, 2016).

** World Bank, *Debt Relief for 39 Countries on Track to Reach US\$114 Billion* (Washington, World Bank, 2013).

*** All Africa News, *Ethiopia: A Way Out of Debt for Sustainable Dev't* (n.p., All Africa News, 2016).

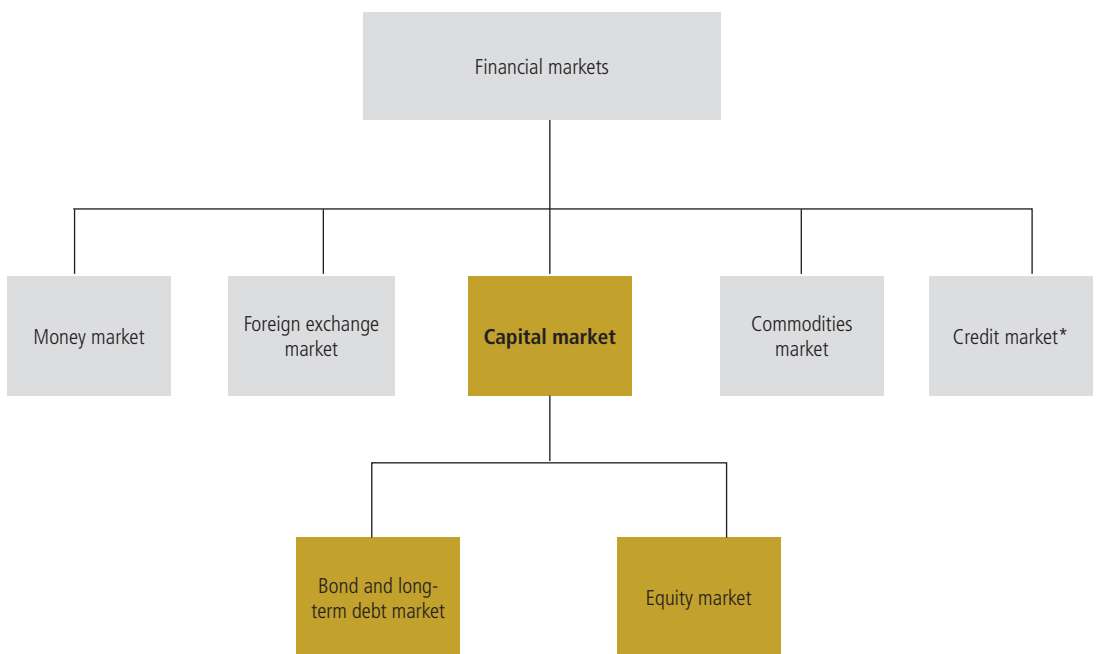
**** AfricaStrictlyBusiness.com, *Africa's Equity Market Capitalization* (n.p., AfricaStrictlyBusiness.com, 2014).

This chapter begins by examining the various methods of using capital markets for municipal finance in LDCs. It then describes financial and non-financial mechanisms most suitable for municipalities in LDCs. Next, the chapter touches upon the emerging financial innovations that, although not currently present in LDCs, may play a more significant role in the future. It concludes with a discussion of the decision-making process and specific steps municipalities can take to access market-based funds (conventional or otherwise).

Use of capital markets for municipal finance

While capital markets may not be thriving in the LDCs, there are still many opportunities for municipalities and other sub-sovereigns to attract private capital for infrastructure financing. Whenever possible and economically sound, public funding should be used as leverage for increasing private investments in infrastructure.

Figure C: Typology of financial markets



* The credit market is defined narrowly as a marketplace for trading, structuring, and investing in the credit/credit risk of public and private borrowers through short-term lending or through credit derivatives and structured credit products.

As shown in Figure C, private finance comes in two basic forms: equity and debt. Equity is financial interest in an infrastructure project that is sold to private investors by the project owner (a public or private entity). Unlike debt, equity does not have to be repaid, but it is much more difficult to acquire and more expensive than debt. In more developed countries, municipal companies are listed on the stock exchange and issue equity either for public or private placement with targeted institutional investors (such as pension funds). However, this avenue is only available for established and well-capitalized companies and requires well-developed and thriving venture capital and stock markets.

In comparison, in LDCs, private equity may be attracted through non-market mechanisms, such as when a private entity (including an institutional investor) commits equity to a new infrastructure project through a project-based partnership arrangement with a municipality. In its most general form, such an arrangement would involve

two equity holders: the municipality that invests equity-like capital in the form of land and physical infrastructure (i.e., buildings, utilities, roads, etc.), and the private partner that contributes the cash required for the construction of the project. This is how a municipal transportation project in Busia, Uganda, was financed (see Case Study 1) and how four municipal housing projects were funded in Kinondoni, Tanzania. Even the least developed among the LDCs can benefit from such arrangements. For example, the local government in Herat, a city in the west of Afghanistan, was able to attract private firms to invest in city squares, parks, and traffic light systems. The number of equity holders may vary depending on the project. For instance, the Busia multi-purpose parking project has three: the Church of Uganda contributing 10 acres of land, the municipality contributing relevant infrastructure, and a private partner contributing equity. Consequently, the Church of Uganda receives 6 per cent of project revenues, the municipality 4 per cent, and the private partner 90 per cent.

Case Study 1: Multi-purpose parking project in Busia, Uganda

The municipal project in Busia, Uganda, pictured below includes a multi-purpose parking project in the District of Busia on the border with Kenya. The project uses the strategic border location of the district and is designed to facilitate cross-border movement and trade between Uganda and Kenya. The United Nations Capital Development Fund (UNCDF) helped develop and design the project as a tripartite public–private partnership among the local government, Church of Uganda, and a private investor (Agility Uganda Limited). De-risking the project through local

economic analyses, feasibility studies, and structuring and financial modelling resulted in leveraging 70 per cent of the total cost of this US\$2.5 million project in private equity and debt. The project (currently under implementation) will greatly improve traffic flow and improve the town's environment; boost business in the region; create over 100 jobs directly or indirectly including lorry, petrol station, and shop attendants; and, in addition to the license fees collected from traders, allow the local government to receive 10 per cent of the project revenue quarterly.



Busia multi-purpose parking project model, Kenya-Uganda border © UN-Habitat

Financial and non-financial instruments for municipalities

The past 15 years have seen significant innovation and increasing sophistication in debt instruments. However, only a few of these are available in LDCs. Local governments should consider two models of municipal credit—the bank lending model used in Europe and the municipal bond model used in North America—and select from each model various elements appropriate for their particular country's sociocultural-political milieu. The most common long-term debt instrument available for sub-sovereigns in LDCs is a term loan from a commercial bank (including national development financial institutions and municipal development funds). A term loan is a loan with a maturity of more than five years and often includes a provision for a relatively long grace period of up to one year, during which the borrower does not pay the interest or the principal (or both).

However, subnational borrowing is, as a rule, heavily regulated. In most LDCs, there is a statutory limit on the amount of debt a municipality can contract, which is restricted to 20–30 per cent of the annual

amount of own-source revenues. Municipalities are not allowed to borrow from foreign banks, and domestic credit may be constrained due to financial repression policies or other reasons. Hence, borrowing against the municipal balance sheet for sizeable infrastructure investments requires a robust financial position—a continued challenge for many LDC municipalities. When an infrastructure project is designed to produce revenues through charges or fees or by generating profit, it is possible for municipalities to borrow against the assets of the future project (including its future cash flows). In this case, the bank considers the project's future revenues as collateral rather than the general municipal revenues.

Generally speaking, municipal bonds are part of the future rather than of the present in LDCs. There are two types of municipal bonds: general obligation, and revenue (or project-based). General obligation bonds are backed by a full faith and credit pledge from the issuing government entity and are heavily dependent on the financial position of that

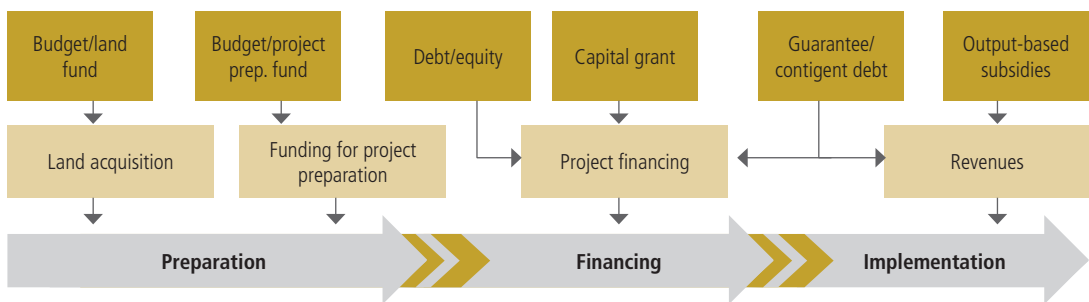
entity. Efforts to issue municipal bonds in LDCs have so far concentrated on this type of bond. Normally, municipal own-source revenues support these bonds and this is why the financial sustainability of municipalities is of such a critical importance for accessing capital markets with these instruments. However, there have been examples in emerging economies when sub-sovereigns issue viable bonds based on future transfers from the central government (the so-called future-flow bonds issued by a number of Mexican municipalities between 2001 and 2003).¹³ Naturally, this type of a bond assumes predictable and guaranteed central government transfers with a reliable interception mechanism. On the other hand, revenues, or project bonds, are backed by the pledge of a specific and limited revenue source originating from a particular project (e.g., fees from a public parking garage). Given the structural challenges of capital markets, only a few larger and richer municipalities can afford a municipal bond, such as Dakar in Senegal, Kampala in Uganda, Dhaka in Bangladesh, or Dar es Salaam in Tanzania.

Bonds, particularly those placed with banks and institutional investors, are issued in minimum denominations of \$5,000 or multiples of \$5,000. However, it is also possible to issue retail bonds in much smaller

denominations, provided there is adequate demand. The so-called Jozi bonds issued by the Municipality of Johannesburg in a denomination of 1,000 rands (approximately US\$70) are very popular with the city's residents and can be bought at any South African Post Office in the wider Johannesburg area. Importantly, these bonds are tradeable in the secondary markets, which makes them a liquid asset for households.

The financial system in most LDCs remains bank-based rather than market-based. Hence, the main sources of private capital for financing infrastructure in those countries are banks and private companies partnering with public entities. Going forward, institutional investors such as government and private pension and insurance funds should play a more prominent role in financing infrastructure.¹⁴ So far, the engagement of such institutions in infrastructure financing in LDCs has been limited to large projects supported by the central government and multilateral financial institutions, such as the US\$4.8 billion Renaissance Dam in Ethiopia. Unlocking this capital for smaller infrastructure projects sponsored by local governments would mean a significant increase in the availability of capital for infrastructure investments.

Figure D: Mechanisms of public sector support for infrastructure financing



Source: Adapted from J. Delmon, *Public-Private Partnership Projects in Infrastructure* (New York: Cambridge University Press, 2011).

At the same time, municipalities and other local governments in LDCs can benefit from existing mechanisms of public sector support to attract private capital for infrastructure financing (these mechanisms are illustrated in Figure D). Public support extended by government and multilateral and bilateral development agencies includes financial instruments that can be used to mobilize private sector infrastructure investment, such as (1) grants and other subsidies (e.g., output-based aid to complement or reduce user fees and tax relief) as well as

interest-free loans; (2) various types of guarantees; and (3) concessional loans. The public sector offers a wide range of specialized de-risking instruments designed to address the challenges of infrastructure financing in developing countries, such as political and currency risks, and include political insurance, synthetic local currency loans, currency swaps, and interest rate swaps. Municipalities and other local governments need to develop a good understanding of the available public support instruments and gain relevant expertise in their application.

Table 2: Type of financing, capital providers, and instruments for municipal infrastructure financing

Type of financing	Capital providers	Instruments
Equity financing	<ul style="list-style-type: none"> • Wealthy individuals • Private equity and venture capital firms • Public sector entities (dedicated funds, agencies, and institutions) • Commercial banks 	<ul style="list-style-type: none"> • Non-listed ordinary shares • Listed ordinary shares • Listed preference shares • Quasi-equity (convertible loan instruments, unsecured loans, preference shares, mezzanine and subordinated loans) • Islamic equity-based contracts (Musharakah and Mudarabah)
Debt financing	<ul style="list-style-type: none"> • Commercial banks • Thrifts • Investment banks and finance companies • Institutional investors (pension funds, insurance funds, etc.) 	<ul style="list-style-type: none"> • Term loans • Municipal and other local government bonds (general obligation bonds, revenue bonds, and structured bonds) • Corporate bonds (for municipal companies) • Mortgage loans
Lease financing	<ul style="list-style-type: none"> • Leasing companies 	<ul style="list-style-type: none"> • Non-tax-oriented lease • Tax-oriented lease (single-investor and leveraged) • Islamic lease (Ijarah)
Public sector financing	<ul style="list-style-type: none"> • Global and regional multi-lateral development banks • Government aid agencies • Bilateral development banks, export credit agencies, specialized funds • National development banks, government ministries, and specialized agencies • Sovereign wealth funds 	<ul style="list-style-type: none"> • Interest-free and concessional loans • Grants and other subsidies, such as output-based aid and tax relief • Guarantees (market, price, performance, cost, etc.) • Insurance • Interest rate swaps • Direct and indirect equity investments • Equity-like contributions (land physical structures, equipment)

Sources: K. Seidman, *Economic Development Finance* (Thousand Oaks, Calif., Sage Publications, 2005); J. Delmon, *Public-Private Partnership Projects in Infrastructure* (New York: Cambridge University Press, 2011); K. van Wyk, Z. Botha, I. Goodspeed, *Understanding South African Financial Markets* (Pretoria, Van Schaik, 2012).



View of Addis Ababa, Ethiopia © Flickr/Neiljs

Access to capital markets can significantly improve the financial opportunities for municipal infrastructure investments. Yet, capital markets (and external finance, generally speaking) are not a universal answer to the challenges of municipal development. Resorting to external finance involves a number of risks. For instance, ownership may be compromised because equity finance comes with the baggage of voting rights for external parties. In addition, because interest needs to be paid on debt finance, a municipality will have to return more than initially acquired, whereas the pledged collateral may be seized by the lender in case of default. Borrowing not only expands the financing capacity of local governments, but also entails the risk of insolvency.

Hence, the decision on infrastructure financing modality should be considered in the overall context of the municipal capital investment plan and municipal financing strategy and plan. (Table 2 briefly presents the defining features of these different modes.) The nature of the project and its revenue generation capacity, the cost of internal and external capital, the optimal funding structure, the financial position of the municipality, and other factors need to be taken into account when deciding how infrastructure development should be financed.

Non-conventional and emerging financial instruments for municipalities

The previous sections focused on conventional financial instruments that have been used by municipalities for a long time and are relatively well-known. This section explains two types of emerging instruments that municipalities in LDCs consider in addition to more traditional instruments: Islamic equity-, debt- and lease-based contracts and diaspora bonds.

Sixteen out of 48 LDCs are members of the Islamic Development Bank, and Islamic finance is becoming more widespread in those countries¹⁵ as well as globally, growing at 10–12 per cent annually during the past decade¹⁶ (although it still constitutes only a fraction of conventional finance). Islamic finance uses a number of contracts that take into account three major prohibitions: against interest (*riba*), against major uncertainty (*gharar*), and against gambling (*maysir*). The major Islamic finance contracts used for long-term financing are summarized in Table 3.

Table 3: Major Islamic financial instruments for capital finance

Category	Name	Description
Equity-based	Mudharabah	Trustee financing contract. One party contributes capital while the other contributes effort or expertise. Profits are shared according to a predetermined ratio, and the investor is not guaranteed a return and bears any financial loss.
	Musharakah	Equity participation contract. Different parties contribute capital and profits are shared according to a pre-determined ratio, but losses are shared in proportion to capital contributions. The equity partners share and control how the investment is managed, and each partner is liable for the actions of the others.
Debt-based	Istina'a	Contractual agreement for manufacturing goods, allowing cash payments in advance and future delivery of a future payment and future delivery of the goods manufactured, as per the contract.
Lease-based	Ijarah	Operational or financial leasing contracts. Bank purchases asset on behalf of client and allows usage of asset for a fixed rental payment. Ownership of the asset remains with the financier but may gradually transfer to the client, who eventually becomes the owner.

Importantly, all Islamic finance contracts must be based on underlying real assets, thus easily lending themselves to the securitization process. The Islamic bond known as sukuk may be based on any of the contracts/instruments discussed in Table 3. A sukuk investor has a common share in the ownership of the assets linked to the investment, although this does not represent a debt owed to the issuer of the bond.

In the case of conventional bonds the issuer has a contractual obligation to pay to bond holders, on certain specified dates, interest and principal. In contrast, under a sukuk structure the sukuk holders each hold an undivided beneficial ownership in the underlying assets. Consequently, sukuk holders are entitled to a share in the revenues generated by the sukuk assets. The sale of sukuk relates to the sale of a proportionate share in the assets. Sukuk have been used for a long time to finance infrastructure projects in countries like Malaysia and Indonesia, and in the Middle East. The municipality of Tehran issued the country's first sukuk based on the musharaka format in 1994; in 2013 Nigeria and Senegal both issued

sukuk to finance large infrastructure investments. Part of the growing trend is due to the lower cost because of strong demand, which makes sukuk cheaper than conventional debt.

An emerging financial instrument is diaspora bonds. A diaspora bond is a debt instrument issued by a country—or potentially, a sub-sovereign entity or a private corporation—to raise financing from its overseas diaspora. For many LDCs diaspora remittances are one of the most significant sources of external finance. Remittance receipts to the LDCs climbed from US\$6.3 billion in 2000 to nearly \$27 billion in 2011. In the median LDC, remittances account for as much as 2.1 per cent of GDP and 8.5 per cent of export earnings, and much more for small economies like Lesotho, Samoa, or Somaliland, where remittances represent between 20 and 50 per cent of GDP.¹⁷

A typical migrant saves a larger amount than the amount of remittances. Most of these savings are kept in bank deposits earning nearly zero interest these days. Diaspora savings for sub-Saharan Africa were estimated at US\$30.4 billion in 2009.¹⁸

A number of countries have attempted, with differing degrees of success, to leverage these significant financial resources through diaspora bonds. Israel and India have raised \$35–40 billion using these bonds.¹⁹ Other countries, such as Zimbabwe, Ethiopia, and Kenya, have also tried this method. Diaspora bonds are often sold at a premium to the diaspora members, thus fetching a “patriotic” discount in borrowing costs. Besides patriotism or the desire to do good in the investor’s country of origin, such a discount can also be explained by the fact that diaspora investors may be more willing and able to take on sovereign risks of default in hard currency as well as devaluation, as they may have local currency liabilities and they may be able to influence the borrower’s decision to service such debt. According to the World Bank, there is a potential for raising \$100 billion per year in development financing via diaspora bonds.²⁰

Accessing market-based capital finance

The first decision to be made by the municipality is whether an infrastructure project should be financed from internal or external funds. External funds (unless they come as grants) have a cost, and the municipality needs to decide if this cost is affordable given the nature of the infrastructure to be financed. The projects likely to be financed with market-based funds include revenue-generating projects and larger infrastructure projects that cannot be financed from regular municipal resources. Even when the decision is taken to tap into market-based funds (conventional or otherwise), the municipality should explore options for hybrid finance that combine own-source revenues and grants with external equity and debt.

Once the decision on funding with market-based capital has been made, the municipality has to consider the following options:

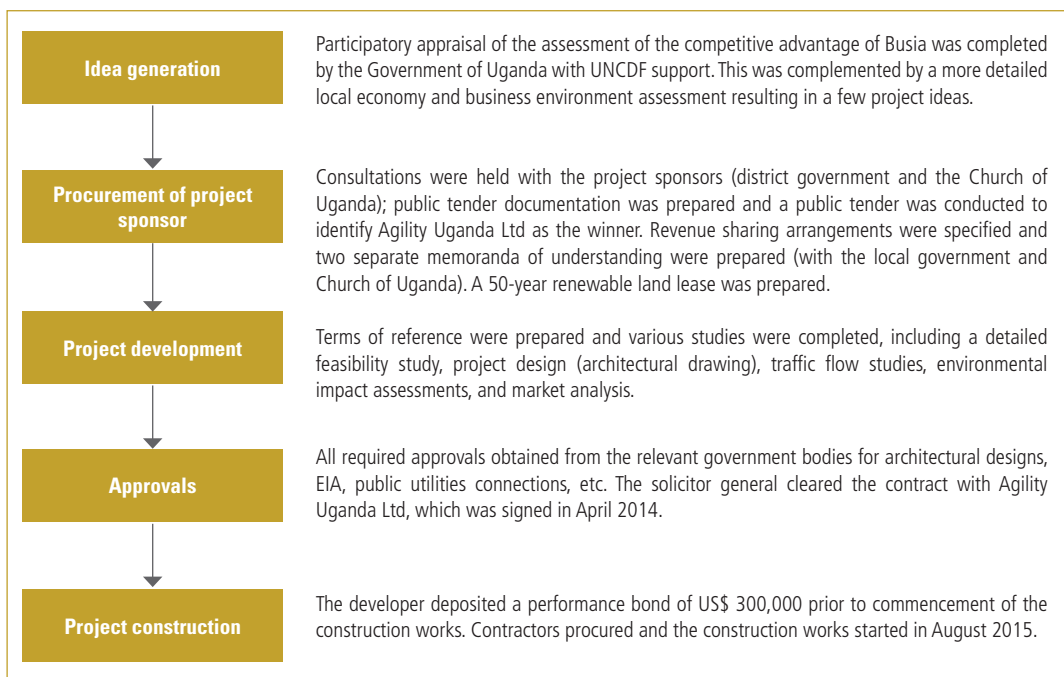
- Borrowing from financial institutions or specialized development banks
- Accessing capital markets or issuing bonds
- Engaging private sector participation through contracts, leases, and concessions

Borrowing from financial institutions, particularly for smaller projects, may be the most straightforward and easiest option for most municipalities. It is particularly attractive when concessional funding is available from development banks or municipal development funds (MDFs). However, the municipality needs to decide (1) whether this borrowing should be made against the municipal balance sheet or against a particular project (if it is a revenue-generating project) and (2) whether borrowing is required at all, or if instead the requisite funding can be provided by a private partner in the context of a joint venture or a concession. If it is decided that the infrastructure investment will be funded with a loan (possibly in combination with other types of finance as discussed), a scan of the credit market will help identify the best credit providers in terms of the loan interest rate, tenor, and other conditions (such as a grace period). Whereas the municipality’s bank may seem like the natural choice, it may be possible to secure better credit conditions from a different financial institution based on the characteristics of the investment.

If the nature of the project allows a partnership with a private entity, the municipality has to choose the optimal contractual arrangements and the type of business structure (e.g., an SPV) best suited to the characteristics of the projects. Further analysis will help decide on the financial structure of this

partnership and identify the types of contribution provided by partners. This will be followed by procurement of the project sponsor, project development approval, financial closure, and initiation of the project. Figure E outlines how the municipal transportation project in Busia, Uganda, discussed in Case Study 1 was developed and financed.

Figure E: Steps in the development of the Busia, Uganda, transportation project (joint venture)



”
If the type and nature of the project justify the issuance of a bond, the municipality needs to make sure that it qualifies for this financial instrument.

If the type and nature of the project justify the issuance of a bond, the municipality needs to make sure that it qualifies for this financial instrument. Before attempting to issue municipal bonds, a local government or local public service enterprise must be in good financial condition so that it can repay its debts. This means that there must be a reliable surplus of revenues over expenditures that can be used to make the interest and principal payments to bondholders on time and in full. Efforts may need to be made to increase revenue collection from existing taxes, fees, and user charges. It may also be necessary to reduce unnecessary expenditures or institute cost-saving measures in areas where it is essential to continue expenditures. Figure F provides an overview of which types of debt instruments are best suited to particular conditions.

Figure F: Log frame for debt instruments

Project revenue generating capacity	Profit generation	Concessional (commercial) term loan and/or private equity	Commercial term loan and/or private equity, bond	Commercial term loan and/or private equity, bond
	Cost recovery	Grant	Concessional or commercial term loan	Commercial loan or bond
	No revenue	Grant	Grant or concessional term loan	Concessional or commercial term loan
		Low	Medium	High

Municipal financial capacity

Source: World Bank, *Municipal Finances: A Handbook for Local Governments* (Washington, World Bank, 2014), p. 359.

Conclusion

There are a few key provisions relating to the use of capital market-based funds by municipalities.

First, tapping into capital markets is associated with financial and some non-financial (e.g., reputational) risks. A municipality may lose its valuable assets in case of a failure. Prior to plunging into the turbulent sea of capital markets, municipalities need to develop the capacity to understand and assess those risks.

Second, there is no one single mechanism or instrument that would best address municipal long-term finance needs. Application of the instrument is determined by the nature of the investment to be funded, by the specific circumstances of a municipality, and by national regulations. There are always statutory limitations restricting the capacity of sub-sovereigns to use market-based capital. There may be more advanced financial instruments that smaller municipalities will never be able to apply. The use of hybrid instruments is encouraged. Overall, a progressive approach is recommended when municipalities move from simpler financial instruments (e.g., term loans) to more complex tools, such as SPV-based structured finance and bond issues.

Third, access to capital markets requires much more robust public financial management systems than most municipalities currently have. This includes proper revenue planning and administration, capital investment planning, and financial strategy development, to name just a few key conditions. Developing business acumen and the capacity to run municipalities as businesses is part of the process of local government re-engineering presently underway in a number of LDCs.

Fourth, obtaining a term loan, let alone issuing a bond, concludes a long process involving significant specialized expertise, which municipalities are in many cases unlikely to have. Hence, developing such expertise internally or ensuring ready access to external expertise becomes a critical issue.

Finally, getting access to long-term finance is not the end of the journey but rather a beginning. Debts, in whatever form they are incurred, must be repaid. Monitoring debt servicing and taking timely corrective actions to avoid default are critical for continued access to capital markets on favourable conditions in the future.

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4 LDCs on average (over 2009–2011) collect only 14.8 per cent of their revenue as a share of GDP. See World Bank, World Development Indicators (Washington, World Bank, 2016).

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6 Antonio Estache, "Infrastructure Finance in Developing Countries: An Overview," EIB Papers, vol. 15, no. 2, pp. 60–88.

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9 The municipality of Kabul in 2011 collected 2.9 billion AFN (US\$42 million) in revenue for its population of about 3.5 million people. An additional 30 per cent of revenue is estimated to be generated by registering all the properties in Kabul city and collecting property-based taxes. See GoIRA, The State of Afghan Cities (Kabul, GoIRA, 2015), p. 42.

10 A number of LDCs issued regulations on municipal bonds and PPPs for sub-sovereigns, including Uganda (2013) and Tanzania (2014).

11 For example, Uganda enacted a bill allowing Islamic finance in January 2016.

12 World Bank, Islamic Finance Brief (Washington, World Bank, 2015). Available from <http://www.worldbank.org/en/topic/financialsector/brief/islamic-finance>.

13 J. Leigland, Municipal Future-Flow Bonds in Mexico Lessons for Emerging Economies (The Journal of Structured Finance, Summer 2004, Vol. 10, No. 2: pp. 24-35)

14 According to the African Development Bank, Africa's pension funds currently hold US\$380 billion in assets, thanks to a decade of economic growth. Even then, only very few countries, including South Africa, have pension systems that are broad-based, relatively transparent, and protect beneficiary rights. See United Nations, Africa Renewal, vol. 28, no. 3 (December 2014), p. 7.

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12

Developing and Managing Municipal Infrastructure Development Plans

Introduction

Managing rapid urbanization is a primary challenge facing many cities, and particularly pressing is the need to provide adequate infrastructure in transportation, water treatment, housing, sewage, and solid waste. However, many local governments—particularly in small and medium-sized cities in developing countries—lack the organizational structures and authority to undertake infrastructure development initiatives. For example, they might lack properly staffed departments of finance, and the proper mechanisms and regulations for public–private investment are often not in place. Similarly, many cities lack the capacity for financing these investments, even when these assets have the potential to become sources of revenue generation.

There are a variety of ways local governments can finance infrastructure development. These include tax increment financing and municipal bonds as well as other land value capture mechanisms. In many cases, land use

planning regulations require developers to fund infrastructure construction as a condition for receiving permits to undertake residential or commercial building projects. The primary problem for small and medium-sized cities in developing countries is the large time lag between the initial investment in infrastructure and the return on this investment in the form of development fees and tax revenues reaped from infrastructure-enabled economic growth. In the case of large-scale water and sewage facilities, this lag can be especially long—10 to 20 years. Particularly in developing countries, it is difficult to secure the necessary interim financing because local governments have neither the credit rating, nor a history of responsible fiscal management, nor appropriate legal or institutional mechanisms (e.g., development levies, betterment taxes, development corporations).

The challenge lies not in the invention of new municipal finance models, but rather in creating the specific local government institutional mechanisms needed to undertake local government–led infrastructure development.¹

This chapter provides background on city-led infrastructure development and presents a practical framework for how local governments can create the conditions for mobilizing private sector resources to finance infrastructure and construct the appropriate facilities. This framework includes feasibility analysis to determine how infrastructure development can be designed to be feasible in a given city; legislation that sets and enforces standards and that provides legal mechanisms for local government to finance infrastructure construction; financing strategies; and organizational platforms for local development (e.g., legal subsidiary entities/development companies) that have the professional capacity to manage these complex projects.

Mandate for local government in infrastructure development

The provision of adequate infrastructure and services is necessary to provide both a high quality of life and an environment conducive to business. This includes everything from safety in the streets, proper sewage drainage, and quality schools to health care, roads, and public parks.

Adam Smith, who laid the intellectual foundation for free-market capitalism, clearly argues on behalf of governmental responsibility for critical infrastructure, writing that among government’s fundamental duties is “erecting and maintaining certain public works and certain public institutions which it can never be for the interest of any individual, or small number of individuals, to erect and maintain; because the profit could never repay the expense to any individual or small number of individuals, though it may frequently do much more than repay it to a great society.”²

While infrastructure provision has traditionally been the job of national government, the complexities, nuances, and dynamics of urban life have led local government to play an increasingly prominent role. Yet, local governments are still often without the legal mandates, the organizational structures, and financing capacity needed to take on these functions. Especially in developing countries, local governments do not usually have the local ordinances and related legislation that enable them to collect development fees and other taxes that serve as the foundation for financing infrastructure development. Nor do they have suitable organizational frameworks that can function in an entrepreneurial manner necessary to carry out the complex tasks of project management and fiscal management of infrastructure development.

The action strategy

The main challenge facing local government is how to create the conditions for mobilizing private sector resources to finance infrastructure and construct the appropriate facilities. This is not an abdication of public sector responsibility—quite the opposite, in fact. Local governments need to set standards, develop enforceable procedures, and anchor development fees/levies in specific by-laws/ordinances. They must establish dedicated organizational and institutional frameworks to manage infrastructure development in a way that enables them to harness often-hidden local economic resources.

Developing and implementing such a strategy of action should have four primary components: a feasibility analysis, authorizing legislation, financing strategies, and organizational platforms for local development.

Feasibility analysis

A feasibility analysis determines not whether infrastructure development is feasible in a given city, but rather how it can be designed to be feasible. This type of analysis involves:

- Assessing the scope of need of different types of infrastructure (roads, sewage treatment, water treatment, waste disposal, power generation, etc.). This needs to be based upon population projections, the number of housing units, and existing infrastructure capacity. This assessment must also identify the city's strategic assets and assess what types of infrastructure are needed to link these assets to each other and to different population groups.
- Assessing the economic capacity of the different populations moving into the city. This entails determining how much different communities

can pay for housing and related infrastructure, what share of the housing costs would go towards infrastructure, and what part of infrastructure costs residents should pay versus what part should be transferred to the business sector.

- Determining the standards and technologies best suited to meet the demands for urban growth for both residents and businesses.
- Estimating the overall costs for the different types of infrastructure required, as well as specific costs for different geographic and socio-economic areas.

It is important to ensure that the municipal level of infrastructure planning dovetails with regional- and national-level infrastructure projects. This is critical both for ensuring that infrastructure development is coordinated and to properly divide the different levels of funding responsibilities.

Authorizing legislation

In the past, infrastructure solutions—septic tanks, wells, runoff drainage, and even dirt roads—were tenable at the household level. But this is no longer feasible given today's rapidly growing urban areas. Although there are regional/county-level initiatives for water purification, sewage treatment, and other types of infrastructure, the legal authority for local government to set and enforce standards is often weak. Equally, if not more critically, there are often no legal mechanisms for local government to finance the cost of infrastructure construction. (For example, there are no legislated provisions for deficit financing or for entering international financial markets.) In many instances, there are no legal statutes that give local governments the authority to make provision of infrastructure, or payment for the provision of infrastructure (through development fees), a condition for approval of building permits.

The transition here is not only one of setting and enforcing standards, but a change in the position and role of local government. It places the burden of infrastructure provision on the municipality and necessitates that it has the authority to finance infrastructure development. In the reality of devolution, local government today is often already accountable to the residents, but without the tools to deliver.

Passing a bill for the levying of development fees is one possible legislative remedy. Such a bill would not only integrate the different legal anchors, but also give the municipal government a mechanism for enforcement. Local government legislation (ordinances or bylaws) is needed to mandate development fees and give local government the authority to do the following:³

1. To make granting a building permit conditional upon payment of a development fee or provision of the infrastructure as set by municipal standards (secured by some form of collateral or bank guarantee).
2. To give the municipality the authority to levy development fees for roads, water supply, sewage treatment, and drainage, and for these fees to be paid to the local government in a closed account (specifically for the given area of development or the related regional system) in keeping with the pace of infrastructure construction. This is to be done in stages and kept in accounts separate from the regular local budgets.
3. To give the municipality the power to finance infrastructure through different mechanisms—bank loans; bonds; joint ventures; build, operate, transfers (BOTs)—that are based upon investment today against future generation of revenues. This type of legislation also needs

to include the institutional safeguards and economic guarantees that provide investors with the security needed to protect their investment.

The intention here is not necessarily for local government to go into the business of infrastructure construction across the board, but rather to give it the authority to do so when private developers do not meet standards. Private developers may very well be the ones to construct community sewage treatment or lay pipes to connect to regional sewage treatment systems, but a municipality needs to have the option to contract out for the construction of infrastructure when the developers cannot provide adequate solutions or when the solutions are required at the regional or sub-regional level. Developers will need to pay the municipality a development fee for those infrastructure components that they themselves are not providing.

Financing strategies

Infrastructure development requires a comprehensive approach. Cities are far from homogeneous; different socio-economic circumstances greatly influence citizens' and businesses' ability to pay for infrastructure costs. Additionally, many elements of infrastructure cut across geographic and demographic boundaries. Likewise, different groups have different levels of use even of the same type of infrastructure. This requires mixed funding sources and differential fees that are equitable and progressive (see Table 1).

Funding sources can in part be based upon the ability of economically wealthier populations to contribute, especially with regard to regional-level infrastructure such as water and sewage treatment

plants or trunk roads. At the same time, donor funds or national development budgets can help close the gap between actual costs and economically weaker populations' ability to pay the full amount.

Not only is there a need for differential funding sources, there is also a need for different tracks of implementation. Take the example of a water treatment plant:

1. The local government (or local infrastructure authority or other development entity) can provide the necessary infrastructure using the income from a development levy to construct a new plant or expand central systems.
2. A private developer (housing estate or business centre) could construct a neighbourhood treatment facility under local government supervision/regulation, and the water treatment development levy would be reduced by the value of the treatment facility built by the developer (e.g., by 70–80 per cent). The remainder of the fee would cover other costs beyond the neighbourhood level for water supply.
3. The development levies serve as the source of funding for build, operate, and transfer (BOT) of a regional water treatment facility that could also include an operational income and management component.

The underpinnings of this overall infrastructure financing and development strategy are well established in many cities throughout the world, but almost exclusively in developed countries where there is a longstanding practice of municipal government having the mandate and statutory authority to provide infrastructure. In such localities the economic model is straightforward. The local government invests in planning, which delineates scope, location, technologies, stages/timing, and

costs of different infrastructure components. Based upon these plans it is possible to set development fees or taxes to be paid by developers of housing projects or commercial ventures. Once these steps have been taken there are many ways of securing interim financing, ranging from municipal bonds to commercial bank loans. Thus infrastructure provision can be ensured.

There are already a number of variations on this theme that can be adopted and adapted. They range from full privatization of certain local government functions (as is often the situation with solid waste and liquid waste management) to contracting out for very specific planning or construction projects where the local government purchases services from private sector vendors.

Table 1. Metropolitan and local finance systems

Government level	Sectors
State/province/regions	Health, inter-urban trains, bulk electricity generation, water management, etc.
Metro-level cross-local government (e.g., city regions)	Education, metro rail, water supply/sanitation, etc.
Development area/corridor authorities	Area/corridor transport and urban renewal
Local government	Solid waste, local roads, parks, etc.

* Collection yield refers to how much of the tax/fee due is actually collected.

** Systems refer to best-practice and technology supports available to maximize efficiency of use and yield.

*** System upgrades to minimize "leakage" in collection and maximize transparency/accountability.

However, the challenge facing local governments in developing countries is more complex. They have neither the credit ratings nor the funds for planning infrastructure development as a financially secure venture. In this situation there needs to be a more explicit linking of the economic potential inherent in urban development and the financing of infrastructure.

One of the main concerns of financing institutions is the ability of local governments to provide guarantees against loans. Similarly, they need a clear business plan that clearly presents the risks and opportunities of specific infrastructure projects. Although as mentioned local governments in developing countries do not usually have such resources, many private developers who need infrastructure to undertake their business projects (housing estates,

industrial parks, or commercial ventures) can provide the types of guarantees needed to secure the financing of infrastructure.

By linking the granting of building permits to the provision of bank guarantees (plus partial payment of development fees) for the cost of infrastructure (as set out in local legislation described in the previous section), local governments can leverage such guarantees to meet the requirements for commercial loans, municipal bonds, or other investment mechanisms.

Furthermore, once these financing components are in place investors can weigh the costs of funding the planning stage of projects as a part of a much larger investment with good rates of return from the financing of a full infrastructure project.

Revenue sources for		Collection yield*	Systems**	Systems to maximize net revenue***
Capital expenditures	Operating expenditures			
General taxes (e.g., income & VAT), bonds, project loans	User fees, taxes	Rarely fully cost recoverable, but relatively easy to police payment	Health cards, smart grid, water auctions	Transparent bidding for concessions/ suppliers/use rights
Shares of general taxes, property tax levies, bonds, project loans	User charges, CSO transfer revenue	With the exception of water supply, rarely cost recoverable, but more difficult to police access	Integrated ticketing, smart metering	GIS-based property tax monitoring and automated billing and other IT systems to maximize yield. Crowd sourcing of service issues and responses.
Property taxes, project loans	As above	Commercial basis; corporation should be in surplus	Eminent domain, area-based tax surcharges	Land banking/performance-based bids
As above, plus limited bonds, transfers	As above	As for metro level	Cost recovery pricing	As for metro and development area levels

Source: Lindfield, Kamiya, and Eguino, *Sustainable Metropolitan Finance for Development: Global Policies and Experiences for the New Urban Agenda and Local Finance* (Washington, D.C., and Nairobi, UN-Habitat and IADB, 2016)

Platforms for local development

The role of local government as a universal service provider and enforcer of regulations almost by definition requires a formal bureaucratic organizational structure with sets of standardized procedures. Such a structure is poorly designed for the tasks of leading, developing, and responding to the demands of rapid urbanization. The principle of serving people equitably has come to mean providing the same standard of service to people regardless of who they are. This lack of flexibility is intended to prevent corruption or biases. Even though the reality is often quite different, the underlying principle is an important tenet of government.

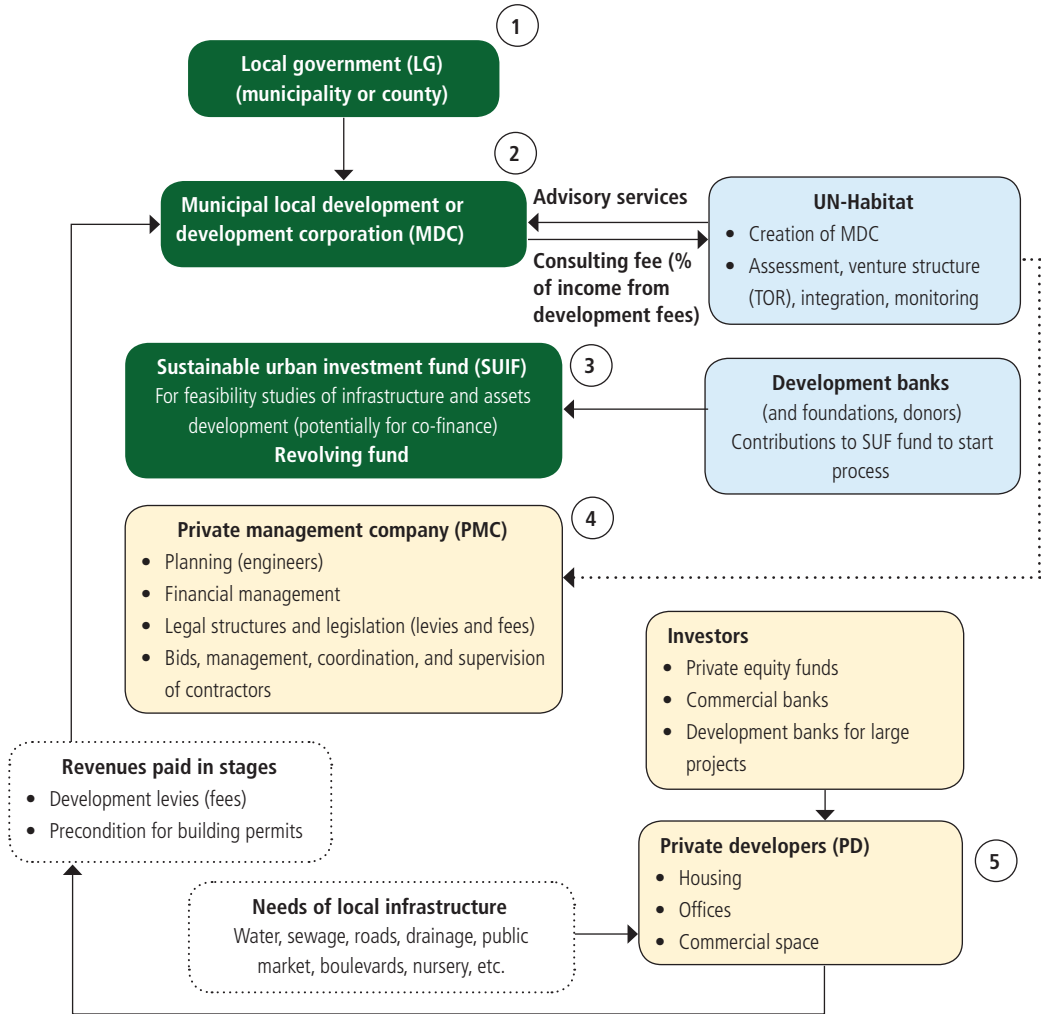
Yet this very tenet limits the abilities of government—and local government, in particular—to act quickly and flexibly, so as to capture opportunities. For example, procurement procedures designed to open opportunities to all contenders may prevent joint ventures initiated by the private sector. In addition, budgetary deficits are a bottomless well that can easily “absorb” any new revenues.

One way to reduce such difficulties and change the mode of bureaucratic operation characteristic of local government is by establishing subsidiary development and management platforms. One such platform is a sustainable urban investment fund (SUIF). An example of a SUIF is depicted in Figure A.



A view of Antananarivo, Madagascar © UN-Habitat

Figure A. Example of a sustainable urban investment fund



Functioning scheme

1. Local government (LG) creates or strengthens a municipal development corporation (MDC). LG requests support from UN-HABITAT or development bank.
2. UN-HABITAT helps the local government establish the technical capacity and find the resources necessary for the MDC to operate.
3. The sustainable urban investment fund (SUIF) is created. This fund should be replenished by the income and revenues generated by development levies from the infrastructure projects. Revenues can also come from urban integrated projects and/or the associated infrastructure itself that comes from land value capture, taxes, and others. This is a revolving fund that is replenished by the constant flow of funding from private developers.
4. The MDC uses the resources from the SUIF to prepare terms of reference and call for private management companies (PMC). The PMC will manage the bidding process and select and supervise private developers.
5. The revenues obtained from private developers go to the MDC, which uses the funding for proper revenues, replenishes the SUIF, and pays agencies (UN-HABITAT, consultants, etc.).
6. The revenues are paid in stages in keeping with the actual construction of the infrastructure. These payments go to the MDC, which reinvests them in the SUIF.

The mandate for a SUIF

Setting up a carefully constructed organizational framework with a dedicated mission, such as a SUIF, can provide the means for local government to meet challenges of urban development. In most countries local government has the authority to create such entities. The case of Kenya, which is in the process of devolution, provides a good example. The County Governments Act 17 of 2012 states, “To ensure efficiency in the delivery of service or carrying out of a function for which the county government is responsible, the county government may establish a company, firm or other body for the delivery of a particular service or carrying on of a particular function.” Thus we can clearly see the authority for setting up a separate legal entity by the local government alone or in partnership for the purpose of carrying out its responsibilities.

Goals of a SUIF

A SUIF combines social goals with economic viability and sustainability. Because this type of framework is an economic entity, the income and expenditures are focused on ventures within a local development and revenue enhancement strategy. Income generated is aimed at the achievement of development goals. Because this is a separate entity, its activities and financial management can be more easily monitored. Such transparency is critical for instilling trust. A SUIF typically has a mandate to:

1. Undertake development projects on behalf of the municipality
2. Enter into contractual relations with private bodies for the achievement of its development goals
3. Manage and develop public assets
4. Purchase and sell goods and services related to the development goals

5. Own and manage land-based development projects

On the one hand it is intended to be the integrating mechanism for coordinating the initiatives of the different bodies within the local government—and on the other hand, it is the legal entity that can enter into partnerships and finance projects with the private sector.

Business strategy of a SUIF

A SUIF, though not immune to business difficulties, needs to operate on the basis of its public mandate. The business strategy is essentially one of low-risk ventures that rest primarily upon leveraging publicly owned lands and other assets. As such, the primary function of a SUIF is the transformation of public assets into economic ventures through various types of partnerships and financing and/or legal mechanisms.

Investments for these ventures can come from development agencies, income from current or future levies/taxes grounded in bylaws/ordinances, development fees, rents from facility/property management, and fees for development services.

Likewise, the SUIF can serve as the vehicle for entering into public–private partnerships in which it brings public assets to the partnership and in which private partners bring financial investments and professional expertise.

There are two generic development strategies that a SUIF can adopt:⁴

1. A SUIF can manage the development of local infrastructure (roads, sewer lines, streetlights, etc.) that would be funded primarily from development fees.
 - Payment of development fees would need

to be a precondition for granting a building permit, combined with bank guarantees by private developers for completion of payment as infrastructure is constructed. This type of infrastructure development can be done directly by the SUIF or with private sector partners.

- Additional income can come from land rates and betterment taxes that are based upon the increased value of lands that have resulted from infrastructure development.

2. A SUIF can develop and manage publicly owned properties/lands by using the rental income to finance asset development and for promoting other development projects.

- The SUIF can leverage the land ownership/use rights and develop tailored-made buildings to suit the businesses or residents. The financing would be based upon leasing agreements that can ensure income to cover the costs of asset improvement.

- The SUIF leverages land owned by the local government at its market value in partnership with a private investor/developer (its equity position is equal to land value in relation to overall development costs). These types of joint ventures are an effective structure for financing projects aimed at leveraging local government assets.

In short, a SUIF can improve local government's ability to enter into contractual relations on a partnership basis and/or as a developer with other public and private bodies in a flexible manner. Its significance is in its unique position as being an arm of local government while at the same time being able to act as a dedicated development platform whose monies and financing mechanisms are not part of the local government apparatus. In this manner it can contribute to the development of local infrastructure, improve local government-owned assets, enhance the revenue base, and contribute to the conditions that foster local economic growth.



Slum upgrading project in Kibera-Nairobi, Kenya © UN-Habitat

Conclusion

Due to global trends towards devolution, the role of local governments has greatly expanded. They are now responsible for numerous development initiatives, including infrastructure development. However, local governments, particularly those in developing countries, lack the authority to finance and coordinate infrastructure development through levying development fees, issuing municipal bonds, and mobilizing private sector resources. In order to increase the provision of sustainable urban infrastructure, however, this must be altered so municipalities are empowered to finance infrastructure through various mechanisms.

As a result of the large time lag between the initial investment in infrastructure and the associated return on the investment, securing interim financing from municipal bonds or commercial bank loans can be difficult. For local governments in developing countries, this is extremely challenging, as most have neither the credit ratings nor the guarantee to secure loans. Regardless, there are other mechanisms that allow local governments to secure

interim financing. For instance, most private developers who need infrastructure to undertake their business projects (housing estates, industrial parks, or commercial ventures) can guarantee loans. By linking the granting of building permits and other permits to the provision of bank guarantees for the cost of infrastructure, local governments can then meet their guarantee requirements.

The resources of the private sector should also be adequately mobilized to finance infrastructure development. One way of doing this is through a sustainable urban investment fund (SUIF), which is a subsidiary development and management platform. As a separate entity, a SUIF is charged with undertaking development projects by managing and developing public assets on behalf of the municipality. It enters into contractual relations with private bodies for the achievement of its development goals and serves as the vehicle for entering into public-private partnerships in which local governments bring public assets and private partners bring financial investments and professional expertise.



Local governments, particularly those in developing countries, lack the authority to finance and coordinate infrastructure development through levying development fees, issuing municipal bonds, and mobilizing private sector resources. In order to increase the provision of sustainable urban infrastructure, however, this must be altered so municipalities are empowered to finance infrastructure through various mechanisms.

Case Study 1: Megiddo Regional Council (a small local regional government in Northern Israel)⁵

The context

Like most local authorities, the goal of the Megiddo Regional Council was to develop an industrial park as part of its economic development strategy. The financing was to come from the national government to prepare a statutory zoning plan, build the roads, and put in a sewage system, electric lines, drainage, etc. This would then provide an attractive site for expanding local businesses and attracting new businesses, and would similarly be a significant source of land tax income to improve services.

The local government was successful in having the national government cover the costs of a land use plan. However, for over five years after the completion of the plan, the Megiddo Regional Council was not successful in receiving the necessary national government funds for infrastructure development. This led the mayor to consider a more entrepreneurial strategy.

Interim financing alternatives

A preliminary feasibility analysis concluded that the cost of the infrastructure, approximately US\$20 million, could be covered from development fees over a 10-year period.

Initially there were three possible finance alternatives:

- **Bank loan:** This would carry an interest rate of at least 6 per cent and would require national government approval. The primary source of revenue would come from the payment of

development fees paid by the businesses as they requested building permits.

- **Municipal bond:** This would be an approximately 5.5 per cent interest-bearing bond to the public, which would cost less to the municipal government but would also require national government approval. Furthermore, this option would be a precedent with all the related complexities and bureaucratic procedures of being “first.”
- **Joint venture with a private developer:** This option was designed as a bid to a private management company (PMC) that would be given the rights to undertake the infrastructure development. The PMC would take on the burden of interim financing and in return would receive all of the development fees and a per cent of the land tax revenues for 10 years.

Taxing the national government as “landowner”

After a series of considerations, a strategic decision was made by the Regional Council to radically change the local government–national government relationship by fully using the statutory regulations mandated to local government, giving it the authority to levy development fees for infrastructure construction to be paid by landowners. Rather than request a development allocation for the industrial park from the national government, the local government taxed the national government US\$20 million as the “landowner.” (In Israel, the national land authority is the primary owner of lands, which are leased to residents and businesses on a 49-year renewable basis.)

Most development fees in Israel are billed to landowners based upon a fixed rate per square metre of buildings constructed on a plot of land. Thus the problem of interim financing still remained. The solution that led to the actual development of the industrial park came in the form of restructuring the bylaws to levy development fees on developed land (land with infrastructure) rather than upon the construction of buildings.

The legal structure

The legal mechanism that was used to implement this strategy of development was the establishment of a municipal corporation for the development and management of the industrial park—marketing, providing municipal services (solid waste, sewage, lighting, gardening, water supply, and other services), and collecting taxes.

The outcome

From the revenues generated by the development fees, the municipal industrial development company not only covered the development costs, but also made an operational profit (which has enabled the development corporation to initiate other new ventures). Additional revenues are being generated by an expanded tax base:

- **Betterment tax** that is levied against the increased market value of the property as a result of the infrastructure improvement (beyond the direct costs)
- **Annual land tax** that is based upon the size and type of land use (commercial, high tech businesses, manufacturing, and other industrial concerns)

In the long term there will be both job creation with new career tracks and secondary businesses that grow around the newer big businesses.



Aerial view of Megiddo, Israel © Wikipedia

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Part 03:



Crosscutting Issues

13

Financing Investments in Slums and Informal Settlements

Introduction

Slums and informal settlements remain a significant challenge for many urban centres around the world, and the implications for municipal and local governments are profound. In many regions, the numbers of people living in slums are growing—a trend with significant implications for urban sustainability. Around one-quarter of the world’s urban population lives in slums, and since 1990, the number of people living in slums has risen by 213 million, to close to one billion.¹

Over 90 per cent of urban growth is occurring in the developing world, and an estimated 70 million new residents are added to urban areas of developing countries each year. Over the next two decades, the urban population of the world’s two poorest regions—South Asia and sub-Saharan Africa—is expected to double.² This suggests dramatic growth in the number of residents of informal settlements and slums in these regions.³



In sub-Saharan Africa, in 2014 over half of the urban population (55.9 per cent) lived in slums, and by 2050, Africa's urban dwellers are projected to have increased from 201 million in 2014 to 1.2 billion. In Asia, home to half of the world's urban dwellers (53.2 per cent in 2014), about 27 per cent of the urban population resides in slums.⁴ Globally, if no immediate action is taken, the number of people without adequate housing living in slum conditions will triple to three billion by 2050.⁵

The challenge posed by a growing global slum population is compounded by the fact that an increasing number of countries and cities struggle with the effects of conflict, natural disasters, or environmental degradation. These calamities have resulted in 40.8 million⁶ internally displaced persons (IDPs) and 21.3 million international refugees,⁷ who mainly settle in camps along the city periphery or in cities themselves. In addition, recent large-scale urban development projects have forcibly displaced 65.3 million people, pushing them into socially, culturally, and economically vulnerable situations. Integrating IDPs, refugees, and forcibly displaced persons into the urban fabric and providing adequate support poses significant challenges for many city administrations.

Slum upgrading is essential for the quality of life and social and economic future not just of those living in slums, but of all city inhabitants. This is because widespread slums and informal settlements undermine the prosperity and sustainability prospects of all urban residents—even the comparatively wealthy living in the developed portions of the city. It is thus necessary to rethink municipal financing priorities and approaches in order to reduce urban poverty and achieve more inclusive and sustainable urbanization.

Slums and informal settlements remain a significant challenge for many urban centres around the world, and the implications for municipal and local governments are profound.

This chapter explains how financing participatory slum upgrading promotes inclusive urbanization, adequate living conditions, and prosperity for all. The chapter begins by explaining the need for large-scale, well-targeted investments to finance inclusive and sustainable urbanization. It then analyzes various instruments for ensuring up-scaling of participatory slum upgrading through creating an enabling environment for local authorities and communities. These tools include national urban policies, people-centred citywide strategies, and locally managed funds and partnership strategies. The chapter concludes by examining a promising template, UN-Habitat's Participatory Slum Upgrading Programme, and detailing its financing models and partnerships.

The need for large-scale and well-targeted investments to finance inclusive and sustainable urbanization

Investment in both slum upgrading and adequate housing has been neglected in many world regions in the last 20 years, despite having been identified as a global development priority by the Millennium Development Goals. The Sustainable Development Goals—which seek to, among many other things, “ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums” by 2030 (Target 11.1)—provide opportunities to address this unfinished business. So too does

the New Urban Agenda, which places municipal and local government in a key role for promoting partnerships and governance structures for sustainable urbanization. It also calls for innovative and partnership-based financing arrangements and for governance arrangements that promote a range of financing options—both top-down and bottom-up.

For a number of countries, the scale of the challenge has been a barrier in addressing this issue. Not many governments can manage the levels of investment required, nor do they have the legal supporting framework in place or show political will to prioritize this. In particular, many local authorities are not financially or institutionally empowered to respond directly to the challenge, and many still lack inclusive governance systems that connect slum dwellers to the formal city.

Remedying this is especially important because slums and informal settlements generate a large majority of economic activity in cities and towns. In many countries, this share is around 90 per cent. Furthermore, although slum dwellers might not pay fees such as property tax and land tax, they do contribute to the overall national budget through their often low-paid work and the fees they pay (such as market fees and value-added taxes on goods). In addition, slum dwellers often pay 10 times more for basic services—such as water supply, for example—than residents of the formal city. In short, slum dwellers play a significant role in broader urban economic dynamics in many towns and cities—a role that could be enhanced through investments in slum upgrading.

Financing slum upgrading, then, is as much about direct investment in urban infrastructure as it is about providing a “leg up” to slum and informal settlement dwellers so that they can overcome

poverty, benefit from living in an intact urban environment, and contribute even more fully to the urban economy.

Moreover, investing in improving slum dwellers’ lives is an investment in human rights reflective of globally agreed-upon frameworks that say all urban dwellers must be engaged and included. It is also critical for the urban sustainability agenda. No country has ever achieved economic growth without urbanizing, and those urban areas that engage and include slums and slum dwellers are more likely to be prosperous, equitable, and socially sustainable.

Furthermore, it is important to note that practices such as forced evictions, unlawful re-locations, or the “do nothing” approach ultimately cost towns and cities money and entrench negative spatial and social divides in urban areas that result in dangerous health and security risks. In other words, not investing creates a larger, more intractable challenge, which ultimately demands more investment and risks social unrest.

In many countries and for many national and local governments, this broader approach to financing slum upgrading is a significant departure from conventional understandings—but an important one. While national governments play a key role in policy, legislation, and financing of urban development and even slum upgrading, local governments often lead efforts to address the growth of slums and to integrate slum dwellers into the city (see Case Study 1). Addressing slum upgrading must be seen as part of the local investment agenda for social, economic, and environmental sustainability—and not as a one-off project unrelated to other major municipal goals.

Case Study 1: Upgrading housing with resilience and sustainable finance in Lima, Peru

CLIMAsinRiesgo, a joint project between the Development Planning Unit of the University College of London (UCL) and the Urban Economy Branch of UN-Habitat, aims to improve living conditions in two major neighborhoods in Lima, Peru: (1) Barrios Altos (BA), a highly regulated area due to its high historical value that is suffering from depressed private investment and absentee landlords, both of which have created an environment in which slums could develop, and (2) José Carlos Mariátegui (JCM), located in the periphery of Lima, which faces challenges such as unplanned development and rapid growth. The project, which is currently in the planning phase, has two main objectives: (1) identify the variables that produce risk traps⁸ for vulnerable inhabitants in the area, and (2) develop tools to prevent risk traps.

In an effort to improve housing infrastructure in these two areas, the Urban Economy Branch of UN-Habitat has developed a financial scheme built upon the premise of providing adequate housing in a sustainable way for both the investors and the inhabitants. This means that housing finance alternatives include subsidized down payments or interest rates; incremental upgrades (loans according to the payment capacity of the households); and a community mortgage. The financial scheme covers six main areas: lot acquisition, titling, land flattening, house structure, public services, and daily risk reduction. The costs were estimated according to actual housing conditions, and the feasibility to pay back house improvements was estimated according to inhabitants' everyday socio-economic restrictions. It is within this context that



Lima cityscape, Peru © Flickr/Sergey Aleshchenko

the different financial alternatives were developed, leaving space for interventions from both the private and the public sector.

Moving forward, UN-Habitat and UCL plan to partner with a local financial institution in the implementation of this project, which will impact more than 3,000 people with limited access to the traditional banking sector, and who live in an environment typified by rock slides, unautho-

rized access to houses, and a high propensity for contracting diseases (respiratory diseases are the most common, with cases in more than 30 per cent of the houses). A house upgrade will cost on average PEN11,267.41, which is approximately US\$3,390—an amount that a household will not be able to access in the traditional financial sector or through community saving schemes, and which will represent a huge expense for the municipal or national government.

Financing must be considered in terms of capital investment but also in terms of other resources—labour, time, and other community assets. Financing is needed not only for physical improvement but also for capacity building, legislative adjustments, and institutional changes. The latter are usually much smaller amounts but tend to be forgotten in budgeting and work plans for slum upgrading. Financing must also—and perhaps most importantly—be considered in terms of a mindset requiring governance and institutional arrangements that can support a “financing approach” to improving the lives of slum dwellers.



Investing in slum upgrading is clearly necessary for social, economic, and environmental sustainability.

People-centred citywide strategies for slum upgrading

Investing in slum upgrading is clearly necessary for social, economic, and environmental sustainability. As local governments undertake these investments, it must be acknowledged that slums and informal settlements cannot change overnight. Such a wide-scale transformation requires long-term engagement and calls for sustainable incremental transformation in several neighbourhoods at the same time (see Case Study 2). Too often national and city leaders seek quick solutions like resettlement, eviction, large investment in one particular neighbourhood that then becomes unaffordable to most of its residents (resulting in gentrification), or city beautification that hides the reality of slums through walls or other barriers. All of these approaches exacerbate social divides, exclusion, inequality, and urban poverty and increase the costs of overcoming these societal ills at later stages.

Case Study 2: Brazil's Growth Acceleration Programme

Brazil's Growth Acceleration Programme is a good example of how slums and marginalized populations can be addressed with an investment perspective and a strategic approach for long-term socio-economic transformation.

In 2007 the Brazilian government announced the Growth Acceleration Programme, the world's largest slum upgrading programme, with an average annual investment of US\$4.3 billion (for a total investment of US\$30 billion) that aimed to reach 1.8 million families. In a very innovative approach, slum upgrading was considered as part of an economic growth package that included investments in the infrastructure of the country as a whole. This was a major breakthrough because it caused slum upgrading to be viewed as fundamental to the country's economic and social development. Slum upgrading was now recognized as an investment and not solely as a social expenditure.

One of the programme's key ideas was to keep the slum population on the land they already occupied, near facilities and workplaces. The programme's goals were to (1) promote urban integration through infrastructure investment, (2) achieve "decent" housing through house improvements or resettlement/purchase of existing houses when relocation is necessary due to construction needs or risks, (3) integrate land titling regularization into housing interventions, (4) raise the environmental awareness of the target population through sanitary and environmental education plus interventions for environmental recovery when needed, and (5) foster social inclusion through the social work program component.

Brazil's experience in slum upgrading shows a clear evolutionary trajectory, from a unidimensional approach focused on individual urban components to a multidimensional approach where different urban components are integrated, and where socio-economic and institutional dimensions also gradually gain more centrality.



View of Porto Alegre, Brazil © Flickr

Source: World Bank, *World Inclusive Cities Approach* (Washington, World Bank, 2015), p. 76.

Forced evictions and unlawful relocations have major impacts on slums and slum dwellers. These include the interruption or destruction of socio-economic networks—consequences that negatively affect not only individual livelihoods, but also potentially the entire city.

Therefore UN-Habitat promotes inclusive pro-poor policies and participatory citywide slum upgrading and prevention strategies which emphasize in-situ upgrading. The concepts discussed in this section enable linkages to broader economic goals and to community investment and improvement programmes undertaken at various levels of government. Furthermore, they help to leverage the potential of the whole city and enable inclusive growth and development. Additionally, they allow for more-focused prioritization and the engagement of diverse investment partners.

Benefits of a participatory, citywide approach

To achieve sustainable transformation, city leaders should take a participatory citywide approach that engages all relevant stakeholders. This allows for joint agreement on principles, aims, and strategies and fosters mutual understanding of the abilities and limitations of each stakeholder. This approach secures commitment from all stakeholders at the outset and makes everyone part of the process, which fosters shared risk-taking. By enabling citizens to take on public responsibilities, it also promotes democratic values. Furthermore, a participatory citywide approach has the potential to trigger engagement of often underrepresented groups, such as women and youth, in urban development and management processes.

A people-centred approach to slum upgrading also fosters economic, social, and environmental resili-

ence among individuals and communities. It identifies the barriers to prosperity communities face and increases their economic potential by providing services and infrastructure, thereby improving the business environment and linking slums' economic activities to those in the rest of the city. It strengthens social connections by creating a sense of ownership among citizens. And it improves environmental conditions by reducing the potential for damage by floods, landslides, and hurricanes, which can upend several years of development for people and communities in minutes or even seconds.

Multi-level governance coordination mechanisms and capacity development

A people-centred approach to slum upgrading should be complemented by multi-level governance coordination mechanisms and capacity development. In the past, national governments often took the lead in implementing slum upgrading programs. For example, previous slum upgrading programs such as Cities Without Slums in Morocco, the Kenya Slum Upgrading Programme (KENSUP), and Minha Casa Minha Vida in Brazil were national schemes rather than city-specific undertakings. Increasing human and financial capacity as well as progressive decentralization and devolution have enabled many cities to take the lead in urban development and management processes, including slum upgrading. Therefore, creating a strong link between national and local government for developing and implementing slum upgrading is essential. In addition, local development committees can support the process by highlighting the issues that need to be addressed, proposing indigenous solutions, and taking part in implementation.

Using the comparative advantage of every level of government has the potential to create complementary top-down and bottom-up efforts to efficient-

ly address slum upgrading. Central governments should ensure national laws and regulations are in place to facilitate slum upgrading, such as land acts, national housing finance schemes, planning regulations, and building codes. Often they are also able to set aside funds for slum upgrading based on general tax revenues and other central government revenue sources, which can then be distributed to local governments. They are also often the stakeholder that negotiates with international development partners for grants and loans. For their part, local governments should ensure that local development plans and strategies address the city-specific issues pertaining to slums and ensure there is sufficient capacity to address them. Local government should also be the main body to coordinate a participatory approach that facilitates exchange among all stakeholders. Their local knowledge of the situation and of the abilities and liabilities of stakeholders is vital to the success of a citywide slum upgrading approach. This also includes ensuring the participation of service providers, which (depending on the country) can be governmental, parastatal, or private entities.

In addition, capacity development and community empowerment are necessary to facilitate full participation in community-driven socio-economic transformation and to leverage local knowledge and experience. Capacity development encompasses, among other things, participatory planning and human rights; community organization; neighbourhood planning; community-driven projects; community data collection, analysis, monitoring, and evaluation; inclusion of vulnerable groups and their particular needs; incremental housing; and strategic projects that build resilience in communities (see Case Study 3).

Women should play an integral part in the capacity-development process, as women are crucial to families' livelihoods in slum communities. Many households are headed by single women with children and are particularly vulnerable. Special attention should also be given to youths' potential to boost prosperity and adapt quickly to change and economic opportunities.

Case Study 3: Harnessing “people power” to create inclusive microfinance mechanisms in Thailand

The success of the Government of Thailand's Baan Mankong program, implemented by the Community Organizations Development Institute (CODI), illustrates that small-scale micro-financing efforts and networks can be harnessed and turned into effective tools to finance citywide slum upgrading.

Baan Mankong centres on providing infrastructure subsidies and housing loans to low-income communities to support slum upgrading in situ wherever possible. Support for projects is provided

not only to community organizations formed by the urban poor but also to their networks. This allows them to work with city authorities and other local actors and with national agencies on citywide upgrading programmes. It seeks to “go to scale” by supporting thousands of community-driven initiatives within citywide programmes designed and managed by networks working in partnership with local actors. With regard to financing, Baan Mankong provides micro-financing through the local community networks that became part of

CODI, which managed the roll-out of the community-led micro-financing mechanism.

The Thai experience highlights how local savings and credit activities teach vulnerable communities to manage their own savings and public finances. This helps ensure that knowledge and capacity are strengthened and that the people themselves become key actors in the development process. The case also shows how the networks and institutions required to implement slum upgrading can be broad and inclusive and have a strong degree of management and input by the community and slum dwellers themselves.



Lumphini Park - Bangkok, Thailand © Flickr/Qsimple

Source: Adapted from Somsook Boonyabancha, "Baan Mankong: Going to Scale with 'Slum' and Squatter Upgrading in Thailand," Environment & Urbanization, vol 17, no 1 (2005), p. 45.

Enabling new partnerships and innovative financing mechanisms

Slums and urban poverty present a significant financing challenge requiring new ways of thinking about urban financing, new partnerships, different approaches, and innovative technical solutions. Partnerships with communities are essential as well; they are key for accessing financing, reducing the costs of investments, and finding locally adapted solutions.

Local funds are an effective instrument for financing sustainable improvements and are often the only feasible way to address large-scale slum issues. One example of a complex but sustainable local financing mechanism following a people-centered approach is a community revolving fund, which acquires small financial contributions from community members themselves. In general, a revolving

fund is a longer-term financing mechanism that aims to fully recoup the investment and therefore allows for cycle-like financing, maintaining the fund contributions as a "credit" source. Having the community in the centre of such a revolving fund is a powerful tool to strengthen community decision-making processes and create sustainable, well-targeted business models that can be replicated in other neighbourhoods and are fully driven by the local community with little input from national authorities. It is therefore an attractive solution in environments where government systems are weak. Further, revolving funds are built on existing social capital, enabling localities to overcome systematic barriers that hinder up-scaling. In particular, community revolving funds provide an opportunity to finance infrastructure that would have otherwise been impossible to finance. Due to the nature of the fund, care must be given to the

type of investments made, and priority should be given to projects that generate income, such as the upgrading of local markets whereby the fund will profit from market fees.

Citywide slum upgrading also provides entry points for diverse investment partners. It provides direct, highly visible investment opportunities. This assists in mobilizing private sector investments as well as attracting multilateral and bilateral financing partners.⁹ For example, the European Commission has expressed interest in piloting the EU's blended financing mechanism for participatory slum upgrading in countries in Africa, the Caribbean, and the Pacific islands. The innovation of the EU blending mechanism is to combine EU grants with loans or equity from public and private financiers. The EU grant element can be used in a strategic way to attract additional financing for important investments in EU partner countries by reducing exposure to risk.

A further interesting new partnership can be built with the insurance sector. Various maladies that affect slums—such as crime, pollution, and deteriorating infrastructure—also negatively impact this sector. For this reason, the insurance sector has realized that it can ultimately be less costly to proactively invest in preventing some of these scourges from occurring in the first place.¹⁰



Two fundamental concepts are at the core of PSUP: A mix of instruments is necessary to address the strategy's variety of needs, and at the city level no single stakeholder has the capacity (financial or otherwise) to address slum upgrading alone.

UN-Habitat's Participatory Slum Upgrading Programme, its financing model, and its partnerships

A promising template that exemplifies many of the concepts discussed in this chapter—one that has mobilized partnerships in implementing participatory slum upgrading to achieve inclusive urbanization, adequate living conditions, and prosperity for all—is UN-Habitat's Participatory Slum Upgrading Programme (PSUP). It was designed over 2008–2016 through continuous learning. It is based on a tripartite partnership initiated by the Secretariat of the African, Caribbean, and Pacific Group of States, as well as the European Commission as financing partner and UN-Habitat as implementing partner.

Two fundamental concepts are at the core of PSUP: A mix of instruments is necessary to address the strategy's variety of needs, and at the city level no single stakeholder has the capacity (financial or otherwise) to address slum upgrading alone.

PSUP uses and recommends a variety of tools and approaches to finance slum upgrading. In particular, it takes a participatory approach, which has implications for financing opportunities. A participatory approach makes all urban stakeholders aware of the challenge, builds capacity for addressing city-specific issues, fosters mutual understanding of all partners' abilities, creates partnerships, determines ownership, and opens up collaboration opportunities. The creation of a sense of common ownership of the process and the outputs is key for discussions on financing the slum upgrading intervention (see Case Study 4).

PSUP addresses the ownership question through early co-funding requirements on the part of local and national governments. This is in line with the programme's sustainability principle, which holds that interventions should be planned in a manageable way and should first rely on locally and nationally available resources. Basing slum upgrading on locally available funds also ensures planning interventions that are later able to be maintained by the local government, the community, or other local mechanisms are in place, which contributes to the sustainability of the interventions. The co-funding discussion with national and local governments is important for lobbying within the national and local budgeting process. Also important is the creation of a budget line for slum upgrading, an expenditure that many ministries and local governments overlook. National and local governments must also be ready to receive, administer, and spend funding received for slum upgrading, which PSUP's experience has proven not to be a given. Therefore PSUP supports governments' attempts to remedy this weakness and releases funds for programme implementation to national accounts where possible.

A successful slum upgrading strategy also requires institutional and policy interventions to be identified early in the process. Some activities, such as policy and regulatory reviews, can be scheduled in regular work plans and budgets of ministries and local governments. An important financing strategy for addressing required institutional changes such as capacity building, restructuring, and infrastructure improvement is strategic partnerships. As the issues at hand are mostly very concrete, time-bound, and visible, this presents an opportunity for city-to-city partnerships, corporate social responsibility activities, and philanthropic contributions whereby

the partner can gain visibility. Often the financing of physical infrastructure is the largest and most challenging issue. Therefore the strategy has to be two-fold: (1) finding options that are adapted to the city situation and are cost realistic, and (2) identifying the right financing mechanism. Depending on the ability of the city, there are plenty of available mechanisms, including redistributive taxes/charges, lending, blending, and drawing together sector budgets into one common project/program budget.

A last point on slum upgrading finance is to look at the way projects—especially physical projects—are implemented. There are a variety of options, ranging from large-scale international contractors to national companies to community-managed funds.¹¹ All have their advantages and disadvantages in terms of management and financial implications. PSUP advocates implementing a capacity-building approach by working together as much as possible with national institutions, NGOs, consultants, and the community. It is advisable to implement a pilot project, wherein a process driven by the national or local governments with significant involvement of the target community is implemented. This addresses capacity building on the three governance levels, often proves more cost-effective, creates a link between indigenous solutions and livelihoods, and builds trust among stakeholders for larger-scale undertakings.



Basing slum upgrading on locally available funds ensures planning interventions that are later able to be maintained by the local government, the community, or other local mechanisms are in place, which contributes to the sustainability of the interventions.

Case Study 4: Cameroon's experience with PSUP

The Government of Cameroon has partnered with the UN Secretariat of the African, Caribbean, and Pacific Group of States; the European Commission; and UN-Habitat on PSUP since 2008. Initially the country undertook no slum-upgrading activities, nor did it allocate funds for this purpose. Further, eviction seemed to be the country's only approach towards slums. Since 2008 the PSUP approach, including the financing component, has been fully institutionalized. Slum upgrading has been delegated to local authorities through a review of legislation, a pro-poor urban policy is on the way, and most importantly a diverse resource base for slum upgrading has been established.

At the national level the Ministry of Housing and Urban Development allocated funds for policy and legislation review, as well as for technical support to local authorities for PSUP. Further, it lobbied the Ministry of Finance and FEICOM, a national financing institution that aims to equip local authorities with financing for sustainable development. PSUP was selected as a funding priority, which enabled the approach to be replicated in two more cities. Further, a broad coordination mechanism was established with representatives from several national and local authorities, NGOs, residents, and the private sector.

PSUP has therefore managed to foster ownership and investment among all parties. All local authorities have allocated funds for slum upgrading. NGOs have provided in-kind co-fi-

ancing and other investments in the slum neighbourhoods, and most importantly have assisted in leveraging financial contributions from community members. For example, a trash collection and recycling service was established by youth. The local authority provided the public equipment for the service, including specially designed vehicles to access the dense slum neighbourhood in Yaounde. The community pays around US\$2 per household per week for trash collection. PSUP provides the potential for communities to invest in small-scale business initiatives such as these.

In addition, the private sector was mobilized from the beginning and has been made responsible for providing infrastructure. In return, it will be able to sell services, such as water and electricity.

Further, a high priority for communities has been to create local economic mobility by connecting the neighbourhood to the formal city and by creating public space for economic activities. Women in particular have benefited; it facilitates care for their children as well as small-scale economic activities within the city (products are often bought in the formal city and sold in smaller, more affordable amounts in the slum neighbourhood).

Thus Cameroon has leveraged participatory slum upgrading to create financial engagement at all governance levels and to respond to community needs through a bottom-up approach.

Source: Sipliant Takougang, UN-Habitat Participatory Slum Upgrading Programme implementation experience and report



A view of Douala, Cameroon © Flickr/Colette Ngo Ndjom

The following unique features of PSUP have helped it to facilitate diverse financing partnerships:

- PSUP's guiding principles, such as securing early co-funding through a formal agreement, allow for the inclusion of slum upgrading in national budgeting processes and enable sector ministries to more successfully negotiate with the Ministry of Finance. The creation of a budget line in general is also important for having the institutional means to receive money from other partners for slum upgrading. Also important is testing the financial procedures of countries for receiving and disbursing funding for slum upgrading.
 - PSUP gives priority to developing capacity and investing in human capital through training, community-managed funds, and local-level projects—which all build upon the initial investments.
 - PSUP created the enabling environment and pre-conditions for the EU “blended approach” to slum upgrading, which requires different
- levels of government—international, national, and local—to work together.
 - PSUP emphasizes the requirement to link with other key urban developments and plans.
 - PSUP fosters the creation of a multi-stakeholder country team working on slum upgrading, which encourages actors to point out successful funding mechanisms that can also be transferred to other sectors.
 - PSUP blends political will and financing commitments.
 - PSUP conceives the citywide slum-upgrading strategy as a long-term vision for guiding prioritization and future investments in an efficient way.

Through PSUP, in 32 out of 35 countries slum upgrading has become a national priority and new financing opportunities have arisen. This is due in no small part to the establishment of national and municipal budget lines and country-specific partnerships with non-governmental organizations, the private sector, donors, and development banks.

Conclusion

Overcoming inequality, exclusion, and inadequate living conditions in slums requires inclusive governance systems. This demands the full engagement of national governments through participatory slum upgrading and affordable housing programmes, municipal leadership guided by citywide slum upgrading strategies, and people-centred approaches strengthened through locally managed funds and community upgrading plans.

Resources for slum upgrading remain scarce; therefore, a strategic, multi-level governance, and multi-partnership approach is absolutely essential. While this approach requires a larger input in time and human resources, it provides the opportunity for up-scaling and replication. An inclusive citywide slum upgrading strategy is therefore a key instrument for integrating the informal city with the formal city and for targeted and efficient long-term engagement and investment.

Locally managed funds, participatory budgeting, and community-led projects are particularly important, and are new recommendations for sustainable transformation and slum upgrading.¹² Locally managed funds have the potential to overcome

barriers to citywide transformation and large-scale investments, thereby enabling large-scale and long-term transformation through replication and up-scaling.¹³

Additionally, community-driven resource implementation reduces costs. “Authentic partnerships” are the most feasible set-up for long-term transformation and incremental improvements in line with the financial capacity of slum dwellers in developing countries. In short, participatory approaches pave the way to achieve more with limited resources.

However, in tandem with the creation of bottom-up investment, it is important to create innovative large-scale financing mechanisms with long-term vision in order to facilitate citywide transformation and full integration of marginalized and poor neighbourhoods. Large-scale financing mechanisms that enable multi-sectoral investment and basic infrastructure projects are needed, and the international community and development banks as well as the private sector need to fulfil their roles in providing required funds to transform slums and the lives of slum dwellers in a sustainable manner.

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Endnotes

1 UN-Habitat, *Slum Almanac 2015/2016: Tracking Improvement in the Lives of Slum Dwellers* (Nairobi, UN-Habitat, 2015). Since 2003, UN member states have defined a slum household as a group of individuals living under the same roof lacking one or more of the following: 1) access to improved water, 2) access to improved sanitation facilities, 3) sufficient living area, 4) structural quality/durability of dwellings, and 5) security of tenure. Agreement upon these “five deprivations” has enabled the measuring and tracking of slum demographics, though a significant data gap exists.

2 World Bank, *Urban Poverty* (Washington, D.C., World Bank, 2008).

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6 International Displacement Monitoring Centre and Norwegian Refugee Council, *Global Report on Internal Displacement 2015* (n.p., International Displacement Monitoring Centre and Norwegian Refugee Council, 2015).

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8 A risk trap is associated with the economic concept of a poverty trap, in which everyday hazards and episodic, small-scale disasters accumulate.

9 Skye Dobson, Hellen Nyamweru, and David Dodman, “Local and Participatory Approaches to Building Resilience in Informal Settlements in Uganda,” *Environment and Urbanization*, vol. 27, no. 2, pp. 605–620.

10 Vanessa Otto-Mentz, remarks delivered at ICLEI Resilience Conference, Bonn, June 2016.

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Roadside rainage channel in St. John's, Antigua and Barbuda © UN-Habitat

14

The Cross-Cutting Issues of Human Rights, Gender Equality, and Youth

Introduction

Urbanization reflects transformations in national economies—most notably growing numbers of people moving away from working directly with natural resources and towards industry and services.¹ Indeed, 70 to 80 per cent of economic activity is generated in cities.² Thus, urbanization is associated with increasing prosperity and enjoyment of social, economic, cultural, civil, and political rights for men and women.³ In this sense, urbanization is also associated with the right to an adequate standard of living.⁴

However, urbanization does not necessarily translate into an adequate standard of living for all. In some countries, it is generally associated with inequality, exclusion and segregation, a spike in urban poverty rates, growth of slums, and unequal access to the services and benefits of urbanization. The challenges of urbanization, such as rising inequalities,

inadequate housing conditions, and the proliferation of slums, are symptoms of a larger deficit of the realization of human rights in cities. Only when all dimensions of the right to adequate housing and other human rights are respected will urbanization realize its full transformational potential.

The cross-cutting issues of human rights, gender equality, and youth are key to wealth and employment creation in cities and towns that realize their full potential as drivers of economic development, and where all residents can contribute to urban life. In view of the 2030 Agenda's call to "leave no one behind" and "reach the furthest behind first," these cross-cutting social safeguards seek to ensure inclusion of all urban residents as contributors to urban life and the urban economy.

The 2030 Agenda for Sustainable Development and Urban Economy

Via the 2030 Agenda, the UN member states have declared their vision of "a world of universal respect for human rights and human dignity, the rule of law, justice, equality and non-discrimination; of respect for race, ethnicity and cultural diversity."⁵ Strong emphasis is put on the importance of promoting gender equality, as well as establishing specific targets directed towards women's and girls' empowerment in the pursuit of gender equality. Youth-responsive approaches are also highlighted throughout the agenda.

Many of the 17 Sustainable Development Goals (SDGs) in the 2030 Agenda for Sustainable Development are of relevance for city leaders engaging in urban financing policies and interventions (see Box 1). The agenda and its goals emphasize that development should focus on and prioritize marginalized, disadvantaged, and excluded groups, in an effort to reach the furthest behind first. Those most often left behind in urbanization processes include, but are not limited to, the urban poor, residents of slums and informal settlements, homeless persons, people experiencing—or under the threat of—forced evictions, children, youth, the elderly, persons with disabilities, refugees, migrants and displaced persons, indigenous peoples, persons with HIV/AIDS, persons of diverse sexual orientations and gender identities, and women. Many persons will experience intersecting forms of marginalization and disadvantage as a result of overlaps in their identities, e.g., young poor women or indigenous youth with disabilities.

”

Urbanization is associated with increasing prosperity and enjoyment of social, economic, cultural, civil, and political rights for men and women.

Box 1: Some of the Sustainable Development Goals relevant for city leaders

Sustainable Development Goal 5: Gender equality

- Target 5.1: End all forms of discrimination against all women and girls everywhere
- Target 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life
- Target 5.9: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels

Sustainable Development Goal 9: Infrastructure and industrialization

- Target 9.1: Develop quality, reliable, sustainable, and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- Target 9.4: Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Sustainable Development Goal 11: Sustainable cities and communities

- Target 11.1: Ensure access for all to adequate, safe, and affordable housing and basic services, and upgrade slums
- Target 11.3: Enhance inclusive and sustainable urbanization and capacity for participatory, integrated, and sustainable human settlement planning and management in all countries
- Target 11.a: Support positive economic, social, and environmental links between urban, peri-urban, and rural areas by strengthening national and regional development planning
- Target 11.c: Support least-developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

Sustainable Development Goal 16: Peace, justice, and strong institutions

- Target 16.3: Promote the rule of law at the national and international levels and ensure equal access to justice for all
- Target 16.5: Substantially reduce corruption and bribery in all their forms
- Target 16.6: Develop effective, accountable, and transparent institutions at all levels

Human rights

Human rights are universal legal guarantees that protect individuals, and to a certain extent groups, from interference with their freedoms. Human rights are inherent to all human beings and are designed to protect the human values of freedom, equality, and dignity. They are grounded in international norms and standards and are legally binding for states upon ratification of human rights treaties.

What human rights are relevant for city leaders?

Human rights relevant in the context of urban economy include, but are not limited to:

- the right to an adequate standard of living;⁶
- the right to education;¹¹
- the right to adequate housing;⁷
- the right to access to information;¹²
- the right to water and sanitation;⁸
- the right to hold property;¹³ and
- the right to work;⁹
- land rights.¹⁴
- the right to health;¹⁰

Financing for development

“Financing for development must satisfy the demands of all persons to have their most basic needs met in a world that does not lack the means, but has failed to demonstrate the will, to make human rights a reality for all.”

Zeid Ra’ad Al Hussein

UN High Commissioner for Human Rights

The added value of a Human Rights–Based Approach to municipal finance

The Human Rights–Based Approach (HRBA) is composed of programming principles that can be used by city leaders to seek to ensure that their decision-making contributes to sustainable and inclusive urbanization processes.¹⁵ HRBA seeks to address capacity gaps of decision-makers such as city leaders, mayors, local government officials, and ministry officials so they can fulfil their human rights duties, and so urban residents can enjoy their human rights entitlements.

The benefits of a Human Rights–Based Approach include the following:

- Financial policies take into account the knowledge and experiences of all urban residents with increased potential for success, sustainability, and cost-effectiveness.
- Tax policies can be developed in a way that promotes equality and combats exclusion.
- Financing schemes include and yield benefits for all, including urban residents who might be left behind in urban processes.
- The participation of both decision-makers and urban residents in the decision-making process enables holistic analyses of financial challenges.

- It provides communities ownership and understanding of the intervention, which builds trust. This increases the chances of acceptance of the process and outcomes, and successful completion of the intervention.

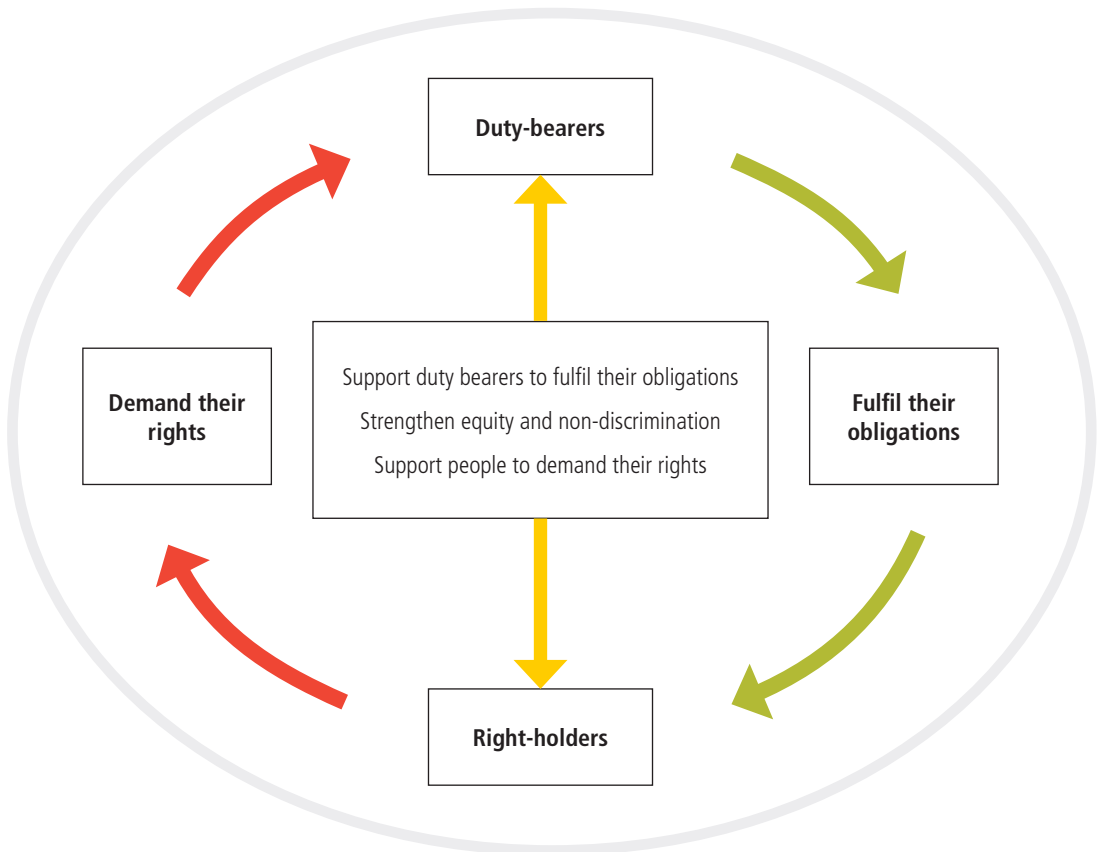
The duties of city leaders in the protection and promotion of human rights

A human right can be understood as a relationship between individuals or a group who has human rights entitlements, and decision-makers and others with corresponding human rights duties or obligations (see Figure A). Urban residents with human rights entitlements are in this way “rights-holders.” Rights-holders include those living in slums and informal settlements without security of tenure and availability of services, as well as those living in formal settlements. Rights-holders include people of different sexes and ages. People in situations of vulnerability are also rights-holders, including the urban poor, persons experiencing (or under the threat of) forced evictions, homeless persons, persons with disabilities, indigenous peoples, minorities, refugees, migrants and internally displaced persons, persons with HIV/AIDS, and persons of diverse sexual orientations and gender identities.

Those with corresponding duties, such as city leaders, mayors, local government officials, national government officials, and ministry officials, are “duty-bearers.” Human rights do not only entail obligations for the state at the national level, but also at the local and municipal levels. In particular, city leaders deal with human rights issues on an everyday basis as a result of their close proximity to urban residents.¹⁶

Human rights obligations of municipal governments follow the classical tripartite typology of states’ human rights obligations, namely, the duty to respect, the duty to protect, and the duty to fulfil.

Figure A: The relationship between decision-makers (duty-bearers) and urban residents (rights-holders)



The duty/obligation to respect means that city leaders should refrain from interfering with the enjoyment of the rights and freedoms of all persons within their jurisdiction. For example:

- Specific barriers to women's access to finance must be eliminated, and women and girls must have equal access to financial services, and the right to own land and other assets.¹⁷
- City leaders need to ensure that taxes and fees are not beyond people's capacity to pay and will not have adverse impacts on their ability to enjoy their human rights to adequate housing, water and sanitation, education, etc.¹⁸
- City leaders need to assess how financial instruments affect various groups. For example, if property valuation undervalues expensive properties systematically, it can place an undue burden on poor urban residents in comparison to higher-income households.

The duty/obligation to protect requires measures to ensure that third parties do not violate the rights and freedoms of the individual. For example:

- City leaders are required to ensure that businesses do no harm to the individual. In working together, city leaders and businesses should subject public-private partnerships to human rights safeguards and due diligence, including human rights impact assessments.¹⁹
- People should have access to fair judicial proceedings regarding the payment of taxes and fees.

The duty/obligation to fulfil requires the adoption of appropriate legislative, administrative, budgetary, judicial, promotional, and other measures towards the full realization of human rights. Also, city leaders should strive to ensure universal and transparent access to affordable and appropriate

financial services across income levels, genders, geographical divisions, ages, and other groups.²⁰ For example:

- City leaders need to ensure that adequate local revenue generation can be spent on the progressive realization of housing, water, sanitation, etc.

The added value of participatory budgeting processes

The distribution of public spending can promote the realization of human rights, and city leaders need to assess how financial instruments affect various groups so as to ensure that certain individuals or groups are not affected adversely. The United Nations Human Settlements Programme (UN-Habitat) is working with participatory approaches to promote inclusive and transparent budgeting processes, where the communities themselves set priorities together with decision-makers (see Case Study 1).

Participatory budgeting processes add value in these ways:

- The lived experiences by the community members inform the process and increase the relevance of public spending or development of the financial instrument, and identification of cost- and time-saving strategies.
- The processes build trust and increase sense of ownership, which increases the likelihood that decisions on tax collection, financial instruments, and public spending will be accepted by the targeted communities.
- The processes increase the likelihood that the communities will protect and take care of the products built or installed.

Case Study 1: UN-Habitat local participatory budgeting in Democratic Republic of Congo, Mozambique, and Senegal

UN-Habitat's programme "Capacity Building for Local Participatory Planning, Budgeting, and Gender Mainstreaming," carried out in collaboration with the Government of Spain, focused on developing capacities of local councilors, municipal staff, non-governmental organizations, community-based organizations, and local training institutions to carry out strategic planning and budgeting in a participatory manner. The programme combined and applied a number of participatory planning tools and governance methods in a sequential manner to best serve the needs identified in eight municipalities in the Democratic Republic of Congo, Mozambique, and Senegal. To ensure a gender perspective, gender considerations were mainstreamed in decision-making and implementation, with a focus of enhancing the capacities and roles of women in the processes.

Participatory budgeting committees were put in place, and the participation of residents of the municipality was ensured, as was the representation of women. Through the committees, a participatory planning and budgeting process was established to contribute to preparation, partici-

patory budgeting formulation, resource mobilization and budget adoption, budget execution, monitoring, and evaluation. In this way, strategic projects were selected by the residents and local decision-makers, who promoted infrastructure and public space projects, and the progressive realization of the human rights to water and sanitation, work, and adequate housing.

The benefits from the participatory budgeting process included the following:

- Gender inclusivity and sensitivity to local cultural practices was achieved.
- Co-funding from the participating municipalities was triggered.
- Participating municipalities contributed towards the execution of the projects.
- Local counterparts assumed a high level of ownership.
- Accountability of local and national policymakers was reinforced.
- The programme contributed to democracy and decentralization.²¹

How human rights principles can benefit financial processes

To ensure that financial policies contribute to inclusive and sustainable cities and towns where human rights are realized for all, human rights principles should guide all phases of the policy process. Human rights principles—such as interdependence and indivisibility, equality and non-discrimination, participation and inclusion, and accountability and rule of law—represent the procedural safeguards to ensure that financial processes integrate a human rights perspective. According to the Human Rights-Based Approach, equal attention needs to be paid to both processes and outcomes.

Human rights principles add value to municipal financial processes in the following ways:

- By acknowledging human rights, city leaders contribute to the sustained, positive changes in the life and standard of living of urban residents. Through the progressive realization of the right to adequate housing, for example, local decision-makers can also promote the right to an adequate standard of living, the health of urban residents (the right to health), their ability to contribute to economic life and work (the right to work), children's capacity to study and live close to schools (the right to education), and so on.²²
- Taking into account and catering to the differences and specific needs of groups that generally face particular challenges and disadvantages, city leaders can promote equality and non-discrimination by carrying out assessments to ensure that policies do not have unintended discriminatory effects.²³

- Having ensured that the people who are targeted by financial policies have been participating in a free, meaningful, and active manner can increase the chances for financial policies to be relevant and produce sustainable results in the long term.²⁴
- Transparent financial processes where accountabilities are clear and rule of law is respected can ensure more clarity in revenue and expenditure assignments, promote efficient use of economic resources, and be important in combatting corruption.²⁵

One major way local governments can promote these human rights principles is through their inclusion in the local legislative framework (see Case Study 2). The establishment of such local human rights mechanisms gives visibility to the role of local authorities in human rights protection. In order for them to effectively discharge their functions, these should be provided with sufficient human and financial resources and be accessible to everyone within the respective locality.²⁶

Case Study 2: Municipal Code of Guatemala

The Municipal Code of Guatemala establishes the obligation of local government to convene different social sectors of the municipality to participate in the development and institutionalization of municipal public policies and plans for urban and rural development. It also stipulates the preservation and promotion of rights of communities to their cultural identification according to their values, languages, traditions, and customs. The code also authorizes the establishment of commissions for compliance.²⁷



An outdoor market in Chichicastenango, Guatemala © Wikipedia

Gender equality

Within the current urban environment, women face unique challenges due to gender-based discrimination. For example, urban settlements are associated with increased incidence of public space gender-based violence (GBV) and challenges in mobility due to gender-neutral urban planning, which fails to acknowledge and accommodate the informal and care economies.²⁸ Specifically, urban poverty has distinctive gendered dimensions, aggravated by the gendered-division of labour, poor representation in urban governance, and unequal access to public spaces.²⁹

Therefore, urbanization's potential to deliver sustainable development and an adequate standard of living for all depends on an intersectional approach that recognizes that the urban poor, and especially women, face daunting challenges in the form of environmental hazards, inadequate shelter, insufficient provision of water and sanitation, and limited access to services, resulting in the overall challenge that their human rights are violated or at risk of being violated.³⁰ In order to meet these challenges, city leaders will have to draw on tools for socially inclusive urbanization, which recognize the participation and rights of all.

Gender equality and women's empowerment (GEWE), and gender mainstreaming

The implementation of sound and inclusive municipal finance will define the achievement of the 2030 Agenda in cities and the New Urban Agenda (NUA). In short, transparent, effective municipal finance will be the source for financing for SDG 11 and the NUA.³² In the same vein, it is paramount to recognize that women's livelihoods are key drivers of the urban economy, and essential to effective finance and implementation of sustainable urban growth.

Women's crucial role

"The subordinate role of women ... enables the minimal maintenance of [the city's] housing, transport and public facilities ... because women guarantee unpaid transportation, because they repair their homes, because they make meals when there are no canteens ... because they look after others' children when there are no nurseries. ... [I]f women who 'do nothing' ever stopped to do 'only that', the whole urban structure as we know it would become completely incapable of maintaining its functions."³¹

At its core, GEWE is about behavioral change and an overarching long-term development goal. Empowerment relies on a woman's ability to plan and control her own life. Therefore, in order to become empowered, women must not only have equal capabilities (i.e., education and health) and equal rights and access to resources and opportunities (i.e., land and employment), they must also have the agency to deploy those rights and capabilities and to be included in societal decision-making processes (i.e., through leadership and participation at the institutional levels).³³

Gender mainstreaming is the process of assessing the implications for women and men of planned actions in all areas, and at all levels (for a specific example, see Case Study 3). Therefore, all activities should be defined so that gender differences can be diagnosed; gender-neutrality is never the case.³⁴ Gender mainstreaming is the main international approach to promoting equality between men and women.³⁵

Case Study 3: Mainstreaming gender in Ethiopia³⁷

In 1993, in Ethiopia, a National Women's Affairs Policy was adopted. The policy established Women Focal Points in each ministry at federal and state levels. The main purpose of these focal points is to mainstream gender into the activities of each sector and authority, which includes engendering the budget. There is also a Women's Affairs Committee in parliament that is one of nine standing committees. The role of this committee is to ensure that every piece of legislation passed by parliament has incorporated the proper gender balance. In addition, the committee tries to monitor how effective the activities of various ministries and agencies are in gradually ensuring real gender equality.



Urban poverty has distinctive gendered dimensions, aggravated by the gendered-division of labour, poor representation in urban governance, and unequal access to public spaces.

Its objective is to make women's and men's needs and experiences an integral dimension of the design, execution, budgetary process, and audit of policies and programmes in all political, economic, and societal spheres.³⁶ In order for this to be achieved, women's participation at all levels of decision-making must be broadened and fulfilled, in line with SDG 5.5. In the long term, gender mainstreaming aims to transform discriminatory social institutions, laws, cultural norms, and community practices, such as those limiting women's access to property rights or restricting their access to public space.

Finally, there is a continued need to complement gender mainstreaming with targeted interventions for women's empowerment, particularly where there are instances of persistent discrimination against women and inequality between women and men. Hence, gender mainstreaming does not replace the need for targeted, women-specific policies and programmes or positive legislation.³⁸

Supporting gender mainstreaming to mitigate gender-neutral macroeconomic analysis

Gender mainstreaming requires sufficient human and financial resources.³⁹ If these are not made available, gender-responsive policies cannot translate to on-the-ground realities. For this reason, gender-responsive budgeting (GRB) is essential to ensure that human and financial resources are available for gender mainstreaming and empowerment activities. As a point of departure, it is paramount to take into account that macroeconomic analysis is oftentimes gender-neutral for the following reasons:

- **Economic institutions carry and transmit gender biases:** Often, economic institutions ignore male biases in employment legislation, property rights, and inheritance laws, all of which restrict and determine the economic activity of women.

- **The cost of reproducing and maintaining the labour force is invisible because economic analysis does not consider unpaid labour:**

Women are disproportionately burdened with care-work responsibilities; although it is unpaid, it is vital for maintaining and reproducing the labour force.

- **Gender relations play an important role in the division of labour and the distribution of employment, income, wealth, and productive inputs:** There are a number of occupations dominated by one of the genders, and regardless of education or skill level required, occupations dominated by women usually have lower earnings than those dominated by men.⁴⁰

In order to remedy these gender-neutral dimensions in macroeconomic analysis, there are three important phases to consider in gender mainstreaming in budgets:⁴¹

- **Raise awareness** and understanding of gender and impacts of budgets.
- **Ensure governments are accountable** for upholding commitments to gender budgets and policy.
- **Amend and reform** budgets and policy to promote gender equality.

The feminization of urban poverty and gender dimension of labour markets

It goes without saying that urbanization engenders changes in national economies, with growing numbers of people moving away from employment in the primary sector and towards the secondary and tertiary sectors.⁴² As noted previously, at present, 70 to 80 per cent of economic production is generated in cities.⁴³

However, urbanization does not necessarily translate

into an adequate standard of living for all. In some countries, it is generally associated with inequality, exclusion, segregation, increased urban poverty rates, slum proliferation, and unequal access to the services and benefits of urbanization. Currently, 54 per cent of the world's population resides in urban settlements.⁴⁴ This is expected to rise to 66 per cent by 2050 and surpass the six billion mark by 2045.⁴⁵ Since urban economies are heavily associated with the secondary and tertiary sectors, wage labour dominates the means for meeting essential needs. Therefore, urban poverty has a distinctive gender dimension, as it puts a disproportionate burden on those members of communities and households responsible for unpaid care-work: predominately women.⁴⁶ Consequently, combined with unequal rights to adequate housing, to minimum economic welfare, to vote, and to freedom of movement in public spaces, efforts to balance paid work and unpaid care-work disproportionately affect women, and in some case, even girls.⁴⁷

This reality raises concerns about the growing feminization of urban poverty⁴⁸ and the inability of national and local governments to provide services to all the residents of their growing cities. Consequently, women's poverty is directly related to the absence of economic opportunities and autonomy; lack of access to economic resources, land ownership, and inheritance; lack of access to education and support services; and their minimal participation in decision-making processes.⁴⁹ In this sense, SDG 1, SDG 5, and SDG 11 are inextricably linked.

As a result of the disproportionate burden of care-work, women are vulnerable to time-poverty, and this can cause a crowding of flexible work economies (i.e., home-based, flexible working hours), which are predominantly associated with the informal sector. In short, women's care-work responsibilities—the result

of gendered division of labour—can cause women to crowd the informal sector in search of flexible work arrangements. Indeed, addressing and engaging the informal sector is oftentimes a challenge for local authorities; therefore, engaging with women’s grassroots organizations and civil society organizations is paramount.

In light of women’s position in the urban economy, and their relative position in the reality of urban poverty, it is fundamental that urban finance managers consider GEWE as paramount in strategic plans and budgets, thus bringing together SDG 1.4 (“[to] ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources...”), 5.a (“[to] undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws”), and SDG 11 (“[to] make cities and human settlements inclusive, safe, resilient and sustainable”).

Transparent municipal institutions via GRB: Achieving SDGs 1, 5, and 16 in cities

Recent trends in municipal finance have led to increased recognition of the different needs of men and women in financing and budgeting. These trends include decentralization policies to ensure more efficient public service delivery;⁵⁰ greater emphasis on land property taxation to raise revenue and implement urban development; growing popularity of public–private partnerships; and increasing demands for accountability and transparency of local governance, including increased implementation of transparent participatory budgeting methods.⁵¹

Institutional transparency denotes the availability and accessibility of information to citizens on all decisions

and actions made by government; as such, budgets are an ideal area to focus on governance and accountability.⁵² The inclusion of a gender perspective in decision-making enhances the legitimacy of governance, in line with SDG 16.7 (“[to] ensure responsive, inclusive, participatory and representative decision-making at all levels”) and 16.b (“[to] promote and enforce non-discriminatory laws and policies for sustainable development”). It enriches political processes by contributing new skills, styles, and visions (see Case Study 4).

Case Study 4: Including women in decision-making processes⁵³

In Bacolod city in the Philippines, the NGO Development Through Active Women Networking (DAWN) Foundation first helped women stand for and fight local elections. As a result of DAWN’s activities, the number of women councilors increased. The executive director of DAWN was one of the new councilors. She and her colleagues recognized the importance of budgets, and worked together with gender activists from two other cities in a GRB initiative. Soon after the research was finished, a leading member of DAWN (who was one of the budget researchers) became the city administrator—the top official in local government. She and her colleagues in DAWN and the administration are now working to implement the gender-sensitive policies and budgets that they advocated in their research.



Women fetching water in Bandiagara, Mali © UN-Habitat

As a means to promote transparency, GRB initiatives are able to provide a way of assessing the impact of government revenue and expenditure on women and men, girls and boys. Therefore, these initiatives can help to improve economic governance and financial management, while providing feedback to government on whether it is meeting the needs of different groups. For those outside government, GRB can be used to encourage transparency, accountability, and people's ownership of the development process. Fundamentally, GRB initiatives provide information that allows for better decision-making on how policies and priorities should be revised to achieve SDG 5.⁵⁴

Moreover, GRB initiatives align with a number of international agendas and agreements, and can ensure the fulfillment of SDG 16.6 (“[to] develop effective, accountable and transparent institutions at all levels”). For local authorities in particular, GRB initiatives can also become a means of meeting SDG 1.4, 5.5, and 5.a, as well as SDG 11.3. In addition, these initiatives align with the Convention on the Elimination of All Forms of Discrimination

Against Women (CEDAW, promulgated in 1979)⁵⁵ and the Beijing Declaration and Platform for Action (promulgated in 1995).⁵⁶

It is important to note that GRB initiatives are not about dividing government money 50–50 between the genders. Instead, they look at the full government budget from a gender perspective to assess how it will address the different needs of women and men, girls and boys, and different groups of women and men, girls and boys.⁵⁷ Specifically, GRB entails the adoption of precise goals, indicators of achievement, data collection, and effective auditing. GRB initiatives have a number of tools for application to ensure effective budgeting (see Figure B); these can be implemented on a stand-alone basis, or integrated into the entire budgetary process. A gender analysis of budget revenues and expenditures can be conducted at the budget preparation phase, to assess baselines and set goals; in the budget monitoring phase; and at the budget audit and evaluation the budget phase.⁵⁸

For in-depth examples of using GRB in municipal finance, see Case Studies 5, 6, and 7.



Youth training by UN-Habitat in Port-au-Prince, Haiti © UN-Habitat/Julius Mwelu

Figure B: Applying GBR in municipal finance, and expected outcomes⁵⁹

Where to apply GRB			
Where to apply GRB	Whole budget	➔	<ul style="list-style-type: none"> ✓ Analysis of whole budget ✓ Study of impact on gender equality and beneficiaries
	Specific unit	➔	<ul style="list-style-type: none"> ✓ Analysis of specific ministry, department, or programmes ✓ Study of impact on gender equality and beneficiaries
	Programme design	➔	<ul style="list-style-type: none"> ✓ Analysis of budget allocation to new programmes ✓ Study of impact on gender equality and beneficiaries
	Revenue source	➔	<ul style="list-style-type: none"> ✓ Analysis of impact of different revenue sources on men and women
	Law/policy	➔	<ul style="list-style-type: none"> ✓ Analysis of new legislation or policy ✓ Study of impact on gender equality and beneficiaries

Outcomes of GRB			
Outcomes of GRB	Gender neutral	➔	<ul style="list-style-type: none"> ✓ No impact on existing gender relations ✓ No sex-disaggregation of data or analysis
	Gender-responsive	➔	<ul style="list-style-type: none"> ✓ Budget takes into account men and women's different needs and priorities ✓ Specifies gender of target stakeholders
	Empowers women	➔	<ul style="list-style-type: none"> ✓ Budget includes women empowerment activities ✓ Funds set aside specifically to close gender equality gap through women's empowerment
	Transformative	➔	<ul style="list-style-type: none"> ✓ Budget aims to promote gender equality ✓ Gender equality mainstreamed across all funded activities

Case Study 5: Strengthening local councils in Cameroon to respond to women's and girls' needs⁶⁰

In Cameroon, UN Women provided support to a local civil society organization, Municipal Development Counseling Group (MUDEC), for institutionalizing GRB in local councils. Building on previous work, the project provided support to improve the technical capacities of local councils to integrate gender priorities into the planning and budgeting processes. MUDEC also contributed to developing the capacities of women's groups to monitor and enforce output-based budgets in councils.

As a result of these efforts, municipal decisions bearing on increasing financing for gender equality have been adopted in 10 out of the 16 targeted councils. The project facilitated the creation and functioning of women foundations for inclusive governance (WOFIG) and gender committees in 16 councils. At least three WOFIG members in each council area were elected as councilors during the 30 September 2013 local elections.

In addition, seven WOFIG members were elected as alternate members of the National Assembly (MPs). These members now play a key role in local decision-making, especially on the allocation of resources and budgets.

To strengthen accountability and transparency towards gender equality in targeted councils, data on allocations for gender equality was collected and widely disseminated to ensure that the local administrators openly commit to increase the levels of financing for gender equality. Support was provided to WOFIG members to strengthen linkages with the gender committees for continuous lobbying on increasing accountability for financing gender equality. The project also facilitated gender public hearings and other engagement forums (face-to-face discussions) between the electorate and the elected within the project area.



Traders at Fomban market, Cameroon © Flickr/Elin B

Case Study 6: CSOs in Serbia demand gender responsive local plans and budgets⁶¹

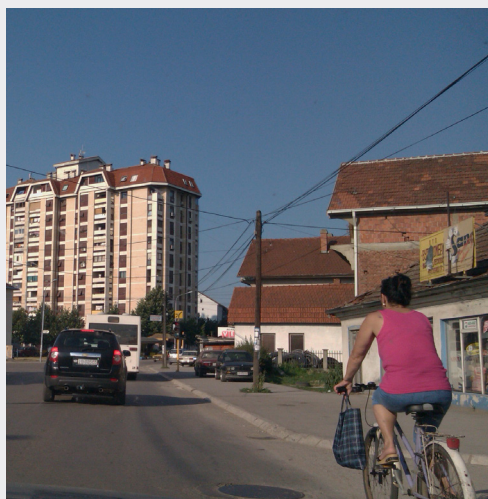
Women-led civil society organizations (CSOs) play a crucial role in gender responsive budgeting processes, and this fact has been the motivating force behind the project led by Association Fenomena in Serbia. Association Fenomena led an initiative in 2013 that contributes to strengthening the role and engagement of women's organizations from less-developed areas in Serbia to influence local policies and advocate for local GRB processes. It worked with eight women's CSOs from seven towns/municipalities in western, central, and southern Serbia (Novi Pazar, Kraljevo, Kragujevac, Užice, Kruševac, Niš, and Leskovac).

The targeted municipalities focused on a wide range of sectors and issues that pertain to women's needs and demands. For example, in Prijepolje and Novi Pazar, the focus was on gender analysis of funds allocated to sports to address women's needs and to assess whether women and men benefit equally from current budget allocations. In Kraljevo, a gender analysis of the municipal budget assessed aspects of transparency in budgeting processes, including budget preparation, implementation, and reporting. In Kragujevac, a gender analysis of budget allocations for welfare services addressed the needs of survivors of violence against women (VAW).

Leveraging the existing potential and experience of Serbia's women-led CSOs, Fenomena brought a common agenda to influence local policy and GRB processes more effectively at the targeted sub-national level. The approach also accounted for the need to develop the capacities of

the network to demand and monitor financing for gender equality as a common concern of western, central, and southern Serbia.

These efforts contribute to increased accountability of the local government in targeted areas to increase financing for gender equality by promoting gender-responsive planning and budgeting. The project strengthened advocacy skills of women's organizations on gender responsive investments and financing in their respective municipalities. The project built crucial partnerships among local actors and strengthened networks of women organizations from targeted towns and municipalities. It brought together local authority representatives including finance officers; local gender equality council representatives; and stakeholders from the national level, such as the ministries of Finance and Labour, Employment and Social Policy, and the Gender Equality Directorate.



Cyclist in Leskovac, Serbia © Flickr/Gagarin Miljkovich

Case Study 7: Morocco's successful experience with implementing gender responsive budgets⁶²

Morocco has a long history of gender responsive budgeting work with sustained, high-level political will to address gender equality. Since the adoption of a new finance law in January 2014, the needs of women and girls are increasingly being reflected in how governments spend, and gender priorities are integrated throughout the budgeting process.

Ongoing efforts have resulted in GRB being progressively anchored in Morocco's budget reform process. Experience with results-based and gender-responsive public finance management for more than 10 years in Morocco resulted in the adoption of the new organic law of finance, by the Council of Government, which legally institutionalizes gender equality throughout budget processes. Taking the GRB processes a step forward, the new legislation explicitly mentions that gender equality must be taken into account in the definition of objectives, results, and indicators of performance of the line budgets. The new organic law also institutionalizes a gender report as an official document that is part of the annual finance bill—an important achievement.

Annually, Morocco produces a gender report that contains information on the work conducted by each sector disaggregated by gender (where data allows), which has become an important accountability and monitoring tool, advancing implementation of GRB from one year to the next. By 2012, a total of 27 depart-

ments joined the report, corresponding to more than 80 per cent of the state's overall budget. The report is successful in requiring reporting from more traditional sectors (for GRB), such as health and education, as well as non-traditional sectors, such as ministries of infrastructure and transport.

The Department of Literacy now conducts budget planning of its programmes based on its "targets," which are largely women, who now constitute 85 per cent of the beneficiaries of such literacy programmes in Morocco. This approach, which began in 2009, has allowed the department to better adapt to the needs of its beneficiaries. As a result, several different programmes are also being developed according to age (15–24, 25–45, and 45+), as well as employment status (employee or looking for employment).

Another breakthrough was the inclusion of provisions in favor of gender equality in the country's new constitution in July 2011. Article 19 explicitly enshrines gender equality in the enjoyment of civil, political, economic, social, cultural, and environmental rights. The new constitution also introduces the principle of gender equality in fact through several articles that mention the commitment of governments to work towards the creation of conditions to allow the achievement of gender equality and equal representation of women and men in all areas, and access to decision-making bodies.

Youth

Youth⁶³ as a cross-cutting issue is fundamental to ensuring sustainable urbanization in cities for several reasons. First, youth constitute the majority of the population in a number of cities. Urbanization, as represented in the 2030 Agenda for Sustainable Development, in particular Sustainable Development Goal 11,⁶⁴ is the engine that propels the world towards economic and social prosperity in the 21st century, and youth are its engineers. The “youth bulge,” a manifestation of reductions in infant mortality simultaneously with high fertility rates, creates a stage of development where a majority of a country’s population are children and young adults. Most developing countries now have more people under the age of 25 today than ever, totaling nearly three billion, or almost half of the total global population; 1.8 billion of that total are between age 12 and 24. They represent a group of change agents—the most active and dynamic, yet the most volatile and vulnerable segment of the population.

Most of these youth live in cities and towns; the cities of the developing world account for over 90 per cent of the world’s urban growth, and youth account for a large percentage of those inhabitants. It is estimated that as many as 60 per cent of all urban dwellers will be under age 18 by 2030.⁶⁵ Based on these statistics, youth is evidently an untapped economic resource and needs to be viewed and treated as an asset and driver of safe, resilient, and sustainable cities.

Municipal finance for and by youth

Municipal finance can be defined as a model for financing the process of urbanization in a sustainable way in cities. Contrary to challenges that cities

face, the new model of urbanization hopes to create cities and human settlements that are inclusive, safe, resilient, and sustainable. As a result, local authorities should embrace urbanization as not only an outcome of development, but also a formidable engine to achieve development in cities.

Youth can play a key role in realizing this promise; in many instances they have risen above the challenges facing developing cities and provided urban solutions that could improve the social, economic, and environmental conditions of cities. However, this is only the case in inclusive cities⁶⁶ that provide youth with equal opportunities. It is important to mobilize their talent for the benefit of society as a whole.

However, the fundamental problem confronting most local authorities, especially those managing cities in developing countries, is the widening gap between the availability of financial resources and municipal spending needs. One of the main reasons for this increasing fiscal gap is the rapid growth of urban populations, which creates an ever-increasing demand for public services, new public infrastructure, and its maintenance.

This therefore creates a rift between different parts of urban centers in developing countries, hence creating a mix of relatively wealthy areas and poor areas, leading to growing disparities in the level of service and provision across the city. Due to having low or no income, among other challenges, the majority of youth live in informal settlements. Informal settlements⁶⁷ are inviting to the urban poor and especially youth, as they offer affordable but substandard housing and mostly lack basic services. Consequently, informal settlements host most of cities’ social injustices but are also laboratories of innovation, as residents seek solutions to

their urban challenges. If these solutions are discovered, analyzed, up-scaled, and replicated in the city context, they would not only be models of generating revenue for municipalities, but also models of expenditure in providing services to city inhabitants.

Role of youth in financing of cities

Youth in informal settlements

Municipal revenue is mostly untapped among the urban poor, especially youth, who are trapped in an informal and “illegal” world—in slums that are not reflected on maps, where waste is not collected,

where taxes are not paid, and where public services are not provided. Officially, they do not exist. Although they may reside within the administrative boundary of a town or city, their local authority may well be a slumlord, mafia leader, or cartel member rather than city council staff, who often no longer attempt to assert their jurisdiction or even enter the informal settlements. As illegal or unrecognized residents, many youth living in informal settlements have no property rights, nor security of tenure, but instead make whatever arrangements they can in an informal, unregulated, and in some respects, expensive parallel market. This forms local governance structures in cities (see Case Study 8).



Youths in Honiara, Solomon Islands © UN-Habitat/Bernhard Barth

Case Study 8: The profitability of slum business

Nairobi City houses Kibera, the biggest slum in Africa. The city is one of the most important economic hubs of the continent and contributes 60 per cent of Kenya's GDP (which had an annual growth rate of 5.6 per cent in 2016).⁶⁸ Youth and children constitute a large proportion of Kenya's population, with those between 15 and 34 years accounting for 7.9 million, of whom 2.6 million live in urban areas (32.3 per cent). Of this latter group, some 49 per cent live in poverty in urban areas, and youth in this group live in slum communities.⁶⁹

This is a case study of the top services offered in informal settlements in Nairobi. The study discusses income generated from the housing sector, provision of basic infrastructure services, and private service providers.

Housing sector

Informal rental housing in Nairobi is dominated by large-scale landlordism.⁷⁰ In Kibera, six per cent of all landlords own 25 per cent of all rooms.⁷¹ This indicates a high degree of ownership concentration. Furthermore, increasing densities in Nairobi's slums suggest that structure owners, bypassing official regulations, maximize their income by constructing an increasing number of units on plots.⁷² As a consequence, densities in Nairobi's slums have reached 250 units per hectare.⁷³ Additionally, the rampant illegal construction of extensions in plots and the resulting problems of providing basic services have turned many of the formerly planned low-cost estates in Nairobi into slums. Particularly in light of the poor quality of housing, rents are high: Slum households pay

on average a monthly rent of 790 Ksh (US\$11), accounting for 12 per cent of the average monthly income.⁷⁴ If Kenya's Rent Restriction Act were applied effectively in Nairobi's slums, "rents would decrease by 70 percent."⁷⁵ This "high cost low quality trap"⁷⁶ allows landlords to make a 100 per cent (tax-free) return on rental investment in only three years.⁷⁷

Provision of basic infrastructure services in Nairobi's slums

Access to basic public services in Nairobi's slums is far lower than Nairobi-level data suggests.⁷⁸ Less than one-fifth of slum households have access to piped water (i.e., private in-house connections or yard taps).⁷⁹ The vast majority of slum dwellers rely on water kiosks to buy water from private providers. By comparison, studies reporting data for Nairobi as a whole place the proportion of households with access to piped water at 71 per cent.⁸⁰ The inequality in access to basic services also applies to electricity connections: One in five households in Nairobi's slums (22 per cent) is connected to electricity and uses it as a lighting fuel. In contrast, in the city as a whole, 52 per cent have electricity connections.⁸¹ Despite the negative externalities of garbage, less than one in 100 slum households (0.9 per cent) is served by a publicly provided collection system. The vast majority of the households in informal settlements dispose of solid waste by dumping, burning, or burying it. On the level of Nairobi province, six per cent of the households are at least infrequently served by a publicly provided garbage collection system.⁸²

Private service providers

Water kiosk owners, in particular, can earn high revenues. Like many other cities, Nairobi's public network provides water below full-cost-recovery prices, justifying this by the importance of access to water for the poor. Slum households pay on average Ksh 100/m³ (US\$1.33/m³) at water kiosks.⁸³ This is eight times the price of the lowest tariff block for domestic connections.⁸⁴ Thus slum households pay full-cost-recovery-level prices in contrast to residents of higher-income areas and water kiosk owners who obtain water from the public network. The exploitation of high rents is also possible because of the concentration of sales within a small number of kiosks.⁸⁵ This suggests that public officials who control the entry to the water market restrict access to their clients and take the opportunity to extract bribes. In part the profits of kiosk owners are negated by the high costs of installing kiosks.⁸⁶ Additionally, public officials capture some of the profit. Water vendors report that at least a quarter of their initial investment is in the form of bribes to facilitate a connection. Furthermore, they are required to make on-going unofficial payments to utility officials in order to stay in business.⁸⁷

However, the high price of water is also the result of rent seeking. Water vendors have reportedly taken advantage of temporary water shortages to make rapid profits. Usually these shortages are due to general problems at the utility. Nevertheless, artificial shortages are sometimes created through collusion with utility officials.⁸⁸

Lessons learned

Informal settlements have a high degree of untapped potential for achieving city goals. This includes legal and financial regulations of service delivery mechanisms in the housing sector and provision of basic infrastructure services. This emphasizes the urgency of mapping informal settlements in efforts to bridge the fiscal gap while also ensuring social safeguards are met in cities.

In this regard, city leaders are encouraged to adopt youth-led innovative solutions, which can help meet basic necessities more efficiently. Despite cities having limited influence over some basic services due to privatization, city leaders need to create an enabling environment for private-public partnerships while also encouraging private investment in infrastructure and public services to achieve their existing goals.



Water kiosk in Mathare - Nairobi, Kenya © UN-Habitat

Youth as a force of innovation and production

Youth are at the forefront of change for a society, and their innovative ideas and energy can be a force for social and economic change. In cities, the youth are best positioned to take advantage of the economic benefits of urbanization, as cities create a pool of ideas, talent, and activities that drive innovation and social change. The sheer scale of cities increases the number of opportunities and creates an urban advantage that makes wealth generation and the pursuit of economic opportunities easier. By tapping into the economies of scale of cities, the inherent potential of youth can be leveraged to generate wealth and jobs. Youth today are migrating to cities because they provide the opportunities and resources for upward mobility that are not available in rural areas. The current challenge is to try and direct the economic power of cities to serve the needs

of youth and ensure that the dividends from economic growth are equitably distributed.

Innovations result from entrepreneurship, and cities have all the essential elements for launching a successful enterprise: a dense network of consumers and labor, a surplus of goods and services, infrastructure, and institutions.

There are significant benefits to promoting entrepreneurship among youth beyond the creation of economic opportunities for the unemployed. From a social perspective, entrepreneurship addresses some of the socio-psychological problems and criminal activity that result from unemployment. Entrepreneurship also re-integrates marginalized and disaffected youth into the economic mainstream of their cities; youth who were previously forced into the margins of society gain a sense of meaning, self-worth, and belonging.

From an economic perspective, youth entrepreneurs are dynamic; they learn and adapt quickly. As a result, they deliver a large number of independent experiments on how to do business. In areas with higher startup rates and entrepreneurial culture, economic resources are used more efficiently and economic growth is higher.

It is therefore essential to foster the creation of small and growing businesses, which create economic value and spur growth. Supporting youth, the fastest-growing and most dynamic population, to become entrepreneurs is the best means of achieving this goal. See Case Study 9 for an example of youth-led entrepreneurship that addresses a pressing urban challenge: collecting revenues.



Construction in Zambia © UN-Habitat

Case Study 9: MatQ, an innovative revenue collection system for Nairobi authorities

The Innovation Marketplace is aimed at harnessing three key dynamics in our world today: the growing number of young urban citizens, information and communications technology (ICT) proliferation, and the devolution process. UN-Habitat, in consultations with local authorities of participating counties, youth groups, and the private sector, identified collection of revenue from the public transport system as one of the most pressing urban challenges facing Kiambu County, Kenya. Various urban challenges were formulated into challenge statements, which were used to inform a two-day innovation “hackathon.” The “hackathon” aimed at getting youth and local government representatives to work together to identify ICT innovations to support local governance.

MatQ, a digital queue management and revenue collection system, was selected as the winning innovation. The innovation aims to improve the transport system for Kiambu County, which is crucial given the millions of residents residing in the county but working in Nairobi. MatQ provides an accountable revenue collection system for the local authority, in contrast to the ineffective analog terminal management and fee collection vulnerable to manipulation by route managers and drivers. The operationalization of the system involves the following: A Matatu (a privately owned public service vehicle) checks in its designated terminal and the route manager, through the system, queues it. Depending on the number

of check-ins, each Matatu is supposed to pay a fee to the route manager (as stipulated in the municipality’s by-laws) and remit the amount collected to the respective Savings and Credit Cooperative Society (SACCO).⁸⁹ The SACCO in turn remits tax to the local authority. Through the app, the Kiambu residents are able to locate their favorite Matatus, book seats, and view their locations in real time.

Lessons learned

Cities need to provide public services more efficiently while at the same time supporting sustainable and long-term economic growth. The latest thinking suggests that the best way to do this is by becoming “smart.” This generally means using new technology (mainly information and communication technologies) and data to improve service delivery and address various economic, social, and environmental challenges.

MatQ illustrates the innovative power of youth and can be defined as a smart mechanism that can be leveraged to improve efficiency of financial flows, strengthen accountability systems, and improve service delivery in municipalities. Such interventions could potentially transform how city inhabitants live, play, and do business. City authorities benefit most when they integrate such initiatives within their existing economic development and public service plans and identify how new technologies can help them achieve their goals.

Need for youth empowerment as an enabler of municipal financing

Evidently, it is imperative for local authorities and other relevant stakeholders to consider the needs of young people with an aim to not only generate revenue and expenditure in their municipalities, but also to empower them as enablers of financing. Young people have raw entrepreneurial talent, but launching and building a successful business that can add economic value requires technical skills, knowledge, networks, and resources that many youth do not have access to. It is therefore essential to create an entrepreneurial ecosystem that promotes a thriving entrepreneurial culture that can drive innovation, production, and employment. There are three essential elements to creating this ecosystem: strengthening educational systems with a focus on entrepreneurship training; developing a supportive and enabling environment that makes it easier to launch a business, particularly via financing businesses owned and operated by youth; and strengthening accountability within systems.

Access to credit and capital alone is far from sufficient to leverage the opportunities of youth-owned businesses. Youth entrepreneurs must develop the skills to run modern, sustainable businesses that can compete and grow in a competitive environment. Formal training in such areas as business plan development, management, financial management, and opportunity identification and capitalization provide the foundation for launching and growing successful enterprises. Education programs also need to focus on transferable and marketable entrepreneurial skills that can be directed towards the creation of new and small businesses that leverage the benefits of the urban economy.

It is also essential to create an enabling environment with rules, policies, and regulations that make it

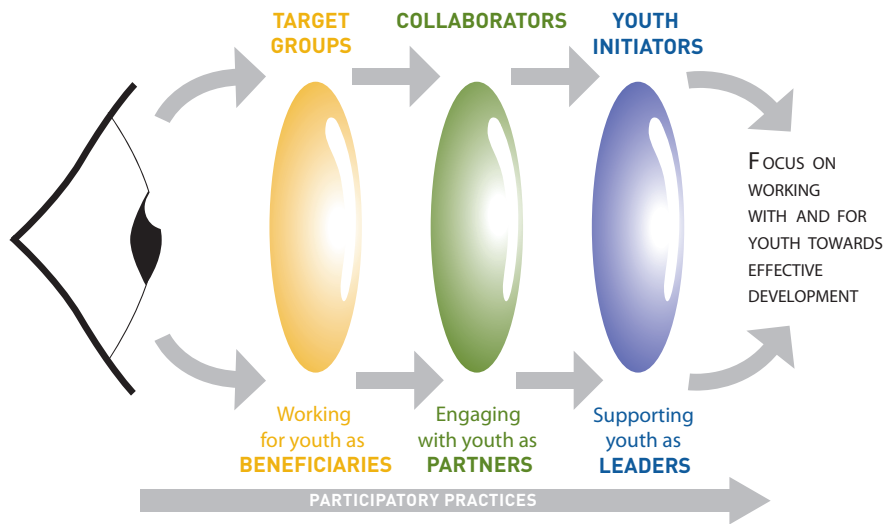
easier for youth to launch businesses. These policies should include implementing legislation to encourage young entrepreneurs to become involved in social and economic development and increasing the ease of doing business through easier business registration and set-up processes. A youth-centric regulatory environment that is conducive to innovation and experimentation with low discovery costs is essential.

In addition, youth entrepreneurs lack the collateral to obtain loans and are usually unable to obtain anything more than microfinance loans, which may not be sufficient to meet the needs of a new and growing business. The lack of long-term business histories, which are often required by risk-averse creditors seeking to make loans or investments, acts as a further significant barrier keeping youth from launching businesses. Access to financing for youth entrepreneurs needs to be expanded, and government-supported capital is needed to supplement private sources of funding. Investing capital in new and innovative youth-owned businesses could also have a multiplier effect on development.

Transparent and accountable municipalities through youth mainstreaming

Governance determines how efficiently costs are shared throughout the metropolitan area, how service delivery is coordinated across local government boundaries, how effectively local residents and businesses can access governments and influence their decisions, how accountable local governments are to their citizens, and how responsive they are to their demands. It is therefore evident that for a city to succeed economically and socially, youth should be mainstreamed. In other words, owing to their multidisciplinary and trans-sectoral nature, youth should be considered and integrated into all programmes and initiatives (see Figure C).

Figure C: Youth mainstreaming



Source: Adapted from World Bank Development Report 2007

This means building social accountability mechanisms at city levels where citizens and civil society, particularly the poorest and most marginalized, play a decisive and formal role in the monitoring and accountability system. This relates well with the youth in cities. In doing so, leaders will be giving a voice to those traditionally excluded from development processes whilst strengthening government's own monitoring efforts, especially when addressing gaps in the implementation of policy affecting youth. To achieve institutionalized youth mainstreaming, city leaders should consider practices that are youth specific and that address and are responsive to specific youth needs (see Box 2) in achieving transparent and accountable mechanisms.



Youth entrepreneurs lack the collateral to obtain loans and are usually unable to obtain anything more than microfinance loans, which may not be sufficient to meet the needs of a new and growing business.

Box 2: Youth-specific practices for achieving institutionalized youth mainstreaming

- Enact policies and practices that support youths' ability to realize their duties, rights, and access to services as citizens.
- Ensure effective legal and judicial systems address youth status and protections under the law.
- Ensure public expenditures reflect governments' explicit youth goals and target high-quality services for all citizens.
- Design structures and implement processes that ensure the effective participation of youth in governance, and that ensure political decision-making processes include youth in critical numbers in key institutions (e.g., parliaments and local governments).
- Ensure delivery of services in key sectors enhances participatory and transparent decision-making, institutional accountability, and responsiveness to youth-specific needs.
- Set up youth-specific monitoring and evaluation systems.

Conclusion

The implementation of sound and inclusive municipal finance is crucial for the achievement of the 2030 Agenda in cities and the NUA. Transparent, effective municipal finance will be the source for financing for SDG 11 and the NUA.⁹⁰ In the same vein, it is paramount to recognize that cities' often-marginalized groups are key drivers of the urban economy, and are essential for effective finance and implementation of sustainable urban growth.

Urbanization offers the potential to improve people's lives but, with inadequate urban management, based on inaccurate or biased perceptions, opportunity can become mischance.⁹¹ In order to fulfil the potential of urbanization, it is paramount to pursue socially inclusive strategies that reduce alienation and exclusion and pave the way for empowerment and engagement of all social groups, particularly the most marginalized. These efforts will be the cornerstone of

the 2030 Agenda as it promotes the right and ability of every individual to influence and/or participate in the decisions that affect their lives.⁹²

Human rights are inherent to all human beings and are designed to protect the human values of freedom, equality, and dignity. City leaders can address capacity gaps and ensure that their decision-making contributes to sustainable and inclusive urbanization processes by applying the Human Rights-Based Approach (HRBA).

A participatory approach to the distribution of public spending has benefits such as increased relevance of financial instruments, increased sense of public ownership, and increased likelihood that communities will protect and maintain products built or installed. Municipal finance should be transparent, participatory, and human rights-based. Financing

strategies, fiscal policies, tax systems, subsidies, development plans, and budgets should benefit the poorest and most marginalized, and should be the product of transparent and participatory processes. They should also be supported by laws that protect human rights, including in the economic sphere, and by public institutions that are non-discriminatory, inclusive, participatory, and accountable for financial policies and strategies.

It is also paramount to recognize that women's livelihoods are key drivers of the urban economy, and are essential to the implementation of sustainable urban growth. Women's participation in the labour force is proportionally higher in urban centers, as compared with rural areas. Therefore, developing a productive and inclusive urban economy supports national growth and financing mechanisms.

As a means to promote transparency and people's ownership of the development process, GRB initia-

tives provide a way of assessing the impact of government revenue and expenditure on women and men, girls and boys. These initiatives can help to improve economic governance and financial management, and provide feedback and data to government on whether it is meeting the needs of different groups. As a result, GRB initiatives provide information that allows for better decision-making on how policies and priorities should be revised in order to achieve SDG 1, 5, 11, and 16⁹³ and fulfil the commitments of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 1979)⁹⁴ and the Beijing Declaration and Platform for Action (1995).⁹⁵

Moreover, it is evident that youth are a valuable asset in achieving resilient and sustainable cities. Investing in youth will help finance the ever-increasing demand for public services, new public infrastructure, and its maintenance. Cities' economic and social growth is buttressed by young people's ability to provide sustainable solutions to existing urban challenges. In this regard, empowering young people to hold governments accountable is one of the most important means of implementation of an agenda that "leaves no one behind."

If the above recommendations are taken into consideration by city leaders, then municipal governments will not only invest in revenue-generating systems and solutions, but also improve the living conditions of all city inhabitants through the three arms of the NUA: urban regulations, urban planning, and urban finance.

It is crucial for city leaders to craft policies that are informed by a commitment to human rights, gender equality, and youth empowerment. Doing so will help fulfil the 2030 Agenda and ensure the inclusion of all urban residents as contributors and beneficiaries of urban life and the urban economy.



Suburbs around Quito, Ecuador © wikipedia

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Brick making by women in Malawi © UN-Habitat

15

Local Governments and Local Economic Development, Productive Capacity, and Spatial Analysis

Introduction

Economies of agglomeration and economies of scale are the two major benefits of urbanization, but despite a global trend towards urbanization, high population density—a key condition for realizing economies of agglomeration—is far from ubiquitous. Even the cities that do experience a rapid rise in density could suffer from negative externalities such as traffic congestion, environmental degradation, crime, violence, and slum formation. Likewise, unsustainable levels of density constrain cities from reaping the benefits of agglomeration and make provision of services inefficient and expensive. For cities with high population density to remain competitive and relevant, there is a growing need to devise plans to boost efficiency and supplement existing infrastructure, while cities with low populations must promote sustainable

expansion. This calls for policy interventions to help ensure that cities grow in a spatially and economically efficient and sustainable manner.

Dense, compact, and connected cities are hubs of ideas, knowledge, and investments. By facilitating interactions among people, they stimulate job growth, wealth, and innovation, which in turn enhance the quality of life of their residents.¹ Increasingly, cities are asserting themselves as major nodes for global supply chains, and competitiveness of a city is often defined by its level of connectivity. Some cities are gradually upending the conventional economic hierarchy by exerting more influence in the global economy than many countries. Cities can increase their influence by creating a business climate more conducive to investment and growth, and by implementing various development and planning tools to ensure this growth is sustainable and inclusive. Unfortunately, many fall short of fully integrating relevant economic dimensions into the urban planning process.

Previous chapters have focused on ways to diversify financing in order for local governments to provide better infrastructure and services. This chapter introduces an innovative local economic development (LED) methodology to help city leaders spur economic growth and generate jobs. Productive and competitive cities have demonstrated higher propensity to retain existing enterprises and talents while attracting new investors and skilled labour. A thriving local economy expands and diversifies the municipal tax base, which fosters sustainable local financial management. To this end, we propose an integrative approach of combining productivity analysis with spatial analysis to maximize the benefits of agglomeration while pursuing spatial sustainability.



For cities with high population density to remain competitive and relevant, there is a growing need to devise plans to boost efficiency and supplement existing infrastructure, while cities with low populations must promote sustainable expansion.

What is local economic development?

Local economic development (LED) is a participatory process in which various local stakeholders combine their efforts towards building a vibrant, resilient, inclusive, and sustainable economy by creating jobs and improving quality of life for all. LED is not a silver bullet or about “quick fixes”; rather, it is a strategic planning exercise that requires a long process of developing a deep understanding of a city’s economic assets and potential, identifying strategic growth industry sectors and their champions, and designing strategies and efficiently allocating resources to improve the competitiveness of the targeted sectors. The scope of the approach is broad and inclusive in nature; it engages both public and private, and formal and informal sectors of the economy. It aims at increasing the rate of economic growth and enlarging the size of the economy, while leveling the playing field for investment and generating productive employment opportunities for all.²

LED strategy complements a national government's urbanization strategy. While national governments often use a country's urbanization strategy to provide coordinated guidance and common vision for all actors, local governments have the best assessment of their own economic assets, and their potential and limitations. By targeting industries that are conducive to growth and job creation in one's specific urban configuration, this bottom-up approach promotes sustainable economic diversification and more efficient systems of cities.

Sustainable development of cities could be a daunting task for many developing countries, especially in South Asia and Africa, regions where populations are projected to double within the next 20 years. In an ideal world, a city would develop a wide spectrum of foundational infrastructure to increase productivity and competitiveness. In reality, however, governments struggle with limited resources and are in need of strategies to unlock growth potential efficiently. This is where the LED approach brings

strategic, targeted, and resource-efficient planning processes that complement the broader national economic development strategy.

The LED methodology consists of two major components: 1) productivity analysis of value chains and supply chains, and 2) spatial analysis.

Productivity analysis

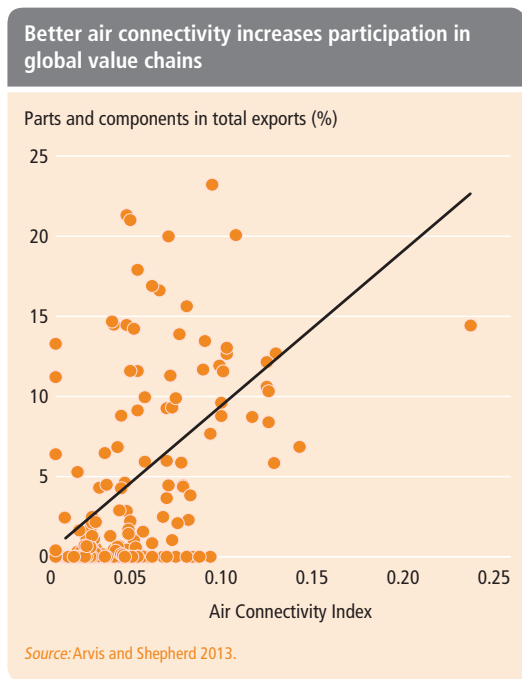
Cities are the primary platform for production, innovation, and trade, while industries are the engines of economic development and job creation. Cities promote mobilization of resources such as labour and capital; the resulting industrialization has transformed the landscape of many cities. Many cities have demonstrated how economic development policies backed by sector-specific strategies could deliver economic growth (examples include the software industry in Bangalore and Silicon Valley, trade and tourism in Dubai, or the shipping industry in Rotterdam). Productivity analysis helps identify an industry sector with potential for growth and creates a business-enabling climate to support the targeted industry sector to become more productive and competitive. By doing so, a city will be able to both expand and consolidate forward and backward linkages, creating more jobs across the sector value chain.

Well-connected cities are also vital nodes for global markets (see Figure A). It is now conventional wisdom that openness to trade has a strong correlation with growth and opportunities. Although trade is considered imperative for economic development, many developing countries are stymied by various endogenous factors. In this light, the productivity analysis approach also aims at making inroads into the global value chain by making the targeted sector more competitive and efficient.



Market in Sri Lanka © United Nations

Figure A: Air connectivity and participation in the global value chain



The graph demonstrates a strong correlation between air connectivity and participation in the global value chain. As connectivity increases, so does the share of exports composed of parts and components. This finding provides a basis for countries and cities to improve their logistics and connectivity to global networks while mitigating inefficiencies.

Source: World Bank, *Connecting to Compete: Trade Logistics in the Global Economy* (Washington, World Bank, 2014). Available from <http://www.worldbank.org/content/dam/Worldbank/document/Trade/LPI2014.pdf>.

Value chain analysis and supply chain analysis³

Productivity analysis takes into account both value chain analysis (VCA) and supply chain analysis (SCA). In general, a value chain/supply chain is considered more competitive if it can deliver high-quality goods and services at the lowest cost and in the least amount of time.

VCA is an accounting tool that deconstructs how value is created and added as a product flows from raw material to final product (see Case Study 1 for

a specific example). It is one of the most powerful tools in today's globalized economy for creating an enabling business environment. By dissecting and analyzing how much cost and value is added at each segment of the production process—from the raw materials stage until a product reaches end consumers—it allows us to measure the efficiency of each of these stages. VCA also identifies distortions caused by policies, regulations, and market and human resources that hinder industries from becoming more competitive.⁴

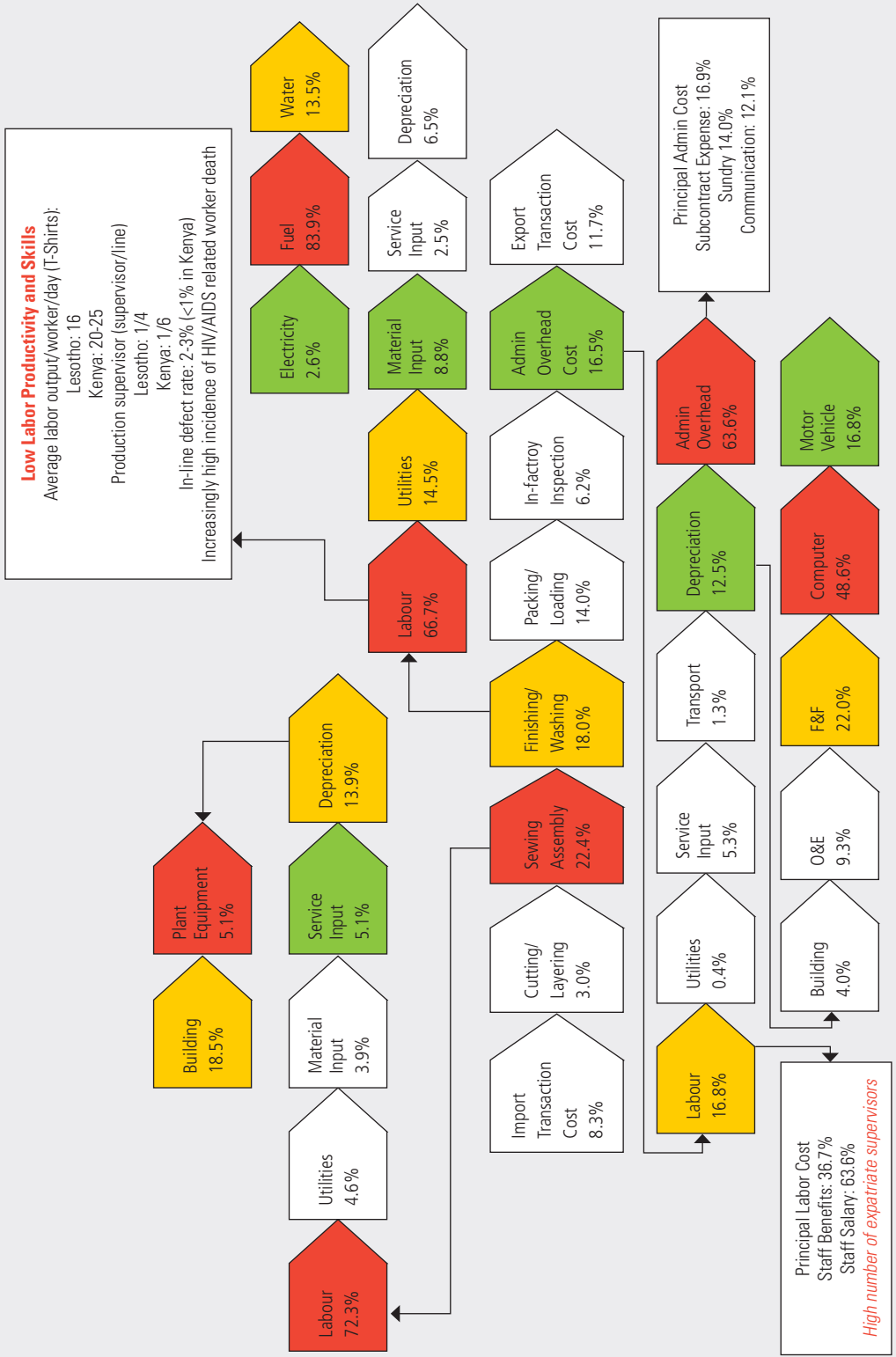
The process of VCA can be simplified into three stages:

- 1) Map out the industry value chain ranging from raw material to end users in qualitative and quantitative terms.
- 2) Set benchmarks against international competition and best practices in order to understand which specific segment of the value chain or policy is presenting challenges vis-à-vis the competition.
- 3) Combine this knowledge with the understanding of the institutional and regulatory factors that underlie performance measures to enable both the public and private sector to design strategies to mitigate hindrances while enhancing competitiveness.⁵

Some identified constraints may be industry-specific, while others may be cross-cutting across all industries. A proper VCA's scope goes beyond industry to integrate aspects of the policy and regulatory environment that bind enterprises' operations (as mentioned above). Hence, the analysis has significant implications for both the public and private sectors in designing strategies for growth and competitiveness. Thus, this calls for a participatory and integrated approach engaging a wide range of stakeholders.

Case Study 1: Productivity and competitiveness in Lesotho versus Kenya, sector level

Tool to Measure Productivity and Competitiveness Between Countries



The above figure provides an example of a value chain analysis map for the production of t-shirts in Lesotho for the U.S. market. As the figure indicates, the production of a t-shirt takes place in eight value-adding stages, namely import transaction cost (importing cotton material), cutting and layering, sewing and assembly, finishing and washing, packing and loading, in-factory inspection, administrative overhead, and export transaction cost (rail cost to Durban port, and shipping cost to the United States). The VCA map shows that sewing and assembly (highlighted in red) is the biggest cost driver for the production of a t-shirt, followed by finishing and washing (yellow highlight), and administrative overhead costs (green highlight). When each of these

key cost drivers are further disaggregated, the analysis draws attention to the weak labour skills associated with t-shirt production, which are undermining labour productivity (workers in Lesotho produce, on average, 16 t-shirts/person/day, while workers in Kenya producing the same t-shirt average about 20–25 t-shirts/person/day). This suggests that targeted training in skills development specifically for sewing and assembly, and finishing and washing would improve the competitiveness of the garment sector in Lesotho. Such analysis helps focus the attention of policymakers and private sector operators on specific interventions to help improve sector competitiveness.⁵

Source: *Global Development Solutions, Measuring the Cost of Trade Logistics on Agribusiness (Reston, Va., Global Development Solutions, 2013).*



Cities are the primary platform for production, innovation, and trade, while industries are the engines of economic development and job creation. Cities promote mobilization of resources such as labour and capital; the resulting industrialization has transformed the landscape of many cities.

While VCA helps us to understand the cost efficiency at each value-adding segment along a production system, supply chain analysis assesses the efficiency of the flow of goods and services from producers of raw inputs to end consumers both within and out of the country. A supply chain is an institutional arrangement that links a set of activities in which firms engage in a specific industry as they move from producers, packagers, marketers, and to consumers. It is a conduit through which products, services, information, and capital move from one segment of the chain to another until they reach the final consumer.⁷ For example, a supply chain mapping exercise captures the flow, cost, time, and efficiency of an agricultural crop from farm gate to the final consumer. This exercise provides insights into specific trade logistics constraints hindering competitiveness, and helps identify both policy- and market-based interventions to improve efficiency and competitiveness. Supply chain efficiency is bound by both physical and trade logistics infrastructure, which are often defined by urban planning.

Many consider improving functions of supply chains and logistics as central to global value chain participation and economic growth. Based

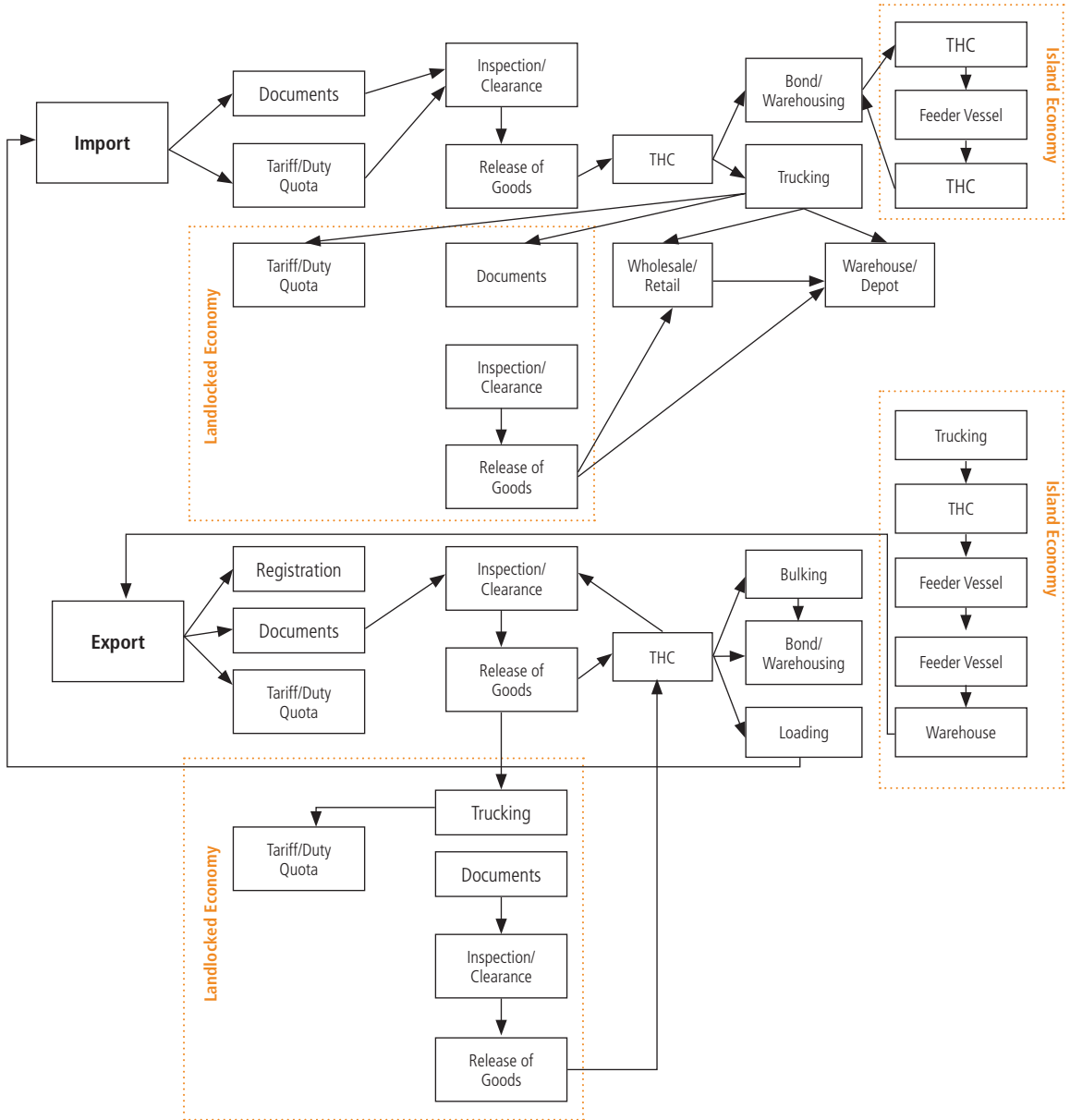
on the findings from the value chain analysis, one can identify particular value-adding segments or a sector that could be plugged into the global value chain. The objective of this exercise is to improve logistical performance on the premise that strong correlations exist between connectivity and global value chain participation.⁸ However, supply chains are often fragmented, especially in developing countries. Fragmentation results in, among other things, waste, income loss, increased product price, and lack of product availability in the market. For example, one can witness a domestic market importing agricultural products despite having farmers available domestically.

The proposed methodological framework highlights key factors that affect cost, time, and quality of goods and services required for operating a competitive sector. The entire flow from raw material to the arrival of final products and services into the hands of both domestic and foreign consumers needs to be considered in conducting the analysis. The process entails finding out the economic cost of each step along the flow. Figure B, for example, maps the logistical flow of imports/exports and the key factors involved in different geographies.



A supply chain is an institutional arrangement that links a set of activities in which firms engage in a specific industry as they move from producers, packagers, marketers, and to consumers.

Figure B: Import–export trade logistics framework



Source: Global Development Solutions, *Measuring the Cost of Trade Logistics on Agribusiness* (Reston, Va., Global Development Solutions, 2013).

The steps taken in the analysis parallel those of value chain analysis. Once the economic costs of key factors in the product flow are collected, we compare the efficiency of the targeted supply chain with competitors and global standards. Prior to designing strategies to overcome supply chain bottlenecks, developing a thorough understanding of institutional and infrastructural frameworks is crucial.

Likewise, developing a thorough understanding of how well a value/supply chain works demands primary and up-to-date information. Secondary desk research could suffice for understanding global and regional trends and demand. However, collecting data and information on domestic markets could be a great challenge, especially in developing countries due to limited data availability. It is both cost- and time-efficient to first look for already-existing relevant reports. In case such reports are not available or require updating, it is possible to build an estimate from scratch by conducting chain-wide surveys and interviews with stakeholders from relevant public and private institutions. In doing so, there are myriad factors to be taken into account.

Variables to consider for value/supply chain competitiveness

Value/supply chain analysis requires analyzing several variables that buttress a sector and, therefore, determine its competitiveness. They are broadly categorized into hard and soft infrastructure. The former includes:

- *Transport infrastructure:* There are three main modes of transport: land, air, and sea. A well-developed and connected network of roads, air links, and maritime shipping combined with an efficient trucking and cargo system will facilitate the movement of goods and services, while any poorly designed mode of transport will result in

slow movement and higher shipping costs. The quality of transport infrastructure heavily influences the true economic distance⁹ along the value chain.¹⁰

- *Logistics:* This refers to warehouses, refrigeration and distribution facilities, and cold-chain facilities. The importance of such facilities is greater for value chains that move time-sensitive and perishable goods, such as in agribusiness.

The following variables that fall under soft infrastructure are as critical to sector competitiveness as those of hard infrastructure:

- *Human resources:* This refers to labour skills (including both life skills and job- and task-specific skills) and wages, which determine labour productivity. It also includes formal educational institutions as well as vocational training institutions, which are responsible for disseminating technology, technical and managerial skills, and knowledge. Without strong support of these institutions, a sector will not be able to compete, even with advanced transport infrastructure.
- *Financial institutions:* While physical infrastructure is crucial for moving goods and services from producers to consumers, the financial sector plays a pivotal role in the efficient allocation of resources and in facilitating payments. The financial services industry consists of five broad categories of services: banks, insurance, securities, asset management, and financial information. The importance of financial services becomes amplified if an industry engages in international trade; these services are also important for the growth of enterprises.¹¹
- *Customs and freight forwarding:* Moving goods from producers to consumers along the supply chain also depends on the quality of transport and associated services, such as customs and freight forwarding.¹²

- *Legal/regulatory framework:* Governmental institutions provide services or set regulations that impact the competitiveness of trade logistics. Also, anticompetitive behavior and restrictive regulations towards transport services and infrastructure could increase transport costs and ultimately may undermine trade and market share. The private sector could play a major role in infrastructure investments as well as services, provided it gets the necessary credit for investments. Access to affordable credit by the private sector is particularly low in developing economies due to lack of strong institutions, poor enforcement of contracts, and weak rule of law. A weak regulatory framework makes investors apprehensive to invest in places where investments are most needed.¹³
- *Information and computer technology (ICT):* ICT is a cross-cutting issue that facilitates information and knowledge sharing along the value chain. For example, the development of computerized customs systems significantly lowers human error, corruption, and the length of clearance processes. Also, improved communication along the supply chain lowers inconsistency and unexpectedness while improving inventory management.¹⁴
- *Business climate:* In order for any sector to expand and grow, an economy needs investments and startups that could transform and support the development of existing and new products and services. In this regard, it is essential to have a business-enabling environment that promotes and rewards entrepreneurship and risk-taking.
- *Safety and security:* Security is a key prerequisite for economic growth. When there is an actual or perceived risk in security arising from military forces, terrorism, or religious fundamentalists, there is less likelihood for any future investment commitment. As the cost of doing business in an

unstable environment is high, very little, if any, investment will flow in.

In addition to the aforementioned endogenous variables, there are other factors, such as geography and climate change, that fall beyond the jurisdiction of city or national governments and that also affect supply chain and trade efficiency. Although the effects must not be overlooked, improving on the above endogenous variables will bring significant improvement to a city's supply chain and logistics performance. An efficient supply chain and logistics within a country is the gateway for participation in a global value chain.

Action-oriented participatory process

As the saying "a chain is as strong as its weakest link" suggests, components of the same value/supply chain are highly interdependent. The efficiency of one segment heavily influences the competitiveness of another. For example, if a leather tannery produces leather sheets at high cost, leather shoe manufacturers are likely to increase the market price for their finished leather shoes. Overall coordination that generates trust and predictability along the value/supply chain also enhances the efficiency of a sector. This gives supply chain-wide incentives to collaborate to bring about a more integrated value chain approach. Thus, from the outset, it is important to engage the wide range of members of the value chain and supply chain from both the private and public sectors. This will allow the sectors to develop a common vision and thus bring about an integrated, sustainable, and competitive value chain and supply chain.

Analyzing a sector through a value chain and supply chain lens allows us to identify and plug the gap along the chain. Combined with the findings from global and regional trends and demand, local sectors

could explore opportunities for value addition or expand their market share. In today's globalized economic landscape, specialization of a competitive sector or a segment of a sector could allow a city to plug itself into a global value chain while productively connecting its people to the world.

Spatial economic analysis

The principal objective of spatial analysis is to help cities design an urban layout that is compact, integrated, and connected. Urban reconfiguration brought about by ongoing urbanization has put local governments under pressure to provision essential services. Current research indicates that six out of seven cities in developing countries are undergoing a decline in population density, which incurs significant costs for governments.¹⁵ There is a growing need for better spatial allocation of services and infrastructure to enable cities to become livable and sustainable economic powerhouses.

The second component of our integrative LED approach examines the spatial and cartographic perspectives of a city and its key industrial sector. This not only allows us to develop a spatial understanding of a city, but more importantly, aids in improving cohesion among various infrastructure projects that connect and buttress industries.

Conducting spatial analysis

If productivity analysis is an exercise in uncovering the linkages among, and determining the efficiency of, stakeholders in a value/supply chain, spatial analysis is a visualization of the findings from the productivity analysis. This can be simplified into four stages:

1) Map the fundamental elements of the city, such

as roads, ports, and warehouses.

- 2) View the findings of productivity analysis through a spatial perspective: Map out the sector players as well as the flow of products, services, and labour among stakeholders of the targeted sector.¹⁶
- 3) Identify production hubs/clusters where there are concentrated business activities and enterprises.
- 4) Develop both immediate and long-term strategies to further integrate the supply chain and optimize the movement of production factors by combining the previous three steps with projected urban expansion. For example, by identifying key production hubs to support, subnational governments can plan city extension around the region to accommodate population expansion, facilitate the supply of skilled labour, improve infrastructure, and provide public transportation.

Key factors to consider in spatial analysis

The following are three of the key factors to consider while conducting spatial analysis to optimize its use:

- **Mobility:** The goal is to maximize mobility of production factors—people and goods—while minimizing economic distance. The intricate linkages and the flow of input and output among value/supply chain members will be identified during productivity analysis. Mapping the flow of products and services by using geospatial tools enables us to understand distance traveled by inputs. This exercise begets numerous potential activities in respect to improving mobility. For example, it allows sector stakeholders to detect whether there are any economic opportunities being lost by proximate suppliers. By analyzing the trend, stakeholders along a value chain can efficiently increase business transactions among

local companies. As a result, a sector will witness growth in production while making the flow of goods more economically efficient.

The same concept applies to labour. Labour is one of the key factors of production, and the ease of mobility affects productivity of a city.¹⁷ Increased mobility of labour brings economy-wide productivity gain by enabling a higher degree of skills matching. Furthermore, on the premise of increased mobility boosting accessibility, less time spent commuting allows people to pursue other productive activities. In developing countries where public transportation could be a major constraint and having multiple jobs is common, increased labour mobility and accessibility could yield significant economic benefit for individuals and the economy.

Indicators such as accessibility to arterial roads, intersection density, land use mix, and the presence of dedicated and safe pedestrian spaces can contribute to measuring the level of labour and product mobility in a given urban layout.

UN-Habitat views sustainable mobility as a means of realizing accessibility rather than an end in itself. The notion of accessibility surpasses simple physical distance; it encompasses access to opportunities and empowers people to fully exercise their human rights.¹⁸

- **Connectivity:** Connectivity of a city is measured by how central a city is to global markets and transportation and logistics networks. Connectivity is increasingly considered as one of the more powerful proxies for gauging a city's development potential. Being better and more efficiently connected to or having access to big markets lowers economic costs. Moreover, the more connected a city is, the higher is the propensity to access new ideas, technologies, innovations, etc. While connectivity is often defined by geographic location, it does not

necessarily determine competitiveness of a sector in a given location. Infrastructure also is a key variable, and spatial analysis allows us to assess the level of connectivity as well as identify areas for infrastructure investments and service provisions. There are indices, such as UNCTAD's Liner Shipping Connectivity Index, that measure countries' connectivity.¹⁹

- **Inclusiveness:** One objective of spatial analysis is to promote inclusive economic growth. It has been demonstrated over the years that urbanization is a powerful tool for economic development. Without proper planning and efforts, however, such positive externalities of urbanization will not be shared equally and may fail to reach vulnerable populations. Application of spatial analysis ensures that the new configurations of expanding urban areas are well-integrated into the existing urban network and are not alienated from the urban economy and basic amenities.



Rush hour in Port Moresby, Papua New Guinea © UN-Habitat

Spatial analysis for future projections

Spatial analysis is not only vital for assessing the status quo, but also for making projections and future plans.²⁰ A study of 120 sample cities shows that, on average, the growth of built-up urban areas has been outpacing that of population, leading to lower density in cities worldwide between 1990 and 2000.²¹ The trend is projected to continue. In addition to urban population doubling between 2010 and 2050 in developing countries, urban land will explode; land consumption rates per capita will increase due to lower transportation costs and economic growth. A mere one per cent increase in land consumption per capita per year will result in a tripling of urban land in developing countries. The effect will be even more dramatic for sub-Saharan Africa, where the same one per cent increase will result in a six-fold rise in urban land.²² Besides, poli-

cymakers must anticipate additional land and jobs being required to maintain available and affordable housing, to ensure quality of life is high, and to keep the unemployment rate low.

Overlooking this continued urban expansion and the need for evidence-based planning will have negative effects not only on urban mobility and connectivity, but also on urban productivity. Numerous cities are already experiencing the adverse effects of limited urban policy actions. Table 1 shows lower-than-average urban layout performance indicators for many African cities. Subnational governments will struggle to provide basic infrastructure and services in the face of ongoing low-density urban land expansion. Unchecked expansion in developing-country cities will aggravate already-poor connectivity and mobility.

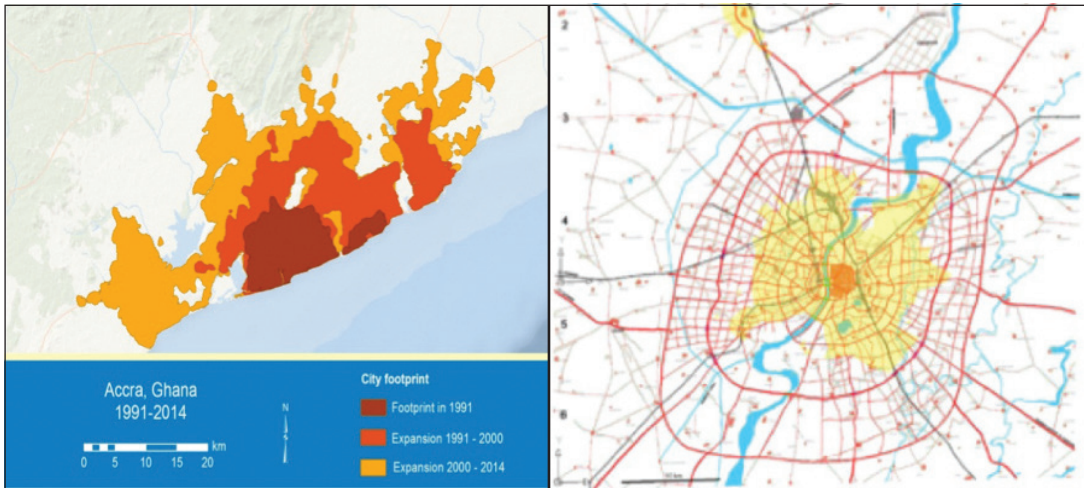
Table 1: Urban layout in Africa and Riyadh: Street networks

City / Region	Share of Built-up Area Occupied by Roads & Boulevards			Average Block Size (Hectares)			4-Way Intersection Density (Number per Hectare)			Walkability Ratio			Average Plot Size in Informal Land Subdivisions			Average Plot Size in Formal Land Subdivisions		
		±	%		±			±			±			±			±	
Accra	17	±	3%	3.7	±	1.0	0.12	±	0.08	1.7	±	0.2	949	±	287	905	±	
Addis Ababa	25	±	4%	3.9	±	1.7	0.33	±	0.10	1.6	±	0.1	239	±	365		±	
Arusha	14	±	3%	4.2	±	0.9	0.16	±	0.06	1.7	±	0.2	289	±			±	
Ibadan	13	±	1%	5.1	±	3.4	0.13	±	0.07	1.6	±	0.1		±			±	
Johannesburg	18	±	3%	7.5	±	3.0	0.16	±	0.08	2.3	±	0.5	191	±	96	291	±	103
Lagos	14	±	2%	4.4	±	1.2	0.01	±	0.02	1.8	±	0.3		±			±	
Luanda	15	±	2%	2.3	±	0.7	0.40	±	0.16	1.7	±	0.2	403	±	192		±	
Cairo	26	±	4%	5.3	±	1.8	0.28	±	0.34	1.6	±	0.2	672	±	187	418	±	1,953
Riyadh	34	±	4%	6.0	±	2.5	0.04	±	0.05	1.7	±	0.2		±		496	±	193
Average World	20			6.3			0.21			1.7			465			643		
Count	53			53			53			53			18			26		

Source: NYU, Lincoln Institute of Land Policy, and UN-Habitat, *Atlas of Urban Expansion* (n.p., forthcoming 2016).

In tandem with conducting urban expansion projections, cities may include arterial road grid plans in the urban development. The exercise maps out major transport infrastructure such as urban and intra-urban roads and public transport (see Figure C). The objective is to provide equitable access and connectivity among the entire projected area of expansion.²³ Well-planned transport infrastructure could significantly increase connectivity of a city and the movement of products and services along the supply chain.

Figure C: Urban land expansion in Accra, Ghana, and the arterial road grid for Ahmedabad, India



Source: NYU, Lincoln Institute of Land Policy, and UN-Habitat, *Atlas of Urban Expansion* (n.p., forthcoming 2016).



More often than not, government economic and urban planning functions occur in silos. Economic development projects tend to ignore the spatial dimension, while the economic perspective is consistently left out in many urban planning processes.

Conclusion: An integrative approach

More often than not, government economic and urban planning functions occur in silos. Economic development projects tend to ignore the spatial dimension, while the economic perspective is consistently left out in many urban planning processes. This integrative LED approach brings together the two critical dimensions of urban development. On the one hand, it conducts more of a conventional economic competitiveness assessment using value chains and supply chains to identify key players in a targeted sector and factors constraining it. The analysis then puts forward regulatory and sector policy recommendations to address the identified bottlenecks. On the other hand, the approach applies the spatial element of urban planning to visualize the functional aspect of the value/supply chain and to explore ways to harness the expansion of urban population and urban land consumption to be of the optimum use to industries and the economy.

By integrating economic and design aspects of urban development, the proposed LED approach surveys urban competitiveness and sustainability in a comprehensive manner that very few existing development tools can match. It provides a participatory framework for the public and private sectors to collaborate from the stage of problem identification to solution implementation. More competi-

tive and integrated sectors will benefit the private sector and city inhabitants by creating value-adding jobs and fostering a vibrant local economy. It also benefits local governments by providing a sound foundation for evidence-based policymaking, enhancing local governance, and by expanding opportunities for revenue enhancement.

The discussed LED tool proposes a sector-specific approach to enhancing local economic competitiveness and spatial sustainability. As opposed to spreading subnational governments' limited budget thinly across multiple industries, a sector-specific approach delivers greater impact in a more efficient manner. However, the question around sector identification is critical. Cities have to identify an emerging sector prior to applying the proposed LED toolkit. Although the identification process is a critical prerequisite for successful LED implementation, it may not be a trivial task for subnational governments, requiring technical analysis and a joint effort from the private sector. This can be done by combining trade data, sector value-added statistics, and labour intensity data; however, this information is not always available. Describing and developing this approach is beyond the scope of this chapter, but is part of an upcoming study by UN-Habitat.

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Endnotes

- 1 Edward L. Glaeser, *Triumph of Cities* (New York, Penguin Press, 2011).
- 2 UN-Habitat, *Promoting Local Economic Development Through Strategic Planning* (Nairobi, UN-Habitat, 2005).
- 3 VCA is often used interchangeably with supply chain analysis. The minor difference resides in the fact that supply chain analysis focuses on the movement of products, materials, services, and information, from one point of value addition to the next, while VCA focuses specifically on accounting for each stage of value addition for a good or service.
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20 There are a number of ongoing studies and platforms for urban spatial data and analysis that can be accessed by the public. City leaders are encouraged to explore platforms such as Lincoln Institute's Atlas of Urban Expansion and World Bank's Platform for Urban Management and Analysis (PUMA) to understand global urbanization trends and to compare urbanization across countries and cities.

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