TOPIC GUIDE:

Sub-national Financing for Urban Infrastructure

Dr Richard Slater and
Harsh Goyal

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Acronyms

ADL	Agence de Développement Local, Senegal
ADM	Agence de Développement Municipal, Senegal
AFDB	African Development Bank
BOT	Build, operate transfer
CDIA	Cities Development Initiative For Asia
CDP	City Development Plan
CLGF	Commonwealth Local Government Forum
CPSCL	Caisse des Prêts et de Soutien des Collectivités Locales, Tunisia
DAU	Dana Alokasi Umum
DBSA	Development Bank of Southern Africa
DDF	District Development Facility, Ghana
Euribor	Euro Interbank Offered Rate
FAR	Floor Area Ratio
FEC	Fonds d'Equipement Communal, Morocco
FEICOM	Fonds Spécial d'Equipement et d'Intervention Intercommunale
Findeter	Financiera de Desarrollo Territorial, Colombia
FSI	Floor Space Index
GLA	Greater London Authority
GOLD	Global Report on Decentralization and Local Democracy
HPEC	High Powered Expert Committee
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IGT	Intergovernmental transfer
IIGF	Indonesia Infrastructure Guarantee Fund
INCA	Infrastructure Finance Corporation Ltd, South Africa
IRA	Internal revenue allotment
IWK	Indah Water Konsortium, Malaysia
JICA	Japan International Cooperation Agency
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KfW	Kreditanstalt für Wiederaufbau
KUIDFC	Karnataka Urban Infrastructure Development Finance Corporation
KWSPF	Karnataka Water and Sanitation Pooled Fund
LGLA	Local Government Loans Authority, Kenya
LGU	Local government unit
LGUGC	Local Government Unit Guarantee Corporation
LLDF	Local Loans and Development Fund
MCPM	Minimum Conditions Performance Measurement
MDF	Municipal Development Fund
NPA	Non-performing asset
OECD	Organisation for Economic Co-operation and Development
OSR	Own-source revenues
PDR	People's Democratic Republic

PFDF	Pooled Finance Development Fund
PFI	Public Financial Institution
PPP	Public–private partnership
PPPIAF	Public–Private Infrastructure Advisory Facility
PRSP	Poverty reduction strategy paper
PSI	Public sector and infrastructure
SFC	State Financial Corporations
TNUDF	Tamil Nadu Urban Development Fund
TNUITCL	Tamil Nadu Urban Infrastructure Trustee Company Ltd.
UDBN	Urban Development Bank of Nigeria
ULB	Urban local bodies
UNCDF	United Nations Capital Development Fund
WSPF	Water and Sanitation Pooled Fund

About the authors

Dr. Richard Slater is a Governance specialist with ICF International. He has extensive experience in local government, urban development and municipal reform. He has been team leader of a number of large, donor funded projects on urban development and governance reform in India and elsewhere and is currently Team Leader of the DFID funded Madhya Pradesh Urban Infrastructure Investment Programme (MPUIIP) where he has been working on urban infrastructure financing, public–private partnership (PPP) and smart city planning in Madhya Pradesh, India.

Harsh Goyal is an Infrastructure Finance professional with ICF International. He has experience in developing PPP projects for urban infrastructure, establishing and operationalising infrastructure development funds and leveraging financial resources from international development partners such as the World Bank, Asian Development Bank (ADB) and DFID. He is currently working on the DFID funded Madhya Pradesh Urban Infrastructure Investment Programme (MPUIIP).

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Report summary

Need for sub-national financing
Developing countries are growing faster than in the past, with significantly higher rates of growth than those in the developed world. Growth rates in Africa and India were well above 5% in 2014 and those in Ethiopia and Rwanda were higher than 7.5%. Much of this growth is generated by cities and towns, with research showing strong linkages between urbanisation and gross domestic product (GDP).

A 10% increase in urban population correlates to a 30% increase in GDP. It is estimated that in Africa, cities account for around 55% of total GDP; in India the figure is 65%. And as urbanisation in the developing world is rapidly increasing, with as many as 55% of Africa's total population projected to be urban by 2020, the impact on economic growth will be sustained.

Cities are the primary engines of growth in almost all developing countries. However, past underinvestment in urban infrastructure and services, combined with a rapidly increasing urban population, has led to a massive and growing deficit in infrastructure and services capable of sustaining inclusive economic growth. Cities across the developing world suffer from a lack of planning, inappropriate regulation and inadequate enforcement.

Planning policies and regulatory frameworks rarely include provision for the high density development required for sustainable urban living and working,i.e. that which combines residential and commercial areas and maximises access to public transport. In addition, infrastructure networks for basic services such as water, sanitation and waste suffer from inadequate coverage, low frequency of service and poor quality. And, poor environmental services lead to health problems and make cities vulnerable to climate change. Poverty remains a major challenge in urban development with as many as 60% of the urban population in Africa and over 500 million people in the Asia–Pacific region living in slums and underserviced settlements.

Cities suffer from weak governance and numerous capacity constraints in terms of inadequate staffing, and a lack of required skills and expertise. They also suffer from decades of persistently inadequate financial resources to address the deficit in infrastructure and services. This deficit is estimated at around 12% of total GDP in Africa, requiring an investment of around US$93 billion per annum to 2020. Meanwhile, a conservative estimate of the total urban investment requirement in India up to 2030 is around US$650 billion.

Policy and regulatory frameworks for sub-national financing
Effective sub-national financing requires strong fiscal devolution. While many countries have adopted political and administrative decentralisation, very few have adopted a robust system of fiscal devolution. The decentralisation of responsibilities and functions to local governments has most often not been accompanied by a corresponding devolution of resources. In many developing countries, more than 60% of local government revenue comes from central government grants; local governments are yet to enjoy fiscal autonomy more than this.

Intergovernmental transfers (IGTs) remain an essential building block for sub-national financing since they provide the bulk of revenue in almost all decentralisation contexts. The institutional framework for the quantification of IGTs is varied and complex. It ranges from central government to an independent finance commission functioning as a permanent or periodic entity, intergovernmental forums and intergovernmental and civil society committees. The regulatory framework for allocating IGTs is often formula based, taking into account population, area and overall level of development against key indicators. IGT frameworks increasingly provide for performance-based grants designed to promote improvements in local governance, financial management and service delivery. These often include minimum conditions so that local governments can access sufficient funds to cover all routine expenditure.

Own-source revenue (OSR) is a key mechanism for bridging the gap between the total revenue accruing from IGTs and the total expenditure required by a local government. The degree of tax authority provided to local governments, often enshrined in a constitutional framework, is a key factor for enhancing and managing OSRs. This includes authority to augment and diversify the sources of OSR such as to levy and revise tax rates, to impose new taxes, and to adjust user charge schedules. This is in turn based on the degree of regulatory authority to establish taxes, to set tax rates, to collect tax revenue and to allocate revenue proceeds. The main component of OSR tends to be based on property tax but many countries have assigned other taxes such as advertisement tax, professional tax, business licenses and fees. By expanding local revenue coverage (the tax or charge base), increasing rates, and enhancing collections, local governments are able to improve their financial standing and borrowing capability.

Sub-national government borrowing is part of a larger legal fabric that sets the roles and responsibilities of public and private sector entities in the operation of a sub-national credit market. The prevailing regime will depend on several wider fiscal policies relating to ownership of public property and property rights, the structure of intergovernmental revenue sharing, the adequacy and reliability of accounting standards, regulation of the banking system and judicial enforcement. Countries with weakly financed and poorly managed sub-national governments may have to forgo direct entry into private credit markets until local governments improve their creditworthiness.

Sub-national debt may also be incurred by municipal enterprises and quasi-municipal entities created with the agreement of existing municipalities or by national or regional legislation. Such special-purpose entities might issue limited obligation debt based on their own revenue sources and the ability to borrow against them. Sub-national governments can also assign their interest in specific revenue streams (taxes or grants) to creditors. Such mechanisms are known as revenue intercepts and can provide sub-national government with a useful means of ensuring access to credit.

Sub-national financing instruments and mechanisms

The most common form of sub-national borrowing in the context of developing nations has been from state-owned local funds or Municipal Development Funds (MDFs) which are typically supported by multilateral and bilateral development agencies. The mandate of these funds may vary from direct project financing to credit enhancement as well as technical support for project development with varying geographical and administrative coverage. This ranges from countrywide (such as in the case of the Local Loans and Development Fund open to all local governments in Sri Lanka, and the Municipal Development Fund in Bangladesh) to province- or state-wide (such as the Tamil Nadu Urban Development Fund in India). In a few cases, such as in Ahmedabad and Tamil Nadu in India and in the Philippines, sub-national governments have also floated municipal bonds (taxable as well as tax-free).

The role of international funding agencies such as the World Bank, the Asian Development Bank, the African Development Bank, the KfW Development Bank, the United States Agency for International Development (USAID), the Japan International Cooperation Agency (JICA), and the International Finance Corporation (IFC), has been critical in the process of establishing institutional structures and systems for transitioning from grant-based to sustainable returnable capital mechanisms.

The MDF model is an effective intermediation mechanism and helps to define efficient linkages between the funding needs of a sub-national government and the funding available from capital and credit markets as well as private financing sources. The institution that undertakes this intermediation role may choose to support sub-national governments on a stand-alone basis. Alternatively, it may take a pooled approach by aggregating the needs and investment requirements of neighbouring sub-national governments to realise economies of scale, raise funds at competitive rates and then manage them locally. Examples of these models include: the Infrastructure Finance Corporation Limited (INCA) from South Africa, Findeter in Colombia, the Urban Development Bank of Nigeria (UDBN), the Local Government Unit Guarantee Corporation (LGUGC) of the Philippines and the Tamil Nadu Urban Development Fund (TNUDF) of India. Other prevalent models include: sub-sovereign hybrid financing and bond issues along with commercial loans under the larger ambit of municipal borrowings.

Credit ratings are of prime importance for sub-national governments, enabling them to have sustainable access to capital markets and other sources of sub-national borrowing. Credit ratings provided by professional international credit rating agencies provide an objective assessment of the creditworthiness and bankability of sub-national governments and their fundraising mechanisms. This assists investors in assessing risks and comparing them against their investment portfolio's risk capacity. In some countries, such as India, credit rating is mandatory according to capital market regulations at the national level; in other countries credit rating may only be a preference rather than an obligation. Mexico, for example, indirectly penalises sub-national borrowers that do not have a credit rating by levying a higher premium on the cost of capital

Land assets as an own-source revenue have significant potential for playing a key role in sub-national infrastructure financing. Land assets owned by sub-national governments are an important ingredient of financing in most developing countries. Land is generally the most valuable asset on a sub-national borrower's balance sheet and is used in multiple ways. Direct land selling by sub-national governments is the clearest example of capital land financing. Other instruments for converting public land rights to cash or infrastructure include land-pooling approaches adopted for regional economic development and urbanisation. In many cases, land is used as collateral for borrowing, a practice that has a long history of financing urban investment.

Lastly, private sector financing is another major source and instrument of sub-national financing for urban infrastructure. Several models have been tested across the world customized to suit local conditions. The quality of public–private partnership (PPP) projects and the probability of success are subject to multiple determinants including technical and financial viability as well as political interest and social acceptability. Asia and Africa have many examples of success and failures in this area.

SECTION 1

Introduction

1.1 Focus of the Topic Guide

This Topic Guide provides a framework for understanding the underlying issues and challenges of sub-national finance as well as examples of emerging good practices in financing capital investment in infrastructure and services at sub-national level in developing countries. The guide is designed to assist DFID Advisers to develop business cases to address the issues and challenges in developing policy, building institutional capacity and designing mechanisms that will enhance sub-national financing of infrastructure and services in developing countries. In doing so, the guide considers the following key issues:

- Importance of planned and inclusive urban development for the promotion of growth and poverty reduction
- Addressing the infrastructure investment requirements of sub-national government
- High dependency on intergovernmental transfers and limited own revenue potential as an outcome of incomplete decentralisation and weak regulatory frameworks for fiscal devolution
- Mechanisms to promote credit worthiness and bankability of sub-national borrowers and projects in accessing new forms of infrastructure financing

1.2 Structure of the Topic Guide

- Section 1 considers the need for and relevance of sub-national infrastructure financing
- Section 2 highlights the policy and regulatory frameworks for sub-national financing focusing on: intergovernmental transfers (IGTs) and grants; own-source revenue (OSR); and municipal borrowing
- Section 3 examines the instruments and mechanisms for sub-national financing focusing on: municipal borrowing and municipal development funds; pooled financing; private financing; municipal bonds
- Section 4 highlights key issues and inferences going forward

1.3 Need for sub-national finance

1.3.1 Economic growth and poverty reduction

Economic growth is essential for poverty reduction. While many developing countries have in the past experienced phases of low to medium growth as a result of periodic economic adjustment, such as occurred in much of Africa in the 1990s, in recent years there has been a significant rise in growth rates throughout the developing world. Africa was projected to rise to around 5.2% in 2014 with increased investment in natural resources, infrastructure and strong household spending. Interestingly, growth has been strong in both resource rich countries such as the Democratic Republic of the Congo and Sierra Leone as well as the non-resource rich countries such as Ethiopia and Rwanda. Several African countries such as Sierra Leone, Ghana and Rwanda have reported real GDP growth of 13.3%, 8% and 7.5%

respectively for 2013 ahead of China at 7.4% and India with a projected rate of 5.7 for 2014. This growth has been influenced by increasing liberalisation of trade policies, foreign direct investment, increased investment in infrastructure and strong household spending.

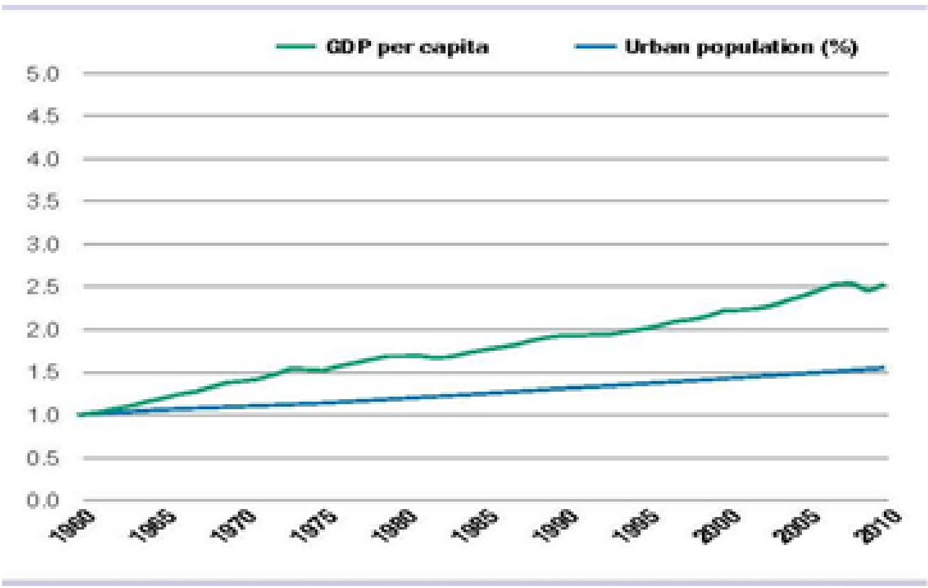
1.3.2 Cities as engines of economic growth

Research on growth demonstrates that cities and towns are among the key drivers of growth and hence an essential element in the quest for poverty reduction. Evidence the world over demonstrates strong linkages among increased investments in urban infrastructure, high quality service delivery, economic prosperity and poverty reduction (see Glaeser, 2011). This research clearly demonstrates that planned and sustainable urbanisation and/or urban regeneration is a strong force for growth and innovation, as evidenced by a number of cities across the globe including Seoul, Portland, Barcelona and London.

The degree of urbanisation is a good indicator for the degree of overall prosperity where a 10% increase in urban population correlates to a 30% increase in per capita GDP. Cities in Africa, as elsewhere in Asia, are the engines of much of this growth, with African cities, for example, accounting for 55% of total GDP. In India, cities generate around 63% of total GDP. With high population density and low GDP per capita there is significant potential for this trend to accelerate further to 75% of GDP by 2025.

The diagram below illustrates the strong positive links between urbanisation and national productivity especially in high and middle income countries. As countries become more urbanised both urban and national productivity tends to rise. In some low-income countries however, in particular those where urbanisation is driven by rural migrants fleeing instability, natural disaster or war, urbanisation may not be accompanied by growth in productivity. Overall however, the dominant role of urban areas in national economic productivity is evident across countries (Moreno et al., 2012).

Figure 1 Urbanisation and per capita GDP across countries as a per cent of base year, 1960–2010



Sources: Moreno et al., 2012.

Hence, we can see that cities are essential for economic growth as people choose cities for work and consumption and inclusive cities will generate inclusive growth. The steady increases in urban population and increases in industrial and commercial productivity are thus key drivers of national economic growth. Research on leading cities worldwide reveals that certain critical factors such as agglomeration and economies of scale; specialisation and collaboration in local economic development, combine to make cities more competitive and enhance investment attractiveness, thereby stimulating inclusive economic growth.

1.3.3 Urbanisation

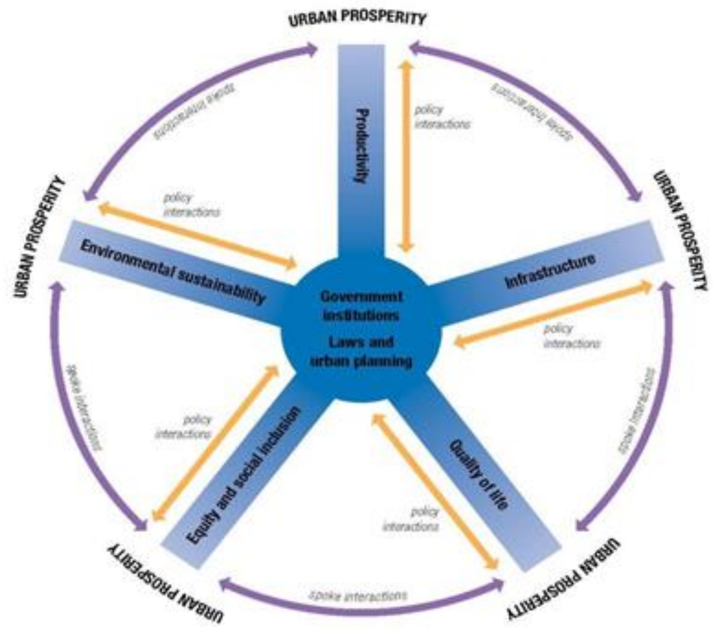
While the process of urbanisation is at an advanced stage in developed nations, many parts of the developing world still remain at an early stage of urbanisation with one-third or less of the population residing in urban centres. The world's total urban population stands at just under 4 billion and will reach 6 billion by 2045. In recent years, however, the pace of urbanisation has picked up dramatically and it is now estimated that Africa's urban population will double in the next 20 years from 370 million in 2010 to 754 million by 2030. By 2020 it is projected that 55% of the population in East Africa and 63% in West Africa will be living in cities (Moreno, 2008). The 2014 revision of the world urbanisation prospects shows that the highest level of urban growth to 2050 will be in India with an additional 440 million urban population, China with an additional 292 million and Nigeria with an additional 212 million.

Nearly 50% of the world's urban population resides in small towns with fewer than 500,000 inhabitants, compared to only one in eight people in the 28 mega cities of 10 million or more. By 2030 over two third of Africa's projected urban population growth will be in smaller cities and towns with a similar pattern of growth projected for much of South Asia. Many of the fastest growing cities in the world are relatively small urban settlements. Meanwhile, the number of 'mega cities' with 10 million inhabitants or more, has grown from 10 in 1990 representing 7% of the total urban population to 28 by 2014 with around 12% of the world's urban dwellers. Sixteen of the 28 mega cities are located in Asia, four in Latin America, three each in Africa and Europe, and two in Northern America. By 2050, 20 African cities are expected to be among the largest 100 cities in the world, with Kinshasa at 35 million inhabitants and Lagos at 33 million; and more than 50 African cities will have reached 10 or more million. These will include a number of metropolises such as Cairo (Egypt), Dar es Salaam (Tanzania), Luanda (Angola), Niamey (Niger) and Myantri (Malawi).

1.3.4 Policy challenges

Managing cities is now one of the most important development policy challenges faced by governments at the national and local level across the globe. The major challenges comprise ensuring sustainable infrastructure provision and improved service delivery, environmental sustainability, equity and social inclusion. Addressing these challenges requires a strong governance framework including supportive legal and regulatory framework for effective decentralisation and fiscal devolution as depicted in the diagram below. The UN reports that the success or failure in building sustainable cities will be a major determinant of the success of its post-2015 development agenda (see Moreno et al., 2008).

Figure 2 The wheel of urban prosperity



Source: UN-Habitat, 2012.

However, most cities across Africa and parts of Asia and Latin America face a range of serious impediments in the process of striving for sustainable economic growth. These problems include: unplanned development; inadequate civic infrastructure and poor environmental services; underfunding; weak governance, non-enabling policy frameworks and dysfunctional legal and regulatory mechanisms. All these factors result in the persistence of urban poverty and the inability of cities to realise their full growth potential.

1.3.5 Unplanned development

Sustainable urbanisation means meeting needs of the present population without comprising future generations. Most cities in developing countries suffer from poor quality planning and inadequate land production. While master plans may exist for many cities, they are often based on outmoded planning concepts that are not well tailored to the current needs of rapidly growing urban centres requiring more flexible planning regulations for high density, mixed use, living and working. Where plans do exist, they are often out of date and lack proper enforcement. Planned land production has tended to be confined to those areas with more formal land markets and is often placed under the jurisdiction of specialised urban development agencies. However large tracts of urban land in all African and South Asian cities are occupied under a variety of informal or illegal tenure arrangements which can cater to as many as 70% of total urban residents in some African cities, especially in East and West Africa. At the same time, around one third of the total urban population in most Indian cities reside in slums. A serious consequence of unplanned and informal settlements is the rise in crime and violence with particular negative impacts on women’s safety.

The consequences of this phenomenon is that large parts of cities across Africa and South Asia remain outside any formal land market and lack any systematic process for assembling and developing land as a primary resource for urban development. Other factors responsible for land market failure in most African and South Asian cities include the dominance of the public sector in urban land ownership, spiralling costs of private property and lack of transparency in real estate transactions, ill adapted legal systems and general funding shortages. Although land developers have been active in South Africa and most North African countries, land market failure is prevalent in the urban sector in developing countries and the overall level of land development remains far below what is required. Land development failures have had a particularly marked impact on urban centres in post conflict and fragile states and a ubiquitous impact on housing shortages across all urban centres in Africa and South Asia (Paulais, 2012).

While a number of North African cities have experienced recent improvements in planned development with upgraded informal settlements, tenancy regularisation and resettlement, most of central and west African cities remain largely unplanned and under serviced. At the same time, providing urban services including water, sanitation, drainage, waste collection and public transport for a more densely settled urban population is typically cheaper and less environmentally damaging than to a widely dispersed urban and suburban population. Hence, new statutory planning frameworks, regulations and norms need to be formulated and applied in order to achieve sustainable urbanisation and growth.

1.3.6 Inadequate infrastructure

Poor planning and lack of resources result in inadequate coverage of infrastructure and poor quality of environmental services, as evidenced by almost all cities and towns in Africa and South Asia. Infrastructure deficiencies are among the most serious obstacles that impede sustainable urbanisation across Africa and many parts of Asia. A survey of African businesses reported poor quality of civic services, roads, public transport and electricity to be among the most serious problems that hinder economic development (Kessides, 2005). A World Bank study on African infrastructure suggests that the requirements for infrastructure development and rehabilitation at city level over the next ten years amounted to about 20-30% of national GDP.

Many cities in developing countries have large gaps in basic infrastructure leading to poor access to services and inefficient delivery, with the most serious problems occurring in slums and under serviced settlements. Low-income cities consistently show lower levels of access to water, sanitation and energy while up to 60% of total residents live in under serviced settlements in cities such as Maputo (Mozambique), Luanda, and Dar es Salaam.

The operations and maintenance of civic services is also very deficient in all low-income country cities with at least 25% of water losses reported across the distribution networks of many African and South Asian cities and as much as 50% losses reported in cities such as Maputo and Nairobi (Kenya) through leakages and theft (Freire, 2013). The table below summarises the lack of access to infrastructure in selected African cities.

	Johan.	**Tunis**	**Cairo**	**Luanda**	**Lagos**	**Dar es Salaam**	**Nairobi**	**Add is Ababa**	**Maputo**	**Average**
Population (millions)	3.9	1	7.1	5.8	10.4	3	3.1	2.7	1.2	
Per capita income (PPP) 2011	10710	8,990	6,120	5,230	2,290	1,500	1,710	1,110	960	2,255
Households with access to electricity (%)	90	90	99.7	75.5	99.8	59.8	75	97	28.8	84
Electricity consumption per capita (GJ/inhabitant)	5.6	18	8	1	0.8	2.5	6.5	1.8	0.8	6.4

	Johan.	Tunis	Cairo	Luanda	Lagos	Dar es Salaam	Nairobi	Add is Ababa	Maputo	Average
CO_2 emission from elect cons (per capita)	1,482	1044	477	2.7	36	60.8	182	15.7	0.04	984
Population density (pop/ha)	2,364	4,698	19000	2,555	2,957	1,400	4,509	5,196	4,147	4,600
Pop. informal settlements (%)	18.8	25	31	69	66	68	50	18.3	70	38
Mass transport network (km)	7	2.3	7.3	0.2	0.1	0	1.9	2,2	0	
Waste per person (tonne/year)	401	172	456	292	276	462	318	160	294	
Population with access to potable water (%)	98	99	99	51	88	90	93	99	83	91
Water consumption per person (litres)	349	299	237	20	90	187	112	58	99	187
Water system leakages (%)	25	28	35	30	30	30	50	20	50	30.5
Population with access to sanitation **(%)**	92	95	98	92	83	56	83	72	49	84

Source: Siemens, 2011

Table 1 Access to infrastructure services – selected African Cities

The lack of adequate civic infrastructure at city level in most of Africa and South Asia means that many cities are vulnerable to climate change and environmental degradation. This is especially the case in a number of West African and Asian cities that lie a few meters above sea level as well as coastal cities affected by cyclones and other periodic weather effects. These issues need to be addressed through land use and development plans and access to new funding mechanisms for adaptation of infrastructure in drainage and flood protection. There is less emphasis on investment for climate mitigation strategies in African cities than in Asia since Africa contributes less than 4% of global carbon dioxide emissions. Carbon financing mechanisms remain confined to a very small number of countries at present as Emission Reduction Purchasing Agreements require high carbon production thresholds and high project assessment costs.

1.3.7 Persistent poverty

Urban poverty is a dynamic condition associated with degrees of vulnerability and risk based on the cumulative impacts of multiple deprivations, including limited access to basic services, poor environmental conditions and limited social protection. Increased child mortality, malnutrition and decreased school attendance contribute more to urban poverty than to rural poverty. This condition is aggravated by the rapid pace of urbanisation exceeding the rate of supply of basic infrastructure and services. The result being that a large segment of the urban population in all developing countries resides in unplanned or informal settlements with little or no access to basic services and/or networked supply.

Although many developing countries have made some progress in reducing absolute numbers of the poor, poverty has been urbanising. Over the decade 1993 to 2002, the number of people living on under US$1 per day fell by 150 million in rural areas but rose by 50 million in cities (Ravallion et al., 2007). In parts of Africa and Asia, urban poverty remains persistent. From 1990 to 2010, the proportion of the urban population living in slums in Sub-Saharan Africa barely fell from 70% to 61.7% (Moreno et al., 2010). African cities appear to be the most unequal in the world (sample of 37 cities with an average Gini coefficient of 0.58) and the highest inequalities are reported in Southern regions of Africa as well as Nigeria, Kenya, Ethiopia and Zimbabwe. It is estimated that around 43% of the urban population in Africa live below the poverty line of US$1 per day.

There are over 505 million people living in slums in the Asia-Pacific region comprising more than half of the world's total slum population (UN-Habitat, 2010). The slum population in a number of Asian countries constitutes more than half of the total urban population including: Afghanistan (88.6%); Cambodia (78.9%); Bangladesh (70.8%); Nepal (60.7%); Mongolia (57.9%). (UN-Habitat, 2010).

It is suggested that urban poverty in Asian countries such as China and India has been underestimated on account of unrealistically low official poverty lines. Moreover, due to country-specific systems such as the 'hukou' system of household registration in China, around 100 million temporary migrants living and working in urban areas get classified as rural. In Asia, while many cities report less inequality in consumption, they nevertheless suffer from unequal access to basic services, resulting in rates of under 5 mortality as high as 130 deaths per 1000 births among slum dwellers in cities such as Chittagong and Dhaka in Bangladesh (Moreno, 2008).

1.3.8 Weak governance and capacity

Many countries have faced a progressive weakening of public sector capacity brought about by pressures such as the over extension of the state, weak macroeconomic policy, chronic budget deficits and poor public management. Cities face additional problems of: insufficient staff especially at senior professional level; outdated cadres and cadre rules, inadequately qualified and trained personnel, low pay scales and poor recruitment systems. Consequently, local government capacity has been weak in numerous countries across Africa and South Asia including Malawi, Botswana and Rwanda as well as in many local governments in India, Bangladesh, Pakistan and Nepal. A number of donor funded local government strengthening programmes have aimed to address these capacity gaps. The Kenya local government reform programme, for example, has included capacity development for planning and implementation and likewise most initiatives in Uganda have included similar components. Likewise recent urban service improvement programmes in India and Bangladesh have included governance reforms and strengthening capacity development

1.3.9 Underinvestment

Although cities or city regions have historically been centres of economic transformation, since such growth has been spatially concentrated, many governments have been more inclined to direct public investment towards rural infrastructure and rural voters, thereby ignoring the recurrent and capital investment requirements of cities. Yet, in spite of such demographic and economic shifts in favour of cities, the urban sector in Africa and South Asia has largely been ignored in policy terms as investment flows have been heavily skewed towards the rural sector. This is reflected in the fact that of 30 poverty reduction strategy papers (PRSPs) prepared across Africa, very few have given any focus to urban development. Only Senegal, Djibouti and Guinea have urban strategies in place allocating 25% to 33% of projected expenditure to the urban sector.

The infrastructure deficit across Africa is estimated at around 12% of its total GDP with a funding requirement of US$93 billion per annum until 2020 (Mafusire and Anyanwu, 2010). Current spending on all infrastructure in Africa is around US$45 billion, with around US$20 billion per annum being allocated to operations and maintenance. This leaves a financing gap of US$48 billion per annum, much of which relates to cities (Amadou, 2013). Even in the relatively few cities where infrastructure is adequate, such as Gaborone in Botswana, for example, fiscal resources are insufficient to meet the infrastructure demands of the future.

In India, central government plan outlays have consistently favoured the rural sector as evidenced by the 11th Five Year Plan allocation of US$91 billion for rural as compared to just US$11 billion (11% of total outlay) for the urban sector. While China invested 2.7% of GDP in urban development from 2000–2007, India's share of urban investment in 2011 was still only a meagre 0.7% of GDP. The total investment requirement in urban infrastructure in India from 2012 to 2032 has been estimated at US$ 653 billion (HPEC, 2011). The McKinsey Global Institute (MGI) estimates that up to 2030, US$57 trillion of investment is required in infrastructure (transport, power, water and telecommunications) to maintain projected global GDP growth. This means that the world needs to increase its investment in infrastructure by nearly 60% in eighteen years (Dobbs et al., 2013).

Apart from increasing investments, the productivity of infrastructure investments will need to be simultaneously improved. In a recent report, the McKinsey Global Institute argued that scaling up best practice in selecting and delivering new infrastructure projects while extracting more use from existing infrastructure can reduce need for infrastructure investment by 40% (Dobbs et al., 2013). The three main levers of increasing productivity of infrastructure investment are described below:

a) **Improving project selection**: Selecting the right combination of projects and optimising infrastructure portfolios could save US$200 billion/year globally. This would require precise selection criteria that ensure proposed projects meet specific goals. For example, to guide its selection of transit projects, the Singapore government requires that they must contribute to 70% use of public transit. In Chile, as many as 35% of proposed projects get rejected for not meeting the careful cost-benefit analysis of the National Public Investment System which incorporates non-financial costs such as travel time.

b) **Streamlining project delivery**: This can achieve a saving of US$400 billion/year while accelerating timelines. A key tool for improving project delivery is to invest in project planning and design to prevent changes and delays later. In India, up to 90% of road projects experience delays due to difficulties with land acquisition. The state of South Wales in Australia cut approval times by 11% by clarifying decision rights, harmonizing processes across agencies and measuring performance.

c) **Utilising existing assets**: Boosting asset utilisation, optimising maintenance planning and expanding the use of demand-management measures can save up to US$400 billion/year. For example, intelligent transportation systems and reducing transmission and distribution losses in water and power can increase asset yields at a fraction of the cost of adding equivalent capacity. Denmark improved maintenance planning of roads by 10–20% by using a total cost of ownership approach that considers costs over the complete life of the asset and finding optimal balance between long-term renewal and short-term maintenance.

Although measures must be taken to increase investment efficiencies, this cannot replace substantial increases in sub-national financing of urban infrastructure across the developing world. Investment has to reach beyond sub-grade water, drainage, sewerage and transport to include above grade superstructures and investment in land development. Existing sources of investment for urban infrastructure are predominantly based on IGTs to cities and towns, supplemented to a small degree by OSR. Most decentralisation policy and legal frameworks do not provide for complete and synchronised functional and fiscal devolution. Most cities in the developing world are unable to exploit the full potential of OSRs, due to poor management and local political dynamics and due to inadequate sources of local revenue. This results in cities being heavily dependent on IGTs from central and regional government over which they have little control. Consequently they have little control over their own budgeting and planning process. IGTs have indirect negative impacts on the credit worthiness of sub-national governments with respect to market borrowings.

SECTION 2

Policy and regulatory framework for sub-national financing

The main sources of revenue for financing local infrastructure and service delivery at sub-national level have traditionally been confined to fiscal transfers, grants and own-source revenue (OSR) which comprise the key building blocks of sub-national finance. The composition and character of these revenue sources is determined by the prevailing system of decentralisation within either a federal or unitary structure of government. This section below will briefly discuss varying forms of decentralisation and fiscal devolution which provides the basic context within which sub-national financing operates.

2.1 Decentralisation and fiscal devolution frameworks

Effective sub-national financing requires strong fiscal devolution. The decentralisation process in most countries has brought new roles and responsibilities to sub-national governments as service providers. Decentralisation is based on economic and political arguments that support the efficiency, effectiveness and desirability of more grassroots decision-making and local accountability where sub-national authorities are seen to be better able to respond to local needs than central governments. At the same time, linking sub-national expenditure and revenues enhances accountability and transparency and reinforces the principle of subsidiarity.

In reality, however, devolution has proven to be complex and contentious. While many countries have adopted political and administrative decentralisation, very few have adopted a robust system of fiscal devolution. In many developing countries more than 60% of local government revenue comes from central government grants (GHK Consulting Limited, 2010). Even in the UK, where democratically elected local authorities have functional mandates covering education, welfare and civic services, over 70% of revenue is provided through central transfers making the UK one of the most fiscally centralised local government systems in the OECD (Lockwood, 2013).

The decentralisation of responsibilities and functions has most often not been accompanied by a corresponding devolution of resources. Although devolution frameworks clearly demarcate devolved functions to the respective levels of government, there is often a mismatch between these functions and the funds and functionaries necessary for undertaking them. This means that many sub-national governments have problems in delivering the full range of devolved functions. This places significant pressure on sub-national governments since additional mandated expenditure assignments are not matched with corresponding revenue assignments (Farvacque-Vitkovic, 2014).

As sub-national governments are increasingly expected to deliver more local services, there is a requirement for major capital and operational investments. Since much of this cannot be met solely through intergovernmental transfers (IGTs), there is an increasing need to explore new funding mechanisms such as debt and equity instruments, private sector investors and other sources of long-term capital. However, sub-national financial management and credit worthiness needs to be strengthened to attract potential lenders and investors (Brockman, 2011).

Fiscal decentralisation, which entails the granting of additional financial resources to sub-national governments, also requires that they are politically, managerially and/ or technically prepared to use them. In a few cases large municipalities such as Manila in the Philippines and Ahmedabad and Vishakhapatnam in India, have been able to tap such funding, providing useful lessons on how this can be further developed. However, the degree to which fiscal decentralisation should be pursued is not obvious. Nevertheless, two general principles do seem to operate universally. First, central government rarely desires to devolve finances. Secondly, if too many functions are decentralised too rapidly and sub-national governments do not have adequate capacity to handle these, they are likely to perform poorly. The table below describes the prevailing pattern of decentralisation for select countries (Farvacque-Vitkovic, 2014).

<table>
<tr><th>Country</th><th>Details of decentralisation framework</th></tr>
<tr><td>Bangladesh</td><td>
<table>
<tr><td></td><td>Sub-national</td><td>Intermediary tier</td><td>Local</td></tr>
<tr><td>Expenditures</td><td>15%</td><td>05%</td><td>10%</td></tr>
<tr><td>Revenues</td><td>02%</td><td>01%</td><td>01%</td></tr>
</table>
Intergovernmental transfers make up 90% of local revenue. This includes transfers made from intermediary to local levels. (Data from 2005). Bangladeshi local governments have very little decision-making authority, even over taxes and services under their responsibility. The district council (a de-concentrated unit at the regional level) must approve all local budgets and local tax and fee rates are set by the central government. The sub-national government share of total spending in Bangladesh is more limited than that of India and Pakistan, amounting to 15% or less. Local governments (Union Parishads, Pourashavas and City Corporations) account for an estimated two-thirds of the sub-national total. Sub-national government own-source revenues in Bangladesh are even more limited than in India and Pakistan. Total sub-national government own sources amount to less than 2% of consolidated public revenues and there is no information on how the sub-national total is distributed across different levels of governments.
Polity – unitary; fiscal devolution – unitary
</td></tr>
<tr><td>China</td><td>
<table>
<tr><td></td><td>Sub-national</td><td>Intermediary tier</td><td>Local</td></tr>
<tr><td>Expenditures</td><td>70%</td><td>20%</td><td>50%</td></tr>
<tr><td>Revenues</td><td>40%</td><td>15%</td><td>25%</td></tr>
</table>
Intergovernmental transfers make up 60% of local revenue. (Data from 2008). Although China remains a unitary political system, the current structure of governance gives a strong feel of fiscal federalism: local governments in China are organised in a four-level hierarchy with each level of government reporting to the next highest level, and they have been given considerable latitude in shaping local policies and managing fiscal resources. About 70% of the entire public expenditure was made at the sub-national levels and over 50% at sub-provincial levels in 2004 (Qiu. 2005[1]).
Polity – unitary; fiscal devolution – federal
</td></tr>
<tr><td>India</td><td>
<table>
<tr><td></td><td>Sub-National</td><td>Intermediary tier</td><td>Local</td></tr>
<tr><td>Expenditures</td><td>66%</td><td>33%</td><td>33%</td></tr>
<tr><td>Revenues</td><td>33%</td><td>30%</td><td>03%</td></tr>
</table>
Intergovernmental transfers make up 90% of sub-national revenue. This includes transfers made from intermediary to local levels. (Data from 2004). State governments in India determine the kinds of services that local governments should deliver and the particular taxes that they may levy (based on recommendations from the State Financial Corporations (SFCs)). The central government has allowed for reasonably significant expenditure responsibility and tax autonomy to be decentralised to local governments in recent amendments to the constitutions. Indian local governments have limited discretion over the taxes assigned to them. State governments exert much control over defining bases and setting allowable rates of tax. Local governments do, however, have reasonable spending autonomy over their own-source revenue where restrictions
</td></tr>
</table>

1 Qiu, Dong. 2005. "China Fiscal Federalism." Central University of Finance and Economics, China.

<table>
<tr><td></td><td>do not seem particularly onerous. This is not the case with transfers. The vast bulk of revenue sharing and grants-in-aid is tied to particular types of spending or projects that the states deem important. In this regard, local governments are better viewed as implementing agencies of the states than autonomous local entities.
Polity – federal; fiscal devolution – federal</td></tr>
<tr><td>Indonesia</td><td>
<table>
<tr><td></td><td>Sub-national</td><td>Intermediary tier</td><td>Local</td></tr>
<tr><td>Expenditures</td><td>35%</td><td>07%</td><td>28%</td></tr>
<tr><td>Revenues</td><td>08%</td><td>5.50%</td><td>2.50%</td></tr>
</table>
Intergovernmental transfers make up 90% of local revenue. This includes transfers made from intermediary to local levels. (Data from 2006). In Indonesia, expenditures have been devolved to sub-national levels to a significant extent. Sub-national government (of which there are 33 provinces, 349 regencies (kabupaten) and 91 cities (kota)) spending makes up about 35% of total public expenditure; and spending by local governments (kabupaten/kota) is about 80% of the sub-national total. The most important local service in Indonesia is education: local governments spend about 35% of their budgets on primary and junior secondary school education. Infrastructure is the next most important with a budget share of around 15%. As in many developing countries, Indonesian tax revenues are very centralised, especially given the level of expenditure decentralisation. Provincial and local government own-source revenues comprise only about 8% of government revenues; and local government own sources contribute just under a third of the sub-national total. The tax on electricity sales is the most important own-source revenue in Indonesia, making up about 20% of the total. Local taxes on hotel and restaurant sales and public health centre charges are also noteworthy; each comprises about 10% of total own-source revenues. Intergovernmental transfers dominate local government revenues in Indonesia, making up at least 90% of the total.
Polity – federal; fiscal devolution – federal</td></tr>
<tr><td>South Africa</td><td>
<table>
<tr><td></td><td>Sub-national</td><td>Intermediary tier</td><td>Local</td></tr>
<tr><td>Expenditures</td><td>49%</td><td>38%</td><td>11%</td></tr>
<tr><td>Revenues</td><td>15%</td><td>03%</td><td>12%</td></tr>
</table>
Intergovernmental transfers account for 95.96 per cent in 2007 (IMF yearbook, 2007; data on revenue and expenditure shares from 2008). The Constitution adopted in 1996 established three separate, interdependent and interrelated spheres of governments: a national government, nine provincial governments and 284 local governments. Each sphere is assigned its own powers, functions and responsibilities. The national government is responsible for managing the country's affairs, and shares responsibility for the provision of basic social services with the sub-national governments. The national government's power to intervene in the decisions of provincial or local governments is defined and limited by the Constitution. Provincial and local government functions consist of exclusive competences and concurrent competences, the latter being responsibilities shared by more than one sphere of government. The provinces are thus mandated to deliver most basic services, including education, health and welfare. Local governments have the major responsibility for certain local services and infrastructure such as water, sanitation, and electricity. In South Africa revenues from services (water, sanitation, and electricity) are responsible for nearly half of the income of local governments. Property tax rates are set by local governments within bounds.
Polity – federal; fiscal devolution – federal</td></tr>
</table>

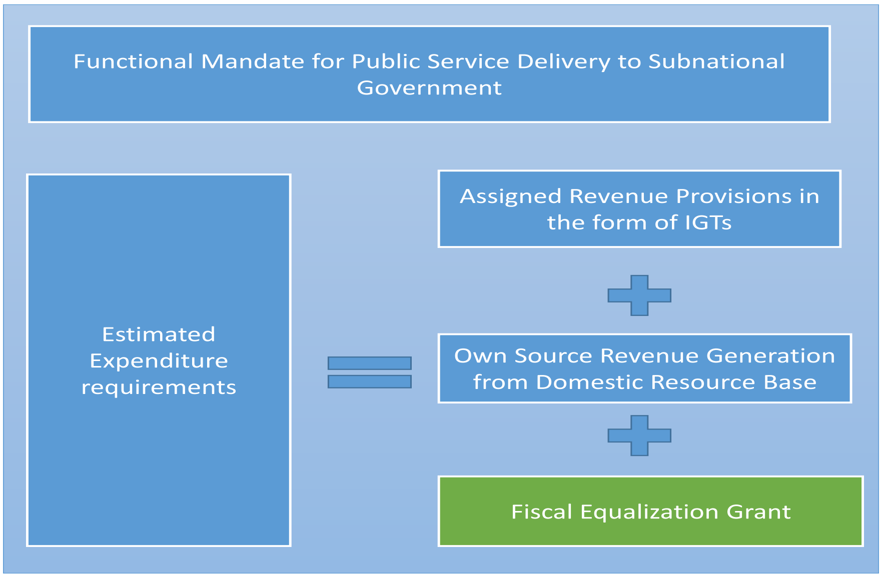
<table>
<tr>
<td>Uganda</td>
<td>
<table>
<tr><td></td><td>Sub-national</td><td>Intermediary tier</td><td>Local</td></tr>
<tr><td>Expenditures</td><td>25%</td><td>20%</td><td>05%</td></tr>
<tr><td>Revenues</td><td>10%</td><td>06%</td><td>04%</td></tr>
</table>
Intergovernmental transfers account for over 90 per cent. (Data on Revenue and expenditure shares from 2007). Uganda has gone through three phases of political decentralisation, the last one in place since 1987. It shows a relatively low level of de-concentration (even if the latest tendencies are towards recentralisation). New laws on territorial organisations (Land Act) and on education have created new districts without financial resources, and the necessary human resources and salaries are not assured. Recently, some viable local taxes have been eliminated and partially replaced with transfers; conditional transfers excessively dominate total transfers. The management of local personnel has been recentralised and the status of the capital city has been modified in order to create a metropolitan authority, whose governing body is appointed by the central government.
Polity – federal; fiscal devolution – unitary
</td>
</tr>
</table>

Sources: (UCLG, 2010; Farvacque-Vitkovic, 2014, Elhiraika, 2007; McLure and Martinez-Vazquez, 2002).

Table 2 Political and fiscal decentralisation characteristics for select countries

Another issue relates to the transfer of fiscal liabilities from a sub-national government. In many cases the liabilities of a sub-national government lie ultimately with the central government. To keep such liabilities low, national or provincial governments enact laws or regulations that limit the amount of debt that the local or sub-national government can accrue. These debt limits can be based on the paying capacity or related to the levels of central transfers. Seldom has project financing alone been used as a base for borrowing (UCLG, 2010).

Figure 3 Financial equation of fiscal devolution



A further issue relates to how sub-national governments fund their expenditure in an autonomous and sustainable manner. Key factors include the extent to which sub-national governments receive grant funding, the extent to which they can utilise local own-source tax revenues, and the extent to which they are free to use such revenues on local services. Underinvestment through under spending is common and exacerbates the problem. At the same time local funding limits will remain a challenge that sub-national governments are likely to continue to have to address (Brockman, 2011).

The main elements of the fiscal framework comprise: the public service delivery obligations and responsibilities of sub-national governments, accompanying expenditure obligations, revenue assignments; legal provisions for OSR and grants and transfers. An effective decentralisation framework needs to address the financial equation through a fiscal equalisation grant which can balance the expenditure requirements for service delivery and the total revenue sources. Imbalances in this equation can manifest themselves as either:

- Vertical imbalances referring to the differences between the expenditure mandates and revenue assignments of the different tiers of government or
- Horizontal imbalances referring to the differences between expenditure mandates and revenue assignments for same levels of government covering different jurisdictions.

2.2 Intergovernmental transfers (IGTs) and grants

Intergovernmental transfers (IGTs) remain an essential building block for sub-national financing since they provide the bulk of revenue in almost all decentralisation contexts and thus undermine the real autonomy of local government. This is not only true for many developing countries where IGTs constitute the largest single source of revenue at around 66% in Uganda, for example, but is equally the case for some OECD countries such as the UK as seen above. Being a prerogative of national government, transfers can be variable and unpredictable, depending on the macroeconomic conditions, the evolving national development agenda and other political factors.

In some countries, such as the Philippines, the local government code prescribes a percentage of certain national government revenues of previous years. These are assigned to local governments and released as the internal revenues allotment. In others, IGTs usually fall into two categories – general purpose untied IGT and specific purpose tied IGT.

- **General purpose (untied) IGTs** are unconditional transfers where sub-national governments have the freedom to exercise discretion on the use of such funds. However in many developing countries where public revenue is constrained, such unconditional transfers will be less common. In order to demonstrate the efficacy of providing local government with greater revenue discretion, even in constrained fiscal environments, the United Nations Capital Development Fund (UNCDF) along with other donor partners has been engaged in a longstanding programme of providing modest unconditional block grants ($5 per capita) to sub-national governments. These are used for local infrastructure provision as well as recurrent funding of service outreach as pilots for national replication with good effect. Examples of this model can be found in countries as varied as Uganda, Bhutan, Timor Leste, Lao People's Democratic Republic (PDR) and Bangladesh.

- **Specific purpose (tied) IGTs** specify the type of expenditures for which grants can be used as conditional transfers that are usually linked to some performance criteria. The capital grant provided by the national government in the form of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) is such an example.

Box 1 India – Jawaharlal Nehru National Urban Renewal Mission (JNNURM)

A reasonably successful pilot programme for incentivising local governments is the JNNURM, which relates central transfers to improvements in local governments. JNNURM is a seven year programme, launched in 2005. It provides substantial central government financial assistance to cities for infrastructure, housing, and capacity development.

Funds are allocated for specific projects in 65 'mission' cities under two components – urban infrastructure and governance improvements, and basic services for the urban poor. Two other programmes are for non-mission cities – small and medium towns' development, and housing and slum development. Total funding is about INR6.6 trillion (US$13.3 million).

JNNURM aims to encourage urban sector reforms to strengthen municipal governance in accordance with the 74th Constitutional Amendment Act of 1992.

- Assistance is provided after the approval of a city development plan (CDP), and the identification of major projects that follow the priorities of the CDP.
- Thirteen specific reforms are mandatory for states and municipalities before funds can be accessed.
- Municipal-level reforms include the adoption of modern accounting systems, improvements in property tax collection, better cost recovery for utilities, and targeting investments to the poor.
- State-level reforms include implementing decentralisation measures, and enacting laws for community participation and public disclosure.
- Funding is provided by national and state governments, and the local government—from its own revenues or through borrowing—based on a formula that classifies cities into three groups according to broad population ranges.

Disbursements were slow to start because of a lack of viable projects. Progress in implementing reforms has also been slow, since it proved difficult to enforce conditionality under a project-based funding approach. The mission has exposed a lack of capacity within local governments to prepare and implement infrastructure projects. However, under the JNNURM and the 74th Amendment, India commenced urban reform. JNNURM needs strengthening and many more resources.

Sources: HPEC, 2011, Shankhe et al., 2010.

Most central transfers remain formula driven and provide no real incentive for local governments to improve performance or increase revenues. Transfers—or at least a component of them—need to be more focused on improving local government performance. They also need to achieve the most 'bang for the buck' by encouraging local governments to increase local resources and leverage those of the private sector. One such example is the Jawaharlal Nehru National Urban Renewal Mission in India.

2.3 Institutional architecture for determination of IGTs

The institutional framework for the quantification of IGTs is often a complex matter. National governments may decide to take up the responsibility of the transfer design or alternatively may delegate this to an independent entity for design and enforcement of intergovernmental fiscal arrangements. Such a body may have decision-making authority or may be purely advisory. The practice of designating an independent finance commission as a responsible agency for the design of transfers is quite prevalent. Such a finance commission can be permanent, as in Australia or South Africa, or can convene periodically, as in India, where independent grants commissions in the states provide fiscal advice on state-local government relations. Since Indian fiscal commissions are advisory, their recommendations may not always be adopted. In one case, in Kerala, nearly all fiscal commission recommendations have been embraced by the state government (see Shah, 1994).

Other forms include intergovernmental forums or federal-provincial joint committees that negotiate the design of the fiscal transfer system. Yet another option is the use of intergovernmental-cum-civil-society committees, with equal representation from all constituent units, chaired by the federal government, to negotiate changes in federal-provincial and local fiscal relations. In Pakistan, for example, provincial-level finance commissions design and allocate provincial-local fiscal transfers. The provincial finance commission awards in Pakistan are based on a revenue sharing rule between the federal government and the provincial governments.

A key question here is how to allocate the portion going to the municipalities. Local governments receive transfers either as formula-based general purpose grants, or criteria based grants linked to population, poverty, or remoteness or some form of performance condition. It is generally considered good practice to transfer resources to municipalities based on a clear formula such as those in South Africa and Saudi Arabia. The South Africa formula is complex and includes general revenue grants, development grants, and an equalisation factor for fiscal capacity differences. The Saudi formula allocates only development grants, while taking into account general needs (measured by population and area) and infrastructure needs (measured by cost of and gap in infrastructure).

2.4 Performance-based IGTs

Performance-based transfer systems are used to promote governance and institutional reforms, including financial management, transparency, and citizen involvement and participation. Nepal's Minimum Conditions Performance Measurements (MCPM) System is a good example of this. The purpose of the MCPM system is to augment grant support to local governments nationwide and to introduce incentives for better local performance and compliance with governance standards, based on 35 measured parameters. These general, unconditional grants are intended to help local self-governments to deliver more public goods and services and respond more effectively to citizens' needs and priorities. The minimum conditions (MC) and performance measurements (PM) are linked to the development grants to bring about better performance in core areas such as planning, financial management, good governance, and transparency. The MCs serve as safeguards to ensure that critical functions (e.g., approval of annual budget and programme on time) of the local bodies are discharged.

2.5 Fiscal equalisation grant

The allocation of expenditure and revenue assignments in a fiscally decentralised context typically leads to horizontal imbalances because of the different revenue capacities and expenditure needs among sub-national governments. At the same time decentralisation structure often leads to vertical imbalances in favour of the central government, as tax revenue sources are seldom as decentralised as expenditure responsibilities. To overcome these imbalances, equalisation grants have been introduced in many places. However, fiscal capacity equalisation can create an incentive for regions to act strategically to influence the size of their grants, leading to inefficiencies in the provision of local public goods.

Box 2 Indonesia – Dana Alokasi Umum (DAU)

In Indonesia the equalisation grant, called *Dana Alokasi Umum* or DAU, has become a key part of the intergovernmental fiscal system. The funding for the DAU consists of 25% of central government revenues after tax sharing with the regions. Ten percent of the DAU goes to the provincial level, which plays a relatively minor role in public services, and 90% to the local governments. In the aggregate, this grant finances some 70% of local government spending and 50% of provincial government spending.

The DAU is distributed according to a formula that takes both revenue capacity and expenditure needs into account. Revenue capacity is defined as potential own-source revenues, plus shared tax revenues, plus 75% of shared natural resource revenues. Expenditure needs are defined as a function of population, poverty rate, land area, and construction cost index as an indicator of geographical circumstances. In addition to the formula allocation, part of the DAU is distributed based on past spending patterns, by and large to accommodate transitory effects that occurred in the 2001 decentralisation.

Source: Freire, 2004

Other incentives can follow a challenge fund type of mechanism, where funds are granted if certain conditions are satisfied. The Philippines Performance Challenge Fund is an example of a recent pilot project that follows this principle.

Box 3 Philippines – counterpart funding

This pilot scheme provides counterpart funding to local governments for capital investment projects. It seeks to rationalise intergovernmental transfers to support good governance, encourage the alignment of local development initiatives with the national government development agenda and priorities, and assist poor local governments in developing and implementing economic development and poverty reduction projects. The grant fund is open to all provinces, cities, and municipalities that comply with the eligibility criteria necessary to secure a Seal of Good Housekeeping. These criteria relate to sound fiscal management—absence of adverse chart of account opinion on their financial statements; and transparent and accountable governance—full disclosure.

Local governments are targeted according to income class or indicators of fiscal need—income or internal revenue allotment per capita, poverty incidence, or classification. Priority is given to low-income local governments, and those with high incidences of poverty.

Source: Department of Interior and Local Government website: www.dilg.gov.ph

2.6 Own-source revenue (OSR) mobilisation

OSR mobilisation and effective management is a key determinant for successful sub-national financing of infrastructure. While IGTs provide the bulk of revenue, there remains a substantial financing gap when it comes to local infrastructure requirements. OSR is thus a key source for meeting some of this gap. It can also be used for leveraging investment through borrowings. As such it is one area that potential investors are keen to examine when considering issues such as the debt repayment capacity of a local borrower.

The size and the socio-economic profile of the sub-national governments will determine the overall OSR potential. The main component of OSR tends to be based on property tax as in the UK but many countries have assigned other taxes such as advertisement tax, professional tax, business licenses and fees. Local or additional income tax is very rarely levied at sub-national level but cases can be found in the United States and Denmark.

By expanding local revenue coverage—the tax or charge base—increasing rates, and enhancing collections, local governments are able to improve their financial standing. This also enables them to borrow. Improved cost recovery provides guaranteed revenue streams against which borrowing becomes possible. But debt financing requires local governments to be more transparent concerning their finances and to demonstrate fiscal stability. Improved creditworthiness and higher ratings are the key. A major source of local revenues in developed countries is property taxation, but its potential in the developing world has still to be maximised. Taxation based on the value of land is best, rather than on what is built on it. If rates are kept low and values assessed at or near market rates, considerable inflation proof revenues can accrue (Brockman, 2011).

If public land assets are not managed responsibly, they place pressure on national governments to finance local infrastructure investment through intergovernmental grants and subsidies. The countries that have taken the lead in intergovernmental land management, like Canada, Australia, and the United Kingdom, have done so with the explicit recognition that sub-national authorities (and the national government itself) must do more to realise the financial value of property assets, in order to reduce reliance on taxes and borrowing to finance infrastructure investment. Under South Africa's Municipal Property Rates Act (implemented in 2005), public property is assessed at market value using the same valuation techniques that are used for assessing private property. Public property owners also must pay property tax, following the same principles as private property owners. Land is valued separately from improvements at market rate.

However, the devolution of OSR has not evolved with as much clarity as the devolution of functional and expenditure mandates, since local governments are often unable to realise the full tax potential because of low institutional and technical capacity and weak political commitment. It is also often felt that some taxes such as customs levies, personal and corporate income taxes, value-added taxes can be collected more efficiently by central government (Farvacque-Vitkovic, 2014). There are two key principles of local revenue management:

- The services that municipalities provide should be clearly linked to the revenue sources needed to finance them.
- Services should be financed by their beneficiaries, 'the general benefit principle', directly or indirectly. The general benefits principle essentially differentiates between private and public goods and emphasises that unlike the private goods, the public goods should be funded by the public money through various forms of taxes. In the case of municipal infrastructure, the source of funding the public services should be predominantly local taxation. This principle helps in realising the true economic value and benefit of the public services and ensures long-term sustainability of public service providers such as sub-national governments.

Studying the structure of local government revenues requires distinguishing between sources of revenues and the factors that affect the level of those revenues, such as the size of municipalities, the wealth of the local economy, and who provides public services. The size of the municipality affects the role of local taxes, compared to transfers from the central government, in total revenues. Smaller municipalities have smaller tax bases and therefore are more dependent on the central government. For small cities of 5,000 or fewer, grants are 91% of revenues; taxes and other sources account for only 9%. In the case of large cities of more than one million, grants account for 45% and taxes and other revenues for 55% (Farvacque-Vitkovic, 2014).

2.7 Revenue authority of sub-national governments

The degree of tax authority provided to local governments, often enshrined in a constitutional framework, is a key factor for enhancing and managing OSRs. This includes authority to augment and diversify the sources of OSR such as to levy and revise tax rates, impose new taxes, and adjust user charge schedules. There are four institutional determinants for OSR enhancement (Farvacque-Vitkovic, 2014) which need to be handled carefully at the policy level through effective legal and regulatory measures. These include authority to establish taxes, to set tax rates, to collect the tax revenue and to allocate the revenue proceeds.

- *Authority to establish local revenue sources*: Here local governments' revenues are defined in the constitution or in fiscal law. The assignment of tax bases (local tax sources) is part of a countries' fiscal framework. In countries with a unitary system (such as France, Kenya, or Morocco), the tax base is defined by the central government. In federal countries (such as Brazil, Germany, and Mexico), revenue assignment authority is shared between the federal and the state governments. In general, local governments have authority to establish non-tax sources (e.g. user charges, fees, licenses, permits) and to set, to some extent, their local taxes (e.g. the property tax and, in some cases, the valuation of the tax base).

- *Setting of tax rates*. Here the authority over tax rates varies among countries. Tax rates are set either by central government or by state government, often within a range of values from which local governments can choose (as in Colombia). City governments have gradually gained greater authority (autonomy) to set their own tax rates and user charges, often with the approval of sector authority (ministry). Tax exemptions or abatements are usually limited by law and are also under city authority.

- *Revenue collection authority*. Here local taxes are collected directly by the local government, or collection is outsourced to higher government entities, peer cities (for example, Amman collects property tax on behalf of four cities), or even the private sector (for example, the case of property tax in Kampala). Central governments may collect local taxes on behalf of local governments and transfer the proceeds to each local government (as for Chile's property tax). Federal taxes shared with local governments are collected by the upper level of government and transferred back based on the origin of tax collections. Many of these processes are determined by political, cultural, or historical practices.

- *Revenue allocation authority*. Generally local governments have autonomy to allocate or spend their revenues freely, but sometimes tax proceeds are earmarked for specific purposes. For instance, in Brazil, 25% of net local revenues must be allocated to education. In Nepal, 75% of general shared tax revenues ought to be spent in development expenditures. Revenues from vehicle taxes are allocated to street and road maintenance in many countries. Revenues from asset sales, fiscal charges on land development, and construction permits are ideally earmarked for specific capital purposes.

- *Valuation*. Particularly in the case of the property tax, valuation is frequently carried out by the higher-level authority to ensure a uniform definition of 'market value' (as in Canada). Alternatively, a higher-level authority may establish a methodology to determine 'market values'.

The case studies mentioned in the boxes below exhibit how the national level regulations and legislations can ensure significant realisation of the OSR potential lying in the hands of the local government to support their local expenditure requirement.

Box 4 Brazil – Revenue raising capability

The 1988 Constitution explicitly defined the division of tax responsibilities between the levels of government. In addition to assigning a specific tax base to each level of government, the Constitution created a system of revenue sharing that redistributes resources among levels of government and geographic regions. The Constitution assigned states receipts from the value-added tax and authorised them to tax automobiles and real estate. Since the value-added tax is the highest yielding tax in Brazil, this assignment gave states much independence, particularly in the wealthy South East. States retained some flexibility to set the rates on interstate sales, subject to the minimum and maximum limits established by the Senate. Municipalities were assigned a tax on services, an urban property tax, and a real estate transaction tax. These are all locally assessed and collected, although the tax on services is subject to a maximum established by federal law.

The 1988 Constitution substantially increased the amount of taxes shared by the federal government. Brazil's revenue sharing system has two main parts: the participation funds and the state value-added tax. The participation funds consist of fixed shares of the federal government's two principal taxes: the income tax and the industrial product tax. Under the 1988 Constitution the federal government is required to transfer 21.5% of the participation funds to the states. Within each group of states, 95% of the funds are distributed among states on the basis of population and per capita income, with poorer states receiving a larger share. The other 5% is distributed in proportion to the area of states, to cover the relatively higher expenditures associated with a dispersed population. The federal government distributes another 22.5% of the participation funds to municipalities, transferring 10% of this amount to state capitals and distributing the other 90% among all other municipalities on the basis of population and the state's per capita income.

Source: Freire, 2010

Box 5 South Africa – Own-source revenue generation driven by national legislation

While municipalities generate about 92% of their own revenues in the aggregate, the experience of large urban centres differs from that of other municipalities. The six metropolitan municipalities, with strong revenue bases, generate some 97% of their own revenues, while municipalities with annual budgets of less than R 300 million generate only 65% of their own revenues in the aggregate. Many poor and rural municipalities generate less than 10% of their own revenues. Most of the own-source revenues of municipalities come from tariffs for utility services such as water, sewerage, and solid waste disposal.

National policy, reflected in legislation, calls for these services to be self-financing. In some cases they generate a surplus, and in others, losses. Much depends on the ability of the served population to pay and the seriousness with which the municipality pursues collections. Many municipalities provide electricity service to their residents, though this function is to be transferred to new regional service entities. This prospect causes concern among municipalities that make a profit on electricity service or that rely on the threat of cutting it off to collect other taxes and tariffs.

The second biggest source of municipal revenues is the property tax, but this tax is available only to local and metropolitan municipalities. With the December 2000 advent of 'wall-to-wall' municipalities, property taxes now may be imposed on essentially all property in the country. This represents a significant expansion of the tax base compared with that of apartheid-era local authorities, which generally included only urban areas. Historically, some municipalities imposed taxes on land value only, though most imposed taxes on both land and improvements, often using different rates. National legislation is expected to soon provide uniform regulations to replace the patchwork of apartheid-era provincial ordinances, but such legislation will leave tax policy decisions largely to local councils.

Source: Paulais, 2012

2.8 Municipal borrowings

Increasing municipal borrowings in domestic financial markets often requires adjusting regulations on borrowing authority and the issuance, registration, and servicing of debt. Market distortions that can lead to a preference for one instrument over another need to be removed. Overall, the regulatory and supervisory framework for sub-national borrowing needs to be strengthened, especially prudential regulations and bankruptcy laws as underdeveloped legal systems can make it difficult for sub-national governments to convince wary private investors to invest in their obligations.

Institutional investors are interested in knowing that the obligations in which they invest are valid and will create enforceable claims against the obligors, based on underlying contracts. Contracts and their enforceability vary according to the legal system under which they are drafted and the transparency, competence, and honesty of the judicial system that enforces them. These attributes of legality and enforceability of contracts, basic to the fair and efficient operation of capital markets, are often undeveloped and weak in developing and transitioning economies.

Legal systems have had a profound influence on fundamental concepts of ownership and creditor rights and consequently on the development of financial markets. There are wide differences in how quickly and how well laws pertaining to investor and creditor rights are enforced. These rights are not inherent in the securities but are determined by law. This can have a profound effect on the ability of countries to establish effective securities markets for debt and equity capital. Laws governing financial markets and securities strongly influence the accessibility and cost of capital for sub-national governments.

Sub-national government borrowing is part of a larger legal fabric that sets the roles and responsibilities of public and private sector entities in the operation of a sub-national government credit market. Several policy issues that have a substantial impact on sub-national government borrowing can be covered only tangentially in this guide. Examples are policies and practices on ownership of public property and property rights associated with such ownership, the structure of intergovernmental revenue sharing, the adequacy and reliability of the accounting standards, regulation of the banking system and other financial sectors, and judicial enforcement.

Government policies on intergovernmental finance and technical and credit assistance to small and unsophisticated jurisdictions affect how markets assess creditworthiness. It is likely that countries with weakly financed and poorly managed sub-national governments will have to forgo direct entry into private credit markets or will need to devise policies to help sub-national governments advance up the creditworthiness ladder.

Sub-national debt also may be incurred by municipal enterprises and quasi-municipal entities created by agreement of existing municipalities or by national or regional legislation. These special-purpose arrangements are of four types:

- Separate restricted funds, accounting arrangements, or special-purpose entities within a municipality, the revenues and expenditures of which are restricted to specific purposes and are separated from the general fund. These entities typically derive their power from the municipalities, although they may have considerable independence.
- Entities created by agreement among municipalities to accomplish a special purpose, such as to provide fire protection across a broad area. Their revenues and expenditures can be separated from those of the organising municipalities. Their powers can derive solely from the municipalities ('joint powers') or through state or national legislation that limits or extends such combining powers.
- Quasi-municipal entities created by state or national legislation to provide municipal services (such as water development, disease control, or transport services) where needs do not necessarily relate to municipal boundaries. Their powers would be described in authorising legislation.
- Public-private arrangements, such as project financing, where governments and private sector entities share in the ownership of projects that usually are built and operated by the private sector partner. These arrangements have been heavily advocated by reformers as a way to re-capitalise projects and make enterprises, particularly public utilities, more efficient.

In theory, such special-purpose sub-national governmental entities might issue limited obligation debt based on their own revenue sources and the ability to borrow against them. In practice, however, issues are more complicated.

In many countries, sub-national governments can assign to creditors their interest in specific revenue streams, such as shared taxes and grants, received from higher-level governments. Called revenue intercepts, these assignments are attractive to creditors because of the promise of predictable revenue streams for paying debt service. Intercepts can be designed to ensure that adequate funds are available to meet debt service payments before they come due (an ex ante intercept) or to be tapped only in the event of a default (an ex post intercept). Another variant is to have a bank 'stand-by' credit facility to advance money should funds not be on hand to meet debt service payments, with that loan then repaid out of future intercept receipts.

In many emerging market economies sub-national governments are highly dependent on transfers from the central government for a major portion of revenues. While these transfers can be volatile, transfer intercepts are attractive for covering debt service payments. As a general rule, if intergovernmental payments are used for pledging, the historic or expected level of transfers should cover the debt service payments by a fraction greater than one.

In the Philippines, cities receive about half of all their revenues and provinces receive about three-quarters of their revenues from intergovernmental transfers from central government. The smaller and more rural the sub-national government, the higher the proportion of transfers to total revenues. In the Philippines, government-owned banks (the de facto required depositories for sub-national governments) have obtained deeds of assignment of transfer payments to cover bank loans. As aid is received, the banks have a right of offset against any loan amounts owed to the banks prior to dispersal for other purposes.

Mexico recently enacted legislation that permits states and cities to sell debt secured by a master trust that holds federal tax participation payments. Payments are made to the trust, which in turn pays out principal and interest to bondholders. Aguascalientes was the first Mexican city to issue bonds under the trust in December 2001. The bonds were sold in the domestic peso market.

Intercepts can also have a powerful impact on sub-national borrowers, especially small and remote governments. The assignment to bondholders of state payments to local school districts (which typically make up over 50% of revenues for the districts) is common in the United States. It is the basis for the high credit ratings enjoyed by local school districts covered by such programmes. As a result of this widespread appreciation of the impact of state assistance and other small-borrower preferences, local schools are among the lowest cost borrowers in the US municipal bond market.

The legal framework for sub-national debt should not discriminate on the basis of the legal form of the debt. The authorisation process, debt limitation, and allowable purposes for issuing debt should be uniform for loans and bonds. The decision of a sub-national government on whether to use loans or bonds should be based on market factors rather than legal factors. The Romanian Ministry of Finance adopted a regulation requiring its approval of sub-national government bond issues (even though the Law on Local Public Finance did not require central government approval) but not bank loans, thereby creating a legal environment favouring loans over bonds. Ukraine, on the other hand, has very different authorisation procedures, amount limitations, and allowable purposes for bonds, loans, and guarantees. In the Philippines loans may be taken for any purpose, but bonds may be sold only for 'revenue- producing' facilities.

Box 6 South Africa – Municipal borrowing

South African municipalities generally understand that borrowing is not a new or separate source of revenue and that borrowed capital and interest must be repaid with revenues from taxes, tariffs, and intergovernmental transfers. The municipalities in South Africa, unlike those in many other African countries, have significant recurring revenue streams available for leveraging. The South African policy on municipal borrowing, as laid out in the government's 1998 White Paper on Local Government and its 2000 Policy Framework for Municipal Borrowing and Financial Emergencies, clearly calls for such borrowing to be based on a market system, with lenders pricing credit to reflect the perceived risks.

Source: Paulais, 2012

2.9 Enabling environment for municipal borrowing

Municipal borrowing constitutes the predominant form of sub-national financing for infrastructure enabling sub-national governments to finance capital investment requirements which are most often forward loaded and lumpy in nature. Municipal borrowing helps to address the prevailing infrastructure deficit found in almost all local governments by shifting the burden of current expenditure into the future and away from grant funding over which local governments have little or no direct control. However, a prerequisite for municipal borrowing is having a sound decentralisation framework in place accompanying OSR assignments. The growth of sub-national/ municipal borrowing will, however, be contingent on the development of a mature and liquid domestic credit and capital market.

Municipal Borrowing can be categorised based on the source and type of access to funds where most borrowing is either directly from the local credit markets comprising commercial lending institutions as well as specialised financial institutions (banking or non-banking) or from the capital markets through bond issuance and other debt/fixed income security issuances.

Box 7 Philippines – Bank credit flow enhancement

The local government code of 1991 appeared to open several avenues for local governments to access credit from banks and 'other similar forms of credits' as well as bonds and 'other securities.' Local governments can use credit financing for both liquidity and capital projects. Initially, the Philippine National Bank and the Landbank were the largest providers of credit to local governments. After 1995 lending accelerated for the Landbank and the Development Bank of the Philippines, in part because of the rapid withdrawal of the Philippine National Bank from the local government credit market following the bank's privatisation. Today the main sources of non-donor-based credit financing is from the Landbank of the Philippines and the Development Bank of the Philippines, and two specialised on-lending institutions, the Local Water Utilities Administration and the Municipal Development Fund.

The Local Water Utilities Administration channels development assistance to local water supply projects and has offered long loan terms matching development assistance loans. Loans from government financial institutions are equal to 40% of their deposits with these banks, although the share varies. Thus at first glance it appears that the banks value local governments more for their depository relationship than for the ability to earn returns on lending. The government financial institutions use the depository relationship and government reporting to create credit and investment instruments. Credits for capital projects are based on the IRA and revenue flows of local government rather than on the revenue flows of the project. This arrangement ensures that short-term credit facilities are tied to future budget releases allowing local governments to draw funds in advance of revenues. This also enables local governments to arbitrage on interest rates and on financial reporting by, for example, granting loans secured on their deposits and earning spreads on their investments while still reporting high deposit balances. These practices help the government financial institutions manage the risk of lending to local governments, while enabling local governments to venture into commercial borrowing and financing of capital projects.

Source: Freire, 2004

While potentially there is an extensive array of domestic sources of credit, ranging from direct loans from central government or agencies, state-sponsored specialised loan funds, to nationalised as well as private banks and domestic and international security markets. In reality, however, the source of funding is constrained by prevailing laws, regulations and controls as well as the risk appetite and perception of lenders and investors, private sector capacity and finally market-imposed limitations. In some cases sub-national governments may be precluded by law or practice from borrowing in the private sector, or they may have nominal access but little interest in their securities.

As already mentioned, to leverage on the potential credit facilities available to sub-national governments in an effective manner, a key prerequisite is to have a sound domestic credit market for local currency based financing in place. It is also important to build investors/lender confidence by mitigating risk perceptions through effective legal and regulatory frameworks and, simultaneously, to strengthen sub-national governments to be able to determine the need for and mechanism to access market funds and enter into legally enforceable binding commitments in line with their repayment capacity. Underdeveloped legal systems and weak regulations accentuate the risk perception of wary lenders and investors. Increasing sub-national borrowing from domestic financial markets will need substantial regulatory adjustments to borrowing authority and the issuance, registration, and servicing of debt by ensuring prudent regulations and bankruptcy laws are put in place.

Box 8 South Africa – Legal framework for municipal borrowing

South Africa's government set out a clear vision for a legal framework for municipal borrowing in its 1998 *White Paper on Local Government* and its 2000 *Policy Framework for Municipal Borrowing and Financial emergencies*, although not all the policies described in these documents have yet been enacted into law. The most important legislation is the Municipal Finance Management Bill which has three key parts:

- *Finance management*. Regulating the budgeting, accounting, and financial reporting of local governments, requiring clear and consistently formatted information about municipalities' financial condition. This information should facilitate municipal borrowing by enabling lenders, rating agencies, and other players to make investment decisions more quickly and efficiently.
- *Borrowing*. Regulating short and long-term municipal borrowing and implementing elements of the government's policy framework that relate to borrowing. Key provisions of the bill limit short-term borrowing to cash flow management within the financial year; long-term borrowing to financing property, plant, and equipment; and allowing municipalities under certain conditions, to pledge assets and future revenue streams to secure debt. A constitutional amendment paving the way for these security provisions was adopted by Parliament in November 2001.
- *Financial emergencies*. Creating a process, including an agency within the National Treasury, to deal with municipalities in financial crisis, implementing the financial emergency provisions of the policy framework. The goal being to restore a municipality to financial health as soon as possible while balancing the interests of citizens, the municipal council, creditors, and other stakeholders.

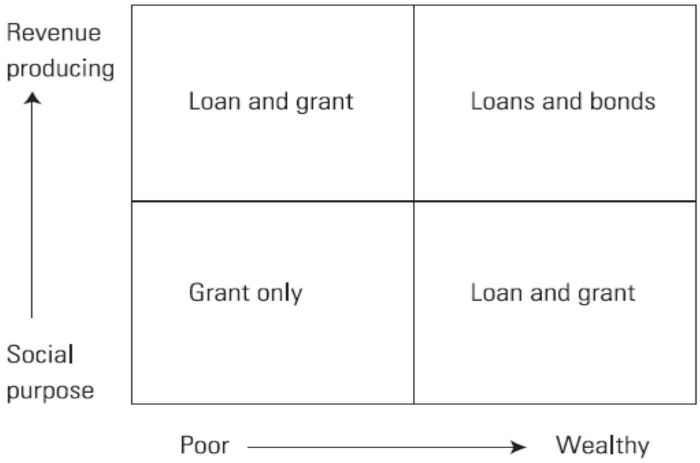
While it remains to be seen whether the provisions of the bill, once enacted, will provide a framework that is sufficiently robust and efficient to build investor confidence in municipal debt, the bill is an important step towards putting in place a sound regulatory framework that will stimulate local borrowing.

Source: Freire, 2004

Both policy reforms and improved market practices need to be implemented simultaneously for ensuring growth in the sub-national credit market. From the supply side perspective, a successful sub-national credit market must be developed both from the top down by building a legal and policy framework to support efficient credit market operations, and bottom up, by accumulating practical experience of lenders in making loans and of sub-national governments in borrowing and debt servicing. The level of maturity of the domestic capital market is thus a key determinant of the success of: a) sub-national credit market structure, regulation and operation; b) disclosure and financial reporting; c) evaluating, monitoring and assisting sub-national governments; d) sub-national debt instruments; e) restrictions on issuance and use of sub- sovereign debt.

Box 9 Philippines – Sub-national financing

The following schematic from the Philippines depicts sub-national financing strategies in two primary dimensions: a sub-national government's wealth and the revenue generating potential of the proposed investment. For the smallest and poorest sub-national governments that need to finance non-revenue producing facilities, grants are the preferred means of assistance (lower-left quadrant). For sub-national governments with adequate wealth and self-supporting projects, access to bond markets was the preferred financing mechanism for larger projects, with commercial bank lending at commercial rates with no grants or subsidies for smaller but commercially viable projects (upper-right quadrant). Since bank lending to sub-national governments has been dominated by government financial institutions, an added dimension is to move from government financial institution lending (the loan and grant quadrant) to private credit sources (loans and bonds quadrant). Government financial institutions should facilitate the move to private capital as sub-national governments grow stronger and projects become self-financing.



Source: Freire, 2004

Here, national governments will have to focus on developing an enabling policy framework and institutional approach for strengthening sub-national governments and enhancing their creditworthiness. National governments need to undertake policy reforms and financial strengthening initiatives to support small and unsophisticated jurisdictions as they will need direct sovereign support to be able to access credit markets.

2.10 Sub-sovereign credit ratings

Credit Ratings are of prime importance for sub-national governments to be able to have sustainable access to capital markets and other sources of sub-national borrowing. Credit ratings provided by professional international credit rating agencies provide an objective assessment of the creditworthiness and bankability of sub-national governments and their fund raising mechanisms. This assists investors in assessing risk and comparing this against their investment portfolio's risk capacity. In some countries such as India, credit rating is mandatory according to national level capital market regulations, in other countries credit rating may only be a preference rather than an obligation. Mexico indirectly penalises sub-national borrowers that do not have a credit rating by levying a higher premium on the cost of capital.

The importance of credit rating emanates from the fact that it assesses past performance and forecasts future financial and operational performance with a degree of objectivity and reliability so as to provide a clear picture of the strength of the borrower and the ability to meet repayment obligations in future years. In order to ensure the adoption of credit rating as a prerequisite to access market sources, credit rating of sub-national borrowers needs to be made mandatory by the capital market regulator.

Mexico’s treasury introduced new bank regulations in late 1990s to enhance transparency in credit and capital markets in a pursuit to devolve more responsibilities and enhance accountability of the sub-national governments to manage their own operations. The regulations require the banks to earmark capital reserves based on the risk weighted credit exposure (as measured by the independent credit rating agency). The ratings of the sub-national governments are then benchmarked against the central government’s credit rating and the earmarking of capital reserves is based on the variations between the ratings of the two in a proportionate manner.

This regulatory mechanism while on one hand ensures thorough pre-lending due diligence, on the other hand also indirectly penalises the sub-national borrowers by asking the banks to reserve a higher quantum of capital which eventually translates into a higher risk premium being charged to borrowers through higher interest rates. As a result of this regulatory initiative, more and more sub-national governments in Mexico are adopting commercial borrowing practices while undertaking reforms to enhance their creditworthiness. This mechanism has gained momentum in the realm of financing large infrastructure investment projects where premiums have a major impact on overall project financials. Over the years this has helped Mexican government in progressing towards a new credit culture and removing the national government from the credit relationship between sub-national borrowers and lenders.

SECTION 3

Sub-national infrastructure financing instruments and mechanisms

3.1 Current practices

Given the almost universal context in which sub-national governments across the world face major funding constraints in terms of being able to deliver their mandates and cater to expanding demand for services, there is increasing interest from governments at all levels to explore new ways of raising funds for infrastructure and services. A number of local governments have therefore resorted to sub-national borrowings within legally permissible limits as one of the preferred modalities in many countries including India, Philippines, Sri Lanka, Indonesia, South Africa etc. Most sub-national borrowing is for short and medium term loans and most often, but not exclusively, for projects of a more commercial orientation. Such borrowing is most often restricted to public sector banks given the prevailing banking conditions of many developing countries. There are very few instances of long-term loans of more than 10-15 years being raised from domestic credit or capital markets.

The most common form of sub-national borrowing in this context has been from state owned local/municipal development funds which are typically supported by multilateral and bilateral development agencies. The mandate of these funds may vary from direct project financing to credit enhancement as well as technical support for project development with varying geographical and administrative coverage. This ranges from countrywide, such as in the case of the Local Loans and Development Fund open to all local government in Sri Lanka, the Municipal Development Fund in Bangladesh to province or state wide such as the Tamil Nadu Urban Development Fund in India. In a few cases, sub-national governments have also floated municipal bonds (taxable as well as tax-free) such as Ahmedabad, Tamil Nadu in India and Philippines. The role of international funding agencies such as the World Bank, Asian Development Bank, African Development Bank, KfW Development Bank, USAID, JICA, IFC etc. has been critical in the process of establishing institutional structures and systems for transitioning from grant based to sustainable returnable capital mechanisms.

Another major sub-national source of financing has been private sector investment which has been explored by the majority of developing countries in varying forms contextualised to address the local issues and challenges. This section will discuss these instruments in brief to highlight the current trends of sub-national financing for urban infrastructure in developing nations.

3.2 Municipal borrowings

Urban infrastructure development funds

Since the early 1980s, many countries have adopted the model of establishing a Local/**Municipal Development Fund** (MDF) as an independent or quasi-government institution to channel borrowings and grant aid from various sources including international funding agencies, development partners and market sources. Examples of this model exist across countries in Asia and Africa in various different forms and can be found in India, Bangladesh, Sri Lanka, Kenya, Philippines, Indonesia, Argentina, Colombia etc. Almost all MDFs provide financial and technical assistance to mostly municipal local governments for infrastructure and service delivery along with some handholding support for project implementation and select reforms. This model of financing has helped to enhance private sector participation in infrastructure by developing bankable PPP projects, reducing political interference and establishing a more responsive local government capable of raising and deploying funds from sub-national sources.

The MDF model is an effective intermediation mechanism and helps to define efficient linkages between the funding needs of a sub-national government and available funding from capital and credit markets as well as private financing sources. The institution that undertakes this intermediation role may choose to support sub-national governments on a stand-alone basis or on a pooled approach by aggregating the needs and investment requirements of neighbouring sub-national governments to realise economies of scale, raise funds at competitive rates and then manage them locally. There are many design alternatives for intermediation of multi-site urban infrastructure investment programmes. Four categories of design choice merit particular attention here:

- The type and scale of investment works that will be built: ranging from neighbourhood footpaths or public latrines to major road construction or citywide water supply and drainage systems.
- The process of priority-setting for subprojects: may be set at central level by ministries or other agencies, at municipal level through capital planning or other means, at community level through participatory processes leading to community-driven demand, or through combinations of these.
- The financing mechanism from central to local and subproject level: determining how funds flow through different tiers of government and how they will reach end users through specific purpose performance linked grants, block grants, loans (market rate or subsidised), or a mix of these.
- The legal and institutional character of the intermediary and oversight institutions: which may be part of central government, independent, or a for-profit financial institution, organised as a single central organisation or as a decentralised collection of local institutions.

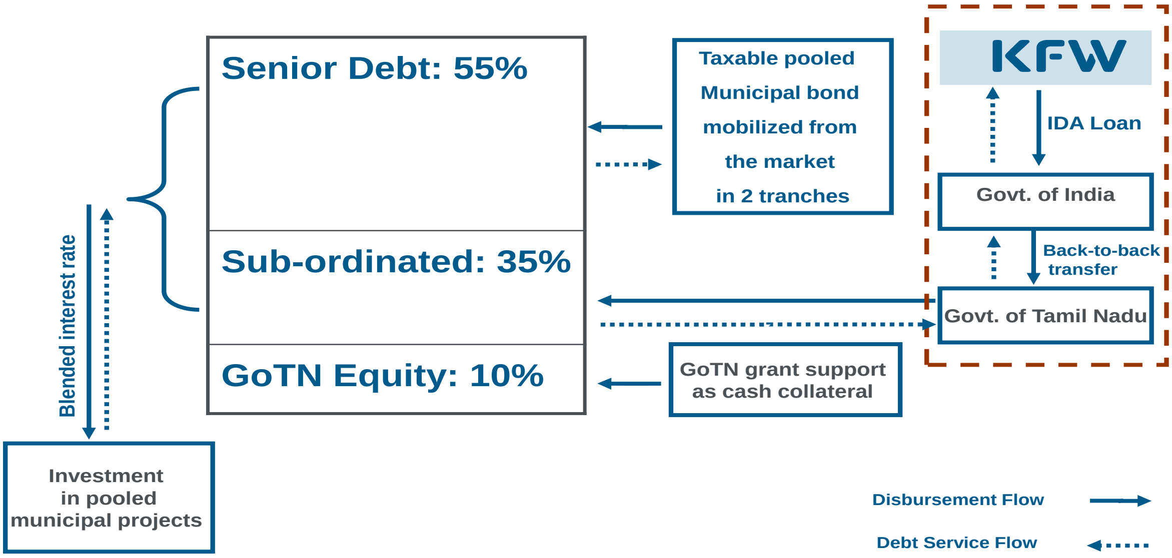
Given these variations one can see that MDFs range from being credit institutions that on-lend for large projects or institutions that primarily support smaller more ad hoc lending of local government as in the case of the Local Loans and Development Fund (LLDF) in Sri Lanka. The coexistence of models is an outcome of the variation of sub-national borrowers and decentralisation frameworks within which they function. The section below describes some of the variants that have been operating successfully in different contexts:

Tamil Nadu Urban Development Fund

The Tamil Nadu Urban Development Fund (TNUDF) was established as a trust in 1996 under the Indian Trust Act with the objective of catalysing infrastructure development by raising and deploying funds efficiently through TNUDF as a state (higher sub-national) financing intermediary. TNUDF is governed by Tamil Nadu Urban Infrastructure Trustee Company Ltd (TNUITCL) and is managed by Tamil Nadu Urban Infrastructure Financial Services Ltd (TNUIFSL) as a PPP between the Government of Tamil Nadu (with a 49% stake and three leading national level financing institutions (HDFC Bank, ICICI Bank and Infrastructure Leasing and Financial Services Ltd.) with a cumulative 51% stake. Since its establishment it has raised a significant amount of funds (to the tune of US$1,200 million) from international funding agencies, primarily the World Bank, KfW Development Bank and

JICA. TNUDF has also pioneered the concept of pooled infrastructure financing in India through its Water and Sanitation Pooled Fund (WSPF) Trust which raises funds by issuing bonds linked to a Master Financing Model with subordinated debt support from KfW of around 35% of total funds raised by TNUDF as highlighted below.

Figure 4 Master financing mechanism by TNUDF



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Source: KfW, 2014

Local Government Unit Guarantee Corporation (LGUGC), Philippines

The LGUGC has played a major role in stimulating the local municipal bond market in the Philippines. It was established as a commercially based financial services company registered in 1998 with 16 owner banks represented by the Bankers Association of the Philippines. The national incorporation law provided the basic operational framework for LGUGC while a separate trust document governs the guarantee support to bondholders and investors and defines legal recourse modalities between LGUGC and bondholders giving all guaranteed bond holders a beneficial interest in LGUGC's reserves, which are deposited in a trustee bank. The trust agreement defines contingent liability limits as well as the guarantee ratio with guarantee support provided as a direct insurance of the periodic bond service payment obligations of the bond issuers (local government units LGUs) including both the principal and interest payments.

LGUGC typically pledges its paid-in revenues to provide repayment guarantees to bond holders and has also been able to obtain complementary support from USAID through a co-guarantee agreement. LGUGC's policy decision was to have a target of broadly 10:1 for the total insured outstanding debt to the corporation's capitalisation to avoid future capitalisation and liquidity related problems. LGUGC is one of the few examples of a credit enhancement mechanism being developed and implemented indigenously through a commercially based and professionally managed guarantee company supported by government, the domestic financial community and international funding agency. The role of the LGUGC considerably mitigates the risk perception of the bond investor and reduces the problems normally associated with regular monitoring of credits by creating a homogenous volume of less risky debt in the market. (Lindfield, 2012)

Financiera de Desarrollo Territorial – Territorial Financing Institution (Findeter) Colombia

Findeter has played a critical role in developing an active sub-sovereign debt market in Colombia by establishing a mechanism which has helped to attract a large number of commercial banks to enter the municipal debt market. Findeter was established as a financial institution in 1989 and started operating in 1991 with a majority shareholding by the Government of Colombia. It primarily functions as a secondary financing institution for sub-sovereign debt financing of municipal infrastructure by discounting the loans which commercial lending institutions and banks provide to sub-national entities. Any sub-national government/implementation agency may develop a proposal to submit to the commercial banks for infrastructure financing. Project appraisal is undertaken by Findeter which then recommends to the bank/primary lender, which in turn will authorise the loan. Findeter will then offer a discounted loan to the primary lender.

The sub-national borrower repays to the primary lender who in turn repays to Findeter at a discounted interest rate. However, the two repayment mechanisms are completely delinked and independent of each other so that the entire credit risk is placed on to the primary lender who has to undertake thorough due diligence and appraisal and ensure funding only for viable infrastructure projects. This mechanism differentiates Findeter from similar pooled or municipal fund mechanisms which provide direct lending support to the sub-national borrowers. An important credit enhancement feature both for first-tier lenders as well as Findeter is a voluntary intercept provision. This requires a municipality to 'voluntarily' set up a special account into which intergovernmental revenue sharing payments can flow. (Lindfield, 2012)

Infrastructure Finance Corporation of South Africa (INCA)

INCA was established as a privately owned debt fund in South Africa to provide much needed liquidity to domestic capital markets for infrastructure financing by supporting the municipal bond market through capital injection. INCA was established at a time when many of the larger institutional investors were exiting from municipal debt provision with serious negative consequences on the liquidity of the municipal bond market. INCA's establishment helped to soften this impact by taking over the loan portfolio of those large investors that were moving out of the municipal debt market while also taking up the task of closely tracking municipal credits unlike the large institutional investors. It also brought in a multi-tranche capital structure providing more security to the senior debt which enhanced the credit rating of both INCA and the debt securities.

A key reason for the financial success of INCA has been its ability to maintain a reasonable margin between its cost of capital and the lending rate of interest (or the rate it can earn on discounted outstanding bonds). INCA senior bonds started at 180 basis points above South Africa Sovereigns when they were first sold in the domestic debt market in 1997 as compared to 100 basis points earlier in the decade, along with a general decline in interest rates. The junior debt appears to be placed with donor institutions at concessional rates to encourage INCA lending to less creditworthy borrowers without upsetting the capital adequacy pledges of the senior bond holders.

Local investment funds in Sub-Saharan Africa

In many Sub-Saharan countries, local investment funds are being established by central governments with the intention of channelling external aid from international development partners and funding agencies through such funds which can also function as credit enhancement mechanisms. Such funds include:

Type of fund	Country	Name of fund	Source of fund
State owned funds	South Africa and other South African Development Community countries	DBSA	Capital markets
		INCA	Donor loans and own sources
Active municipal borrowing mechanisms	Tunisia	CPSCL	Donor loans, capital markets and own sources
	Nigeria	UDBN	Sovereign donor loans and capital markets
	Morocco	FEC	Commercial banks, capital markets and own sources
Investment funds	Senegal	ADM, ADL	IGTs and own sources
	Cameroon	FEICOM	IGTS, own sources and external lines of credit
	Kenya	LGLA	Donor loans, IGTs and own sources
	Ghana	DDF	Donor loans, IGTs and own sources

Source: Paulais, 2012

Table 3 Local investment funds in Sub-Saharan Africa

Most of the funds mentioned above are heavily dependent on loans from donor agencies with USAID supporting Morocco and Tunisia, and the World Bank supporting Senegal and other countries in North and East Africa. However, these local investment funds have faced the challenge of narrow and stagnant local municipal credit markets which has hindered their growth and evolution as borrowing mechanisms. The dependence of these funds on external loans undermines their long-term sustainability given the lack of local capacity to take the initiatives beyond their loan based financing work.

Indonesia Infrastructure Guarantee Fund (IIGF)

The IIGF was established in 2010 with World Bank’s support and operates as a ‘single window’ for the processing and appraisal of guarantees provided to infrastructure subprojects. IIGF is expected to improve the quality of PPPs by establishing a clear appraisal framework for guarantees. The IIGF employs various types and structures of guarantees back-stopped, as necessary, by the IIGF balance sheet, the Government of India (GOI) balance sheet, the International Bank for Reconstruction and Development (IBRD) Guarantee and Credit Facilities, any other multilateral agencies/financial institution guarantees or credit facilities, or a combination of these. This ensures complete operational flexibility in providing guarantees for infrastructure subprojects.

The main role of IIGF is to:

- Test market appetite for guarantees and market IIGF guarantees
- Screen infrastructure projects for eligibility to receive IIGF guarantees

- Review the adequacy and quality of project feasibility studies and related documentation, as well as project specific attributes as inputs into the guarantee process
- Ensure; that infrastructure projects are appraised in accordance with IIGF appraisal guidelines
- Provide feedback to projects seeking IIGF guarantees in the event the request for guarantee(s) is rejected
- Monitor and supervise PPPs supported by the IIGF
- Assist in the overall coordination of processing the GOI's guarantee programme with private sponsors, and IBRD (in case IBRD Guarantees are provided).

IIGF Guarantees have undoubtedly improved the status of financing sub-national infrastructure in Indonesia by leveraging private investors through suitable PPP arrangements, concessions or other contract modalities. IIGF Guarantees focus on reducing the risk associated with sub-national project financing, thereby attracting private investment and increasing competition among potential bidders. The lower degree also enhances the potential projects' credit ratings, which, in turn, reduces the cost of project debt and lengthens the maturity of available financing. The lower cost of debt also reduces the dependency on government financing for infrastructure projects, and ultimately translates into tariff benefits for consumers. The higher ratings of project debt may allow some projects to issue bonds on the capital markets, including local markets, therefore contributing to the development of Indonesia's capital markets.

InfraCo

InfraCo Ltd is an infrastructure development company (with a focus on Sub-Saharan Africa and Asia) specifically established to provide infrastructure financing for projects in developing countries. It was established in 2010 and was designed to assume the risks and costs of early stage project development in areas where many traditional developers have been absent, adding value by leveraging in additional investment. It initiates the development of innovative ventures from an early conceptual stage, secures in-principle commitments from providers of finance, and subsequently offers structured investment opportunities to private sector investors.

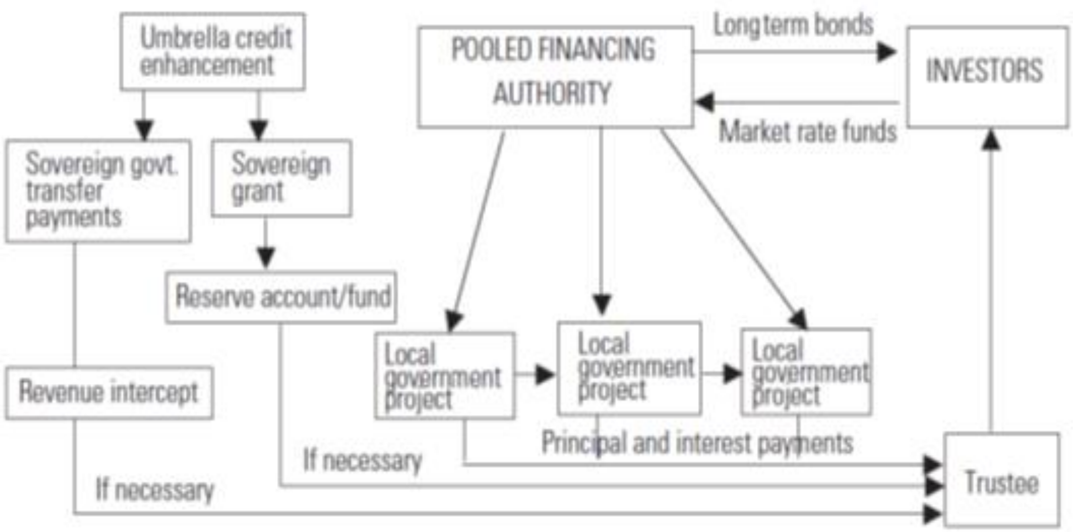
By managing the entire project development process, InfraCo is involved with all phases of project development such as feasibility assessment, project structuring, etc. InfraCo clearly addresses a gap in the private market. There are few reputable and professional private sector infrastructure developers working in Sub-Saharan Africa and Asia and even fewer focusing on the types of innovative projects. Most donor-financed support for developing privately financed infrastructure projects in developing countries goes to help governments design and manage PPP transactions like IFC, Public-Private Infrastructure Advisory Facility (PPPIAF) etc. While these initiatives are valuable, they complement rather than duplicate the work InfraCo does under its 'developer as principal' model.

3.3 Pooled financing approach for urban infrastructure – Water Sanitation Pooled Fund of Tamil Nadu, India

The key premise to adopt a pooled financing approach emanates from the need to address the investment requirements of small sized urban local bodies (ULBs) which do not have adequate creditworthiness on a stand-alone basis in the market to undertake market borrowing and investment requirements are signification to be just dependent on grant aid from various sources.
To provide long-term support to ULBs in Tamil Nadu, TNUIFSL (the fund management company for TNUDF) established a Pooled Financing Mechanism by establishing a Water and Sanitation Pooled Fund Trust. Here, the scheme pools the investment requirements based on the infrastructure priorities of all small and mid-sized ULBs, that could not otherwise raise funds on their own due to capacity and creditworthiness issues, and assists them in providing access to capital markets and investors for raising long-term funds at an affordable cost of capital.

Through this approach the scheme aims to realise economies of scale for the combined borrowers while making the fund quantum to be a significant amount from a supply side perspective. The scheme includes guarantee mechanisms in the form of guarantee funds provided jointly by the central and state government through the National Pooled Finance Development Fund (PFDF) Scheme of the Government of India as well as partial risk guarantees by international funding agencies such as USAID. The credit enhancement support also includes intercept mechanisms based on prior calculation to cover the debt repayment obligations.

Figure 5 Pooled financing mechanism in Tamil Nadu



Source: Krishnaswamy 2009

The Pooled Fund concept has also been adopted by the state of Karnataka in India through a similar set up in the form of the Karnataka Water and Sanitation Pooled Fund (KWSPF) which was established as a trust and managed by the Karnataka Urban Infrastructure Development Finance Corporation (KUIDFC) which is a Public Financial Institution (PFI) owned by Government of Karnataka. The details of the terms of issue of the bonds raised by WSPF, Tamil Nadu are given in the table below:

Maturity	15 years
Put or call option	After 10 years
Redemption	In 15 equal annual installments
Interest payment	Annually on diminishing balance
Face value of bond	Rs 100,000
Credit rating	AA (SO) by Investment Information and Credit Rating Agency; AA (SO) by Fitch Ratings
Guarantee	50 percent of the principal guaranteed by USAID; the government of Tamil Nadu to top up shortfalls through interception of transfers
Debt service reserve fund	Rs 6.90 crore to be invested in highly secured and liquid investments

Note: SO indicates structured obligation.

Source: Krishnaswamy 2009

Table 4 Terms of issue of the bonds raised by WSPF, Tamil Nadu

It is worth noting that these pooled financing mechanisms have been utilised to raise funds from multiple sources depending on a demand-supply assessment after considering the most cost efficient transaction modality. KWSPF and WSPF Tamil Nadu have both raised funds from commercial lending institutions and nationalised banks as well as by raising municipal bonds for a specific pool of pre agreed projects developed to an advanced stage. The importance of the state intercept mechanism, partial risk guarantee by international funding agencies and national government's support in establishing a bond/debt service reserve fund, have proved to be of prime importance in ensuring that transactions have been able to secure an investment grade credit rating.

3.4 Sub-sovereign hybrid financing – Burkina Faso

There are hybrid models of sub-national financing that have been tried in locations such as Burkina Faso – wherein a mix of various grant and debt instruments are used to finance an infrastructure project. The instruments may include concessional, long-tenor loans, performance linked grants, quasi-equity instruments etc.

The capital city of Burkina Faso Ouagadougou undertook a new sub-sovereign hybrid financing model in 2006 to finance the redevelopment of the city's central market. Based on the detailed technical, financial and economic feasibility, along with the detailed analysis of the city's finance and accounts, it emerged that capital grant support would be required for financing the project and ensuring its viability. Consequently, the capital structure comprised a EUR2 million loan and EUR3.5 million capital grant. The loan was based on a variable interest rate linked to the Euro Interbank Offered Rate (Euribor) less 186 basis points for a 20 years repayment with a 5 year moratorium period. The grant component was utilised to develop those fractions of the market which had low revenue generating potential and the receipts were expected to be very low. The loan service security was ensured through a dedicated escrow account opened up by the city and proceeds were escrowed.

3.5 Municipal bond issuance – Lagos

Lagos state committed to a US$1.85 billion bond issuance programme between 2008 and 2010 to meet the requirement of growth enhancing urban infrastructure including roads, public transportation, water and electricity utilities, special economic zone development etc. The bonds were issued in three tranches and all were over-subscribed. Only institutional investors and qualified buyers were allowed to purchase bonds because of the favourable conditions as compared to sovereign debt – income tax exemptions and fixed interest rates. The state of Lagos established a dedicated bond service reserve fund underwritten by dedicated local resources including OSRs. The state was rated AA (national) by Fitch ratings.

3.6 Own-source revenue from land/asset based financing

Land assets owned by sub-national governments are an important ingredient of financing in most developing countries. Land is generally the most valuable asset on sub-national borrower's balance sheet and is often used in multiple ways. Direct land selling by sub-national governments is the clearest example of capital land financing. There are other instruments for converting public land rights to cash or infrastructure including land pooling approaches adopted for regional economic development and urbanisation. In many cases land is used as collateral for borrowing, a practice that has a long history of financing urban investment. Today, land is often the most important public contribution to PPPs that build metro (subway) lines, airports, or other large infrastructure projects[2] in addition to urban development and affordable housing.

In addition to land itself, development rights over land or land parcels allowing for more intensive development and use through higher Floor Space Index (FSI) or higher Floor Area Ratio (FAR) represent strong incentives for leveraging private investment. Such 'excess density rights' in effect represent the publicly controlled share of privately owned land. These development rights have economic value that can be sold by public authorities, as has happened in cities such as Mumbai (India), Sao Paulo (Brazil), and in many cases in the United States.

Another example of leveraging private finance through the pooling of land as an asset to achieve a larger scale site area for change of land use from low value industrial to high value mixed use is the case of the Nine Elms project in central London. This project has entailed the establishment of an innovative partnership between two local authorities (Wandsworth and Lambeth) and 12 land owners coming together to promote new mixed use development encompassing high end residential, commercial as well as affordable housing on a single 200 hectare site. The pooling of land in this case has achieved a sufficient scale of operation to enable the two sub-national governments to benefit from a major injection of private funding that will lead to a substantial increase in property values and hence taxes over the medium term. Moreover, the property tax uplift has been calculated over a 20 year period and used to leverage substantial additional benefit of around £1 billion for investments in public infrastructure such as a new metro transport link to the site.

In the past few years, land-based financing of urban infrastructure has taken giant strides forward. However, most of the initiatives have advanced in ad hoc isolation, without the benefit of comparative analysis. The amount of revenue generated by land-based financing relative to other sources of financing, like market-based borrowing, has not attracted much attention.

2 World Bank Economic Policy and Debt Department, August 2010

In 2006 and 2007, the Mumbai Metropolitan Regional Development Authority sold at auction two medium-size land parcels in Mumbai, India. Fewer than 13 hectares of land were sold for the equivalent of about US$1.2 billion. The proceeds from this land sale were targeted primarily to transportation infrastructure investment in the metropolitan region. Revenue from the land sales amounted to more than five times the annual investment budget of the Mumbai Municipal Corporation and about 3.5 times the total value of municipal bonds that have been issued in all of India over the past 12 years, despite intensive efforts by international organisations to develop the municipal bond market as a source of infrastructure finance.

In May 2007, a two-day auction of land in areas designated for new city development outside of Cairo generated US$3.12 billion in receipts, an amount equivalent to roughly 10% of the annual budget of the national government of the Arab Republic of Egypt and more than 100 times the annual property tax revenues of all local governments in Egypt. Over the past decade, Bogotá, Colombia, has financed 217 municipal public works projects through betterment taxation levied on land-value gains produced by the projects. In all, some US$1 billion of municipal infrastructure investment has been financed in this way.

Location and Activity	Land Financing Amount and Use of Proceeds	Comparative Magnitude of Land Finance
Cairo, Arab Rep. of Egypt: Auction of desert land at urban fringe for new towns (May 2007, 3100 hectares). Seller was national ministry.	US$3.12 billion: To be used to reimburse costs of internal infrastructure, to build connecting highway to Cairo Ring Road, and for general central govt. budget	Proceeds from this one sale equaled 117 times total urban property tax collections in the country; equal to approximately 10 percent of total national government revenue.
Mumbai, India: Auction of land in the city's new financial center (January 2006, November 2007, total 13 hectares) by Mumbai Metropolitan Regional Development Authority (MMRDA).	US$1.2 billion: To be used primarily to finance projects in metropolitan regional transportation plan. Together with revenue from other land sales, is planned to finance the first phase of Mumbai metro system and 23-km bridge across the Mumbai harbor to the mainland.	10 times MMRDA's total capital spending in fiscal 2005; 3.5 times total value of municipal bonds issued by all local urban bodies and local utilities in India in the past decade.
Hyderabad, India: Contribution to private consortium by Greater Hyderabad Municipal Corporation of land surrounding planned metro line and metro stations.	According to contract agreement, (July 2008) a private company was to build the entire metro system in return for the land and concession rights, without cost to government. Over the lifetime of operation the company would return an additional US$270 million (present value) to government.	It appears (as of late 2009) that this arrangement has fallen through, victim of the decline in land values and reduced demand for land development. The private company has been unable to raise the equity and debt (total: US$2.5 billion) necessary to build the metro. It missed payments on the construction bond.
Istanbul, Turkey: Sale of old municipal bus station and former government administrative building site (March-April, 2007).	US$1.5 billion in auction proceeds, said by municipal and national governments to be dedicated to capital investment budget.	Total Istanbul municipal capital spending in fiscal 2005 was US$994 million; municipal borrowing for infrastructure investment in 2005 was US$97 million.
Cape Town, South Africa: sale of Victoria and Albert Waterfront property by Transnet, the parastatal transportation agency (November 2006).	US$1.0 billion, to be used to recapitalize Transnet and support its investment in core transportation infrastructure. Part of proceeds used to finance pension obligations, which in turn strengthened balance sheet and allowed Transnet to borrow from market without government guarantee or subsidy.	Sale proceeds exceeded Transnet's total capital spending in fiscal 2006; equal to 17 percent of five-year capital investment plan prepared in 2006.
Warsaw, Poland Sale at auction of municipal land assets.	Proceeds: Actual 2007, 330 million zlotys (approx: US$110 million). Budgeted 2009, 144 million zlotys. Budgeted as capital revenue within the capital budget.	Land sales in 2007 exceeded municipal borrowing by 20percent. Budgeted revenues from land sales in 2009 were 70percent of budgeted borrowing by city.
China subnational land leasing for financing large-scale urban infrastructure.	According to the China Index Academy, the following cities led the way in land-leasing contract revenues in 2009: Hangzhou (105.4 billion yuan), Shanghai (104.3 billion) and Beijing (92.8 billion).	In Beijing's case, land leasing contract value in 2009 was equal to 45percent of total fiscal revenue.

Sources: First five cases modified from Peterson (2009); information for Warsaw from Kaganova (2010) and Warsaw City (2010); information for China from Xinhua (2010).

Table 5 Land financing mechanisms in developing nations

Owing to the volatile and cyclical nature of land assets, over dependence on land asset based financing for sub-national capital investment funding may pose risks to sub-national capital budgets and hence there is a need of a strong fiscal framework to manage and mitigate such risks. Risk mitigation may take the form of ceilings on land-finance dependence (similar to ceilings on local indebtedness) or encouragement of permanent infrastructure funds that accumulate proceeds from land sales and spread out expenditures over time, according to an infrastructure investment plan. The 'golden rule'[3] of public finance

[3] World Bank Economic Policy and Debt Department 2010

should be applied to sub-national land financing. Capital revenues generated through land sales, like the revenues generated from debt issuance, should be used for capital investment or equivalent purposes. Rules that require revenues from land transactions to be dedicated to investment reduce the financial risk that arises when one-time revenues are used to finance recurring operating expenditures. Such rules also open the opportunity to diversify and augment own-source financing of capital investment.

Deferred land-value payment model (Greater London Authority, 2014)

In the UK there is a growing practice of deferred land payments being adopted as a formal part of a development agreement between a private developer and a local authority or sub-national strategic entity such as the Greater London Authority (GLA) as a means to incentivise private investment in schemes that were otherwise perceived too risky. This model works on the basis of pushing an agreed (market) land development value to be paid by the developer to the sub-national government to a future point, tied to a square metered of floor area developed.

Here, the land receipt is based on an agreed/negotiated market value as proposed by the bidder and then agreed by the sub-national authority and preferred bidder when finalising the master development agreement. When comparing competing bids, the sub-national government will look at the net present value based on a standard discount rate (circa 3%). So for example if one bidder offers a £20 million payment in four years (based on their proposed development schedule) versus £21 million from another developer but not paid for seven years, they have the methodology in place to rank or value the bids.

To capture potential increases in land value from the time the master development agreement/deferred land receipt amount is signed, the Greater London Authority (GLA) has adopted two mechanisms. One is to get an additional payment if the planning permission granted for the site exceeds what was put in the developer's bid to secure the master development agreement. This happened at Silvertown Quays in Newham, where the presumptive floor as indicated in the developer's (First Base) bid has increased from what was approved by Newham Council in the outline planning application. Thus the GLA will receive an additional receipt fixed to a price per square meter of additional developed space (as per the same deferred payment schedule). The second means to capture increases is where the GLA splits the additional profit with the developer if it exceeds the schedule agreed in the master development agreement.

The practice of using deferred receipts emerged out of the recent recession as a tool to get development markets/project financing moving once again. The GLA has adopted this practice as a formal procedure without problems thus far, although there are a number of payments that are in the pipeline (not yet paid) since the development triggers have not yet been reached. The model is complemented by a parent company guarantee from the developer to ensure payment should any project failures arise. The experience of the GLA has been positive thus far. Other local governments however are more cash starved and have tended to agree to take less up front (below market rate) rather than wait for future payments. It all depends on the local authority.

Private sector participation/private financing initiatives

PPPs have been a less significant means of mobilising finance for infrastructure to date in most developing countries. Where PPPs do exist most have happened in sectors such as telecoms, power and expressways, with very few from urban infrastructure. Of those PPPs that have been established many of the concessions have run in to problems requiring renegotiations and consequent losses to the state unanticipated at the time of contract award. The following section talks about the significance of the private sector investments as well as the quality of the PPP engagements in developing countries (Krishnaswamy, 2009)

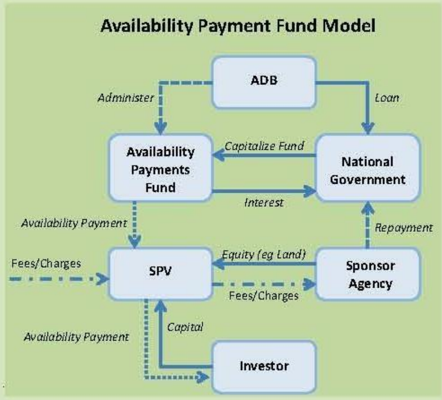
Box 10 Availability payments

Availability Payments

An availability payment is a periodic transfer made to a concessionaire by a public authority for providing an "available" facility. Payments are reduced if the facility is not always available, or not being maintained as agreed. Availability payments eliminate demand and revenue risks and protect the public interest through financial incentives to concessionaires to maintain facilities properly and operate them at a specified level of performance. They offer a number of benefits:

- There is long-term budget certainty for the public owner.
- Payments start at project operation, incentivizing the private partner to complete soonest.
- Private operators are focused on meeting a specified standard of service.
- The public partner has control over user fees or revenues
- Maintenance and future capital renewal and replacement costs are fully funded.
- Cash flows to private partners are more stable than with user fee concessions, thus reducing debt costs.

The ADB financed Climate Public-Private Partnership Fund has adopted the approach and enabled the implementation of environmental and social infrastructure projects by leveraging international and domestic finance.



Source: Innovations in Financing Subsovereign Infrastructure. ADB internal paper. Draft March 2011.

Public-private collaboration lies at the heart of land-based infrastructure finance. In fact, land-related finance may represent the biggest opportunity for private partnerships within the sphere of urban infrastructure investment.

Incidence of PPPs

Evidence from Brazil shows that the share of PPPs in total infrastructure investment was around 57% in 1995–1996, up from 30% in 1980–1985. Meanwhile, the share of PPPs in Brazil as a percent of GDP stays roughly the same, declining somewhat from 1.5% to 1.4%. This increased share of public sector and infrastructure (PSI) is also accompanied by a sharp reduction in public sector spending, declining from 3.6% of GDP to 1%. The share of telecom and power account for almost 75% in both periods, while urban PSI accounts for about 0.07% of GDP or 3% of total infrastructure investment.

In China increases in infrastructure spending are reflected in increasing service levels in 1991–1999 where city based domestic water use has increased by over 75%, municipal waste water treatment capacity by nearly 250%, and city sewer network lengths by nearly 225%. However, PSI has not as yet played a major role financing less than 4% of total investment in water supply and sanitation and with municipalities accounting for over 85% of investments. In any event most of the Chinese corporate investments are through the Chengtou (debt products issued by China's local government).

South Africa has been quite successful in mobilising private debt for urban infrastructure based on limited equity PPPs. The total PSI investments up till 2003 have been quite insignificant at about US$80 million, or much less than 1% of one year's local government spending.

Quality of PPPs

In Brazil most PPP contracts were renegotiated, with water having the highest incidence of renegotiation at 76% of all contracts, on an average of 1.6 years after contract signing. 66% of these requests were initiated by the operator. Further, it seems that renegotiations are linked closely to the practice of price cap regulation. Price cap is a regulatory arrangement embodied in a private contract and considered better adapted to environments with weak institutions not able to manage the information and analytical requirements of rate of return regulation, because all it requires is a price resetting about once every five years. Price caps turned out to be highly vulnerable to contract renegotiations; 88% of the price cap water contracts concluded in the Latin America region was renegotiated. It also appears that a common outcome of these renegotiations under price caps was to agree to decrease the level and pace of investment. 85% of the water projects with investment obligations were renegotiated.

Another example is the Malaysian programme for private investments in sewerage. After a few successful water and sanitation build, operate, transfer (BOT) projects in Malaysia, the government chose to support a national sewerage project, the Indah Water Consortium (IWK). This project arose from concerns over local governments' weak technical and financial capability in the face of poorly maintained facilities and rising demands for better sewerage services. An unsolicited proposal was brought to the government and approved rapidly in 1994. Investments and the level of service improved dramatically in the immediate term.

However, even before the economic crisis in 1997, consumers objected to the tariffs imposed. The tariff structure originally stipulated in the agreements was suspended without compensation for the private contractors, and a new tariff structure was only established in 1997. The economic crisis then prompted further reductions, while the IWK discovered that the rehabilitation needed was more investment intensive than anticipated. As a result, the government felt obliged to provide substantial financial support to IWK, including long-term soft loans amounting MYR 450 million. The economic crisis multiplied the difficulties tremendously, but the problems had already emerged before devaluation aggravated them.

While private participation doubtless brought considerable implementation capacity to the task, they did not resolve the fundamental impediments to making provision of sanitation services a viable financial proposition. The government succeeded in attracting private investment, but the structure of guarantees provided, and the nature of the risks involved in the project were such that both the capital mobilised and the physical achievements of the projects were much less than originally expected with the costs being borne by the state.

SECTION 4

Key inferences

While there are many lessons that can be captured from the experiences to date with sub-national financing of infrastructure, some of the main inferences that arise from the above include:

1. Sub-national investment for urban infrastructure is a critical requirement for supporting and sustaining inclusive economic growth.
2. There is a mounting infrastructure deficit in all cities in developing countries given the rapid pace of urbanisation.
3. The funding gap to meet the sub-national infrastructure investment requirement cannot be adequately addressed through prevailing systems of Intergovernmental transfers (IGTs) and own-source revenue (OSR).
4. Support for urban infrastructure development should place emphasise on economic infrastructure and municipal service delivery as the primary focus for stimulating economic growth and supporting urbanisation in a sustainable, inclusive and equitable manner.
5. There is an urgent need to create more enabling frameworks for sub-national infrastructure financing through reform policy and regulatory reforms designed to optimise intergovernmental transfers and improve own-source revenue mobilisation as key building blocks for strengthening sub-national infrastructure finance.
6. Policy and regulatory reform needs to accommodate alternative forms of financing infrastructure through municipal borrowing, pool funding, private financing and other mechanisms.
7. Donors may need to explore and evaluate options for developing mechanisms and instruments for direct investments in infrastructure projects to help build a critical mass that would complement the technical and capacity development assistance currently provided.
8. There is a requirement for niche assistance in the urban developmental financial assistance sector alongside existing funding agencies with more conventional debt support. In this regard it would be interesting to explore various modalities of co-financing, re-financing and take-out financing by collaborating with select commercial lending institutions while also focusing on providing credit enhancement assistance in the form of sub-ordinate debt or quasi-equity instruments.
9. Coupling technical support to new forms and instruments of financial assistance in the form of direct or indirect financing could create an effective means of strengthening the sub-national financing ecosystem. However, in order to make this approach successful the focus of assistance for sub-national financing has to be clearly defined while ensuring convergence from a beneficiary’s perspective.
10. While financial assistance may generate a critical mass by encouraging sub-national governments to adopt new mechanisms and instruments of financing to access market sources of funds, technical assistance should focus on the complementary strengthening of sub-national governments by focusing on the main building blocks of effective fiscal devolution. This will entail a strong focus on improving urban governance and finance including strengthening of accounting and audit, own-source revenue generation and enhanced creditworthiness.
11. Infrastructure experts and advisers may need to become champions for the promotion of fiscal devolution able to develop business cases that would

demonstrate the path towards synchronised functional and fiscal devolution as a pre-determinant for initiating and sustaining sub-national financing.

12. There is a requirement for further policy research and development on legislative instruments, regulations and mechanism for sub-national infrastructure financing.
13. Creditworthiness enhancement has to be a major component of technical assistance to institutionalise credit rating mechanisms and encourage adoption of commercial borrowing practices that enhance transparency in financial management systems and enhance investors/ lenders confidence in the urban sector.
14. Business cases could assist in bringing about a paradigm shift in sub-national government's perspective on IGTs where sub-national governments should be encouraged and capacitated to see IGTs as a source for leveraging funds from market sources rather than a source for direct financing.
15. It may be useful to consider national level dialogue initiatives on sub-national urban infrastructure financing in collaboration with the national governments, financial institutions and investors. In parallel there is a requirement of dedicated financial strengthening and sub-national revenue management and augmentation programmes in developing nations as a precursor to financial assistance for sub-national financing.
16. Support in institutionalising capacities at sub-national level in the form of municipal development funds may require a major focus on pooled financing mechanisms to address the needs of small and medium sized towns which cumulatively form a large and growing share of the urban population and are expected to be the next generation urban growth centres. The approach to support such development funds may include developing progressive and forward looking legal structures aligned with the national legal and regulatory frameworks as well as a thorough assessment of the need gap in terms of project development, financing, implementation and management. Institutional convergence and avoiding overlapping and competing structures would need some consideration to ensure effectiveness in the ecosystem.
17. One useful initiative may be to encourage the corporatisation of urban utilities and ring fencing technical service delivery for capital investment planning in the medium term and enhance the bankability of infrastructure projects by ensuring adequate cost recovery and proper operations and maintenance mechanisms. Enhancing private sector participation would be a key component of this approach which would require more thinking on preferred and customised implementation modalities for engaging the private sector and developing safeguard mechanisms for post award contract management as well as managing contingent liabilities.

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