

Private Infrastructure Investment at the Subnational Level: Challenges in Emerging Economies

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WORKING PAPER

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Caveat Emptor

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There has recently been a noticeable increase in the number of conferences and papers extolling the virtues of financial markets to finance the public provision of local infrastructure services. Some advocate the wonders of foreign borrowing, even for cities and states that are patently unworthy of even local borrowing. We concur with the need to enhance the coverage and efficiency of the infrastructure service provision, but feel that private participation is a better alternative and one of the best instruments. Nevertheless, even private finance is challenging. The purpose of this article is to bring some caution into the discussion.

Violent public protests recently took place in Cochabamba, Bolivia (and extended throughout the country), over increases in water rates. The protests, which began before the construction on the project started, highlighted some of the perils of private infrastructure investment under subnational jurisdictions (see Exhibit 1). As a result, the private consortium was forced to pull out of the \$200 million project. A concession contract in the province of Tucuman in Argentina confronted similar problems.¹ While there have been many successful private investments at the municipal level, like Aguas de Santa Fe in Argentina and several regional toll roads in Brazil, experience shows that private infrastructure investment at the subnational level faces greater challenges than investments at the national level.²

As decentralization and devolution of responsibilities to subnational governments is increasing, together with a continued, the volume of private infrastructure under the jurisdiction of subnational governments is increasing in tandem with increases in decentralization and devolution of responsibilities to those governments. Continued interest in the private provision of infrastructure services is also con-

tributing to increases in private infrastructure investment. However, this move is fraught with challenges that arise partly from the social implications of the services that are in the purview of each level of government and also because of the political, institutional, economic and financial characteristics of subnational levels of government. This article discusses these challenges³ and presents some recommendations to overcome them.

The infrastructure investment needs of Latin America have been estimated at between US\$60 billion and US\$80 billion a year for the next decade distributed as follows: power, US\$28 billion; transportation, US\$10 billion; telecommunications US\$25 billion; water and sewerage US\$7 billion (Chrisney, 1996; World Bank, 1994). Although the actual figures may be debatable, the infrastructure needs of the region are clearly very large and beyond the means of most governments. It has been estimated that the public sector (national and subnational) still directly provides more than 75 percent of those needs (World Bank, 1998). It has also been estimated that the per capita stock of infrastructure in the region is twice that of East Asia but one half of the stock of the United States. However, the quality of service in Latin America is lower than in East Asia and significantly lower than that of the United States. Filling these gaps in quality and quantity requires large infrastructure investments at all levels of government.

Although the distribution of responsibilities between central and local government varies, in most countries, the provision of water and sanitation, public lighting, waste management, drainage and, to a lesser extent, public transportation and regional highways is the responsibility of subnational governments. The challenge is larger when we consider that over half of Latin America's poor currently

EXHIBIT 1
Subnational Public Spending
as a Percentage of Central Government Spending

Argentina	49.3
Brazil	45.6
Colombia	39.0
Bolivia	26.7
Mexico	25.4
Venezuela	19.6
Uruguay	14.2
Chile	13.6
Honduras	12.3
Peru	10.5
Guatemala	10.3
Ecuador	7.5
Trinidad	7.2
Paraguay	6.2
El Salvador	6.0
Nicaragua	5.2
Panama	3.2
Dominican Republic	2.9
Costa Rica	2.3
Simple average LAC	14.6

Source: Inter-American Development Bank (1997).

live in urban areas and by 2025, two-thirds of the poor will reside in cities or towns.

Private participation in infrastructure attracts financing to the sector to increase quality and coverage and frees local government funds for use in other areas. However, obstacles for private sector participation in infrastructure are different and, to some extent, larger than those in power and telecommunication, which tend to be in the hands of national governments and are more amenable to commercial ventures. Some obstacles derive from the fact that relevant industry decisions rest on local authorities, making the nature of the political risks of these projects different than those associated with the central government. Other obstacles result from the lack of social acceptance of private participation in some local services such as water and sewerage, waste management and public lighting, which are viewed as *rights that should be provided free of charge*.

ELEMENTS THAT SHAPE CHALLENGES AND OPPORTUNITIES

Decentralization in Latin America

The average share of public expenditures managed by subnational governments rose from 8 percent to almost 15 percent in less than 15 years. Although this figure may appear low when compared with the average for the OECD countries, where 35

percent of public spending is the responsibility of local governments, the importance of subnational government is large in countries like Argentina, Brazil and Colombia, which have levels close to or exceeding 40%. Still, the level of decentralization varies widely from country to country in the region. However, during the last decade, nations throughout the region have moved toward decentralization and transferred new functions to local governments, sometimes backed by automatic revenue transfers that more than double local government revenues. This process has been accompanied with a tendency toward more democratic local governments. Mayors and council members in about 13,000 units of state and local government are now chosen by democratic vote. This change has been particularly noticeable at the municipal level. At the beginning of the 1980s, only three countries elected their local public officials. In all other countries, the central government appointed local administrators. Today, local public officials are elected into office in virtually every country in Latin America (see Shah, 2000).

Decentralization strategies in Latin America have been driven by local governments' concern that central governments would pass their budget deficits to local budgets. Thus, the decentralization process has favored local government budgets because the process has generally been started by transferring a larger share

of centrally collected revenues to local governments,

while shifting only few spending obligations. The

EXHIBIT 2
Latin America Urbanization Trends

	Total Population Million	Urban Population Million	Percent urban %
1975	319.8	196.0	61
2000	523.8	401.2	77
Increase	204.0	205.2	

Source: Habitat 1996

devolution of services began only after the transfer of revenues was well under way.

Brazil's 1988 Constitution shifted six percent of total public revenues from the central government to the subnational governments. The new Constitution did not, however, transfer any expenditure responsibility to states and municipalities. Colombia's 1991 Constitution requires that sufficient revenue transfers accompany all transfers of responsibility for services to ensure that they are adequately financed at their current or mandated level. The decentralization process was anticipated to reduce central government revenues by almost seven times the reduction in central government expenditures. In Venezuela, the transfer of central government revenues to states increased from 15 percent to 20 percent, but the transfer is voluntary and negotiable (the Constitution approved in December 1999 severely limits the autonomy of local governments). Eight percent of total central government revenues in Guatemala were transferred to lower levels of government with no transfer of responsibility for services. The transfer of revenues to municipalities in Bolivia in 1994 had the same effect (see Ter-Minassian, 1996; Stein, 1997).

Urban Growth and Large Cities

Local infrastructure opportunities and obstacles are shaped by growth in urban population and in the number of large cities. Local public services need to increase on a par with growth in demand stemming from the increase in urban population. Some figures may be useful to appreciate the importance of this factor.

Almost 77 percent of the total population of Latin America live in urban areas, making it the most urbanized region in the world. Moreover, urban population has grown enormously during the last 25 years. In fact, population growth has been totally reflected in urban growth. In order to provide services to twice the population serviced in 1975, the supply of some services in urban areas should have doubled. Yet, even though investment in water and sewerage services has

been large, it has not kept pace with the requirements of a growing urban population. Another relevant feature of urban population that brings opportunities to private investors is that the great majority of the region's population now lives in cities with over 100,000 inhabitants (large and medium-size cities), a size that, according to operators, represents a threshold for making water and sewerage investments attractive to private operators.

Four megacities account for almost 11 percent of the region's population, they are São Paulo (17.8 million), Mexico City (16.4 million), Buenos Aires (11.4 million) and Rio de Janeiro (10.2 million). Thirteen other large cities account for 10 percent of the population; and three other cities, Lima (8.4 million), Bogota (6.3 million) and Santiago (5.4 million) account for 20.1 million. Nine intermediate-size cities account for 30.6 million people.

City growth has meant that urban land covers territories under the jurisdiction of several local governments. This leads to division of authority and overlapping of responsibilities in the provision of local public services within an urban nucleus. Often other levels of government must resolve the problems created by territorial fragmentation.

Water and Sewerage Coverage

Although about 86 percent of the region's population has access to water supply, only 49 percent receive sewerage services. It is estimated that about 150 million of the region's 500 million people do not have safe water and 250 million do not have safe collection of sewage.

Fresh water coverage has increased in most of the countries in the region in the last decade. However, there are still some countries where around 20% of the urban population do not have access to safe water. For instance, only 71 percent of the urban population of Argentina have access to safe drinking water. That leaves more than 10 million urban residents without

EXHIBIT 3

Water and Sewerage Coverage

(Percentage of the Population with Service, average 1990-1996)

	Water Urban Areas	Water Rural Areas	Sanitation Urban Areas	Sanitation Rural Areas
Argentina	71	24	80	42
Bolivia	81*	27*	77	39
Brazil	n.a	52*	74	43
Colombia	88	48	76	33
Costa Rica	N/A	N/A	100	95
Chile	97*	22	82	21*
Dominican	74	67	76	83
Ecuador	82	55	87	34
El Salvador	78	37	78	59
Guatemala	97	48	91	50
Honduras	81	53	81	53
Mexico	91	62	81	26
Nicaragua	81	27	34	27
Panama	99	73	99	81
Paraguay	70	6	66*	40*
Peru	74	24	62	10
Uruguay	99	27*	56	59
Venezuela	88*	65	64	30
Avg. LAC	N/A	44	60	18

* Refers to 1982-85

Source: World Development Indicators, 2000

coverage. Assuming that each connection serves five persons, Argentina alone account for US\$2 billion in new investment.

More than 160 million urban residents in the region lack sewerage coverage and approximately 80 million lack fresh water. For instance, Brazil's urban population reached 133 million in 1998 and sewerage coverage in urban areas was around 74 percent. This means that about 33 million people need sewerage connections; filling this gap would require around US\$6.6 billion. For the region, sanitation needs to cover 90 percent of the urban population would reach more than US\$25 billion (to be spread over several years).

Other Services Coverage

Although comparable figures for other local services are very hard to obtain, some inferences as to the gap in those services can be made with very limited data.

For example, Exhibit 4 gives an indication of the average travel time to work in a few selected cities. The times reflect a waste of human resources that could be alleviated by better infrastructure. In some

persons and costs US\$1,000, the urban needs of Asuncion, the large commuting times reflect urban congestion in large cities, in others, like Asuncion, it reflects the lack of housing close to work centers and unreliable public transportation. Exhibit 4 also shows the percentage of the urban population with access to regular waste collection services. Even though some cities approach the levels of developed countries, there are others whose services could be improved.

In local services like public lighting, urban transportation, and waste collection, where data are rather hard to come by, inferences as to the gap in services can be made by looking at the growth in urban population and the corresponding one in public expenditures. Granted that the assumptions needed are heroic, but the results are nevertheless indicative. For instance, over the last two decades, gross domestic investment in Latin America has grown at an average rate of 1.75 percent per year, which happens to be very similar to the rate of population growth of 1.8 percent, but below that of urban population growth, which has been closer to 3 percent per year. Year in and year out, this can create a huge gap in urban services.

EXHIBIT 4
Local Service Needs

	Travel Time to Work (Minutes)	Urban Population with Regular Waste Collection (Percent)
Bolivia, Santa Cruz de la Sierra	25	100
Brazil, Rio Janeiro	51	88
Colombia, Bogota	39	94
Chile, Santiago	36	95
Ecuador, Guayaquil	45	70
El Salvador, San Salvador	N/A	46
Paraguay, Asuncion	60	79
Peru, Lima	35	57

Source: World Development Indicators, 2000 (not all data refer to the same years, some are as old as 1993).

CHALLENGES TO PRIVATE PARTICIPATION

Institutional Challenges

Regulatory Framework and Institutions

A first obstacle to private sector participation in subnational services is the lack of clear and consistent regulation. Quality of service and rate-setting rules are scattered throughout different laws and regulations under the responsibility of different departments, thus conveying a high degree of discretion on the authorities. Furthermore, the functions of central and local governments often overlap and, at times, prove contradictory. The reason for the latter is that in many countries, the local authority is the one entitled to reach agreements with the private sector regarding water and sewerage and other local services, whereas setting the rules of the game for service provision is in the hands of central governments. This split in functions gives rise to overlaps and regulatory conflicts more often than in other public services, like power and telecommunications, which have less regulatory power in the hands of local and municipal authorities.

Even though many countries have taken steps to improve the decisions made by authorities, less discretionary and more transparent regulations are still too new to convey confidence. In fact, regulatory institutions and regulatory frameworks are set up in many countries at the time of private sector entry. Therefore, investors lack evidence on how new regulations will be implemented. Regulatory institutions lack an established record backing their independence and technical ability. Investors complain about problems arising

from central and local government overlaps in jurisdiction and refusal to abide by inefficient dispute resolution mechanisms. Investors fear that erroneous decisions will not be amended in a timely manner because of delays by courts and arbitrators in reaching and enforcing a verdict. These problems are complicated by the fact that a lack of well-qualified staff and high turnover rates prevent local governments from preparing adequate bid documents and contracts. This also restricts their ability to supervise projects once approved.

To reduce these impediments, the regulatory framework should specify the functions of central and local governments. Given the time lag between issuance of regulations and confidence in the government's ability to enforce them, contracts between public authorities and private firms (management and concession contracts) should guarantee operator's rights. Contracts that include guidelines for updating them, procedures for settling disputes, and reliable, flexible and independent arbitration mechanisms help improve investor confidence and may also compensate for the absence or relative newness of regulatory frameworks.

In countries where the power to grant concessions, rental or management contracts is vested in municipalities, contract credibility and flexibility will be improved through the enactment of legislation establishing the principles for setting price and quality rules as well as procedures and guarantees for revising contracts. The credibility of contracts and their enforceability are enhanced by legislation granting them government support and its ability to close loopholes.

EXHIBIT 5

Cochabamba Concession

The contract for the development of the Misicuni Project and the concession of water in Cochabamba was signed on September 3, 1999 between Aguas de Turani, Bolivian central government authorities and officials of the city of Cochabamba. Public rejection and civil disturbances started in November 1999. On April 9, 2000, the Superintendent of Water and Sewerage of Bolivia terminated the contract with Aguas de Turani. The reasons for the project's rejection by Bolivian society and authorities' decision to terminate the project have to do with the project's inefficiency, problems in the selection process, the size of the investment, pricing of the service and political issues as detailed below.

Inefficient Project. Two options were considered to provide water to the city of Cochabamba: the Coriani project was to solve existing water supply problems in seven to ten years and the Misicuni project was to provide solutions over the long run. Several analyses showed that the Misicuni project was not economically or financially feasible and that its cost was around three times the cost of the Coriani project.

Problems in the Selection Process. A 1998 government law required an international public bid process to select a developer for the Misicuni project and a provider of water services to the city of Cochabamba. Ten consortiums bought the bidding documents, but only one, Aguas de Turani, presented a proposal. However, the proposal did not meet the bid requirements and the bid was declared null and void. Nevertheless, negotiations were started with Aguas de Turani that produced a new contract with fewer requirements than originally specified in the bidding documents.

Large Investment. The bidding documents required the operator to invest around US\$200 million in five years and stipulated a concession population of 500,000. The final contract required an investment of US\$109 million in five years plus approximately US\$97 million in seven years. (For purposes of comparison, the La Paz concession required US\$80 million and stipulated a population of 1.5 million.)

Starting Rates Were Below Cost. Cochabamba's public water service firm (SEMAPA) has traditionally set rates below costs, leading to deficits and delays in investments. In January 1999, before the contract was signed, a 20% rate increase was requested from the Superintendencia to increase the firm's cash flow generation capacity. However, the rate increase was not put into effect by the public firm.

Timing of the Rate Increase. A 38% rate increase was put into effect in January 2000, once the contract had already been entered into. The rate increase was intended to compensate for 1999 rate hike that was never implemented and to generate investment funds. The rate increase was included in the concession contract and took place three months after private sector entry and before improvements in service quality and coverage had taken place. Moreover, the reason given for the rate increase was not the need to cover service costs. Instead, it was based on the requirements of the Misicuni project, which was to enter into operation five years ahead of time.

Social and Political Issues. Bolivia's Capitalization Ministry began the concession of water services for Cochabamba in 1997. Private firms, independent from the concessionaire, developed the Coriani project. However, that process came to a halt at the request of the Cochabamba authorities, who were supposed to back the Misicuni project. After the 1988 presidential election, an international public bid process, which included the Misicuni multiple project, was begun by decree. The popular uprising was promoted by local well-water vendors and peasants, although the latter were not, in principle, affected by the contract.

Lack of Operators

Another institutional challenge is the lack of private operators able to manage local services and offer sufficient technical and financial guarantees. In most Latin American countries there are very few financially sound domestic operators with commercial standing. For instance, operators from outside the region control most of the privatized water and solid waste services. Bids for medium- and small-sized services are rare, and large operators seem to be only interested in providing services in large cities. They are unlikely bidders in smaller cities because expected benefits do not cover transaction costs in a new country.

In an industry with few operators compared with demand and the costs involved in bidding, opera-

tors may decide to forego competition and share the market instead. From the operator's viewpoint sharing the market is a rational option. From an efficiency viewpoint, it is not in the best interests of consumers.

Opening the market to new, albeit less experienced, operators is an option that deserves consideration. However, authorities in charge of private sector participation may be reluctant to experiment. Setting up joint ventures with local capital and the participation of large operators, including technical assistance contracts, will permit an increase in the number of bidders. Less demanding financial schemes (in terms of the financial capacity of the concessionaire) favor an increase in the number of operators bidding for the services.

Modalities of Private Participation

There are many different modalities of private participation, ranging from the extreme of ownership of assets and responsibility for all cash flows (as in a private enterprise) to lesser forms like a management contract for one part of the services provided, for example maintenance or bill collection. There are many intermediate forms like concessions, leasing of assets, management contracts with responsibilities for everything but investments, among others. As will be explained later, the political and social challenges posed at the subnational level are significantly larger than those at the national level. In order to mitigate some of these challenges, it is even more important to explore all alternatives of private participation, especially those that may overcome resistance to outright sale of assets. Eventually, when the conditions are right, the arrangement may move to other forms or more intense participation. This may even help overcome the scarcity of qualified operators.

Institutional Arrangements⁴

In many cases, because of geographical reasons or to achieve economies of scale, local services may cover several jurisdictions, creating the need for a utility that covers multiple municipalities. This modality has significant advantages. A larger concession area means that it can attract better operators, that economies of scale may be possible, and that it may also be possible to use common facilities such as dumps, electrical lines or water reservoirs. These advantages have to be balanced with the increased political risk resulting from having to deal with several municipalities that may have diverging political interests.

A multi-utility arrangement would also help to solve the problem of lack of reputable operators and reach economies of scale and scope. In this case, the utility may cover several services (such as water, gas, waste collection, electricity and telecommunications). However, these utilities tend to accumulate significant political power, subjecting the firm's management to political pressure and interference in day-to-day operations. They also may become "too large to fail," thereby creating incentives for inefficiency.

Economic and Financial Challenges

The analysis of financial and economic challenges requires that a distinction be made between services that are paid directly by consumers (such as water and sewerage, public transportation, waste management, and to some extent, regional highways) and services provided by the private sector but paid for by local governments (such as local roads or public light-

ing). Appropriate pricing policy is the major challenge in the provision of services paid for directly by consumers, while a stable and reliable local government revenue base is the key for the latter. Yet, both services face the challenge of finding long-term financing in local currency to avoid foreign exchange risks.

Pricing Policy

Pricing policies are one of the main obstacles faced by private participants in the provision of public services in Latin America. Most public providers are unable to cover operation and maintenance costs from the revenues they receive from utility rates. In addition, rates are not revised upwards as costs increase. These circumstances are at the origin of problems that interfere with private sector participation in three ways. First, the rate increase required to make private sector participation feasible leads the public to believe that private participation implies costlier services. This, in turn, produces public resistance to private sector participation (which is further promoted by interest groups benefiting from subsidized services). Second, and as a result of the public's resistance, operators become skeptical of the authority's capacity and will to increase rates. The lack of a tradition of increased rates with increases in the cost of providing services raises serious doubts about the ability of local authorities to abide by price commitments made in the contracts. Third, the public service provider's lack of adequate financial resources usually leads to such a severe deterioration in the quality of service that private operators need to make very large investments to obtain minimal quality improvements.

Willingness and Ability to Pay

Private investors must assess the willingness and ability of local governments to pay for infrastructure services when the source of these funds is general revenues. However, in the case of subsovereign projects, making this assessment is a challenge because of the close and often complex interactions between willingness to pay, ability to pay, and the nature of the public service.

Willingness to pay, that is, the political will of borrowing entities to make required payments, is closely related to the nature of the service. Local governments tend to make payments for essential services, like those closely associated with public health (basic water and sanitation facilities) basic educational or training services (elementary, secondary and other fundamental educational institutions or equipment) and public safety and the rule of law (police, fire, judicial and similar facilities). Yet, essential services may also be good candidates for suspension of payments in

times of financial or economic crisis because operators will attempt to protect their reputation and not risk public anger and bad publicity by suspending or curtailing services. As a result, private operators are exposed to significant payment risk.

Financing Structures and Credit Enhancements

Depending on the structure of private participation, credit enhancements may be needed. In cases (rare at the local level) where all revenues come from the services provided by the project, the pricing policies mentioned above are the most important consideration. In the majority of cases, where revenues from services are not sufficient to cover costs and generate profits, local governments may commit to contributing to a portion of investment costs or to pay or supplement the utility's rates. In these cases, the private operator has a significant exposure to the payment capacity of the local government. To complicate matters still further, the executive branch may need approval from a legislative branch (city council, state legislature) to budget and/or make those payments, which converts part of the financial risk into political risk and introduces an element of delay in the payments.

Some of these problems can be mitigated with credit enhancement mechanisms, which can play an instrumental role in the development of infrastructure projects at the sub-national level. The most common are intercept mechanisms from central government transfers and over-collateralization. Although, they have proven useful in some cases, attention should be given to the vehicle for intercepting revenues and the legality of doing so in some cases. For instance, in Brazil, the legal framework for intercepting revenues in a special purpose vehicle is weak; in Venezuela, revenues from the central government to municipalities cannot be intercepted.

Another mechanism is reliance on external sources of credit or guarantees such as the central government, or local, international or multilateral financial institutions. These institutions may provide financing or guarantees to cover payments or to enhance financing instruments issued by local governments (although this last option should only be open to the most credit-worthy local governments). These explicit enhancements are to be preferred to implicit ones, whereby the local government relies on being bailed out by the central government because the services are too politically important. Private sector operators should not count on these bailouts and should not deal with local governments that count on them.

Domestic Financial Markets

The development of domestic financial markets is a challenge for private infrastructure investments. The lack of long-term financing means that investors must finance long-term assets with short-term funds and/or foreign currency. Long-term projects financed with short-term funds are subject to refinancing risk, while projects whose revenues are denominated in local currency and whose debt is denominated in a foreign currency bear foreign exchange risk. In many Latin-American countries, there are very few tools for assigning and mitigating risks. For instance, no instruments for hedging foreign currency positions are available. Equity markets are also narrow. Pension funds, which are natural suppliers of long-term funds, are still small in most countries and are prevented by regulations from investing in infrastructure. Even if they were allowed to do so, as the case of Chile and Argentina, they may be unwilling to because of liquidity considerations and exposure to regulatory and political risks.⁵

Political Challenges

Coordination between Local and Central Governments

An important political challenge for successful private sector participation is the need for coordination between local and central governments. Coordination may be especially difficult when both these governments do not belong to the same political party. As a result, the timing of elections also has implications for private participation in infrastructure. Electoral reforms in most Latin American countries have led to the separation in time of local and national elections. This introduces an additional political challenge for private participation. If the local and central authorities are chosen at the same time, three or four years are available for initiating and culminating the process without changes in the political actors. However, if they are chosen at different dates, additional political risks are introduced. In any case, private operators must be aware of these potential problems, take them into account at the time of bidding for concessions or contracts, and include this variable in their negotiations. In some cases, it may be necessary to include the central government as a party in the negotiations and the legal arrangements.

Length of the Term in Office of Local Authorities

The length of the term in office of local authorities and whether or not reelection is possible in-

roduces an additional challenge. If terms are short and reelection is not possible, the persons who start the private participation process are unable to complete it, and the process is managed by two political teams that may or may not share the same goals and ideas. Furthermore, politicians with short terms in office will be less likely to assume the risks of undertaking reforms that entail short-term costs but whose benefits will be felt at a time when they would no longer be in office to reap the political fruits (the possibility of reelection provides a greater incentive for mayors and governors to make reforms that reduce medium-term fiscal expenditures). This problem is common in Colombia, Guatemala, Mexico, Peru, and Venezuela, where terms in office are relatively short and no immediate reelection is permitted. These problems may be worsened or ameliorated by the ability of municipal or state councils to participate in the policy-making process, monitor the actions of mayors or governors, and represent citizens between elections. This is influenced by the level of resources (salaries and expertise of council members, availability of technical advisors, etc), their number, and the formal legislative powers vested in them by the constitution. Most Latin American councils tend to be very weak; their role being restricted to ratifying or vetoing proposals for private participation, but lacking adequate resources to evaluate them.

Expectations of Local Authorities

The third challenge is how to deal with the expectations of local authorities. Local as well as central government authorities tend to hold inflated expectations of the private sector's potential contribution to infrastructure services. In an effort to enhance political acceptance of private participation, they tend to overestimate benefits and underestimate costs, and mix hopes with realistic objectives. When this wishful thinking is transferred to the bidding documents for selecting operators, the outcome is an absence of serious and consistent proposals. Some examples follow.

Local authorities and advisors can err in assuming that private sector operation will drastically reduce losses and increase efficiency and that this, in turn, will translate into an equivalent increase in revenues. The process of reducing losses and increasing efficiency is a slow one. In the case of water, for instance, illegal concessions abound, and users reduce consumption when they can no longer avoid paying their bills. As a result, declines in losses and costs take longer than anticipated and revenues are, therefore, slower to increase.

Most public service providers collect only a small percentage of their billings. Local authorities correctly anticipate that collections will increase once the service is in private hands. However, the collection

index will not move, say, from 40% to 90% during the first year. The "disappointing" performance of private operators in this area is the result of the local authorities' overly optimistic expectations. Unrealistic assumptions about revenues are often one of the obstacles to private participation.

Unrealistic expectations also affect private investments. Understandably, local authorities want to catch up on delayed investments as rapidly as possible, but a 20-year investment backlog cannot be reduced in three to four years by a private operator. Private investment is a function of expected revenues, and large investments require rate increases that will permit a flow of revenues consistent with financing terms. However, users may balk at a sudden high rate increase, making it impossible for operators to quicken the pace of investment. Bid requirements for a rapid recovery of a protracted investment shortfall, even if accompanied by rate increases, restrain responsible operators from bidding. This occurred in Cochabamba, where part of the investment was to be financed through steep increases in rates that were going to go into effect before service improvements were felt.

Social Challenges

Public rejection is a main obstacle to private sector participation in the provision of infrastructure services. This rejection results from the real costs of private sector participation faced by certain segments of the population. It also arises from the actions of advocacy groups that deliberately exaggerate negative impacts while downplaying the advantages of private sector participation or the mitigating measures that are part of the plan.

Election campaigns are times of passionate rhetoric. Private participation in the provision of local services are often at the center of political campaigns, and since local and national political campaigns may not necessarily coincide, private participation in infrastructure services can become a permanent topic on the political agenda. A discussion of the most widely used arguments against private participation follows. These arguments are also valid for national services; however, because the impact is more concentrated at the local level, the obstacles to private sector participation also loom larger.

The Ability to Pay of the Low-Income Population

The first argument is that low-income users will be unable to pay the higher rates required for private service provision. This argument does not mention that subsidized rates tend to benefit medium- and upper-income groups more than low-income populations

because these are the only groups that can afford to pay the full cost of those services. Groups that lobby against private participation tend not to favor subsidies targeted to lower-income groups.

It is the responsibility of the government to inform citizens that the private provision of services is compatible with addressing the needs of lower-income groups. The government must also publicize increases in coverage in low-income areas. Given accurate information, low-income persons are unlikely to join groups whose interests lie in the failure of private participation.

Subsidies may be required to adjust rates to consumer's readiness and ability to pay. However, care must be taken in designing subsidy schemes. In particular, the following three aspects should be taken into consideration. First, the contract must specify the entity in charge of paying for subsidizing low-income customers. Second, subsidies to low-income people should preferably be financed from the public budget, since cross-subsidies tend to generate distortions in consumption and cause large, unsubsidized users to leave the service. Furthermore, financing the consumption of lower-income users through cross-subsidies produces incentives for an increase in the number of subsidized users. Third, when cross-subsidies are the only option for reducing the rates paid by low-income users, the number and volume of those subsidies has to be limited and specified in the contract.

Increasing Local Unemployment

Another argument against the private provision of services is the possibility of large lay-offs as the public firm is turned over to private management. It is a fact that private management increases worker productivity, which, in most cases, implies a reduction in the labor force. A well-managed water firm, for example, requires three to four workers per 1000 connections; most public firms in Latin America employ 15 workers per 1000 connections. However, campaigns against private involvement in service provision do not mention that labor redundancy is inefficient and that everyone pays through poor coverage and low quality services. Also ignored is the fact that pervasive inefficiency brings about corruption. In the case of water services, public employees often hold the monopoly in tank-water supply to low-income communities with no access to piped water, obtaining large returns as a result.

Authorities can mitigate social costs by means of three programs: hiring of some of the public sector workers by the private provider, voluntary retirement and compensations for layoffs, and labor retraining. The existence of these programs should be publicized by means of information campaigns so that the entire

population, not only the interested workers, is aware of them.

Lack of Control over Essential Services

Another way of fostering social dissent is by arguing that the authorities will lose an essential tool for redistributing income. What is not said is that control over public service is a powerful instrument for capturing votes. Campaigns against private participation neglect to address the insidious nature of generalized cross-subsidies, which actually worsen the distribution of income. High-income consumers receive a larger subsidy than do lower-income users whose consumption levels are small.

Foreign control of essential public services is a concern often promoted by executives at public service firms who fear losing their job and political clout. Good managers do not fear foreign control, as they can expect to be hired by the concessionaire. The government must make it clear to the public that foreign control does not in itself cause problems when an adequate and transparent regulatory framework is in place. Moreover, in most cases, large foreign operators form a consortium with local investors who can be expected to be more sensitive to national and local concerns.

Authorities in charge of promoting the process of private sector participation have to pay attention to the social rejection phenomenon. They have to establish programs to mitigate the real costs involved while counteracting, with transparent and accurate information, interest groups campaigns.⁶ Non-government organizations, community based organizations and other civil society organizations (neighborhood associations, trade associations, church groups, sports clubs), whose activities are of great importance for local development may play a key role in the processes of private participation. Some are key actors in promoting community involvement in local decision-making and have a significant impact on local governance. Others collaborate with local governments in the provision of services through philanthropic activities targeted to specific population groups. Yet others function as contractors for local development programs.

SOME CLOSING OBSERVATIONS

Increased decentralization means that local private participation in the provision of services will also increase. A quantitative evaluation of the increase in private participation is difficult because the success or failure of initial experiences will shape the willingness to move to private sector of local services. Although the private provision of infrastructure services faces many challenges, the nature of local service pro-

vision is more complex than at the central government level.

The absence of adequate regulatory frameworks is an important obstacle to increase private participation. Overlapping national and municipal responsibility in the regulation and control of these services aggravates the problem. Establishing clear regulatory frameworks that make decisions less arbitrary will ease the obstacle. However, since investors need time to gain confidence in the ability of these new mechanisms to resolve service problems, private participation contracts must include clauses that reinforce the regulations. This is fundamental to enhance the quality and quantity of private operators attracted to the provision of local services.

A price policy based on rates that are below the cost of providing the service complicates private participation because people associate private participation with increased rates. To ease this problem, rate revisions must begin well before privatization takes place (but not after the award has been made and improvements have not been felt) and proceed on a gradual manner. The ability and willingness of users to pay has to be taken into account in determining the quality/price ratio.

The financial arrangements by means of which local governments assume responsibilities for investments or payments to private operators are also key ingredients of a well-structured operation. In this case, the most important considerations are the revenue-generating capacity of the local government, the financial and political independence of the executive branch and the capacity to obtain credit enhancements in the market.

Political agreement between central and local governments is a necessary condition for the success of the process. The government should avoid making overly optimistic announcements regarding the ability of private operators to reach explicit goals. Overly optimistic expectations regarding the private operator's ability to make improvements in the quality of the service or improve the firm's cash flow can lead to the acceptance of otherwise bad proposals. Private investors should not foster optimistic expectations.

Social and political acceptance is a pivotal factor for setting up and successfully completing private sector participation processes. The real costs faced by some users may partially explain their rejection of private provision. However, the wholesale social and political rejection of many private participation processes is provoked and encouraged by groups who will lose the privileges they now enjoy. These groups, which are usually in the minority, exaggerate the problems and minimize the benefits. The best weapons to counteract such campaigns are identifying and mitigating prob-

lems, and providing all citizens with transparent and accurate information.

Multilateral financial institutions like the World Bank, the International Finance Corporation, and regional development banks (such as the Inter-American Development Bank) can play an important role in reducing some of those obstacles.⁷ At this point it is important to emphasize that the legal relationships of the MFIs are, in the first place, with the national government and only in a subordinate role with the local governments. Good behavior will still depend on moral suasion and the intervention of national governments. Indirectly, these institutions can enhance the environment for investment by supporting programs that clarify and strengthen the legal, financial, economic, and political relationships between national and local governments. Furthermore, they can provide support for strengthening local institutions, particularly those charged with regulatory and enforcement functions, and by enhancing the transparency of governance. Additionally, they can support the design and implementation of appropriate pricing and private participation policies through overall economic reform programs and policy dialogues. In their role of honest broker they can support public information campaigns on the costs and benefits of private participation.

Directly, the MFIs can provide financing for private and public sector infrastructure projects and guarantees for public sector commitments (such as termination payments, tariff adjustments, currency convertibility, expropriation, and the like). When participating in a project, they can enhance the operating environment through due diligence and provide comfort to the private sector on the behavior of local governments through their financial participation.

From the discussion above, it should be clear that the many challenges faced by private providers of infrastructure services at the subnational level is considerably larger than those faced at the national level. Therefore, if private participation in infrastructure services under central government jurisdiction took more than a decade to become significant in the region, it will likely take significantly more time for infrastructure under local jurisdiction.

The best ally for accelerating the process will continue to be a well-structured contract, operating in a favorable environment, with transparency and disclosure, under a responsible, long-term minded local government and with capable and responsible private operators. Quite a task! Nevertheless, all parties, private and public sector, multilaterals and the public should do their part to enhance the efficiency and effectiveness in the provision of services.

ENDNOTES

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¹ Both cases violated several basic commandments of private participation in infrastructure (see Vives, 1997).

² The federal government granted a concession for the waterservices of the city of Buenos Aires.

³ Even though many of the examples deal with Latin America's water sector, the analysis can be applied to other sectors and other parts of the world.

⁴ This section is based on Klein (2000).

⁵ For a comprehensive discussion of pension fund investment in infrastructure see Vives (1999).

⁶ As noted in Vives (1997), transparent and truthful information is the second commandment of mandatory compliance for the authorities to ensure long-term private participation sustainability.

⁷ At press time, the Inter-American Development Bank was finalizing its Subnational Government Development Strategy. This document details the role that institutions like regional development banks can play in fostering efficient provision of localservices.

REFERENCES

Beato, P. and A. Vives. 1996. Risk, Fiscal, and Efficiency Issues in Public-Private Arrangements for the Provision of Services. *Infrastructure*, Vol I, No.3, pp 3-14, Spring. Available at www.iadb.org/sds/index.html

Beato, P. 1998. Participación del sector privado en los sistemas de agua potable y saneamiento: ventajas, riesgos, obstáculos. Inter-American Development Bank, Discussion Paper IFM-113, Washington, D.C. Available at www.iadb.org/sds/index.html.

Chrisney M.D. 1996. Financing Trends for Private Infrastructure In Latin American and Caribbean. *The Financier*. Volume 3, No.1. Available at www.iadb.org/sds/index.html.

Inter-American Development Bank. 1997. *Latin America after a Decade of Reforms*, Economic and Social Progress in Latin American Report. Washington, D.C.: IDB.

Inter-American Development Bank. 2000. Making Decentralization Work. A Background Paper for the Subnational Development Strategy. Washington, D.C. April. Mimeo.

Inter-American Development Bank. 2000. Subnational Government Development Strategy. Washington, D.C. August. Available at www.iadb.org/sds/index.html.

Habitat. 1996. *An Urbanizing World: Global Report on Human Settlement 1996*, United Nations Center for Human Settlements. Oxford: Oxford University Press.

Klein, M. 2000. Privatization in the City Economy. *Public Works Financing*. April.

Ter-Minassian, T. 1997. *Fiscal Federalism in Theory and Practice*. Washington, D.C.: International Monetary Fund.

Shah, A. 2000. Fiscal Federalism and Macroeconomic Governance: For Better or For Worse. Paper presented on the global conference on capital markets development at the subnational level. February 15-17. New York

Stein, E. 1997. Fiscal Federalism and Decentralization: A review of Some efficiency and macroeconomic Aspects. In *Annual World Bank Conference on Development Economics*. Washington, D.C.: The World Bank.

Vives, A. 1997. Private Infrastructure: Ten Commandments for Sustainability. *The Journal of Project Finance*. Spring. Earlier version available at www.iadb.org/sds/index.html.

Vives, A. 1999. Pension Funds in Infrastructure Project Finance: Regulations and Instrument Design. *The Journal of Project Finance*. Summer. Earlier version available at www.iadb.org/sds/index.html.

World Bank. 2000. *World Development Indicators 2000*. Washington, D.C.: The World Bank.

World Bank. 1994. *World Development Report, Infrastructure for Development*. Washington, D.C.: The World Bank.

World Bank. 1997. *Facilitating Private Involvement in Infrastructure: An Action Plan*. Washington, D.C.: The World Bank.