

Dialogue on Globalization

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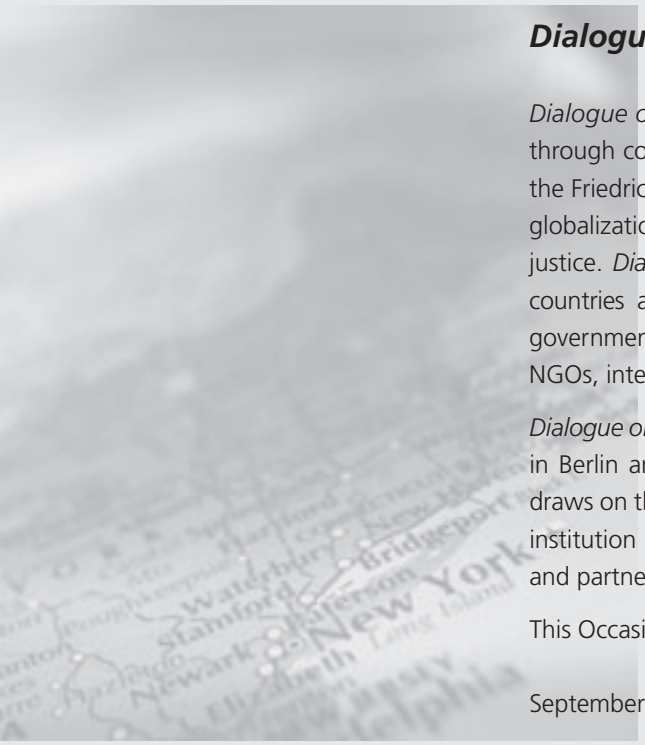
Moving Beyond the Privatization Debate

Different Approaches to Financing Water and Electricity in Developing Countries

FRIEDRICH EBERT STIFTUNG



Dialogue on Globalization

Dialogue on Globalization contributes to the international debate on globalization – through conferences, workshops and publications – as part of the international work of the Friedrich-Ebert-Stiftung (FES). *Dialogue on Globalization* is based on the premise that globalization can be shaped into a direction that promotes peace, democracy and social justice. *Dialogue on Globalization* addresses "movers and shakers" both in developing countries and in the industrialized parts of the world, i.e. politicians, trade unionists, government officials, businesspeople, and journalists as well as representatives from NGOs, international organizations, and academia.

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1. Preface

Whether or not to privatize essential services in developing countries has been subject to a long and heated controversy. Those in favor of privatization argue that putting water and electricity utilities into private hands will improve the quality and quantity of the services delivered and enhance the overall competitiveness of a country's economy. On the other side of the fence, opponents to privatization predicted higher prizes, fewer jobs and an uneven delivery of services due to cherry picking investors.

This occasional paper provides a new perspective and tries to overcome the ideological tug of war. It starts with the observation that in today's developing world the vast majority of water and electricity services are provided by public utilities. Rather than asking "who should provide the services", the authors adopt a financing point of view and look at how access to basic utilities for all can be funded in a sustainable manner.

The paper is based on a series of multi-stakeholder consultations which the Friedrich-Ebert-Stiftung, in cooperation with the UN Financing for Development Office and the International Poverty Center of UNDP has organized in 2006 and 2007. At the consultations, the organizers brought together experts from governments, utilities, civil society, private sector and academia. In a first meeting in New York, an analytical framework to structure the debate was developed. A subsequent event in Brazil focused on the challenges of middle-income countries in Latin-America, while a conference in Lusaka put its emphasis on low-income countries on the African continent. A fourth consultation focusing on the Asian region will take place in Bangkok, Thailand towards the end of 2007.

The ultimate goal of these multi-stakeholder consultations was to promote dialogue at the regional level and to produce action-oriented proposals on how to finance utilities for all. The consultations took place within the broader context of the UN Financing for Development (FfD) process. The outcome will be shared with delegates at the next High-level Dialogue of the General Assembly on Financing for Development in October 2007. The conclusions contained in this paper represent an interim assessment of the discussions that have taken place so far. They are not intended to have universal scope, as they relate only to the experiences and discussions of selected countries in Latin America and Africa. However, given the broad and unique array of stakeholders that have participated in the meetings and the strong commitment that the participants have dedicated to the project, the findings may provide a successful vehicle for generating further dialogue, proposals for change, and effective outcomes for the FfD Follow-up process. A final report of all multi-stakeholder consultations will be prepared as an input to the Review Conference on Financing for Development in Doha, Qatar in the second half of 2008.

I offer my profound thanks to the two authors of this report as well as to the UN Financing for Development Office and all those who participated in and contributed to this project.

Jürgen Stetten
Director, New York Office
Friedrich-Ebert-Stiftung

2. Introduction

Basic Services as an Economic and Social-Development Issue

More than 1 billion people in the world today live without access to clean drinking water; about 2.6 billion do not have access to basic sanitation; and nearly 1.6 billion lack access to electricity. It has been estimated that achieving the UN Millennium Development Goals (MDGs) for water and sanitation will require considerable resources to fill a funding gap of about U.S. $9–30 billion per annum. Likewise, additional investment is needed to meet the growing demand for electricity. The total cumulative investment required for electricity to achieve the MDGs in sub-Saharan Africa alone has been estimated at U.S. $46 billion for the years 2003–2015.[1] If the MDGs are to be reached, increased focus should be put on determining effective financing mechanisms for all levels of utility service provision. In particular, the financing of water, sanitation, and electricity requires special attention, as these utilities are the most vital to poor households.

The achievement of universal access to water and electricity is one of the greatest development challenges for the international community.

The achievement of universal access to water and electricity is one of the greatest development challenges for the international community. One main lesson of ongoing research in the area of water and electricity is that the lack of access to utilities is not only an impediment to economic growth but also a main barrier to social equality. By promoting growth, reliable and affordable infrastructure can reduce poverty and contribute to the achievement of the MDGs.[2] Moreover, the provision of key services, such as water, sanitation, and electricity, is a precondition for reaching other related human-development goals. In order to achieve progress in the fields of education and health, policymakers rely on a supportive infrastructure, including water and sanitation to prevent disease, and electricity to serve schools and health clinics.

Any realistic policy approach to expanding and improving access to utility services requires additional, predictable financing for infrastructure investment.

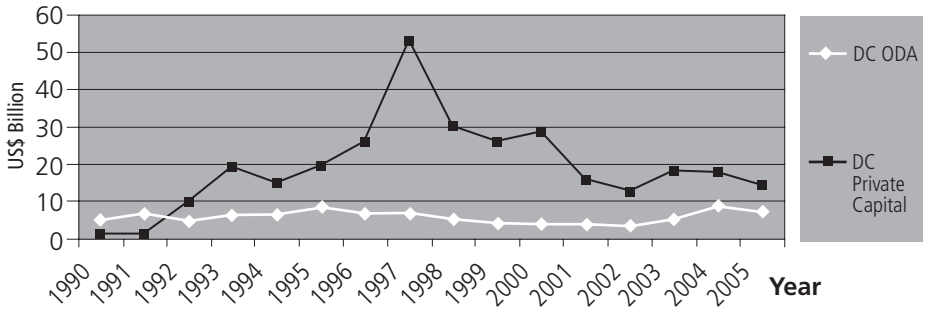
Any realistic policy approach to expanding and improving access to utility services requires additional, predictable financing for infrastructure investment. The delivery of water and electricity, in particular when targeted to reach the poorest citizens, is characterized by low levels of cost recovery and requires long-term financial investments. The economic record of investments in water and electricity over the last decade reveals the existing challenges (see figure 1). While there was rapid growth in private investment in these sectors in developing countries during the 1990s, there has since been a rapid decline. As can be seen in figure 1, as a result of the Asian crisis of 1997–1998, investment interest was reduced dramatically in all parts of the developing world. With respect to Official Development Assistance (ODA), funding for water and electricity has been stationary. More specifically, between 1999 and 2003, grant and loan funding for water and

1 Toubkiss (2006), UNICEF (2005), International Energy Association (2004, 2006)
2 Briceno-Garmendia, Estache, and Shafik (2004), p. 2

sanitation alone ranged between U.S. $2.5 billion and U.S. $3 billion, a decline compared to previous years both as a percentage of total ODA and of commitments to social services and infrastructure.[3] The position is even worse in the Least Developed Countries, where, with very little input from private investors, ODA has traditionally provided a major proportion of infrastructure investment. Here, since the Asian crisis, there has been a sharp decline in infrastructure investment by donors. What little interest there was from the private sector has now all but disappeared.[4]

Since the Asian crisis, there has been a sharp decline in infrastructure investment by donors.

Figure 1: **ODA and Private Capital Flows to Water and Sanitation and Electricity in Developing Countries (DC)**



Source: World Bank PPI Database, OECD Database

A closer look into the accessibility of basic services illustrates the socioeconomic dimension of utilities in developing countries (see table 1). The problem of lack of access is most severe in low-income countries, but remains sizable in most middle-income countries. Even more revealing is the finding that, independent from all countries' stages of economic development, income is highly correlated

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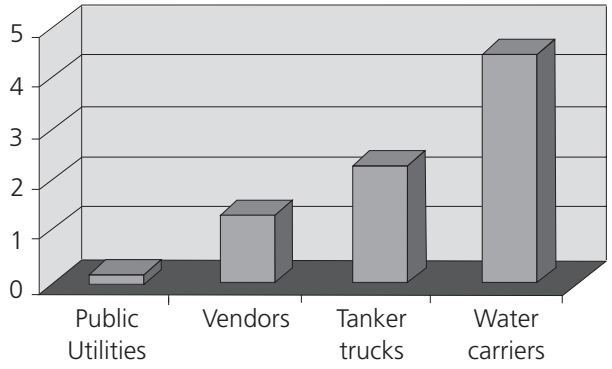
Table 1: **Access to Basic Infrastructure Services**

Share of Population	Electricity		Water		Sanitation	
	Poorest 20%	Richest 20%	Poorest 20%	Richest 20%	Poorest 20%	Richest 20%
Low-Income Countries	9.7	68.7	41.1	78.5	27.2	68.8
Lower-Middle-Income Countries	79.5	99.3	64.5	86.6	48.2	78.7
Upper-Middle-Income Countries	81.4	99.5	76.7	95	73.4	96.4

Source: Briceno-Garmendia, Estache, and Shafik (2004), p. 12

3 Cardone (2006)
4 Department for International Development (2002), p. 18

Figure 2: **Payments to Public versus Private Providers (US $ per cubic metre of water)**



Source: United Nations Development Programme (2006), p. 83

with access to basic services. Therefore, a combination of pricing and access policies, including targeted subsidies, may be needed in order to achieve broader access to utilities and more equitable outcomes. In areas where a large part of the unserved population lives below the poverty line and where government finances are constrained, redistribution mechanisms may be necessary to expand utility provision into poorer regions.

Poor households that are not connected to utilities have to rely on more expensive secondary or tertiary suppliers.

Figure 2 depicts global comparisons on payment for water services. Poor households that are not connected to utilities have to rely on more expensive secondary or tertiary suppliers. While private water-trucking companies and kiosk operators might be in a position to generate excessive profits, price differences for utilities can also be a result of structural causes.[5] Resale prices rise with distances, as the transport costs for providing informal slums and periurban areas with services are high. However, as Bayliss and McKinley point out, this should not lead to the conclusion that poor households are willing to pay higher prices than other consumers. Poor households have simply had to give up consumption of other vital items.[6] The UN "Human Development Report" of 2006 summarizes this problem in an even more striking way: "Across the developing world the daily struggle to access water is a constant drain on the human, financial and physical assets of poor households, regardless of whether the country—or locality—in which they live is water scarce."[7] Therefore, it should be acknowledged that policy strategies to enhance the poor's access to utilities have to be integrated into coherent national poverty strategies in order to be effective.

Across the developing world the daily struggle to access water is a constant drain on the human, financial and physical assets of poor households.

5 United Nations Development Programme (2006), p. 84
6 Bayliss and McKinley (2007), p. 3
7 United Nations Development Programme (2006), p. 80

Beyond the Privatization Debate

The rhetoric in the debate surrounding private-sector services in the area of water and electricity has often been heated or evasive, with participants accusing one another of bad faith or naïveté about the facts. While nobody can deny that the private sector has an important role to play in development, the privatization of natural monopolies in developing countries during the 1990s, especially in water and electricity services, has led to disappointing results at several levels.[8] Therefore, it should not be surprising that even former proponents of privatization are acknowledging today that, despite the pressure by international financial institutions and donors on developing countries' governments to increase private participation in basic infrastructure, few private investors have taken much interest in water and electricity. Out of those that have, many have done a very poor job.[9] A comprehensive empirical study by Hall and Lobina shows that most private contracts in water and sanitation, notably lease and management contracts, did not lead to any new investments or extensions to unconnected households in developing countries.[10] In the case of concession contracts that involved investment by private companies, the agreed commitments were often invariably revised, abandoned or missed. These authors also show from a regional perspective that in South Asia no investments have been made by private operators to extend water distribution systems, while, in sub-Saharan Africa, 80% of the major water privatization contracts either have been terminated or are the subject of major disputes between public authorities and operators over investment levels.

While nobody can deny that the private sector has an important role to play in development, the privatization of natural monopolies in developing countries during the 1990s, especially in water and electricity services, has led to disappointing results at several levels.

The decline in private-sector commitments, as depicted in figure 1, has not only fueled the debate about the rationale for private-sector contributions to infrastructure during the 1990s, but has also led to acknowledgment of the associated risks that private operators have neglected when entering developing countries. The fact that a rapid decline in private-sector commitments in infrastructure investment took place immediately after the Asian crisis is a striking indicator that exchange-rate risks were often neglected by private operators, an experience from which the sector has not yet fully recovered. Moreover, in cases in which utility contracts between private firms and governments guaranteed a fixed rate of return in hard currencies, a huge number of utilities were brought to the brink of financial collapse, as a result of sudden exchange-rate changes. At the same time, the financial burden was shifted to taxpayers in developing countries.[11]

Empirical research has also shown that, given the different forms of investment risks, the returns required to start a private project in lower-income countries have to be at least 2–3% higher than in richer developing countries—and more than double of what is generally expected for infrastructure activities in developed countries.[12] This means that in order to cover the minimum costs of new investments in the poorest countries, tariffs have to be much higher than elsewhere. Given the importance of basic services, such as water and electricity, a very difficult

8 See, for example, Von Weizsaecker, Young, and Finger (2005)
9 Nellis (2007)
10 Hall and Lobina (2006a)
11 Kessler (2003), p. 9
12 Sirtaine, Pinglo, Foster, and Guasch (2005), pp. 380–402

If there is one striking policy lesson that economic decision makers can learn from failed privatization efforts, it is how to better balance the concern for equity with the need for offering incentives to invest.

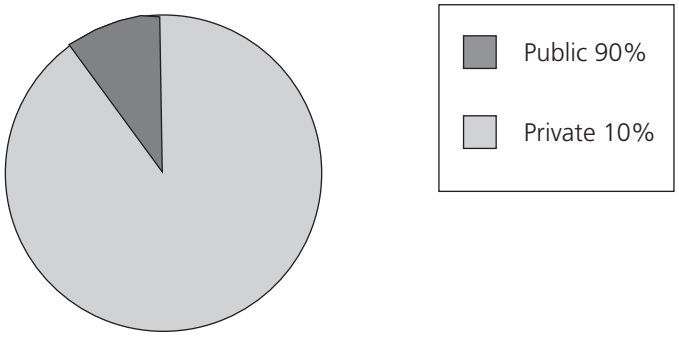
economic reality that policymakers have to face is the fact that full-cost recovery cannot be imposed on the poorest citizens given their limited ability to pay. If there is one striking policy lesson that economic decision makers can learn from failed privatization efforts, it is how to better balance the concern for equity with the need for offering incentives to invest.

However, this should not lead to the hasty conclusion that publicly run utilities in developing countries have been very successful in providing high-quality services in water and electricity. Public utilities in many developing countries leave much to be desired. New approaches must be found in order to strengthen their management and to achieve development goals like serving the poor and promoting social equity.

It is unfortunate that the controversy and debate about the role of the private sector in providing essential services during the 1990s have shaped public perception in ways that overvalue its impact on developing countries. As can be seen in figure 3, the majority of public services, such as water, are primarily delivered by public providers. In rural areas, where there is little profitable business for private companies, the percentage of water services provided by the public sector is even closer to 100%.[13] In other words, any serious attempt that is targeted to improve the livelihood of the majority of the poorest people and their access to basic services has to focus on improved public provision. While during the 1990s some momentum may have been lost, against a background of global and national policies aimed at restricting the role of public-sector borrowing and expenditures, international-development efforts today have to take into account that additional funding for public infrastructure could have an important impact on services for the poor. Currently, in developing countries, the public sector—the largest contributor to the financing of infrastructure—is spending roughly 2% of GDP (in

International development efforts today have to take into account that additional funding for public infrastructure could have an important impact on services for the poor.

Figure 3: **Public and private water supply in 300 cities > 1 million inhabitants (middle- and low-income countries)**



Source: Hall and Lobina (2006b), p. 3

13 Hall and Lobina (2006b), p. 3

middle-income countries) to 4% of GDP (in low-income countries) on infrastructure, a contribution that is up to 3% lower than the estimates of their investment needs.[14]

Based on these facts, this paper suggests a new framework for the discussion of utility financing. Rather than weighing the benefits of private against public provision of services, it approaches the discussion from the viewpoint of publicly owned utilities. The framework consists of three broad topics, which track the challenges of utility providers to fund their operations in a sustainable fashion. The first part highlights the financing challenges facing providers. In order to finance capital expenditures for building, upgrading, or extending networks, utilities have to raise capital. For the purposes of our discussion, we refer to the various schemes to do so as financing or borrowing mechanisms. Options may include, but are not limited to, commercial or noncommercial bank lending, municipal bonds, pooled financing arrangements, and equity finance, if the private sector is involved. Since most utilities are publicly owned, much emphasis will be put on the ability of cities and states to apply these options. The potential of many of the mechanisms can only be fully understood in a broader macroeconomic context, which takes into account various types of inherent risks and fiscal and monetary policies of a government. Accordingly, we build on the discussion of financing mechanisms by focusing in the second section of the paper on macroeconomic issues. However, once finance is raised, a utility has to generate its own revenue and, in most cases, depends on transfers from a government to pay off its debt and fund its recurring expenditures. The third part of the paper therefore focuses on revenue-generating mechanisms, including user fees and taxes. Throughout this paper much emphasis is put on practical examples and concrete country experiences in the water and electricity sectors.[15]

14 Briceno-Garmendia, Estache, and Shafik (2004), p. 17

15 Many of these examples were presented and discussed during multistakeholder consultations on "Financing basic utilities for all" in Brasilia, Brazil (December 11–13, 2006), and Lusaka, Zambia (April 23–25, 2007), referred to in the preface.

3. Raising Finance: Challenges in Tapping Domestic and International Capital Markets

Subnational Debt in Latin America

Over the last decade, there have been increased focus and interest in building the financial sector in developing countries.

Over the last decade, there have been increased focus and interest in building the financial sector in developing countries. In the Monterrey Consensus, world leaders explicitly recognized "the need to strengthen and develop the domestic financial sector, by encouraging the orderly development of capital markets through sound banking systems and other institutional arrangements aimed at addressing development financing needs, including the insurance sector and debt and equity markets that encourage and channel savings and foster productive investments."[16]

The conventional theory of fiscal federalism promotes a clear division of labor between the national and subnational levels of government. It assigns the public-finance role of resource allocation to local governments and gives the federal state the role of stabilizing the economy and promoting a fair income distribution. According to this theory, subnational entities should finance operational expenditures through locally raised revenues, and capital expenditures through intra-governmental transfers. The taxing authority of states, cities, and towns is therefore usually limited to immobile tax bases, such as property taxes. While local government borrowing was traditionally not seen as a viable alternative, this view has been challenged by the drastically increasing financing needs of municipalities in the developing world. This trend is due to at least three reasons.

Much of the responsibility for infrastructure and utility investment has shifted to local governments.

First and foremost, rapid urbanization has become a global phenomenon. According to UN estimates, urban population increased from 732 million in 1950 to 3.2 billion in 2005 and is projected to reach 4.9 billion in 2030.[17] Urbanization has led to a greater demand for investment in water systems, wastewater collection and treatment, electricity, and other facilities. At the same time, fiscal decentralization strategies have become more popular. As a result, much of the responsibility for infrastructure and utility investment has shifted to local governments. Finally, there are fewer fiscal subsidies from central to local governments.[18]

Yet despite these developments, there is very little research available on the long-term-financing arrangements of municipal governments in developing countries.[19] Existing evidence indicates that self-finance and central government transfers remain the most important sources of funds for the capital expenditures of municipal utility providers. For instance, in Brazil, 51% of all financing of utilities

16 Monterrey Consensus on Financing for Development (2002)
17 United Nations (2005)
18 Peterson (2000)
19 Martell (2003)

is self-financing.[20] Other funds for investments are mostly provided by the federally owned bank Caixa Economica Federal. In addition, small towns and rural areas draw funds from the National Health Foundation FUNASA, under the Ministry of Health. However, self-finance and intergovernmental transfers are not meeting the growing demand in developing countries for infrastructure investment in utilities. A high-share of self-finance appears to reflect an overall decline in investment rather than sound finances of utilities. It is therefore important to promote further study of mechanisms that can allow municipalities to attract additional capital for long-term investments.

One of the various mechanisms for cities, states or municipally owned corporations to raise capital is to issue their own bonds.

One of various options in this regard could be for cities, states or municipally owned corporations to issue their own bonds. While it is well-known that subnational bonded debt markets are not very advanced in developing countries, actual data is hard to come by.[21] To the authors' knowledge the only attempt to compile a publicly available, comprehensive overview of subnational bonded debt (including amounts, types, yields, and maturities) in developing countries was made by the World Bank. However, the data, which was laboriously compiled with the help of World Bank country offices, has not been updated since 1999.[22] At one level, this is understandable due to the magnitude of the work involved. On the other hand, it is surprising given the importance that the Bank attaches to the development of subnational bond markets.[23]

A less laborious strategy than the World Bank's approach is to research the number of subnational issuers that have received credit ratings from the three major rating agencies: Standard & Poor's, Moody's Investors Service, and Fitch Ratings. Figure 4 shows the number of subnational bond issuers in developing countries rated by at least one of the three agencies with issues in domestic or foreign currency as of June 2007. Data from the three major rating agencies should yield a useful approximation of the number of internationally rated, subnational issuers in developing countries. It is assumed that these agencies together reach a global market share of roughly 95%.[24] However, it is important to note that unrated bonds and those rated by other, less dominant, international and local rating agencies are not included in the table.[25] This approach gives some indication of the potential access of cities, states, and municipally owned corporations in those countries to domestic and international capital markets.

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20 This is a high share by Latin American standards. Data is taken from the National Information System on Water, Sanitation and Solid Waste (SNIS): http://www.snis.gov.br/.

21 The term subnational bonded debt refers to debt issuances of states, cities, municipalities, and other local governments or local government-owned institutions and utilities. Subnational bonded debt in the U.S. is also referred to as municipal bonded debt. In some other countries (for example, Mexico), however, municipal bonds would refer only to bonds issued by cities. To avoid confusion, the authors refer to subnational bonded debt rather than municipal bonded debt in this paper.

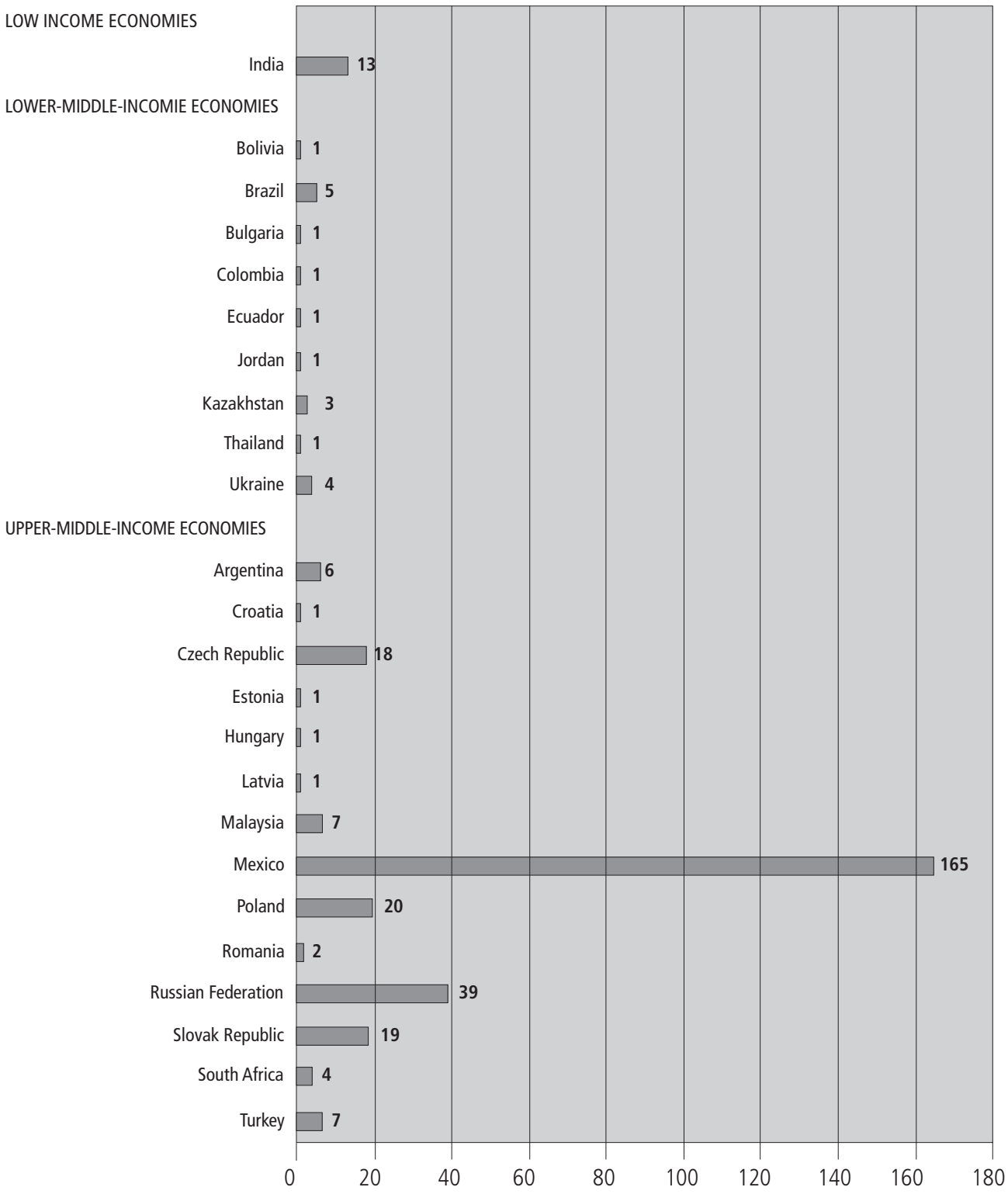
22 See http://www.worldbank.org/html/fpd/urban//cmd/frontpag.htm.

23 See http://www.worldbank.org/urban/mun_fin/munfin.htm.

24 The estimate of 95% is based on 2001 numbers presented at U.S. Congressional hearings on the role of the major rating agencies role in securities markets.

25 It is difficult to establish the exact number of rating agencies worldwide. The authors are aware of fifty-seven entities. Eighteen are located in developing countries, of which only three could be found in low-income countries.

Figure 4: **Number of Subnational Issuers in Low- and Middle-Income Countries Rated by at Least One of the Three Major Credit Rating Agencies**



Source: Data based on information on rated subsovereign issuers provided by Standard & Poor's, Moody's Investors Service, and Fitch Ratings (June 2007)

Figure 4 illustrates that the subnational bonded debt market in the developing world remains at an embryonic stage. The large majority of developing countries either do not have subnational bond markets or issue bonds that are not rated by one of the major rating agencies. Countries that do have rated issuers have only a very few (with the exception of Mexico). It is also evident that only one low-income country (India) has successfully issued subnational bonds rated by the three agencies.[26]

State and municipal bonds have only been issued by a small number of countries in Latin America.

State and municipal bonds have only been issued by a small number of countries in Latin America. The first city in Latin America to successfully issue a bond in the international capital markets was the municipality of Rio de Janeiro. The city issued a bond in July 1996 to refinance its existing debt (10.3/8% for U.S. $125 million over three years). The bond was unsecured despite the fact that this was the municipality's first public international debt issue. The Argentinean province of Mendoza also successfully issued an international bond: a U.S. $125 million six-year offering in August 1996 to refinance its debt. The bonds were secured by oil royalties paid by oil companies.

The comparably large number of rated issuers in Mexico is an important exception in the Latin American region. This phenomenon can be best understood in light of recent changes in Mexico's federal fiscal system. In the early 1990s, Mexican states and municipalities increased their degree of autonomy regarding tax collection and expenditures, while new support funds and programs were put in place that provided additional resources for infrastructure financing. Most importantly, however, since March 2000, new financing and credit underwriting structures are in effect. As a result, subnational entities do not receive any implicit or explicit credit guarantees from the national government. Capital requirements for banks were put in place that were based either on two ratings from authorized rating agencies, an issuer rating by municipalities themselves, or an endorsement from the state or municipal government.

Consequently, almost all subnational entities have had their own creditworthiness assessed by international rating agencies.[27] However, the number of rated public entities listed does not necessarily correspond to debt issuances that are currently outstanding. Many issuers obtain ratings without actually issuing bonds in order to build credibility and trust with investors and enhance name recognition. For instance, in the case of Mexico, as of 2006 only six municipalities had outstanding bond issuances, and total outstanding subnational bonded debt was US $ 987,016,000. This represents about .13% of Mexican GDP. It is a relatively high number compared to that of other Latin American countries, but small if compared to a ratio of 18.25% for subnational bonds outstanding in the U.S. in 2006.[28]

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26 India also had some success in tapping domestic savings through municipal bonds rated by Indian ratings agencies. As of 2005, at least nine cities had raised funds (some Rs 7.5 billion) from the Indian capital market through municipal bonds. Kehew, Matsukawa, and Petersen (2005).

27 Fitch Ratings (2002)

28 Calculations based on information provided on the website of the Secretaría de Hacienda y Crédito Público, Unidad de Coordinación con Entidades: http://www.shcp.gob.mx and http://www.fitchmexico.com.

There appear to be several reasons for the lack of bonded debt issuances in Latin America. Creditworthiness imposes a ceiling on subnational ratings.

There appear to be several general, as well as some more specific, reasons for the lack of bonded debt issuances in Latin America. Among the more general reasons, one can argue that creditworthiness imposes a ceiling on subnational ratings. That is, it is unlikely that cities and states can raise greater finances from capital markets than the federal government unless the issuance is guaranteed by an external party. In addition, the success of subnational bond issuance is closely tied to the overall state of national and international capital markets. In times when corporate bond markets are eyed critically, international investors are unlikely to invest in national or subnational debt. It is also important to note that obtaining an international credit rating is an expensive endeavor for most municipalities in developing countries. While it is hard to find publicly available and reliable information on the fees charged by the three major rating agencies, anecdotal evidence suggests that charges are often prohibitively high, in particular for smaller municipalities. At the same time, only a small number of well-known local and regional rating agencies exist in developing countries, which could provide a cheaper rating. The Mexican case suggests that connecting local with international credit rating agencies can make ratings more affordable and helps strengthen local credit markets.

Subnational debt issuance and commercial borrowing in Latin America is constrained by fiscal restrictions imposed by central governments and municipalities themselves.

Primarily, however, subnational debt issuance and commercial borrowing in Latin America is constrained by fiscal restrictions imposed by central governments and municipalities themselves. In Brazil, for example, the main borrowing constraint on municipalities is the Fiscal Responsibility Law (Supplementary Law 101) of May 2000. The law was introduced to limit overall fiscal spending and potential inflation. The Law contains explicit numerical hard budget and intra-budget constraints. For instance, it determines that the ratio of net debt to current revenue should reach a target of 1.0 over 15 years, and credit operations should be consistent with this target. No debt can be issued to finance current expenditures. At the same time, total personnel expenditures incurred in each determination period must not exceed 60 percent of net current revenue. If a municipality does not respect those limits, it is not allowed to make contracts for both internal and external credit operations, including revenue anticipations, except for the refinancing of the updated principal of securities debt. Due to the fact that almost all of the approximately 5,560 Brazilian municipalities have approached or exceeded the limits established by the Fiscal Responsibility Law, no subnational bond issuance for infrastructure financing appears to be taking place in Brazil. Similar laws exist in other Latin American countries, including Colombia and Peru.

Because of the lack of new issuances of subnational bonded debt, the World Bank and other development agencies have reduced their efforts to promote municipal bonds. Instead of promoting single issuances of bonds, these institutions have started highlighting the benefits of pooled financing arrangements through municipal development funds and other financial intermediaries.[29] Pooled financing arrangements of municipalities within, and possibly even across, countries could reduce risk and make it easier for issuers to be considered creditworthy by the rating agencies. Ideally, financial intermediaries can raise capital and lend it to subnational entities. For instance, as illustrated in the case study below, the local

29 See Kehew, Matsukawa, and Petersen (2005)

development fund Findeter, supervised by Colombia's banking regulators, had some success in helping local governments finance their infrastructure and develop banking relationships. Another possible advantage of financial intermediaries could be their ability to reduce the time it takes for a city to obtain a loan from an international financial institution, which can take a couple of years. In general, financial intermediation will be more effective when the project is well governed, and financing is not misused for vested interests, such as salary increases for financial intermediary employees or preferential treatment of certain municipalities.

Case Study for Latin America: Findeter's Experience in Colombia

Findeter was set up in 1989 as a follow-up to the Urban Development Fund (FFDU). In a recent assessment, the World Bank's Independent Evaluation Office evaluated the experience of Findeter in supporting the financing of basic utilities in Colombia.[30] Findeter used external borrowing from the World Bank and the Inter-American Development Bank to rediscount loans made by private commercial banks to public local authorities and local private entities (*entitades territoriales*) for investing in urban services and utilities. Findeter does not lend directly to municipal borrowers, but operates as a second-tier lender. Commercial banks can borrow up to 100% of the loan amount from Findeter at the same conditions they apply in their long-term loans to subnational entities.

The Government of Colombia (GOC) served as a guarantor for the multilateral loans to Findeter, either through underwriting the loans directly as the borrower or by providing a sovereign guarantee. Findeter's (and the GOC's) risk lay not with the local authorities and entities, which was taken on by the commercial banks, but with the banks themselves. However, there were no instances of any commercial bank defaulting in these operations. As a result of Findeter's rediscounting of the debt, the loans could be extended to a twelve-year maturity as compared to the five-year maximum term offered by commercial banks. At the same time, Findeter was free to lower interest rates in response to demand.

In light of Findeter's ultimate objective to extend urban service coverage and deepen local credit markets, results have been somewhere between positive and mixed. On the one hand, urban services for the poor improved in Colombia over the life of Findeter. Country data show that coverage for those in the lowest quintile of the income distribution improved significantly between 1993 and 2003. Coverage rose from 80.4% to 91.4% for electricity and from 77.4% to 83% for basic sanitation.[31] However, tariffs have risen for all users. At the same time, Findeter contributed to the establishment of a local credit-rating industry in Colombia. Nevertheless, local credit markets shrunk after 1998–99. Fiscal responsibility concerns have kept many creditworthy municipalities from entering the subnational debt market despite the need for service improvements.[32] The success

30 Independent Evaluation Office, World Bank (2006)
31 FEDESARROLLO (2004), referenced in Independent Evaluation Office, World Bank (2006)
32 Independent Evaluation Office, World Bank (2006)

of a model like Findeter seems to depend on the depth of the local financial markets and the availability (or potential availability) of capable financial institutions that can take on credit risk related to municipal and urban services loans at a substantial scale.[33] This makes it a suitable approach for some middle-income economies, but it might be inappropriate for financially shallower, lower-income economies. In addition, Findeter is closely tied to the credit policies of its funding institutions, which can lower its own financial flexibility.

In order to expedite the process of raising financing, it is important to analyze what factors could facilitate access of municipalities to credit. Experience suggests that attracting long-term financing calls for a sound long-term financing strategy. Identifying what elements of a capital investment plan should be financed by grants, national or international credit instruments, or internal revenue generation is a critical challenge and depends on local context. As will be illustrated in the following case study of Porto Alegre, participatory budgeting can be instrumental to finding the locally appropriate financing strategies.

Further dialogue between cities and states can also help in formulating appropriate strategies and identifying adequate financing mechanisms. A relatively new initiative to exchange municipal financing experiences at an international level is the Cities Alliance.[34] A global coalition of cities and their development partners, the alliance brings cities together in direct dialogue with bilateral and multilateral agencies and financial institutions.

Case Study for Latin America: Participatory Budgeting Approaches in Porto Alegre

If the citizen benefits from a public service, he or she will be more willing to pay for it. Participatory approaches can help ensure that the right financing priorities are set.

If the citizen benefits from a public service, he or she will be more willing to pay for it. Participatory approaches can help ensure that the right financing priorities are set. They can help in better identifying investments of value to poor localities. In addition, they can assist in forging consensus on the appropriate distribution of costs among clients, as well as on adequate user fee levels to fund necessary investments. The experience of the city of Porto Alegre, Brazil, in extending water and sanitation to its inhabitants provides a useful example. Attempts to privatize public services in Porto Alegre were rejected by the public. The Departamento Municipal de Água e Esgoto (DMAE) is responsible for water and sanitation. It is fully owned by the municipality of Porto Alegre, but has operational and financial independence. The utility provider currently supplies water to 99.5% and sewerage to 87% of the city's population.[35] An innovative aspect of the model applied in Porto Alegre is its participatory character. Consumers are protected by exerting control over quality and reach of the services provided. Residents take part in financial decisions through a participatory budgeting process *(orçamento*

33 Ferguson (2004)

34 Current members of the alliance, whose headquarters is housed at World Bank, are cities in Brazil, Canada, Ethiopia, France, Germany, Italy, Japan, the Netherlands, Nigeria, Norway, South Africa, Sweden, the United Kingdom, and the United States.

35 The remaining half-percent lives in high-risk areas, such as flooded or mountainous regions, that are reached by water trucks.

participativo), which allows them to vote on the municipality's spending priorities. Moreover, a "deliberative council" has been established as the equivalent of a board of directors. It is made up of representatives, appointed by the mayor, of different civil society organizations.

The council is responsible for approving work plans, tenders, contracts, and agreements entered into by DMAE; water supply and sanitation tariffs; budgetary proposals; annual financial reports (informe econômico financeiro); financial operations; divestitures of property and unusable materials; and the company's policy on human resources (excluding DMAE's own employees), when requested by the Chief Executive Officer.[36] Strong public accountability enabled DMAE to win public support for price increases when they were seen as necessary for new investments. Users' willingness to pay seemed to increase when price increases resulted in tangible improvement of services. Data from 1994 to 2004 confirm the success of this approach. They show that while population in the city grew by 8.5%, water services expanded 23%, and the coverage of sewage treatment grew by 40%. Of these new investments, 70% were financed through tariffs. A further important element of the Porto Alegre approach is cross-subsidization. Extremely poor households are only charged a control tariff and receive a subsidy of almost 80%, while households that consume a monthly average of up to twenty cubic meters receive smaller subsidies. The subsidies are financed through "luxury consumers" of utilities, including shopping malls and airports, which use well above twenty cubic meters per month. While DMAE applies a cross-subsidy among its own customers, the company itself does not receive governmental subsidies and is not cross-subsidized through other public services. DMAE relies entirely on user fees to directly self-finance investments or repay contracted loans. DMAE's finances also benefit from the fact that the company's surpluses are entirely reinvested. Contrary to multinational companies' practices, no dividends have to be paid out to shareholders or are diverted for investment in other company ventures. Financial self-sufficiency has helped DMAE raise capital in the international market, as defaults are seen as unlikely. In order to raise funds for capital investment, DMAE mostly draws on multilateral loans, which have traditionally offered lower interest rates and longer repayment periods than national banks. Recently, DMAE has also put increased emphasis on public-public partnerships between the federal government, states, and municipalities, including public banks like BNDES and Caixa Economica Federal to generate additional financing for new investment.[37]

Strong public accountability was crucial to win public support for price increases when they were seen as necessary for new investments.

Financing Challenges in Africa

It is possible to distinguish three phases of reform measures most African financial systems have been subjected to over the last twenty to twenty-five years.[38] The first phase can be roughly designated as the 1980s, a period characterized by liberalization and deregulation through the contentious structural adjustment

36 DMAE (2001)
37 Todeschini (2006)
38 Max (2007)

policies advocated by the World Bank and the International Monetary Fund (IMF). These policies called for removing directed credit policies and price and interest-rate controls. During the second phase, in the 1990s, these institutions advocated no less controversial privatization of public services, capital-market reforms, and the establishment of securities exchanges. Most of Africa is now passing through the third phase of reform, which features regionalization and internationalization, pension-fund reform, the microfinance movement, and the introduction of new technology platforms. However, financial development in Africa continues to face severe constraints related to the small scale of many economies, large informal sectors, governance issues, the volatility of aid inflows, commodity price shocks, capital flight, and other external factors, such as health problems and climatic risks. The potential of market-based financing instruments for utilities with maturities between five and twenty years is therefore limited. Capital costs are high with long payback periods; rates of return are low due to impoverished populations; contract and regulatory risk are often unpredictable in response to rapidly changing government environments. With regard to subnational bonded debt, South Africa is the only African country that has issued municipal bonds. Its positive experience is discussed below.

Financial development in Africa continues to face severe constraints related to the small scale of many economies.

South Africa is the only African country that has issued municipal bonds.

In response to the lack of market finance for the rest of the continent, the African Development Bank has introduced a set of financial products that are made available through two main lending windows geared toward the public and private sectors.[39] The public sector window is further divided into two subwindows: lending on commercial terms to middle-income countries is done through the African Development Bank (ADB); lending on concessionary terms to poorer countries is through the African Development Fund (ADF). For countries that can borrow both from the ADB window as well as the private-sector window, the range of financial products available includes direct loans, lines of credit, guarantees, equity participations, risk management products (to hedge risks including climatic ones), and grant resources. The ADB has an additional dedicated window, the African Water Facility (AWF), which has provided grant funding to a broad range of stakeholders in the water sector, including central and local African governments, NGOs and community-based organizations, as well as regional, subregional, and sectoral organizations (including regional economic organizations, river basin organizations, and others). However, the products offered through ADF are limited to loans and grants. Demand for them has been low.

Due to the constraints identified above, the costs of lending to utility projects are especially high. One of the strategies to lower lending costs is to lend directly to subsovereign entities (such as a municipality-owned water utility) in local currency. Pooled financing arrangements could be a fruitful option because of the variations among and between countries in Africa. Intermediaries could help pool risk, perhaps at a regional (sub-Saharan Africa) or subregional (for example, the Southern African Development Community) level. At the same time, it appears to be critical to emphasize capacity building and improving the risk profile of utilities. Multilateral Development Banks (MDBs) could help by increasing efforts to provide knowledge management and facilitation for the financing of utilities, increasing

39 Akari (2007)

flexibility to operate in local currencies for debt and risk mitigation activities, and working toward the use of grant financing to support partial risk guarantees for the water sector. Participating institutions could cooperate to identify where existing and planned lines of credit can be earmarked for water utility business. In addition, MDBs could target their lending toward strengthening municipalities and developing bond markets in select middle-income countries. Further support to microfinance institutions as part of a country strategy for financing small utility operators is also worth exploring.

In general, developing countries face a scarcity of capital resulting from a shallow financial sector and underdeveloped or often nonexistent insurance, pension, and mutual funds. Pension funds, in particular, have the potential to support the development of the financial sector. Through the purchase of government or municipal bonds, pension funds, which are generally the largest holders of long-term savings, can cater to the long-term financing needs of municipalities. Indeed, more and more pension systems around the world are attracted by the long-term revenue streams of infrastructure investments, treating this as an asset class in its own right. Further research is necessary, however, on strategies to effectively utilize this mechanism in developing countries. Major challenges persist where pension systems are dramatically underdeveloped, as is the case in sub-Saharan Africa and many other least-developed countries. In countries with large informal sectors, low levels of contributions, and fiscal problems, achieving fully funded pension systems is a particularly daunting task. At the same time, investing pension reserves is especially tricky when the economy is weak, and there is an underdeveloped financial sector that provides very limited investment opportunities. Moreover, many attempts by pension funds to become financial intermediaries in least-developed countries have been unsuccessful and have weakened the financial institutions even further.[40] It is critical to explore the factors that could make the relationship between infrastructure projects and pension funds a positive sum game. The ultimate goal must be to safeguard the value of pensions, while not hindering investments in viable and profitable infrastructure projects.

Developing countries face a scarcity of capital resulting from a shallow financial sector and underdeveloped or often nonexistent insurance, pension, and mutual funds.

Case Study for Africa: Johannesburg's Municipal Bond Issuance

The South African constitution and laws relating to the state administrative system primarily identify the provincial and municipal governments as the most appropriate layer of administration to deliver utilities. Yet there remains a major challenge for municipalities to match financing needs with funding. The example of the city of Johannesburg offers a positive experience for generating the long-term financing needed for the provision of public utilities. In 2002, the city experienced a capital expenditure backlog of R 8 billion, with significant adverse impacts on investments in electricity infrastructure and water provision. All existing domestic financial institutions had been providing loans to the city at their maximum limit. To avoid the breakdown of public services, the city was bailed out by the national treasury in 2002 with a grant of R 525 million. Requirements for the bailout were that Johannesburg had to consolidate its finances. As a first step, the

The example of the city of Johannesburg offers a positive experience for generating the long-term financing needed for the provision of public utilities.

40 Barbone and Sanchez B. (1999)

city established a treasury department, which took the initiative to issue municipal bonds in order to raise long-term funding. Fitch Ratings was asked to rate the municipality as an investment opportunity. Although the rating was initially low, it served as a benchmark for improvements. The city decided to plan for the issuance of two institutional bonds,[42] which were to be financed out of a fund containing operational surpluses from water and electricity revenues. The first bond issuance was for R 1 billion. It was not guaranteed by the government and will mature in 2010. Issued in the same amount, the second one will mature in 2013. It is partially guaranteed (40% of the total issue) by the Development Bank of Southern Africa and the World Bank's International Finance Corporation.

According to the city's treasurer, the following steps were important in establishing the bonds: founding the city treasury; embarking on a study tour to Mexico to learn about best international practice in municipal bonds; eliciting political support for the move, and developing a ten-year financial plan that took into account inflation, interest rates, tariff increases for municipal services, and mechanisms to secure cheap capital. Crucial steps during the implementation phase were the appointing of advisers on the type and structure of the bonds; the selection of both underwriters (who agree to buy the entire issue in case the market fails to show interest) and guarantors (which helped the bond to get a higher rating than the city itself); road shows whereby investors witnessed the establishment of new utility networks and distribution systems; and book building (taking the orders of investors) before the bonds were put on the market. Both bonds were well received by the market, with the first being 1.5 times and the second 2.3 times oversubscribed. As a result, the financial standing of the city improved dramatically. Projects were indeed funded and financial concerns have made way for capacity-building concerns. In 2005, 40% of the capital budget went to repairing and replacing electricity infrastructure, while R 450 million will be spent to replace the water and sewage networks of Soweto that suffered from 70% water losses at the time the city went bankrupt.

Johannesburg's experience might not be easy for other municipalities to replicate for a variety of reasons.

Johannesburg's experience might not be easy for other municipalities to replicate for a variety of reasons. In sharp contrast to many other developing economies, whose municipalities have very little taxing power, localities in South Africa generate up to 90% of their operating revenues from their own taxes and fees. South African municipalities are entitled to raise property taxes, payroll and regional levies on businesses, as well as fees and surcharges on electricity and water provision. Utilities, however, present a liability for many, as collection rates can be as low as 60% (but are typically around 85%). Furthermore, municipalities providing water and electricity face high loss rates. Another challenge for municipalities will be the planned restructuring of the electricity sector, leading to a loss of sector revenues. This might be at least partially compensated, if municipalities become shareholders in regional electricity distributors and receive dividends. In addition, many municipalities suffer from poor socioeconomic conditions because of the high prevalence of poverty and HIV/AIDS. These factors lower the revenue potential and result in spending pressures for municipalities, as they require additional funds to provide acceptable quantity and quality of service.[42]

41 The term institutional bond refers to a bond sold to financial institutions, such as banks, insurance companies, and pension funds, as opposed to retail bonds, which are sold to individuals.
42 Palmer Development Group (2006)

4. Macroeconomic Aspects of Financing Utilities

ODA Inflows and Appropriate Fiscal and Monetary Policies

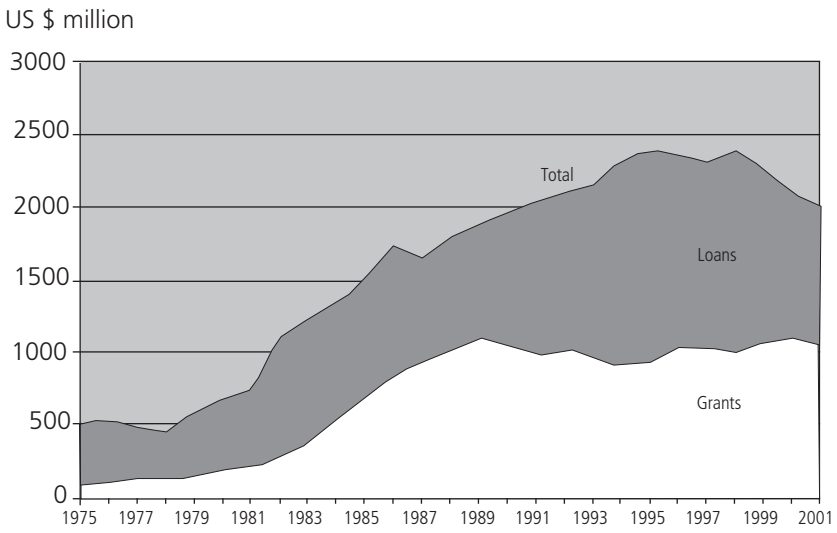
Overall ODA grant and loan funding for water supply and sanitation is on the decline.

ODA is critical for closing the financing gaps and thus ensuring enhanced access to utility services, especially in low-income countries. Empirical research shows that overall ODA grant and loan funding for water supply and sanitation over the last several years, compared with previous commitments throughout the early 1990s, is on the decline. As can be seen in figure 5, in the 1980s, grants and loans both rose considerably, leading to greater investments in the water sector. In the 1990s, grant financing stagnated, while the volume of loans increased. Between 1998 and 2001, however, loan financing dropped off considerably. Moreover, as Cardone points out, starting in the late 1990s, water and sanitation commitments by donor countries, relative to other sectors, dropped from 22% in 1999 to 14% in 2003.[43]

For the electricity sector, the picture is even more dramatic.

For the electricity sector, the picture is even more dramatic (see figure 6). In anticipation that the private sector would become an important player in the energy field, bilateral and multilateral lending in electricity decreased from U.S. $3.5

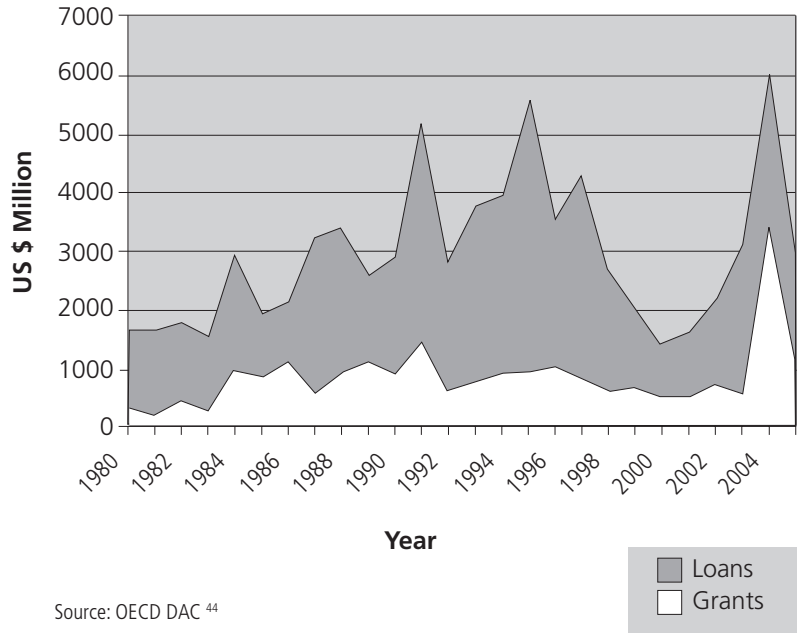
Figure 5: **Trends in Bilateral Grants and Loans for Water Supply and Sanitation (1975–2001), Five-Year Moving Averages in Constant 2002 Prices**



Source: OECD, quoted in Cardone (2006)

43 Cardone (2006), p. 4. While, in 2004, overall ODA increased, the recent commitments appear to merely offset the considerable decline in commitments between 1999 and 2001.

Figure 6: **Annual Flows of Development Aid for electricity (transmission and distribution)**



Source: OECD DAC [44]

billion in 1996 to U.S. $1.3 billion in 2000. Over the same period, grant financing declined by 50%. In response to these developments, the Operations Evaluation Department of the World Bank, in its 2004 "Annual Review of Development Effectiveness," noted that from 1993 to 2002 the largest decline for World Bank lending to infrastructure projects occurred in the electric power and water sectors—two sectors in which private-sector participation has proven to be less feasible than it is for other activities.[45] While the direction of the trend has been sharply reversed since 2002, the commitments by bilateral and multilateral donors have on average not yet reached the levels of the mid-1990s. In other words, the current overall ODA disbursements for water and electricity are by far insufficient for bridging the financing gap and achieving the MDGs for water supply and electricity at global, regional, and country levels. Therefore, a massive scaling up in ODA for the poorest developing countries, which lack financial resources for the expansion of existing services to unserved households, should remain an imperative.

A massive scaling up in ODA for the poorest developing countries, for the expansion of existing services to unserved households, should remain an imperative.

While the importance of increasing development assistance has been acknowledged in the international community with the introduction of the MDGs, some critics have argued that in developing countries a large surge of capital inflows will exacerbate macroeconomic instability by increasing inflation and appreciating the real exchange rate. It is assumed that these so-called Dutch disease effects will undermine prospects for long-term growth, since the exchange-rate appreciation will have a negative impact on the developing countries' export sectors. However, this seems to be a nonissue for most developing countries, if these inflows are

44 The data cover only flows from bilateral and multilateral donors from DAC member countries.
45 Operations Evaluation Department, World Bank (2005), p. 30

properly managed by their governments and central banks.[46] Hofmann and Zattler observe several situations in which the appreciation problem is less severe:

- the greater the unused capacity a country starts with;
- the greater the proportion of additional external funding used for imports;
- the more opportunity domestic consumers have to turn to imported goods in response to increased prices for domestic goods;
- the more domestic demand focuses on domestic goods and services (that is, nontradable goods).[47]

Many economic models that make the case for Dutch disease assume full capacity utilization. This assumption, however, can be challenged. The fact that most of the developing countries, and, in particular the poorest economies, experience widespread unemployment and underemployment points to significantly underutilized resources. An adverse impact of ODA can be partly mitigated, if the recipient government directly uses its new stock of foreign currency for imports instead of domestic goods, thus reducing the risk of inflationary pressure. This strategy, however, might not only have positive effects, since the multiplier impact of government expenditures would be minimized.[48] Within this scenario, inflationary pressures would be attenuated, if, as a result of increased domestic prices due to increased inflows of currency, consumers were to shift their demand toward imported goods. In the event that foreign-exchange inflows are invested in public domestic goods, such as infrastructure, the potentially inflationary impact of capital inflows would be mitigated. With such a strategy, aid for infrastructure in itself can increase the absorptive capacity of the economy. At any rate, these different options illustrate that Dutch disease symptoms should be manageable, if additional foreign exchange is used not only to increase government expenditures but also to boost net imports.

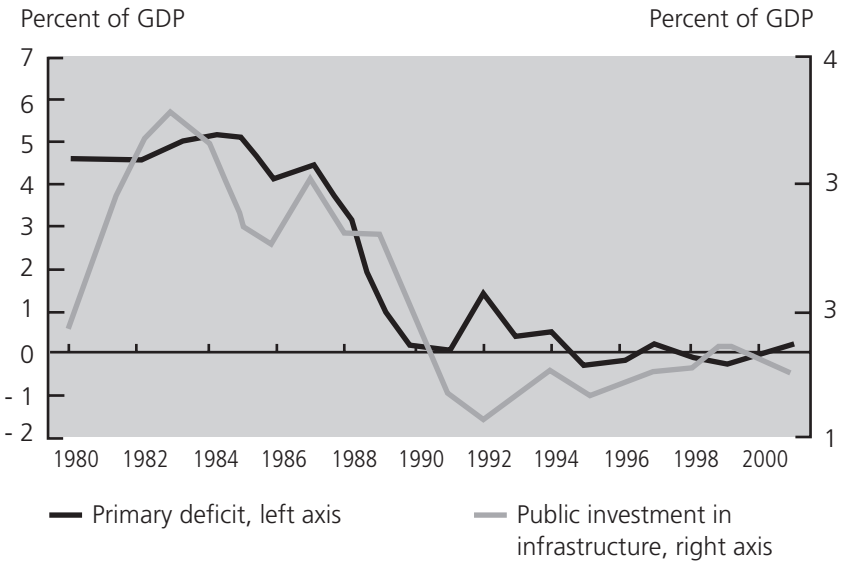
At any rate, these different options illustrate that Dutch disease symptoms should be manageable.

The term *fiscal space* has become an important indicator for the room in a government's budget to increase public spending. Given the fact that the IMF and other financial institutions can exercise significant pressure on the use of aid inflows in developing countries through their lending programs, many critics have argued that the overly conservative fiscal approach of these institutions has stifled country ownership and constrained the provision of basic services. Adverse impacts on poverty reduction and economic growth result.[49] A recent empirical analysis by the Independent Evaluation Office of the IMF came to the conclusion that in sub-Saharan Africa on average only 28 cents of each dollar of ODA is being disbursed for additional public spending.[50] Several experts have expressed concerns about the degree to which the IMF determines the level of aid allocation based on macroeconomic conditions, such as external reserves, domestic debt, and the rate of inflation.[51]

A recent empirical analysis by the Independent Evaluation Office of the IMF study came to the conclusion that in Sub-Saharan Africa on average only 28 cents of each dollar of ODA is being disbursed for additional public spending.

46 McKinley (2005)
47 Hofmann and Zattler (2005), pp. 5–6
48 McKinley (2005), p. 4
49 See, for example, Epstein and Heintz (2006)
50 IMF, Independent Evaluation Office (2007)
51 See, for example, Goldsbrough (2007)

Figure 7: **Primary Deficit and Public Infrastructure Investment in Latin America**



Source: 2006 "Global Monitoring Report," World Bank, p. 40

Considering that, historically, the biggest share of funding for water, sanitation, and electricity is provided by domestic governments in developing countries, fiscal restrictions of the central government appear to be a major impediment to the expansion of utilities. It is estimated that, for instance, almost 70% of funding for water and sanitation in 2000 came from the domestic public sector.[52] Since 1990, against a background of global and national policies aimed at restricting public-sector borrowing and expenditures, funding for public infrastructure has been strongly reduced. For example, as shown in figure 7, fiscal consolidation in Latin America led to a sharp decline in infrastructure investment. It is estimated that the restriction of fiscal space by national governments in the region has created infrastructure underinvestment, which accounts for about one-third of the difference in output per worker in Latin America compared to East Asia.[53] Another recent study on Latin America estimates that inadequate investment in infrastructure during the 1990s reduced long-term growth by 1–3%.[54] In its 2006 "Global Monitoring Report", the World Bank acknowledges that, in the long run, attempts to cut deficits by cutting public investment may be partly self-defeating. While most governments focus only on the short-term effect of expenditure reduction when setting fiscal targets, such a perspective neglects the fact that infrastructure investment in the longer term can lead to higher tax revenues by increasing future output revenues.[55]

Fiscal consolidation in Latin America led to a sharp decline in infrastructure investment.

Fiscal space should enable developing countries' governments to increase their expenditures for national development goals. The current approach to fiscal policy in developing countries appears to be biased against growth, employment,

52 Fonseca and Cardone (2004)
53 Calderón and Servén (2002)
54 Easterly and Servén (2003)
55 World Bank (2006), p. 40

and the use of fiscal policy to enhance access to utilities. A more development-oriented approach should consider fiscal policy as a supporting vehicle for the achievement of the MDGs to increase basic services, instead of being a constraint on their implementation.

Addressing Macroeconomic Risks

Private and public investors in utility projects face various kinds of risks, including regulatory and contractual, default, interest-rate, and foreign-exchange rate risks. These dangers greatly depend on uncertainties in the macroeconomic environment. Two major reasons investors shy away from developing countries are regulatory and foreign-exchange rate risks. While regulatory risk does not necessarily qualify as macroeconomic risk, it is closely related to foreign-exchange rate risk. Regulatory risk worsens in the event of a financial crisis or a currency devaluation, as the government involved might be prompted to default on contractual obligations.

Two major reasons investors shy away from developing countries are regulatory and foreign-exchange rate risks.

Foreign-exchange rate risk is of particular concern to water and power projects in developing countries for several reasons. First, as a result of a shallow financial sector, the large financing needs of water and power projects often cannot be met through commercial loans. Moreover, financial-sector liberalization has limited public-utility providers' access to official sources of capital. As a result, international capital markets have become more attractive to infrastructure investors. This, however, implies greater exposure to foreign-exchange rate and interest-rate risks. Second, amortization is a lengthy process for water and power assets. During the twenty to thirty years it could take to recover the investment, it is possible that a currency crisis might occur. Third, thermal power generation projects rely on fuel, which is denominated in hard currencies. Similarly, expansion costs are mostly priced in hard currency, as many countries import the equipment required for network extensions from foreign sources. Whoever invests in this equipment is exposed to foreign-exchange rate risk. Fourth, in the event of a financial crisis, investors are in a weak bargaining position. Once installed, power and water project assets may not be redeployed. As a result, it is more difficult for investors to exit the investment in order to minimize foreign-exchange losses. Fifth, with some notable exceptions in power generation, water and power outputs are usually nontradables. Consequently, currency movements are not compensated for by increases and decreases in revenue. Lastly, there is a significant risk for households in the event of a financial crisis. The higher interest rates that result from a currency crisis may decrease a government's incentive to honor price regulations in order to curb the abuse of monopoly power in these sectors. If prices of utilities go up as a result of higher interest rates, households will be the ones who suffer the most. This impact can be further exacerbated by factors that usually accompany a financial crisis, such as rising unemployment and inflation.[56]

56 Matsukawa, Sheppard, and Wright (2003)

Mechanisms against foreign-exchange rate risk for investors include: local currency instruments, currency hedging, exchange-rate guarantees and liquidity facilities.

Protective mechanisms against foreign-exchange rate risk for investors include: the use of local currency instruments; currency hedging; exchange-rate guarantees (often based on tariff indexation); and other innovative tools such as liquidity facilities, sovereign guarantee pools, and escrow accounts. Local currency instruments can effectively mitigate for currency risk. Increasing the share of local currency loans in investment in utilities has the advantage of limiting foreign currency exposure. Local currency schemes may include: local currency financing; local capital and bank market development; local currency fund schemes; local currency credit enhancement; and public-sector lending in local currency. However, a major problem with local currency debt is often its short-term structure, which does not match the long-term nature of water and power industry assets. As a result, while currency mismatch might be reduced through the increased use of local currency, investors are still vulnerable to the interest-rate increases that may follow currency devaluation. The development of long-term interest-bearing instruments, such as municipal bond markets, can therefore play a critical role in making local currency a viable financing option for utility providers. An innovative mechanism to deepen local bond markets could be guarantees by multilateral development banks to international investors in local currency bonds. These guarantees would provide utility-infrastructure investors with partial compensation for devaluation losses and could be based on the local guarantees currently provided by the Inter-American Development Bank only to domestic investors in several developing countries.[57]

Currency hedging usually relies on long-dated forward exchange rates. Forward exchange rates specify in advance the amount of local currency needed to meet future debt-service obligations in hard currency. Through buying forward contracts, the debtor can ensure the ability to pay the required amount in hard currency according to an agreed upon schedule. Yet long-dated forward exchange rates exist for only a few countries outside the Organisation for Economic Co-operation and Development (OECD) with investment ratings. Similarly, hedging with derivatives is not an option in most developing countries, because derivative markets do not exist for their currencies. The deepening of local capital markets would help develop both of these instruments. Governments, multilateral development banks, and export credit agencies could play an important role in providing the guarantees that can ensure the viability of investments in basic utilities. Although many governments of developing countries provide such foreign-exchange rate guarantees to investors, their financial capacity to deliver on such commitments is doubtful. Moreover, mechanisms that allocate investors' exchange-rate risk to fiscally constrained governments are highly controversial. For many it is hard to see why state governments and municipalities should bear the risk of foreign-exchange movement, when they have no control over these fluctuations. Opponents of this concept argue that foreign-exchange risk is market risk and thus should be borne by the market players, that is, the private sector itself. These guarantee mechanisms are usually structured in a way that requires an increase in revenues in the event of a currency devaluation. As a result, either the end users have to bear the burden of a tariff increase, or governments may simply default on their obligations.

57 Griffith-Jones and Fuzzo de Lima (2004)

The limited ability of developing countries' governments to protect against currency risks may demand that other institutions provide safeguards. Given the fact that export credit agencies in developed countries, as well as multilateral development banks, are more creditworthy than national governments, such institutions could play a crucial role in the provision of guarantees. Future research should focus on the role these agencies and banks can play in providing guarantee mechanisms. These guarantees might also include a countercyclical element: in those developing countries exhibiting relatively sound long-term fundamentals, export credit agencies and multilateral development banks could provide countercyclical support by increasing their guarantees—at the same time that commercial banks are lowering their exposure. Innovative mechanisms for risk mitigation include liquidity facilities, such as the Contingent Partial Credit Guarantee (CPCG) of the World Bank's International Finance Corporation (IFC). Through the CPCG, the IFC supports foreign investors in projects with local currency revenues that lack access to local currency financing of the desired tenor. The partial guarantee would mitigate the foreign-exchange risk that might arise from local currency devaluations. Other proposals for liquidity facilities have been the subjects of heated debate. For instance, the Camdessus Report proposed a devaluation liquidity backstopping facility to mitigate risks of foreign-exchange fluctuations for water projects at the subsovereign level.[58] In the case of a large devaluation, the facility would pay foreign lenders that part of the debt exceeding the reimbursement capacity of the utility provider. The amounts paid by the facility would be treated as long-term loans to the national government. The facility in turn would be repaid by the host government through socially and politically feasible surcharges on water tariffs. Proponents of this proposal argue that this type of risk mitigation will significantly increase commercial investment in utility provision. Opponents argue that the financing of a devaluation liquidity backstopping facility through tariff increases would essentially impose the international market price for water on consumers in developing countries, with the poorest being the most vulnerable. Similar problems arise with escrow accounts, which are deposits held in trust by a third party available to pay debt service. These deposits can be used to cover exchange-rate risk for the benefit of the lender. Since these accounts are typically funded by the proceeds of a project's senior debt, they are often costly to maintain. As with liquidity facilities, the critical question is who is the funder of these escrow accounts.

A promising regional approach toward creating guarantee agencies that enable currency risk sharing would be a sovereign guarantee pool. The pool would be a contractual mechanism for risk sharing among governments. Governments that benefit from the same infrastructure investment, but that enjoy complementary sovereign ratings, could come together to pool their guarantees and share the risk. The country with the better rating may have an incentive to participate because of budget constraints and the likely multiplier effect of the infrastructure project in terms of social and economic development. At the same time, the country with the poorer rating will enjoy access to financial resources it would otherwise not have.[59]

A promising regional approach toward creating guarantee agencies that enable currency risk sharing would be a sovereign guarantee pool.

58 Camdessus Report (2003)
59 Griffith-Jones and Fuzzo de Lima (2004)

Innovative mechanisms for risk mitigation are also critical for investing in renewable energy. Burning fossil fuels is not a long-term option for sustainable economic development and new investments into utilities in developing countries should also be seen as a chance to invest in renewable energies. Besides the obvious environmental benefits, the capacity to forego hard currency intermediate input would also in the long run decrease foreign-exchange risk. Still, given the high upfront costs of renewable energy technologies, serious challenges persist. According to a recent study by UNCTAD, two factors are critical for promoting the use of renewable energies in developing countries.[60] First, the costs of renewable energy have to become competitive in an increasing number of situations; second, investors and consumers need access to long-term financing to invest in renewable energy. The study finds that the greatest potential lies in decentralized schemes that aggregate the renewable energy investments of a large number of people, rather than large-scale dams, wind farms, or solar farms.

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60 UNCTAD (2005)

5. Internal Revenue Generation through Cost Recovery and Taxes

Unless the provision of utilities is financed by external grants, it is the citizen who will pay for them through user fees and/or taxes. This section therefore focuses on strategies to raise revenue through these two channels. At the same time, it is important to remember that the ultimate goal is to provide utilities for all. Hence, this discussion also touches upon the application of subsidies, in particular cross-subsidies, from richer to poorer segments of the population. While there appears to be a lack of research on the financing arrangements for utilities, much work has been done on cost-recovery strategies for water and electricity.[61] For that reason, this section steers clear of a more theoretical treatment of the issue and is limited to practical examples of how utility providers have recovered their costs.

Cost Recovery in Africa

It is estimated that about 300 million people in Africa do not have access to safe water, and about 313 million lack access to sanitation. Rural areas have the lowest access rates at about 47% for water and 45% for sanitation. According to the World Health Organization (WHO), approximately 50% of all Africans suffer from one of six water-related diseases.[62] Access to electricity, like water, is critical for health services and poverty reduction in general. Electricity is needed to light schools and homes, run health clinics, and power small industries and enterprises. Yet more than 526 million people in Africa, more than 75% of the population, do not have access to electricity.[63] Rural areas pose particular challenges for expanding electricity and water coverage. The most obvious reason is the fact that segments of the population living in these areas are often those with the lowest incomes and hence the lowest capability to pay for services. Moreover, rural areas are characterized by high costs of service delivery due to dispersed populations. The resulting logistical challenges reduce the commercial incentives for distributors to extend their services.

The water and the electricity sectors have undergone extensive reforms in the last two decades. Many sub-Saharan African countries have shifted from centralized and state-driven natural-resource management regimes toward decentralized and community-based water management regimes. In this context, the water sector has been reformed in Ghana, Kenya, Malawi, South Africa, Swaziland, Uganda, the United Republic of Tanzania, Zambia, Zimbabwe, and other countries. While these decentralization policies have increased participation, accountability, and transparency in many instances, they have also put enormous strain on local

Many Sub-Saharan African countries have shifted from centralized natural-resource management regimes toward decentralized and community-based water management regimes.

61 Excellent recent studies are provided by Komives et al. (2005) and Joskow (2005).
62 See "Water supply and sanitation project sector" at http://www.afdb.org.
63 Bayliss (2006); Bayliss and Kessler (2006)

districts, which have to rely on fewer fiscal transfers from central governments in running their utilities. Moreover, in many instances, decentralization was combined with privatization efforts tied to loan programs with international financial institutions. Reform experiences vary across countries. For instance, in 1999, the Ghanaian government privatized the public Ghana Water Company as a result of an agreement within the IMF's Enhanced Structural Adjustment Facility (ESAF), as part of a water-sector reform.[64] The effects of that privatization were highly regressive. Water rates rose 95% in May 2001.[65] Poor areas without access to piped water were particularly affected, as tanker truck operators and intermediary buyers passed on the increased costs.

Uganda's reform of the water and sanitation sector has been more successful. In 1998, Uganda moved toward the Sector-Wide Approach to Planning (SWAP) in reforming its water and sanitation sector to avoid duplication, inappropriate sequencing, and other inefficiencies. Uganda's SWAP included a shift from project-based approaches to comprehensive sector-wide programs and toward jointly coordinated funding of water and sanitation through government budgets. A critical component of the SWAP is the strengthening of the operational and financial standing of the National Water and Sewerage Corporation (NWSC), which is described below.

Similarly, the electricity sector has undergone major reforms in many African countries in the 1990s under pressure of the donor community. According to the World Bank and other multilateral and national development agencies, unbundling, deregulation, liberalization, and privatization of utilities were believed to reduce costs and increase the affordability of connections. It was widely expected that these reform measures would also lead to grid extensions provided there was competition. However, according to recent studies, the results have been disappointing. For the last fifteen years, power-sector reforms did not manage to increase access to electricity among the poor in Africa.[66]

Decentralization of services has boosted the importance of independent electricity distributors. Distributors most in need of funding were the least likely to obtain it, since full-cost recovery is not a realistic prospect for utility providers operating in areas with low incomes, high unemployment, and low consumption. Another consequence of the power-sector reform was that prices increased in most countries following a shift to marginal cost pricing, although it was often unclear which costs should be covered. Would this include currency fluctuation, leakages, and shortages, as well as private-sector profits? Moreover, what could be justified as a "fair return," as demanded by providers? The case study below about the publicly owned Zambian electricity provider ZESCO illustrates the pricing challenges of the electricity sector. The example touches upon a scenario in which industrial tariffs might be unjustifiably low compared to the prices citizens have to pay.

64 The ESAF has been converted into the "Poverty Reduction and Growth Facility."
65 See http://www.irc.nl/page/2433
66 Bayliss (2006); Bayliss and Kessler (2006)

On the positive side, many utilities have successfully applied measures to improve cost recovery and to increase internal revenue generation for water and electricity. In many cases, system losses could be reduced by decreasing technical faults and avoiding billing errors. Options for improved bill collection and payment enforcement include the use of prepayment meters and community support (for example, ease of payment measures and the use of community agents). The case study on the Ugandan experience shows that measures to improve cost recovery need not be detrimental to the poor. At the same time, the consumer, especially the one in the higher income bracket, should be encouraged to save energy. The choice of technology is an important cost-reducing variable. In rural areas, for instance, off-grid systems might represent the cheaper and more environmentally friendly technology option rather than grid extensions.

Many utilities have successfully applied measures to improve cost recovery and to increase internal revenue generation for water and electricity.

Subsidies are now widely seen as a necessary means to ensure sustainable and universal access to utilities. The main unresolved issues seem to be how to limit subsidies, target them, and make them more efficient. Consumption subsidies are often seen as problematic, for they benefit the better off rather than those that have not yet received a connection. Subsidizing connections might be the preferable option, but effective targeting is difficult. A coordinated, participatory approach toward policy design that takes into account voices of the poor and local context can help effectively tailor the provision of services.

Subsidies are now widely seen as necessary means to ensure sustainable and universal access to utilities.

Case Study for Africa: Minimizing Costs for Water Supply in Uganda

The experience of the Ugandan National Water and Sewerage Corporation (NWSC) in optimizing revenues through enhancing cost-efficiency measures makes for an illuminating case study.[67] As of 1998, the operational efficiency of the old NWSC was low. Along with many unviable towns being served, there were high arrears, high labor costs, a lack of performance incentives for area managers and staff, and rampant water leakages and sewage spillages. Collection efficiency was low, at around 60%, and service interruptions in several towns were regularly ranging from fifteen to twenty-one hours. As a result, NWSC was running a monthly deficit of about Ush 348 million (U.S. $300,000) despite a high average tariff of Ush [1,100 per cubic meter (U.S. $1.00 per cubic meter) with an overall debt burden of U.S. $100 million. Subsequent cost-recovery interventions were focused at the policy level, changing both the board membership and its strategy, as well as operational improvements through comprehensive management reform.[68] A critical step for optimizing revenue flows was to restore customer confidence through training in customer care, the establishment of customer-care centers, conducting of customer surveys, amnesty for illegal water use, and better territorial management. Cost containment included a drastic downsizing of staff from 1,850 in 1999 to 850 in 2001. (By 2006, the staff had increased again to 1,200, which

A critical step for optimizing revenue flows in Uganda was to restore customer care, amnesty for illegal water use, and better territorial management.

67 Muhairwe (2007)

68 These reform elements included a "100 days programme to improve services," the "Service and Revenue Enhancement Programme," "Area Performance Contracts," "Internally Delegated Area Management Contracts," the "One Minute Management Concept," and the "CHECKERS system." For details, see http://www.nwsc.co.ug.

can be interpreted as an indicator of good management and financial sustainability.) There was also a reduction in administration and overhead costs (vehicle maintenance, as well as medical, travel, and illicit activities). Moreover, a stricter appraisal of capital projects was ensured. A simplification, rationalization, and indexation of tariffs included lowering the average tariff to U.S. 50 cents; a reduction in connection fees by 50%; a reduction in reconnection fees by 75%; the elimination of a minimum charge; and the introduction of a minimal service charge. As a result of the improved financial situation, more than 1,370 kilometers of new water mains and new standposts (an average of 300 per annum) were constructed in periurban areas.[69] Cross-subsidies were applied across customer groups and across areas by application of a uniform tariff.

The water-sector reform was implemented within the context of performance contracts to ensure continuous performance improvements, a Poverty Eradication Action Plan, and a SWAP. Critical ingredients were large, upfront infrastructure investments (into waterworks, sewerage systems, and big transmission mains, among other things); social mission activities, including reaching out to the poor; the takeover of nonviable towns; and agreed upon debt write-offs. This strategy led to significant operating efficiency gains from 1998 to 2006. These include increased service coverage (from 48% in 1998 to 70% in 2006), a higher number of total connections (50,826 to 152,046), more metered connections (217 to 149,963), a larger number of new connections (3,317 to about 28,521 per year), and a lower number of staff per 1,000 connections (36 to 7). Unaccounted for water was reduced from 51% to 29.3% (in Kampala from 55% to 35.1%, and in other areas from 43% to 15.2%). In addition, collection efficiency increased from 60% in 1998 to 95% in 2006, leading to a much higher operating profit. Based on these positive experiences, NWSC has offered advisory services on organizational behavior change, contract design, and incentive systems to other utilities and institutions within and outside Africa. The case of NWSC's argues for a multipronged approach to financing access to water for the poor. Improved operational efficiency can be seen as a prerequisite for improved financial performance, and tariff restructuring as a short-term intervention. At the same time, disconnecting users from their services upon nonpayment can be avoided. Full-cost recovery, however, at least in the short and medium term might be a "myth," especially in least-developed countries. Capital investments, in NWSC's case, were grant-financed. In order to service the poor in a sustainable fashion and finance big infrastructure projects, either targeted subsidies from the state or official development assistance appear to be necessary.

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69 NWSC increasingly favors the use of private yard connections as alternatives to public standposts or kiosks, as those experienced low rates of payment. As opposed to standposts, yard connections are private, and water can be distributed through on-selling to neighbors.

Case Study for Africa: Tackling Cost Recovery Challenges for Electricity in Zambia

The experience of Zambia Electricity Supply Corporation (ZESCO), Zambia's largest power utility, in extending access to electricity to the poor highlights some of the major challenges least-developed countries have to tackle in providing basic utilities. In extending access to poor individuals, electrification standards can often be constraints. For instance, thatched houses or mud houses cannot be electrified. While on average 23% of individuals in Zambia overall have access to electricity, there is a vast disparity between the rural (2%) and the urban (44%) population. A sizable country (752,000 square kilometers) with a population of only 10,812,000, Zambia has to face relatively high costs per connection (around $1,000).

Zambia is a least-developed country with increasing but still low per capita income and difficulties in payment collection. Possible strategies to meet these challenges should focus on accelerating national development through pro-poor policies that would increase people's capacity to pay. However, extending electricity itself is a growth-enhancing and pro-poor policy, as it supports critical Zambian industries, such as mining, agriculture, tourism, and services. In addition, accessible electricity is crucial to small-scale income-generating industries. However, electricity costs, including those of connection, operations, and maintenance, have not been fully recovered in Zambia. ZESCO tariffs are currently the lowest in the region at 3.1 cents per kilowatt hour. While many developed countries have been subsidizing electricity by way of grants or tax waivers, and consumption support through welfare payments, Zambia does not provide welfare payouts but rather only lifeline tariffs. Yet many poor households are unable to obtain electricity service connections at the lifeline level because of infrastructure constraints.

The current tariffs for mines and industrial customers should be viewed critically in the Zambian context. Electricity tariffs of mines average 2.1 cents with real costs of 4.2 cents. These tariff calculations are based on low commodity prices in the past. As commodity prices have risen over the years, this tariff should be reevaluated. Potential new revenues resulting from a tariff increase in the mining sector could be used to finance electricity for the poor. Other recommendations to increase the poor's access to electricity include promoting the use of gas for cooking as well as equipping all new houses with solar panels for heating. Finally, increased emphasis should be placed on the rural population by exploring the potential of innovative, off-grid solutions.[70]

The current tariffs for mines and industrial customers should be viewed critically in the Zambian context.

70 Zulu (2007)

Cost Recovery in Latin America

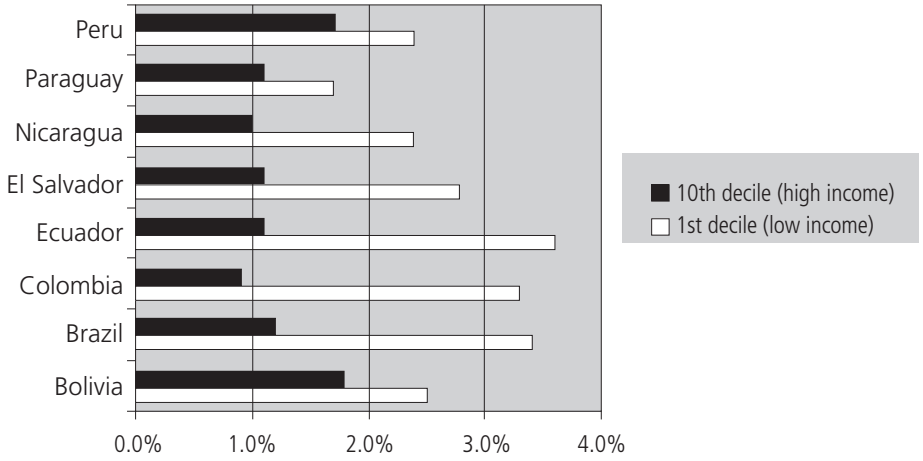
As is the case for other regions, Latin America offers a wide variety of conditions in terms of access to water, sanitation, and electricity. The Latin American electricity sector has undergone major structural, regulatory, and market reforms since the early 1980s. Institutional settings differ among countries, but in general private-sector involvement is more pronounced in the electricity than in the water sector. Chile arguably has experienced the world's longest electricity reform in the post-World War II period. The Electricity Act introduced in 1982 still regulates the current organization of the sector.[71] The law triggered the partial privatization and commercialization of the state-owned electricity system. Over the last 20 years Chile has successfully privatized its electricity sector. However, the lack of sufficient incentives for generation and transmission investment in many Latin American countries has led to a significant decline in foreign investment in electricity since the late 1990s. As a result, the public sector is still the main provider of electricity in Latin America. In Brazil, for instance, the major power company is Centrais Elétricas Brasileiras (Eletrobrás), which, together with its subsidiaries, generates and transmits approximately 60% of Brazil's electric supply. The company is listed on the stock market under public control, for the Brazilian government owns about 52% of the shares.[72]

Institutional frameworks differ for utilities in the water sector, like the electricity sector, with regard to the type and number of providers and regulatory frameworks. The predominant tariff model for water and sanitation in Latin America seems to be based on increasing block tariffs (IBT). These tariffs are constant over a specified range of water use, and then shift as use increases. IBT are common in many developing countries for reasons of affordability and resource conservation. The first block is usually highly subsidized through higher consumption charges for users that exceed its level. In this way, a subsistence level of water can be made affordable to the poor, while above-subsistence level consumption of water is discouraged through increasing tariffs. However, where to set the adequate threshold for the subsistence level remains controversial in many instances. Moreover, IBT are regressive in nature. Households that are not connected to the system will not benefit from the consumption subsidies.

Experiences differ widely in the Latin American region as to the affordability of water and sanitation. As Figure 8 shows, in relative terms, individuals in rural areas generally spend much more than those living in urban areas. On the positive side, household expenditures in the selected countries are in line with WHO recommendations (3.5% of monthly household income for water, and 5% for water and sewer systems). This might serve as a reminder that the most daunting challenge remains that of providing access to those who are excluded.

71 Pollitt (2004)
72 See http://www.eletrobras.gov.br.

Figure 8: **Percentage of total household expenditures on drinking water for the lowest and highest deciles of total expenditure per capita**



Source: Revista panamericana de salud pública, 2002

The institutional setting for water provision varies in Latin America. In Uruguay, for example, where a safe drinking-water supply is almost universal, almost all water and sewer services (with the exception of Montevideo) are provided by the state-owned national utility, Administración de las Obras Sanitarias del Estado. Cross-subsidies are being employed there to subsidize lower tariffs for residential users through higher tariffs for commercial and public enterprises. Nevertheless, average tariffs have increased significantly over the last couple of years, in particular for low-income households. Argentina offers another interesting example of cross-subsidization. Buenos Aires's social tariff is discussed below.

The Brazilian constitution assigns the responsibility for the provision of water and sanitation services to the country's 5,560 municipalities. However, since 1971 the state water and sewerage companies, National Water and Sanitation PLANASA, have provided water services in about 4,000 municipalities and sewer services in about 1,000 municipalities. Almost all subnational service providers in Brazil are public entities. Only sixty-five municipalities in ten states have signed concession contracts with private companies. Brazil still faces challenges in extending access to water supply in rural areas. Water tariffs are high compared to the rest of Latin America. Moreover, while urban coverage is 96% for water and 83% for sanitation (including 53% access to sewerage), coverage in rural areas only stands at 57% for water supply and 37% for sanitation.[73]

Chile, on the other hand, represents a noteworthy exception to most other Latin American countries. In Chile, more than 95% of both water and sanitation services are being provided by the private sector (as of 2005). Fifty-three small, medium-sized, and large private companies serve 95% of the urban population. The

73 Data based on WHO/UNICEF Joint Monitoring Programme for water supply and sanitation. See http://www.wssinfo.org/en/welcome.html.

remaining 5% of urban dwellers are served by small municipal companies and cooperatives. Rural areas in Chile are served by cooperatives, and rural drinking-water committees are in charge of operating water-supply systems.[74] According to the current prevailing concession regimes, contracts are awarded by the state; private concessions can be revoked; operating areas are limited; and services, which must be continuous, are constantly regulated and inspected. Chile's regulatory and legal framework seems to be critical to ensuring sufficient quality and quantity of services. The regulatory agency Superintendencia de Servicios Sanitarios (SISS) has modeled tariff regulation on the Chilean electricity and telecommunications sectors, which had already established efficient cost levels as benchmarks for utilities tariffs. Varying from .77% for the lowest quintile and 2.35% for the highest quintile of household income, tariffs have remained low in Chile.[75]

Case Study for Latin America: The Social Rate for Water in Buenos Aires

Buenos Aires provides a good example of an effective application of cross-subsidies.

Buenos Aires provides a good example of an effective application of cross-subsidies. Buenos Aires province is an area covering 9.6 million people living in the city of Buenos Aires and seventeen surrounding municipalities. Of these people 38% live below the poverty line. In 2001, a "social rate" for water was introduced, which was financed as a cross-subsidy. Annually, U.S. $4 million were transferred from richer to lower-income households in order to offer a discounted tariff to households in critical socioeconomic situations. The system has proven to be successful, and it is transparent and participatory. (Among the participants have been the User Committee of Ente Tripartito de Obras y Servicios Sanitarios [ETOSS], the Argentine undersecretariat for water resources, the province of Buenos Aires, the city of Buenos Aires, and the seventeen municipalities' regulatory entities and utility providers.) Moreover, it has managed to minimize targeting errors and has low administrative costs.

The subsidy is targeted at families with the incomes of less than $210 per month. To identify the target groups correctly, a social survey was initially undertaken, assessing data on income, health, and consumption-related variables. Benefits of the social rate program include a reduction of the bill for the poor and the adjustment of existing debt according to payment capacity. Average payment capacity has been estimated to be around 4%. One challenge lies in the distribution of the funds among the eighteen jurisdictions. Funds are distributed in $4 increments and must be requested by the user to be disbursed. In order to be beneficiaries, users have to take part in the social survey. The municipalities and the government water regulator, ETOSS, identify and select the beneficiaries, while ETOSS also supervises the process. Discounts to users are applied by the utility provider in their invoices.

74 SISS (2005), http://www.siss.cl
75 Organización Mundial de Salud, Evaluación de los servicios de agua potable y saneamiento 2000 en las Américas, Chile

As of September 2006, the social rate reached approximately 116,000 users (4.5% of total users). The program's funds totaled 6.1 million pesos annually (.9% of the total turnover). The average discount for a beneficiary was 40%, and the average invoice for water and sewage after the introduction of the discount stood at $6 per month. Complex controls have been put in place to address the bad debt of users; concessions were made in the amount of $9.5 million, which reduced the percentage of users with debt from 70% to 20% within the first twelve months. The social rate and extended benefits, such as the cancellation of debt incurred before 1999, have also been offered to institutions that serve public interests, such as universities and hospitals.

Increasing Tax Revenue

Increasing government financing is critical to expanding resources available to public utilities. The most sustainable way to achieve this is through increasing the tax revenue base.

The discussion on how to increase tax revenues has usually been left out of the debate related to financing basic utilities. However, the dependency between providing utilities and generating tax revenue runs both ways. In most developing countries, the central government continues to be the most important source of financing for municipalities. Increasing available government financing is therefore critical to expanding resources available to public utilities. The most sustainable way to achieve this is through increasing the tax revenue base. Furthermore, a better provision of public services will also increase the willingness of consumers to pay taxes. For these two reasons, this last section outlines some of the major challenges for developing countries in increasing tax revenue.

Sustainable, adequate, and stable financial resources play a critical role in enabling governments to deliver public utilities and promote overall socioeconomic development. Yet the challenges developing countries face in mobilizing tax revenues are manifold. First, the potential for tax revenue is generally low given the prevailing low average income in developing countries. Sub-Saharan economies, in particular, are often characterized by the agricultural sector's large share of total employment (but not necessarily in total output). This severely limits the revenue potential of income and consumption taxes. Second, many developing economies are characterized by large informal-sector activities and occupations without transaction records. The problem of data collection is exacerbated by the fact that most transactions even in the formal sector transpire in cash, a fact that makes it difficult to establish true levels of income. Third, tax administration capacities are weak due to inadequate funding of the states' revenue collecting agencies; as well as workforce problems, including a dearth of labor, heavy competition for workers, a lack of training, and often more favorable remuneration available in the private sector. Fourth, tax awareness is low. Taxpayers are often not aware of their rights and obligations. Moreover, the incentive to pay taxes is low where the rates are too high, and nonexistent where public services do not reach the poor. There is a significant loss of revenue, finally, due to liberal tax incentives and exemption schemes, from liberal capital allowances (the "race to the bottom" to attract foreign investors) to sectoral exemption schemes (in such areas as mining and agriculture), location incentives, and the establishment of export processing and manufacturing zones.

The role of tax administration is to collect taxes as specified by law. Hence the biggest challenge is to reduce the difference between the tax due according to the law and the amount actually collected; that is, the goal is to narrow the so-called tax gap. Common types of noncompliance result from nonregistration, nonfiling, and nonpayment; underreporting of tax voluntarily paid; and abuse in refund systems, in particular, in the case of the VAT.[76] These difficulties suggest that the following objectives are critical for improving tax administration in developing countries. First and foremost, there seems to be an urgent need for improving data collection and taxpayer information to correctly assess the revenue base. Measures must also be taken to increase potential taxpayers' ability and willingness to pay. This can be done through simplifying compliance procedures, increasing educational efforts, setting lower tax rates, and providing universal and better quality public services. Moreover, the administrative capabilities of revenue authorities should be increased, perhaps through better remuneration for employees, the upgrading of technology, and a higher degree of agency autonomy. Finally, much revenue is lost through tax incentives, a trade-off that should be examined critically.

Measures must be taken to increase potential taxpayers' ability and willingness to pay.

One popular avenue of administrative reform intended to tackle these challenges more effectively has been the establishment of semiautonomous revenue agencies, especially in sub-Saharan Africa. The justification for these new agencies lies in considerations of efficiency and effectiveness. An autonomous organization is believed to be free from political interference in its day-to-day affairs and from other constraints of civil-service personnel systems. More specifically, the concrete advantages of establishing an autonomous revenue agency arise from the taxpayers' perceptions of new entities as more effective, efficient, and equitable than the preexisting agency; greater flexibility in human-resource management; an opportunity for integrating revenue functions into a single agency; and the independence of such an agency to take legal action against taxpayers. Among the possible disadvantages are the additional costs of forming, and the higher costs of running, the new agency (compared to the tax agency it typically replaces). In addition, the creation of a new executive agency might contribute to fragmentation of the civil service with a negative impact on interagency coordination and cooperation. It is also important to put in place a clear regulatory and supervisory framework to prevent abuse and political interference. This is often lacking in poor countries.

A first assessment of these new institutions indicates that this model has run into deep problems in many instances. While tax revenue increased in the short run, it could not be sustained in the long run.[77] As seen in the case of Uganda, a proclaimed autonomous revenue authority with generous remuneration packages is not necessarily free from political interference. On the contrary, the offering of well-paid jobs and considerable rent-seeking opportunities can make an attractive target for interference in personnel matters. Corruption can continue to thrive even within high-wage environments. Moreover, the typical work environment of

76 Ad Hoc Group of Experts Meeting on Strategies for Improving Resource Mobilization in Developing Countries and Countries with Economies in Transition (2000)

77 Fjeldstad and Rakner (2003)

tax officers includes external actors. As a result, there is the potential for corruption in an extended network, where tax officials can be hired as "tax experts" by the private sector in return for certain "favors."

Privatization of tax collection—such as the collection of customs duties by the private British company Crown Agents in Mozambique—gives also reason for concern, as revenue increases seem unsustainable, skills transfer is limited, and contracts are often very expensive for the developing countries' governments. In countries with high levels of corruption, there is no reason to believe that private-sector entities are less guided by self-interest than revenue authorities.

In countries with high levels of corruption, there is no reason to believe that private-sector entities are less guided by self-interest than revenue authorities.

While most of the literature views outsourcing measures with some skepticism, another potential tool for increasing administrative efficiency is viewed more optimistically: electronic service delivery.[78] It is argued that low-income countries need to begin a process of reviewing their tax administration in the face of growing electronic commerce. Growing electronic commerce includes electronic banking; purchasing and inventory systems; payment systems and commercial transactions conducted via internet, phone, and fax; and all forms of digitized goods and services. Although the internet is still in its early stages in many least-developed countries, this form of business is growing rapidly around the world. There is considerable evidence that e-commerce has helped spur economic growth and thus can help increase potential tax bases.[79] To harness this growing opportunity, electronic service delivery development (that is, the ability to file taxes electronically, register a business, receive information, and so on) should go hand in hand with growing e-commerce.

Finally, it is important to reach consensus on the general objectives of tax administration. In this regard, complementary reforms in incentive systems and organizational procedures are necessary. Improving tax structures and collection requires a thorough examination of institutional parameters. Feasible reform may require enabling organizational changes in many areas, including personnel, task assignments, information systems, budgeting and procurement, and mechanisms for feedback and evaluation. These comprehensive reforms can only materialize if they are guided by political will.

78 Hadler (2000)
79 Brookes and Wahhaj (2000)

6. General Conclusions and Action-Oriented Proposals

The present paper has laid out a new framework for the discussion on how to improve the financing of basic services from the vantage of publicly owned utilities, by taking into account domestic and international capital markets, macroeconomic factors, and internal revenue generation. In conclusion, the following recommendations are made with the goal of improving financing for basic utilities and ultimately achieving increased access to water and electricity for the poor in developing countries.

Raising Finance:
Challenges in Tapping Domestic and International Capital Markets

- Infrastructure spending needs are increasing massively in developing countries. A paradigm shift might be necessary at all levels of government. Central governments need to have sufficient policy space to set the right spending priorities. At the same time, expenditure ceilings for municipalities in sensitive areas should be reevaluated in order to make more resources available for infrastructure and social spending.
- Promoting the development of the financial sector is critical. Public providers may wish to explore new innovative mechanisms for raising finance. Potential instruments include municipal bonds, pooled financing arrangements, and mechanisms provided by financial intermediary institutions. Emphasis should be put on local currency mechanisms to minimize exchange-rate risk.
- At the same time, government subsidies remain indispensable where no or inadequate commercial borrowing is available to meet the financing gap for providing utilities to all. Government-subsidized entities like national development banks have proven to be an effective vehicle for infrastructure financing in many developing countries. Experience has shown that government-subsidized institutions can help the development of local credit markets.
- Subnational creditworthiness is critical for municipalities in developing countries to obtain national or international credit ratings. Appropriate regulatory environments and sound financial management can help strengthen creditworthiness. Further efforts should go into connecting local with international credit-rating agencies to make credit ratings more affordable for utilities in developing countries. Pooled financing arrangements of municipalities, combined with financial intermediaries, can reduce risk and make it easier for issuers to be considered creditworthy.
- There is no “one size fits all” approach. The appropriate financing structure depends on local context. Participatory budgeting mechanisms can help set the right priorities.

Macroeconomic Aspects of Financing Utilities

- More development aid is needed to fill the infrastructure-funding gap in poor countries. However, ODA inflows have to be properly managed by governments and their central banks. Ideally, foreign-exchange inflows should be invested into noncompetitive imports that improve the productive capacity of recipient countries. In this way, aid for infrastructure can increase the absorptive capacity of economies.
- Increased fiscal space for government spending on utilities is needed in most developing countries. Rather than crowding out investment, prudent public spending increases the productive capacity of nations' economies and can attract private investment, if it is coordinated with adequate monetary policies.
- Macroeconomic risks have to be taken into account. Protective mechanisms against risk include the use of local currency instruments, currency hedging, exchange-rate guarantees, and other innovative tools, such as liquidity facilities, sovereign guarantee pools, and escrow accounts. Discussions on whether mechanisms or facilities are appropriate should be guided by the question of who (private investor, municipality, or government) should bear what portion of the risk and how likely it is that potential costs will be passed on to the poor.

Internal Revenue Generation through Cost Recovery and Taxes

- In the long run, it is the citizen who will pay for the provision of services, either through taxes or user fees. In the short run, however, full-cost recovery is often not a realistic option, if the utilities are to be provided to the poor. More financial resources are therefore needed to help utilities invest in service extension and upgrade their systems.
- There is not a single, one size fits all recommendation as to the appropriate tariff structure. However, a simplification, rationalization, and indexation of tariffs can help lower the average charge to consumers and increase revenues. Reductions in connection fees or reconnection fees can help to better reach the poor and increase the revenue base.
- Who should benefit from subsidies and how they can be made more efficient are challenges that must be approached in the local context. In general, there appears to be an emerging consensus that increased focus should be put on access subsidies, because they help extend networks and include poor, unconnected households. At the same time, services must remain affordable to the poor. Cross-subsidies have been applied successfully in many countries. They have been most effective where administered simply and when based on thorough household surveys of the consumer base.
- Innovative technologies can help reach rural populations. More research should focus on the use of low-cost, renewable energy sources that do not require grid extensions.
- Tax revenue is a critical source of income for utilities. Improving tax structures and collection requires a thorough examination of institutional parameters. Feasible reform may require enabling organizational changes in many areas, including personnel systems, task assignments, information systems, budgeting and procurement, and mechanisms for feedback and evaluation. These comprehensive reforms can only materialize if they are guided by political will.

7. Bibliography

Ad Hoc Group of Experts Meeting on Strategies for Improving Resource Mobilization in Developing Countries and Countries with Economies in Transition (2000): Report, New York, October 2–6, 2000

Akari, Peter (2007): The experience of the African Development Bank and the African Water Facility. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

Alexander, Nancy (2006): Financing access to basic utilities for all: The case of Brazil. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Barbone, Luca/Sanchez, Luis-Alvaro (1999): Pensions and social security in sub-Saharan Africa: Issues and options. The Thirteenth International

Bayliss, Kate (2006): Ensuring sustainable access for the poor through internal revenue generation: Electricity. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Bayliss, Kate/Kessler, Tim (2006): Can privatization and commercialization of public services help achieve the MDGs? Paper published by UNDP, International Poverty Centre, July 2006

Bayliss, Kate/McKinley, Terry (2007): Privatising basic utilities in sub-Saharan Africa: The MDG impact. Policy Research Brief no. 3. UNDP, International Poverty Centre

Briceno-Garmendia, Cecilia/Estache, Antonio/Shafik, Nemat (2004): Infrastructure services in developing countries: Access, quality, costs and policy reform. World Bank Policy Research Paper no. 3468

Brookes, Martin/Wahhaj, Zaki (2000): The shocking economic effect of B2B. Goldman Sachs & Co. Global Economics Paper no. 37, February 3

Cabannes, Yves (2004): Participatory budgeting: A significant contribution to participatory democracy. Sage Publications and International Institute for Environment and Development

Calderón, César/Servén, Luis (2002): The output cost of Latin America's infrastructure gap. World Bank

Camdessus Report 2003: The report of the World Panel on Financing Water Infrastructure. Presented at People's World Water Forum

Cardone, Rachel (2006): Analysis of donor flows to water supply and sanitation services, in Meeting development goals in small urban centres: Water and sanitation in the world's cities. UN-Habitat publication

Cardone, Rachel/Fonseca, C. (2003): Financing and recovery. International Water and Sanitation Centre

Chisenda, Danies K. (2007): Taxation and infrastructure financing. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

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Connor, Helene (2006): Preconditions for successful sustainable investment. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

De Oliveira, Oswaldo Serrano (2006): Financiamento para o saneamento: Fontes, programas, dificultadores e realizacoes. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Department for International Development/DFID (2002): Making connections: Infrastructure for poverty reduction

DMAE (2001): Relatório 40 anos. Internal publication

Easterly, W./Servén, L. (2003): The limits of stabilization. Stanford University Press

Epstein, G./Heintz, J. (2006): Monetary policy and financial sector reform for employment creation and poverty reduction in Ghana. Country Study no. 2. UNDP, International Poverty Centre

Ferguson, Bruce (2004): Findeter: A model municipal development fund? Presentation made at the World Bank, April 12, 2004

Fitch Ratings (2002): International special report: Financing of Mexican states, municipalities, and agencies: Alternatives and strategies

Fitch Ratings website: www.fitchratings.com

Fjeldstad, Odd-Helge/Rakner, Lise (2003): Taxation and tax reforms in developing countries: Illustrations from sub-Saharan Africa. Chr. Michelsen Institute Development Studies and Human Rights

Fonseca, Catarina/Cardone, Rachel (2004): Analysis of cost estimates and funding available for achieving the MDG targets for water and sanitation. London: Well

Goldsbrough, David (2007): The IMF and Constraints on Spending Aid, UNDP International Poverty Center, One Pager Number 35

Gonga, Sam (2007): Mobilizing finance: The Zambian experience. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

Griffith-Jones, Stephany/Fuzzo de Lima, Anna (2004): Alternative loan guarantee mechanisms and project finance for infrastructure in developing countries. Working Paper. Institute of Development Studies, University of Sussex

Hadler, S. C. (2000): Best practice in tax administration in sub-Saharan Africa: A handbook for officials. Harvard Law School, International Tax Program

Hall, David/Lobina, Emanuele (2002): Water privatisation in Latin America. Report presented at PSI Americas' Water Conference, San José, Costa Rica, July 2002. University of Greenwich, Public Services International Research Unit

Hall, David/Lobina, Emanuele/Viero, Odete Maria/Maltz, Helio (2002): Water in Porto Alegre, Brazil: Accountable, effective, sustainable and democratic. A PSIRU and DMAE paper prepared for WSSD in Johannesburg, South Africa

Hall, David/Lobina, Emanuele (2006a): Pipe dreams: The failure of the private sector to invest in water services in developing countries. University of Greenwich, Public Services International Research Unit

Hall, David/Lobina, Emanuele (2006b): Water as a public service. University of Greenwich, Public Services International Research Unit

Hofmann, M./Zattler, J. (2005): Mitigating risks of increased ODA flows. Federal Ministry for Development and Economic Cooperation

Independent Evaluation Office, World Bank (2006): Project performance assessment report of the Colombia Municipal Development Project (Loan 3336-CO) and the Urban Infrastructure Services Development Project (Loan 4345-CO). Report no. 36435

International Energy Agency (2004): World Energy Investment Outlook 2004

International Energy Agency (2006): World Energy Investment Outlook 2006

International Monetary Fund, Independent Evaluation Office (2007): An evaluation of the IMF and aid to sub-Saharan Africa

Joskow, P. (2005): Regulation of natural monopolies. Center for Energy and Environmental Policy Research, 05-008 WP, April

Kambanda, Callixte (2007): Financing basic utilities for all. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

Kehew, Robert/Matsukawa, Tomoko/Petersen, John (2005): Local financing for subsovereign infrastructure in developing countries: Case studies of innovative domestic credit enhancement entities and techniques. World Bank, Infrastructure, Economic, and Finance Department in cooperation with Municipal Finance Thematic Group, Transport and Urban Development Department

Kessler, T. (2003): Privatization and GATS: A threat to development? Friedrich Ebert Foundation, New York Office

Komives, Kristin/Foster, Vivien/Halpern, Jonathan/Wodon, Quentin [OK? One person?], with Abdullah, R. **(2005)**: Water, electricity, and the poor: Who benefits from utility subsidies. World Bank

Koonings, Kees (2004): Strengthening citizenship in Brazil's democracy: Local participatory governance in Porto Alegre. Bulletin of Latin American Research 23, no. 1 (1994), pp. 79–99. Utrecht University

Lentini, Emilio J. (2006): Programa de tarifa social de la Concesión de agua y saneamiento de Buenos Aires. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Martell, Christine R. (2003): Municipal investment, borrowing, and pricing under decentralization: The Brazilian case. Routledge, vol. 26, no. 2 [vol. 26 of what?]

Matsukawa, Tomoko/Sheppard, Robert/Wright, Joseph (2003): Foreign exchange risk mitigation for power and water projects in developing countries. Energy and Mining Sector Board Discussion Paper. World Bank Group, The Energy and Mining Sector Board

Max, Reginald (2007): Mobilising local finance: Stable and predictable financing mechanisms for utility providers. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

McKinley, Terry (2005): Why is "Dutch disease" always a disease? The macroeconomic consequences of scaling up ODA. Working Paper no. 10. UNDP, International Poverty Centre

McKinley, Terry (2006a): Does debt relief increase fiscal space in Zambia? The MDG implications. Paper published by UNDP, International Poverty Centre, September

McKinley, Terry (2006b): The macroeconomics of financing basic utilities for all. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

McKinley, Terry (2007): The macroeconomics of financing basic utilities for all. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

Menegat, Rualdo (2002): Participatory democracy and sustainable development: Integrated urban environmental management in Porto Alegre, Brazil. Sage Publications and International Institute for Environment and Development

Miños, Daniel Chavez (2002): Porto Alegre, Brazil: A new, sustainable and replicable model of participatory and democratic governance?

Monterrey Consensus on Financing for Development (2002): A/Conf/198/11

Moody's website: www.moodys.com

Mugisha, Silver (2006): Managerial incentive plans for water utility management: Practical applications in sub-Saharan African water companies

Mugisha, Silver/Berg, Sanford V./Muhairwe, William T. (2005): Using internal incentive contracts to improve water utility performance: The case of Uganda's NWSC

Muguisha, Silver/Berg, Sanford V./Skilling, Heather (2004): Practical lessons for performance monitoring in low-income countries: The case of National Water and Sewerage Corporation, Uganda

Muhairwe, William Tsimwa (2003): Improving performance through internal reforms by the public sector: The Case of National Water and Sewerage Corporation, Uganda. Paper presented for Water Week, World Bank, Washington, D.C., March 4–6, 2003

Muhairwe, William Tsimwa (2007): Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

National Water and Sewerage Corporation (2005): Annual Activity Report July 2004–June 2005

National Water and Sewerage Corporation (2006): Annual Report 2005–2006

Nellis, John (2007): Privatising basic utilities in Africa: A rejoinder. One Pager no. 31. UNDP, International Poverty Centre

OECD, IEA (2006): World Energy Outlook

Operations Evaluation Department, World Bank (2005): 2004 Annual review of development effectiveness: The World Bank's contributions to poverty reduction

Palmer Development Group (2005): The municipal bond issue: Study commissioned by the Johannesburg Innovation and Knowledge Exchange (JIKE)

Peterson, George (2000): Building local credit systems. World Bank, Washington, D.C.

Pollitt, Michael G. (2004): Electricity reform in Chile: Lessons for developing countries. CMI Electricity Project Working Paper no. 51. University of Cambridge, Department of Applied Economics

Rodriguez, Alejandro Encinas (2006): La ciudad de Mexico: Los retos del agua. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Simoes, Andre F. (2006): Assegurando o acesso sustentavel para os pobres mediante a geracao interna de receitas: Eletricidade. Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Sirtaine, Sophie/Pinglo, Maria Elena/Guasch, J. Luis (2005): How profitable are private infrastructure concessions in Latin America? Empirical evidence and regulatory implications. Quarterly Review of Economics and Finance, no. 45

Souza, Celina (2001): Participatory budgeting in Brazilian cities: Limits and possibilities in building. Sage Publications and International Institute for Environment and Development

Standard and Poor's website: www.standardandpoors.com

Supplementary Law 101 (May 2000): The Brazilian fiscal responsibility law. Ministry of Planning, Budget and Management of Brazil

Todeschini, Carlos Atílio (2006): Presentation prepared for the first regional consultation on "Financing access to basic utilities for all," Brasilia, Brazil, December 11–13, 2006

Toubkiss, J. (2006): Costing MDG target 10 on water supply and sanitation: Comparative analysis, obstacles and recommendations. Montreal, Canada, World Water Council

UNCTAD (2005): Potential uses of structured finance techniques for renewable energy projects in developing countries. Study prepared by the UNCTAD secretariat

UNICEF (2005): Meeting the MDG drinking water and sanitation target

United Nations (2005): World urbanization prospects, the 2005 revision

United Nations Development Programme (2006): Human development report: Beyond scarcity: Power, poverty and the global water crisis

Venkatachalam, Pritha (2005): Innovative approaches to municipal infrastructure financing: A case study on Tamil Nadu, India. Working paper no. 68. DESTIN

Vives, Antonio (1999): Pension funds in infrastructure project finance: Regulations and instrument design. Sustainable Development Department Technical Papers Series (no. IFM-119). Washington, D.C.: Inter-American Development Bank

Von Weizsaecker, Ernst U./Young, Oran R./Finger, Matthias (2005): Limits to privatization: How to avoid too much of a good thing. Earthscan, London

World Bank (2006): Global monitoring report: Millennium Development Goals: Strengthening mutual accountability, aid, trade and governance

Zulu, Moses (2007): Ensuring sustainable access to electricity for the poor through internal revenue generation. Presentation prepared for the second regional multistakeholder consultation on "Financing access to basic utilities for all," Lusaka, Zambia, April 23–25, 2007

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