Climate Change Sensitive Cities

Edited by
Gian Carlo Delgado Ramos

Climate Change-Sensitive Cities:

Building capacities for urban resilience, sustainability, and equity.

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CLIMATE CHANGE-SENSITIVE CITIES:

BUILDING CAPACITIES FOR URBAN RESILIENCE, SUSTAINABILITY, AND EQUITY.

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GIAN CARLO DELGADO RAMOS

NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO
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Chapter 8

Green financing for cities: current options and future challenges

Antonina Ivanova

Introduction

The world in 2050 will be home to more than 9 billion people. Three quarters of the population will live in cities, and will need housing, education and employment. Water and energy will be very important to satisfy their basic needs. Other essential services for city life are transportation, communications and waste processing. The rate of urbanization in developing countries is expected to reach 50% in the next decade (Z/Yen Group Ltd and WWF, 2015).

This chapter explores funding sources that could be implemented with national support, local funding schemes, or private financial institutions. We also present the main options for financing the development of cities, analyzing the possibilities for their improvement. It is important to mention that not all existing problems can be solved through financial engineering, as there are many regulatory barriers and regional specificities that must be taken into account.

Cities and their problems: objectives and challenges

According to current estimates, the world population will grow from approximately USD$ 7 billion in 2012 to more than USD$ 9 billion by 2050, and virtually all the increase will be absorbed by urban areas in developing countries. With 70% of the population living in urban areas by 2050, it is also

no surprise that, while cities will be centers of wealth and relative prosperity, the number of urban poor may well be higher than that of the poor rural population (EIB, 2013-A).

The number of megacities (with populations of more than 10 million people) is expected to increase from 19 today to 27 by 2025, when 10% of the world's urban population will reside in these cities. Of the projected 27 megacities, 21 will be in developing countries. By 2025, there will be 48 cities with populations of between 5 and 10 million, and three quarters of these will be in developing countries (City of London, 2014). Metropolitan areas generate more than a quarter of national GDP in industrialized countries (Ibid.). The same is true in developing countries, for example, 27% of GDP in Istanbul, and 52% in Buenos Aires (WB, 2013).

At the same time, there are significant costs to metropolitan growth, especially if poorly managed. Threat to life by air pollution in Beijing and Delhi, traffic congestion in Bangkok and Sao Paulo, the proliferation of urban slums, corruption and crime in many cities in developing countries attest to the challenges of metropolitan development (Bahl and Linn, 2013). The benefits and costs of metropolitan growth are not limited to the big cities themselves. The positive effects include the growth of industries in the metropolitan area and the generation of fiscal revenues that are redistributed to local governments in the rest of the country (Smoke 2013; WB, 2013).

Key drivers of strong and sustainable growth of metropolitan income and employment are: (1) an economic base that is competitive in national and global markets; (2) transport and strong ICT links within cities and with the rest of the world; (3) concentration of human capital skills; and (4) the quality of governance that supports metropolitan growth and takes advantage of generated opportunities (Agster, 2015).

The main objective for urban planners and managers is to create a

competitive city that attracts modern investment and skilled workers. Particular goals are the creation of a smart, ecological, safe and fun city (ASU, 2014; EC, 2013). Intelligent means access to modern information and media as well as transportation technology that connects business, government and city dwellers with each other and with the rest of the world. Green refers to an efficient and sustainable use of energy, water and air. Safe means protection against crime and natural disasters, including the potential effects of climate change (Gouldson, 2015). Finally, being fun refers to the facilities of culture, cultural heritage, sport, and green spaces (EIB, 2013b). The five objectives interact with each other, so achieving one supports the success of others.

In pursuit of these five objectives, urban planners and managers have five main sets of tools at their disposal: public service provision, land use planning, business regulation, connectivity and financing.

As in the case of the objectives, there is a close interrelation between the instruments: effective public service delivery creates the basis for better connectivity and has to be related to land use planning, while business regulation can support or impede the efficient delivery of services, implementation of land use and effective connectivity.

Funding is essential for the effective delivery of public services and metropolitan regulation, and vice versa. The increasing demands of spending that the metropolises exert on the tax systems of their respective countries become an especially important question. Pressure on budgets to support services and infrastructure in cities will increase in the coming decades, although the severity of the problem will vary from city to city.

The demand for services will continue generating high costs, whose management will be problematic, especially in relation to poor neighborhoods. Factors that will drive increased public expenditures in urban areas include: (1) population growth; (2) per capita income growth; (3) corporate demands;

(4) improvement of infrastructure and public services needed to attract and retain a skilled workforce; (5) the need to address the negative externalities that come with urbanization, such as pollution (e.g., solid waste management) and transport congestion; and (6) the special needs of a large concentration of families in expanding poor neighborhoods that require large public investments from metropolitan governments.

An idea which is gaining increasing international acceptance is that collaboration between governments of cities and counties and the business sector turns out to more efficient in the promotion of development and social progress when compared with the action of federal governments.

It is very important the idea whose acceptance increases internationally that the collaboration between the governments of municipalities and cities with the business sector, turns out to be more efficient to foment the development and the social progress, in comparison with the actions of the federal governments.

Financing for green urban development

Background

Although different methodologies and estimates are applied, there is a consensus that very important needs exist for financing infrastructure works in cities. According to Standard & Poor's, by 2030 the requirements will amount to USD$ 57 billion (Standard & Poor's, 2014), while the OECD estimates about USD$ 82 billion (including energy generation and related infrastructure) for the 2009-2030 (EIB, 2013).

Historically, governments have been the main funders for infrastructure development. However, after the financial crisis, public financing of infrastructure and related services has declined. After the debt crisis in some European countries, the governments of the OECD member countries have also reduced their infrastructure financing to about 3% of their GDP, compared

with 4% in the 1980s and 5% in the 1970s (EIB, 2013). In Europe, public infrastructure financing has fallen from about 5% in the 1970s to only 2.5% after 2000 (EIB, 2013).

Within the private sector, banks have traditionally provided long-term financing for infrastructure projects, which currently amounts to USD$ 300 billion a year (Standard & Poor's, 2014). However, their ability to provide financing has been affected by the crisis and by new regulations such as Basel III.

Therefore, considering future projections of GDP and infrastructure deficits, and assuming that government funding will maintain the same levels, Standard & Poor's (2014) estimates an annual gap of at least USD$ 500 billion in the requirements of infrastructure. This lack of resources becomes one of the major political concerns and requires a significant involvement of the private sector.

On the other hand, new agencies are emerging in the financial sector as providers of long-term financing, such as pension funds, insurance companies and sovereign wealth funds.

With over USD$ 70 billion of assets in OECD countries, institutional investors are often referred to as an alternative source of financing (Della Croce and Yermo, 2013). Over the past decade these institutions have diversified their investments into alternative options, such as real estate, and recently infrastructure, including "green infrastructure" (USS, 2014).

These investments are an area of opportunity for institutional investors because of their long-term assets and liabilities management needs, besides receiving higher yields than traditional investment options in government or corporate debt (Della Croce and Yermo, 2013).

However, the share of infrastructure financed by institutional investors is still very low: only 1% of pension funds are earmarked for infrastructure projects.

According to Standard & Poor's estimate, the level of investment by institutional investors could increase to 4%, about USD$ 200 billion a year in additional infrastructure funds (or USD$ 3.2 trillion by 2030). That represents a substantial increase of the current level (Standard & Poor's, 2014).

Securing financing for urban projects can be challenging, especially during the early stages of construction when the needs are greatest and the level of risk may be unacceptable to many potential investors and providers of funds.

Potential sources of funding and instruments are varied and multiple, but the right mix of funding sources will ultimately depend on the return period and the duration of the projects to be funded. The capacity and willingness of the competent entities to assume adequate levels of risk and acceptable forms of security are also very important (BLP, 2012).

Improving city resilience

Between 2000 and 2012, natural disasters, such as climate, health and seismic events, caused USD$ 1.1 trillion in damages worldwide, taking into account both the direct impacts on infrastructure, resources, communities, and the environmental and indirect impacts, such as decrease in business profitability and economic growth in the affected regions (Siemens, 2013).

Building resilience requires long-term coordination and cooperation between decision-makers, communities, companies and other stakeholders to reduce disaster risk, both through policies and investments to reduce specific risks, and by improving infrastructure and provision of services (Carraro *et al*., 2013, CCFLA, 2015).

Resilient infrastructure systems may require large-scale changes in planning, design, and management and maintenance modes. While technology is part of the solution, the ability to anticipate risks and plan long-term urban development is critical. Resilience should not only be included as a

decision-making criterion for new infrastructure projects, but should also be systematically taken into account in evaluating projects to maintain and improve existing infrastructure (Siemens, 2013).

Resistance to climate change not only influences the ability to respond to extreme weather events, but also has implications for the safety of the inhabitants of the cities (Agster, 2015). Insurance against catastrophic events and other forms of risk transfer are essential for the maintenance of urban assets and for financing recovery from extreme events.

While governments have historically absorbed the gap between private insurance losses and total economic losses, their ability to continue to do so is limited by declining public finances.

On the other hand, the unpredictability of such events and the magnitude of the losses are undermining the insurability of urban infrastructure and assets (CCFLA, 2015). Decision-making cities and insurers have much to gain, working together to improve and strengthen city security through better resilience (ClimateWise, 2013).

Smart cities

The financing of smart cities requires solutions to ensure energy-efficient urban development. Power grids, energy-efficient buildings, energy supply systems, transport systems and citizens' attitudes will lead to considerable energy savings and reduced GHG emissions.

Strategic planning, integrated municipal departments and supply processes should be supported with financial innovation mechanisms to attract the necessary private investment for the large-scale transformation of energy use.

Over the next few decades, energy costs will continue to fluctuate and cities will face the challenge to raise their economic growth, while simultaneously reducing GHG emissions. In such conditions, the public sector is more

likely to encourage investment in intelligent technologies, low carbon and environmentally friendly goods and services (LCEFGS). These include smart grids and broadband access, electric vehicle recharging systems, installation of heating systems, on-site power generation, and other adaptation and mitigation initiatives. This sector has a clear socio-economic impact and is based on a growing demand at global level.

The benefits of energy transformation are not only recognized in terms of economic returns, but also of socioeconomic and health benefits. The initial investment and the longer periods of recovery of investment are sometimes barriers to private investment. Other barriers are uncertainties about the prices of renewable energy and fossil energy prices. In this sense, it is important to have government incentives and encourage public-private investment.

To mobilize investments, governments and public governmental institutions need to promote innovative tools and solutions. Thus, it is very important to ensure that regulatory frameworks do not constitute barriers to innovation.

Main financing options: analysis and ways of improvement

Intergovernmental transfers

Presentation and analysis

The degree of dependence of metropolitan areas on transfers can vary widely between cities. On the one hand, central cities like Buenos Aires have the capacity to collect taxes and finance about 70% of their budget with their own revenues. A similar case is represented by large cities in South Africa.

However, in most cities reliance on inter-governmental transfers is very high (Boex, 2009). Although financial analysts favor self-financing, it is generally not supported by politicians in office, both for financial reasons and for political control issues. High-income cities are being controlled through transfer-versus-tax policies, with justification for more equitable distribution

of resources or to finance central government expenditures (Ivanova, 2016).

These policies are sometimes supported by authorities at the subnational level, who do not wish to lose their popularity by establishing unpopular taxes. With the increase of the urban population, and more places in national and state congresses, local rulers prefer not to lose popular support (Boetti, Piacenza and Turati, 2010). On the other hand, cases exist when granting more power to establish taxes to subnational governments, has led to distortions in economic decision-making.

Sometimes, for reasons of equalitarian distribution, metropolitan areas and large cities are not favored. This has been observed, for example, in São Paulo and India (Peterson and Annez, 2007). In South Africa, special funding is provided to municipalities to improve services in poor neighborhoods (Paulais, 2012). Another approach is to divert a portion of intergovernmental transfers to debt repayment, as is done in Mexico.

Some countries have developed special agencies (municipal development funds) to support the development of government capacity to manage urban areas. These agencies have channeled financial funds (grants or loans) to local governments in support of construction and infrastructure (Ivanova, 2016). Grant funding usually sets the objectives of the project or contractual obligations of local authorities. National governments often resort to endorsements that can suspend financing in case of non-compliance.

There are successful cases of such financing in the Indian state of Tamil Nadu, in Senegal, and other regions of South Asia and sub-Saharan Africa (Peterson and Annez, 2008; Paulais, 2012; Streitferd, 2012).

Paths to improvement

It is not uncommon for developing countries to make efforts to restructure their intragovernmental transfer systems. But reforms rarely coincide with the development of a metropolitan public financing strategy. To do so, the strategy for the restructuring of transfer regimes for large cities should include three components of reform.

The first would focus on the gradual independence of local metropolitan governments from transfers, while ensuring that they have sufficient authority to tax users. A strong budget constraint for funding deficits from subsidies by the top-level government would be part of this strategy. Currently, financing of infrastructure investment has shifted from subsidies to debt. In this arrangement, the borrowing is supported by locally sourced income. Subsidies should never disappear altogether as a source of funding, since external factors will always have to be available, but in many metropolitan areas subsidies can be drastically reduced.

A second, complementary component of the strategy would be to redesign the transfer system so that the local governments of megacities may be treated under a different regime from other local governments. The vertical law quota of metropolitan area governments would be lower due to their greater tax capacity. The loss of revenue resulting from local metropolitan governments would be offset by increased tax authority. With a separate system, it would be possible for the central government to recognize differences between metropolitan governance structures (greater reliance on subsidies when the local government is more fragmented), provide incentives for more efficient regional taxes, and greater fiscal effort. The transfer formula for central (state) grants must include horizontal transfers from the richest to the poorest local governments within the metropolitan area, and specific subsidies, such as slum upgrading programs.

A third option is to link institutional capacity building, with the granting of funds through the creation of a municipal development fund. This would provide grants for infrastructure investment and also support the design and implementation of projects, the development of capacity for income mobilization, as well as improvements in the operation and maintenance of urban services. The municipal development fund will also address the strengthening of personnel and management capacity for urban planning, regulation and financial management. The type of financial support may be gradually shifted from subsidies to loans as the fiscal capacity of local governments improves, or could be structured asymmetrically, by providing subsidies to smaller municipalities, while providing loans to metropolitan governments with relatively strong income bases.

Loans

Presentation and analysis

The practice and success of using loans by local governments in metropolitan cities varies greatly between different cases. Local governments in South Africa use loans from government banks and private financial intermediaries, but without a guarantee from the central government (van Ryneveld, 2007). At the other extreme are the local Chinese governments. They could not borrow but instead created an alternative route for urban investment firms that borrowed on behalf of the municipal government. These were supported by a revenue base provided by the municipal government (Wong, 2013). Municipal bonds are used in Colombia, Mexico, Brazil, South Africa, India and the Philippines (IADB, 2012; Peterson and Annez, 2007). Over-indebtedness has occurred in several cities and has led to some kind of rescue in metropolitan cities such as Buenos Aires, Sao Paulo and Johannesburg, and more recently in China (UNEP and Gwangju City, 2012; Cao, Feng and Tao, 2008). Many

countries try to control excessive borrowing with various forms of tax liability legislation, although these programs have reported varying degrees of success (Liu and Webb 2011).

Municipal development funds have been used in some middle-income countries to help develop the institutional conditions for local government loan services and to assist urban local governments in developing capacity to access loan financing, often with external assistance (Peterson and Annez, 2007; Kharas and Linn, 2013). One of the most successful cases is FINDETER in Colombia, which was created in early 1990 with the assistance of the World Bank and the Inter-American Development Bank, based on rediscounting of long-term commercial credits to municipalities. Over time, FINDETER became a well-functioning financial intermediary, supported by local credit rating institutions and better cadastral services. This led to higher local revenue collection and greater solvency, effective municipal access to long-term credit, and ultimately improved urban services (Kharas and Linn, 2013).

Pathways to Improvement

Governments could consider the following guidelines in shaping policies to strengthen the use of debt financing for the improvement of metropolitan infrastructure services:

- Provide local governments with greater autonomy on both sides: income and expenditure budgets. If infrastructure is to be maintained, and if debt obligations are to be achieved, local governments need to be able to control their level of budgetary resources. Even a well-structured debt framework cannot be a substitute for the local government's ability to pay.
- Debt financing limit for long-term capital projects. It must be ensured that any exchange risk is hedged; either through commercial hedges or that the central government assumes the risk of the exchange rate.
- Impose a strong budget constraint on borrowers, without the possibility

of a "free" bailout by top-level governments if the underlying problem is that local government was reckless in incurring debt obligations. It is recommendable to create a regulatory framework for central debt, with clear rules for borrowing: how much, for what purpose, who, what instruments and what restrictions (Nixon, Cambers, Hadley and Hart, 2015). Compliance with the framework should be carefully monitored.

Public- Private Partnerships (PPP)

Presentation and analysis

PPP funding expanded rapidly in the 1990s and outpaced official external assistance almost tenfold. Most of the PPP infrastructure investment has been targeted at telecommunications, followed by energy. Together, these two sectors accounted for nearly four-fifths of total PPP investments from 1990 to 2008. Less than one-fifth went to transport and only 5 percent to water and sanitation. Carraro *et al* (2013) attributed these differences between the sectors mainly to the different capacity to charge commercially viable users in the first two sectors compared to the last two. However, with the exception of the telecommunications sector, PPP investments have generally bypassed low-income countries. It is therefore not surprising that PPPs have added relatively little to the financing of urban capital in developing countries over the past two decades (Bahl and Linn, 2013; Peterson and Annez, 2007). However, there have been cases where PPP investments have exceeded official external aid flows even for water and sanitation, and highly visible projects have been funded with PPPs in selected metropolitan areas of developing countries, including urban rail projects in Bangkok, Kuala Lumpur, and Manila (Liu and Waibel, 2010).

Inman (2005) and Liu and Waibel (2010) argue that the inherent risk of urban investment is the main obstacle to increasing the flow of private capital.

There is insufficient record of full cost recovery, since local governments are often unwilling to accept the types of tariffs and regulatory provisions needed to attract private investors, especially for long-term contracts. Pethe and Calvani (2006) describe that the lack of use of PPP schemes in Mumbai was due to a "confidence gap" between the private and public sectors. There is also weak institutional capacity to manage PPPs. For the public sector, a risk is present that the services provided may not be what the public wants. There is also a risk that the private partner will make a mistake and the public sector will have to assume the obligation in full. How successful such arrangements are, from the perspective of either party, depends heavily on the details of the contractual arrangements and how the risks are shared.

Pathways to Improvement

Although they have not provided the expected results, PPPs have made an important contribution to the financing of infrastructure in metropolitan areas, especially in middle-income countries. However, reform is needed in five areas to address the obstacles and constraints that prevail (Liu and Waibel, 2010):

- The legal framework in the country should be supportive and allow an arbitration process that puts public and private partners on an equal footing within a framework of transparency.
- Cities need to be supported in their efforts to build build the capacity to deal with PPP problems and to conduct complex investment design negotiations. This is an area where top-level authorities and external aid agencies can be useful, including their participation in municipal development funds.
- PPP projects need to be carefully planned and transparent standards and documents must be established for participants.
- Improvements in national and local business climates are critical, as they are important signals to potential PPP investors that they will be

treated fairly and predictably.

- PPP will be more difficult to organize and implement in an environment of fragmented, vertical and/or horizontal metropolitan governance. Therefore, it will be important to establish territorial management, negotiation and implementation of large PPP projects.

International Aid

Presentation and analysis

Many donors are involved in providing aid. The World Bank is the largest, followed by Japan, and then by the regional development banks. However, in the last few decades, the flow of aid to urban areas has stagnated and is inferior to that required for urban investment needs, despite frequent calls for increased support from urban experts in the aid agencies. Aid in urban areas has been limited to particular projects, such as roads or sanitation, without addressing more general, cross-cutting issues of management that could enhance the sustainability of existing interventions. Africa's urban investment needs, in particular, have been neglected by donors. More generally, the implementation of urban strategies by donors has fallen far short of the targets set.

This scarcity of specific urban aid came despite the fact that evaluations show that such investments on average tend to be more successful in terms of their impact on the development of other sectors. The situation has been worsened by the involvement of donors at the country and city levels in general; it has lacked a long-term strategic perspective and therefore has been fragmented and uncoordinated, instead of being systematic and continuous for successful interventions. A key constraint to the sustainability and expansion of donor-supported programs has been the lack of local funding capacity to sustain and build on the funded aid initiative, once donor support ceases. This can be attributed to the lack of attention on the part of donors to the fiscal capacity of urban governments or their lack of impact in improving local

capacity for revenue collection.

In addition, donors generally do not focus on the question of how to rationalize intergovernmental transfers, which are a key part of local government resources. And although there have been some examples in which donors have systematically helped to strengthen borrowing capacity, institutional frameworks and policy for municipal governments in general, such interventions have had little impact.

Finally, donors have not paid sufficient attention to the special financing needs and capacities of metropolitan areas compared to other urban areas (Pethe, 2013). This is partly because many donors are required to work with national entities at the government level, and partly because metropolitan areas are often not formal levels of government, in contrast to state or municipal authorities.

Pathways to Improvement

A number of changes in donor strategies could benefit metropolitan and city funding in general. First, aid donors must go beyond broad strategy statements and focus more systematically on the funding needs and institutional capacity of urban governments.

Second, experience shows that donors can effectively channel at least some of their resources through municipal development funds (also known as urban investment funds), which are the national level agencies that provide funding and support to urban governments to meet their investment needs. But those funds and the financial and technical support that donors provide must be carefully tailored to country conditions (e.g., credits in middle-income countries and grants in low-income countries) (Peterson and Annez, 2007; Kharas and Linn, 2013).

Third, donors could also enhance partnerships and pool their resources for

comprehensive and long-term support for urban and metropolitan investment, institution building and policy reform. To do so effectively would require a thorough analysis of local socio-economic conditions and investment needs, assessing the institutional capacities and interests of participants, and helping to create and implement longer-term metropolitan development strategies. In doing so, special attention should be paid to urban finance. Donors should support the development of local income mobilization and management capacity, intergovernmental transfer and debt management schemes.

A much stronger national and international effort in data collection is imperative. It is suggested to use caution when drawing homogeneous conclusions for different countries and cities, and to make recommendations based on "best practices".

Conclusions

The prevailing theory of metropolitan governance and finance provides useful guidelines for public policy, but it does not provide many firm rules on how best to govern and manage finances. Rather, the frameworks of policy options are set in terms of a series of advantages and disadvantages that entail significant costs and benefits. Among these advantages and disadvantages are: centralization or vertical decentralization; consolidation or horizontal fragmentation; effectiveness of income, efficiency or equity in local income generation; central control through categorical subsidies or local control through generalized transfers; strict limits on local indebtedness or the freedom to access credit markets.

Nevertheless, some conclusions and general directions arise from the metropolitan management and finances in the last decades based on prevailing practice:

- Developing countries have different patterns from industrialized

ones. Developing countries generally tend to be more centralized, their metropolitan areas tend to be more fragmented, and their cities are less self-financing and thus more dependent on subsidies. These countries tend to borrow less and have less PPPs. In addition, they rely more on external aid funding, especially the poorest countries. A significant shift away from these differences is not observed.

- There are few long-term success stories of metropolitan governance and finance in developing countries. Hong Kong and Singapore have been very successful in a sustained way, but they are special cases, due in part to their status as city-states. Bogota and Shanghai have also become successful cities in the last few decades, but they also demonstrate how success can be ephemeral, as both cities now face significant problems due to changes in city management (Bogota) or to the accumulation of inherited problems, including congestion and pollution (Shanghai).
- Very few central governments have clear strategies to support the development of cities and/or metropolitan areas in their countries. With few exceptions (e.g. cases of new capital development, such as Astana, Kazakhstan), national authorities do not focus on developing visions and strategies for their metropolitan areas; rather, they approach them in a non-differentiated manner from other local or regional jurisdictions. They are not coordinated through functional ministries that are involved in metropolitan area services, regulation and taxes, and they rarely see their role as a supporting one, designed to guide local authorities in their difficult task of complex management and challenging metropolitan-controlled dynamics.
- Political economy is at the heart of the problems of metropolitan finance, both in developing and industrialized countries (Eaton, Kaiser and Smoke, 2011). Barriers are reflected in vested interests preserving the status quo; short-term time horizons and misaligned incentives as a result of postponing difficult decisions are also hurdles to be dealt with. Likewise, corruption in government agencies undermines the provision of effective public service and sound management of funding. As a result, central governments do not want to give up control and create political competition at the local

level, metropolitan managers do not want to introduce unpopular but essential local income measures. Competition between sub-metropolitan jurisdictions prevents effective coordination, and local administrators are not responsible for the effective management of the limited functions they have.

- Innovative funding and management practices have emerged. These include the use of information and communication technology (ICT) and geographic information systems (GIS) in land use planning and property taxes; the capture of capital gains (Seto *et al.,* 2014); emissions of metropolitan bonds; municipal development funds for funding, channeling and loaning, along with capacity building assistance; as well as the PPPs in the financing of infrastructure and alliances in neighborhood improvement.

It is clear that there are no universal solutions for urban governance and financial reform. Each country and each city has to find its own way. However, some recommendations may guide national and local authorities as well as external donors and advisors:

- Create a long vision. Involve national, regional and local institutions instead of quick and simple solutions; look for fundamental and lasting changes that require perseverance and courage to make difficult political decisions.
- Understand the history, institutions and political economy of each country and city. While solutions to problems of governance and metropolitan finance can work in one country and/or city, they will not necessarily do so elsewhere, unless they are adapted to the specific characteristics of local history, institutions, and political interest.
- Develop a comprehensive vision of the governance and fiscal conditions of each country and city. Even if interventions ultimately remain relatively narrow and selective (e.g. reform of a tax or a grant instrument), it is essential that they be seen within the broader institutional context of the country. Without an understanding of the context, limitations or unexpected unwanted consequences, there is the risk of impairing the effectiveness of interventions.

- Pay attention to effective governance (function, finances and officials) and for the triad of autonomy, accountability and capacity, in the right sequence. Allocation of financial resources should follow the rule of functional accountability, which depends on the vertical and horizontal governance structure that is put in place. Effective and personal management should be performed by local authorities for it to function well. Officials must have sufficient autonomy to do their job well, but they also have to be held accountable for results and have the knowledge and institutional capacity to function effectively.
- Activate the right financial instruments. Again, there is no easy transfer of an instrument from one place to another. However, it is worth exploring some innovative tax institutions and agreements, including those mentioned above: property taxes in general and land value specifically, based on ICT and GIS; competitive, results-based subsidies; well-regulated loan financing for infrastructure capital investments; public and private multi-stakeholder partnerships and alliances; and municipal development funds.

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