

Private Utility Supply in a Hostile Environment

The Experience of Water, Sanitation and Electricity Distribution
Utilities in Northern Colombia, the Dominican Republic and Ecuador

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Foreword

While one might have hoped that improved performance and efficiency gains due to privatization would have reduced costs sufficiently to re-establish the balance between costs and revenues, this has not been always the case in public utilities around the region. Furthermore, fiscal constraints limit the amount of subsidies available from the government. While raising tariffs may be the only option left, it is not difficult to see the reasons—political and otherwise—why this has not been done. Nonetheless, understanding the reasons why people consider water and electricity as an entitlement and refuse to pay market prices for them, and identifying the factors behind successful experiences is crucial for the sustainability of infrastructure reforms in the region. Bank teams, which must agreed on tariff conditionality on every public utility project to comply with Bank policies, have an urgent need for incorporating fresh approaches when trying to optimize the scant government resources available for subsidizing the services.

Seeking to raise awareness among Bank's management and staff on the crucial importance of incorporating political economy considerations in the proposals to comply with Bank's policy on public utility tariffs and subsidies, in 2004 the Infrastructure Division of the Sustainable Development Department (SDS/IFM) held two one-day workshops. During these workshops Bank staff discussed the relevant experience of four selected privatized Latin American public utilities as presented by their management and by regulators. Jaime Millán, Principal Energy Economist at SDS/IFM organized and coordinated the workshops. Luigi Manzetti and Carlos Ruffin were the moderators of the events and the present publication constitutes a summary of the discussions and conclusions drawn from the experience.

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Executive Summary

BACKGROUND

Privatization of public utilities has gone a long way over the past fifteen years. The countries of Latin America have played a pioneering role in this regard. However, the viability of private utility ownership is threatened by serious problems of theft and nonpayment, as well as political opportunism, as regulators and governments face intense pressure to hold utility rates down. Sustaining privatization over time has proven to be a challenge extending well beyond the transfer of ownership from the public to private sector.

The theoretically attractive models of private ownership and independent regulation, following the experiences of developed countries and especially that of the United States, have not proven to be robust when applied to emerging markets. In theory, the profit motive would lead privately-owned utilities to crack down on theft and to improve collection; in turn, improved performance and the efficiency gains brought about by private ownership and regulatory incentives were to reduce utility costs sufficiently to allow the gradual reduction of rates (other things, such as fuel prices, being equal). Furthermore, fiscal constraints were supposed to limit the amount of subsidies that governments in the region could provide for utility service, leaving no alternative to increasing collection levels as well as rates when costs went up. All of this would make it easier for private utilities to obtain adequate resources to finance not only their current operations but network maintenance and expansion too. The reality, however, is that this virtuous circle has often stalled.

Weak political and legal checks and balances provide fertile ground for the executive branch to act unilaterally and change utility rates to maximize electoral goals. If we want to correctly address the problems plaguing utility regulation in Latin America today, we should try to under-

stand why politicians change existing utility rate agreements for political goals, and why people consider water and electricity as an entitlement and refuse to pay market prices for them. By the same token, understanding these problems will be fruitless if we cannot come up with possible solutions by identifying the factors behind successful experiences. Indeed, this second aspect is crucial for the sustainability of infrastructure sectors and reforms in the region.

THE CHALLENGES OF NONPAYMENT AND POLITICAL OPPORTUNISM

This report examines the problems of theft, nonpayment and political opportunism in the aftermath of privatization by considering the recent experiences of four private utilities in Latin America that operate in water and sanitation, and electricity supply. The purpose of the report is to extract practical recommendations to assist managers, regulators, policymakers and, not least, the staff of multilateral financial institutions, in dealing with the post-privatization problems of theft, nonpayment and political opportunism.

The performance of utility companies in developing countries is affected by high levels of poverty and poor noneconomic institutions that affect them in ways that are very different from those experienced by institutions in advanced industrial nations. Noneconomic institutions in developing countries, and more specifically political institutions, impose significant transaction costs on economic activity by limiting the ability of governments to uphold laws and contracts. When these considerations are applied to regulated sectors such as network utilities, it is clear that best practice models that may work in advanced industrial societies face entirely different constraints in developing countries, which must be understood and addressed for the successful application of such models. Specifically, attention to transaction costs of a political nature

leads to a focus on factors such as the practice of obtaining votes by promising government jobs, corruption (both within the company at the time of privatization and within the political institutions dealing with public utilities), changes in government leadership, the company's public image, and changes in macroeconomic conditions. The primary analytical focus in this report is therefore an institutional one.

Noneconomic institutions and transaction costs are not, however, the only determinants of the outcomes of utility privatization. The high rates of poverty found in developing countries and local cultural elements are also key aspects to consider, particularly customers' purchasing power relative to utility rates and cultural attitudes toward payment for utility services. Lastly, the characteristics of the private operator should not be neglected, especially the strategy followed by the operator before, during and after privatization.

CASE SELECTION

The basis for the analysis that follows is primarily the information supplied by participants in two workshops held at the Inter-American Development Bank in Washington, D.C., on September 9 and November 19, 2004. The first workshop dealt with theft and nonpayment, and the second addressed political opportunism. In addition, participants at each workshop discussed the experiences of two utilities, one in electricity and one in water, with the intention of extracting common lessons applicable to different types of network utilities rather than specific to a single sector. The four selected cases concern companies operating in the downstream, or distribution, side of these sectors. These companies have daily contact with end users, face problems of theft, nonpayment, and unwillingness to increase rates, and their prices are usually regulated. The workshops provided the opportunity for utility managers and IDB staff to present their experiences. The second workshop also included regulators.

Participants in the workshop on theft and nonpayment analyzed the innovative experiments of two companies that provide electricity and water

and sanitation services, in the Atlantic coast of Colombia: Electricaribe/Electrocosta in electricity (owned and controlled by Unión Fenosa of Spain, with minority participation by the Colombian government), and Sociedad de Acueducto, Alcantarillado y Aseo de Barranquilla S.A. (owned and controlled by European utilities). The comparison between these two companies is particularly informative for two reasons. First, the two companies operate in the same geographic area and share the same customers and difficult operating conditions. Second, they are subject to a common regulatory framework for public utilities.

During the workshop on political opportunism participants discussed two cases, one in water supply and another in electricity, that face the crucial issue of time consistency in public utility rate policy. One of the cases studied involved the problems inherent in maintaining cost recovery rates in the electricity sector of the Dominican Republic. Particular attention was paid to how these problems affected EdeEste, a distribution utility controlled by AES and owned in equal parts by AES and the government of the Dominican Republic. The other case studied involved the problems that arose following the concession of the water supply company of Guayaquil, Ecuador, to a private operator.

SOME THEORETICAL CONSIDERATIONS

This report argues that institutional factors explain the problems of theft, nonpayment and political opportunism that were observed. As a result, we considered the extent to which the observed facts agree or not with institutional theories as currently developed. In particular, we look at political opportunism and political transaction costs, enforcement, trust and cooperative institutions, transparency and legitimacy, and the design of privatization strategies.

Political Opportunism and Political Transaction costs. Transaction cost theories can help us understand different patterns in utility regulation seen in Ecuador and the Dominican Republic. Political conditions in the Dominican Republic (which has a presidential system with weak po-

litical parties and voters who respond to promises of government jobs) created high transaction costs for companies participating in the capitalization process. Time inconsistency¹ became a possibility because future governments might find it expedient to hold utility rates down knowing that they could do so with impunity (as was the case). For this reason, some private operators may have demanded high tariffs as a condition for acquiring the capitalized companies (high tariffs could shorten the payback period for the investment or increase returns commensurately with the risks involved) and displayed a preference for direct negotiations with the government, bypassing the formal channel of the electricity regulator (the government being the key decision maker). Unfortunately, these strategies increased the likelihood of time inconsistency by creating more backlash (against high rates) and by undermining sectoral institutions, especially the regulatory agency, and led to a vicious cycle of opportunism. When companies opt to strike direct bargains with the executive power in the initial stage of the privatization process, as a way to ensure government commitment, they may gain in the short run but not in the long term. As governments change, chances are that a company may not have the same kind of rapport with the new administration, leaving the private operator with no recourse mechanism. Having ignored regulatory institutions from the beginning, these are unlikely to be sympathetic to the private company when the political climate turns for the worse.

Enforcement. In modern societies, the State plays the role of the third-party enforcement institution. However, in developing countries the interpretation and enforcement of the law usually depend upon the interests of the government

¹ Time inconsistency refers to the lack of coherence in public policies across time, and in particular the pursuit of policies that are directly contradictory with previous policies. The pioneering work on time inconsistency was Kydland and Prescott (1977), who point to the example of U.S. government policies that on one hand seek to discourage the population of areas subject to extensive flooding, and yet offer government money for rebuilding after floods.

or judge in charge, which creates great uncertainty.

Trust and Cooperative Institutions. Trust is essential to encourage voluntary compliance in the absence of strong institutions that can enforce formal rules. To create trust, particularly in a situation of weak third-party enforcement, it is necessary that parties engage in mutually beneficial transactions over a prolonged period of time. In so doing, negative cultural attitudes toward specific transactions (such as nonpayment, fraud and theft) will turn into positive ones. Within this approach, grassroots intermediary institutions played the pivotal role of mediators between the needs of the communities and the financial and technical concerns of utility companies in some of the cases. Nonetheless, the different experiences highlighted two important caveats for the involvement of grassroots organizations. First, it is essential that such experiments be sustained over time. Second, at times even grassroots organizations are too politicized or dependent on patronage to be suitable intermediaries between utilities and the community.

Transparency and Legitimacy. Transparency and political legitimacy are often overlooked key factors affecting transaction costs. They are crucial in forging political support for concession contracts in politically sensitive sectors such as public utilities. While new institutions are often created because new institutional designs gain legitimacy, new institutions cannot be expected to survive unless they do, in fact, gain legitimacy. This is particularly appropriate for utility reform, as it involves the creation of new institutions (regulatory authorities and privately-owned utilities). When the reform process is transparent and legitimate, transaction costs will be lower, as the potential for political opposition is diminished.

Well-designed and Transparent Privatization Strategies Can Legitimize New Ownership. The electricity and water experiences show that the State can play a positive role when it sets clear goals and guidelines in terms of broad macroeconomic and regulatory policy.

FACTORS AFFECTING UTILITY REGULATION

Workshop participants were asked about the impact of a variety of factors that are often cited in the literature as affecting theft and nonpayment for utility services, and political opportunism in the regulation of private utilities in developing countries. Their responses indicate that these factors can be broken down into several categories, depending on the likelihood that the issues they raise can be solved or, at least, mitigated.

Severe Problems that Are Most Difficult to Solve

Changes in the Country's Macroeconomic Conditions. Companies cannot control economic recessions and inflationary episodes, but they can induce governments to resist tariff adjustments and create heated disputes about pre-existing agreements between companies and regulators. These problems are evident in the countries that suffered the greatest macroeconomic instability, such as Ecuador and the Dominican Republic.

Political Clientelism. Patronage is pervasive throughout the region, and has a particularly strong impact on public utilities. Because this phenomenon is deeply rooted in the countries surveyed here, the best option is to mitigate its negative influence when a company is facing a pro market-minded administration. Politicians find public utilities to be particularly attractive vote-buying instruments because utilities can be sources of local employment and can also provide tangible benefits in the form of electricity supply, potable water, or sanitation to poor people who can hardly afford them. Clientelism has affected each of the four cases studied here to a different degree, depending on local political conditions and particular circumstances. It has been less of a disruptive factor lately in Colombia and Ecuador precisely because the political leadership has been more willing to cooperate with public utilities. However, this can change for the worse very quickly once a new administration comes to power (see below) with a different political agenda (as evidenced by the case of the Dominican Republic).

Changes in Government Administration. In the weak institutional setting of most Latin American countries, the dominance of the executive power (presidents, governors, mayors) means that regulatory independence is very rarely significant and that, to a significant extent, private operators depend on the goodwill of the current executive. As a result, changes in government can have a major impact on the conditions in which private utilities operate, depending on the political preferences of a new administration. In Colombia, for instance, the relationship between public utilities and the central government changed when the more market-oriented Álvaro Uribe replaced Andrés Pastrana as president. Conversely, new government officials often do not feel bound by commitments made by their predecessors and can change the rules of the game overnight as was the case in the Dominican Republic. This problem is particularly acute at the local level, where independent oversight of elected officials often does not exist. To this day, what matters is not the institution and what it is supposed to do, but rather the personality and policy preferences of presidents, governors and mayors.

Difficult Problems that Can Be Solved

Consumer Purchasing Power. The fact that large shares of the population of Latin America and the Caribbean earn low incomes has a fundamental impact on theft, nonpayment and political opportunism. This is particularly the case of the four countries studied during the two workshops. Some theft of utility services results from the poverty and economic pressures faced by poor households. In addition, low incomes challenge utility providers to develop affordable supply schemes for rural areas and urban slums. Poverty also contributes to clientelism because the poor respond favorably to charismatic politicians who offer “gifts” to the community in exchange for political support. However, purchasing power *per se* is not a good predictor of lack of payment or fraud. In fact, when the utilities were under government ownership, lack of payment and fraud were a problem in middle and upper middle-class areas and resulted from corruption and clientelism. This suggests that the solution to these problems rests with the political

will to crack down on clientelism and corruption, and the establishment of an appropriate subsidy policy for low-income consumers.

Cultural Attitudes toward Utility Service Payment. In all the cases studied there is a deep-seated belief that basic utility services, and most of all water, are an entitlement, and that governments should provide these services alongside other tax-financed public goods such as health care or law and order. Compounding this cultural bias is the perception that government agencies, politicians, and the upper strata of society often get away without paying for utility services. This belief leads lower-income consumers to question the motivation behind the imposition of fees. Changing this attitude is a major challenge for private operators, but can be done if companies and the government work together to devise strategies that address local socioeconomic and cultural challenges. In order to reduce theft, increase collections and avoid a political backlash, private operators need to convince users that the provision of utility services improves under a fee-for-service program.

The Enforcement of Legal Statutes. Protection of property rights in the region is generally poor because laws generally favor the government and courts lack the power or willingness to enforce them. As a result, lax enforcement of regulations creates difficulties for private operators. In addition, they also face difficulties when attempting to use the court system to obtain redress for thefts, fraud and nonpayment of utility services. In many cases, governments do not abide by existing legal requirements. Again, this problem can be solved if the political leadership of a country is committed to public utility reform.

Regulatory Agency Behavior. Although regulatory behavior varies widely in the four cases studied, the common pattern is one of limited or no regulatory independence from the elected government (local or national), which exposes private operators to arbitrary government decisions. This problem can certainly be properly addressed, but that requires the political will to let the regulatory agencies do their jobs. It also

means that the regulatory agencies must be properly financed and staffed.

Problems that Can Be More Easily Solved

Company Image. All four utility companies studied had a very bad reputation when they were under government ownership. The fact that the companies were mismanaged and corruption was perceived as rampant was an additional justification for avoiding payment or stealing the service outright. These image problems and the cultural biases discussed above make it imperative for private utilities in the region to create a favorable image right from the start. Companies must convince consumers that they are being treated fairly. They also need to overcome the potential handicap of being foreign-owned, which makes them a target of attacks because the local population might consider the companies are enriching foreign shareholders. The cases reviewed here yield two examples of companies that successfully changed their image (AAA in Colombia and Interagua in Ecuador).

Corruption Within the Company. Companies have much more discretion in tackling this problem, and it is also the easiest to overcome. In all four cases, there were systemic problems of employee corruption under public ownership. Companies failed to go after prominent politicians (congressmen, mayors) and people protected by them (family, friends, businesses) when they did not pay their bills or committed fraud. In all four cases, the privatization process led to major improvements in employee corruption. Corrupt employees were fired and better controls to prevent, detect and punish corrupt behavior were put into place.

LESSON #1: UTILITY REFORM MUST PROVIDE QUICK AND TANGIBLE BENEFITS FOR USERS

The workshops also yielded some general lessons. For example, *service delivery* was identified as an important lesson relating to the problems of nonpayment and theft. The two successful examples (AAA and Interagua) employed different strategies but had one element in common. They placed great emphasis on appreciably

improving both the quality and the availability of service within a relatively short period of time. Unless there is a clear and tangible commitment in this regard, utility reform will lack the credibility needed to win public support and will fail (as was the case in the Dominican Republic). In other words, even the poor are willing to pay when they receive good quality services, but companies must first prove their case to consumers by actually showing improvements in order to overcome cultural biases and the hostility resulting from the negative experiences with government-owned utilities.

Service can be improved through a variety of efforts, including community-based approaches, improving company image, making utility services more affordable, and improving community well-being.

Community-based Approaches Pay Off. Non-payment and theft can be significantly reduced by designing innovative approaches to foster cooperation and trust that involve the utility provider, community representatives and the government. Some of the companies studied developed strategies that incorporated both community organizations and government representatives. The basic assumption was that a winning formula would be found once local market conditions were understood and addressed. A key element of this approach was identifying an intermediary that could bring consumer and community representatives together with the utility company and the government to establish a sense of trust within the local community and assure its cooperation.

Following this approach, some companies made special efforts to establish an environment of social responsibility where voluntary cooperation made the need for policing and sanctions less necessary. Companies engaged communities and government representatives through a variety of town meetings and training programs that delivered a persuasive message. Companies could do well only if customers were getting better services, which then would allow them to expand service and invest in the community. In this regard, companies put much effort in educating consumers (through public workshops)

about the importance of paying if they wanted to receive good services. For its part, the government had to come up with subsidies to help the companies offset infrastructure costs and lower rates. To give the process legitimacy, in some cases (electricity), the regulatory institutions stepped in to make sure that the new process was transparent and the private company was not taking undue advantage.

Acting Fast to Improve Company Image. Private owners must move quickly to establish a positive image and counteract the legacy of poor service and corruption of the state-owned utilities as well as the often negative popular perception of the privatization process and the acquisition of companies by foreign interests. Moreover, new private owners have to contend with the adverse social and political reactions that will inevitably result from the significant increases in rates that often follow privatization.² Thus, prior to the transfer of ownership, private owners must have a proactive approach that they can quickly put into place.

The Need to Improve the Life of the Community. Decades of neglect and poor service have created strong negative feelings against utility providers. This is particularly true in poor areas, which are traditionally the most neglected. To gain credibility and trust, Colombian companies made substantial efforts to show their commitment to “social responsibility” by investing in education and parks, supporting local soccer teams, and many other initiatives to benefit poor communities.

Making Utilities more Affordable and Easier to Pay. The experiences of Colombia and Ecuador show the importance of improving customer service, including such measures as providing flexible tariff rates or rewarding timely bill payment. The sooner customer service is improved, the greater the chances that nonpayment of utility bills will decline.

Other more conventional approaches can be used to complement the ones already discussed,

² Service levels can only be improved slowly as investments are rolled out.

including making it harder to steal utility services and fighting illegal activities.

Making Utilities Harder to Steal and Easier to Monitor. The experiences of Colombia and Ecuador show that investing in better monitoring mechanisms pays off. Particularly effective are the installation of meters that are difficult to temper with, or placing meters in visible places where they can be easily monitored.

Fighting Back Illegal Activities. Cracking down on illegal activity remains a difficult task in all the countries examined because of the lack of a strong rule of law and policing system. Nonetheless, company managers emphasized that it is important to show to employees and customers alike that the utility operator is no longer willing to tolerate illegal activity and is ready to take the necessary measures by firing corrupt workers or terminating illegal connections. Company executives stressed that a balanced carrot-and-stick approach was needed. However, they noted that the “carrot” (persuasion) is far preferable to the “stick” (sanctions). The reason for this is that monitoring and policing costs are higher the costs of programs to encourage voluntary cooperation.

LESSON # 2: POLITICS MATTERS

The four cases studied highlight the importance of politics in shaping the final outcome. Political problems are the most difficult to solve. Moreover, weak government institutions make it possible for the individuals at their helm to have a disproportionate influence in the decision-making process. This is shown most clearly in the ease with which problems can be resolved when the mayor, governor or president in question supports the role of the private enterprise. Conversely, if political leaders are not strongly committed to private participation in the provision of utility services, private providers will face serious difficulties, even insurmountable obstacles. The situation can become particularly difficult if the administration that sponsored the privatization process is replaced by one that is significantly less sympathetic or opposed to it. Time inconsistency problems may arise when a new administration abandons the original com-

mitment to the regulatory framework in order to appease its political supporters and fulfill its electoral commitments. Workshop participants suggested several options to reduce political opportunism, as described below.

The Role of the Government and Multilateral Agencies

Workshop participants noted that because sociocultural and political issues are often at the heart of the many of the problems that arise with the private provision of utility services, multilateral aid agencies should incorporate innovative approaches, such as social responsibility, into their assistance programs. Another way in which post-privatization problems can be reduced is by including service obligations clauses in concession contracts prior to privatization. Alternatively, as in the case of Guatemala’s rural electrification trust, governments can earmark all or some of the privatization revenues to subsidize activities whose social return is higher than their private returns. Such efforts will go a long way in reducing negative public perceptions about privatization. In all, we would argue that these types of measures are probably more urgent than establishing the “perfect” regulatory framework from the outset. If the social problems affecting utility service are not tackled, a regulatory framework that looks perfect on paper is unlikely to survive adverse political pressures. The resolution of these issues is likely to increase the legitimacy of the privatization process, and thus, the prospects for establishing an independent regulatory structure.

Workshop participants agreed that political opportunism is an endemic and very serious problem affecting public utilities, which is much more difficult to address than theft and nonpayment. Company executives reported that the most challenging task is preventing politicians from manipulating regulatory policy and interfering in company operations. Political will remains the most crucial factor, but there is only so much that can be done to shape it, particularly from the standpoint of private public utilities and multilateral agencies. Nonetheless, some preliminary recommendations can be made.

- *Deal-making.* Making deals does not seem conducive to good results because the agreements reached may disappear once a new administration comes into power. Indeed, new political leadership may imply a substantial rewriting of regulatory policy to the detriment of the service provider.
- *Transparency and Bipartisan Consensus.* Transparency in the privatization process, coupled with careful political deliberation to gain bipartisan support, legitimize the process and its end results. Moreover, transparency and societal consensus eliminate any possible arguments that post-privatization administrations may want to use to change the rules of the game.
- *Timing for the Establishment of the Regulatory agency.* The establishment of a regulatory agency that operates under clear contractual obligations prior to privatization makes it more difficult to change the rules of the game at a later time.
- *International Arbitration.* The inclusion of an international arbitration clause, invoked when conflicts arise between the regulator and the utility, can also help, but this is a mechanism to be used in extreme cases only because it involves potentially high economic and political costs for the service provider.
- *Mixed Companies.* Some workshop panelists suggested that the creation of a mixed company, in which the government (national or local) retains a minority stake, can deter opportunistic behavior and make politicians more responsive to economic rather than political factors. However, other participants contended that mixed companies simply provide yet another way in which politicians can engage in opportunistic behavior.
- *Streamlining of Rules and Regulations.* Even after privatization, the government can use a vast array of legal tools to engage in opportunistic behavior. When rules and regulations are many, the opportunities to use them for political ends are greater. One way to limit the likelihood of over-regulation is to limit overlapping jurisdictions by ministries and special agencies. Similarly, the laws and regulations that apply to public utilities

should be streamlined and simplified in order to improve clarity and predictability for public utility managers.

- *Persuasion.* Utility operators, by themselves or in cooperation with foreign governments and/or multilateral lending agencies, can try dissuading a government from engaging in political opportunism.
- *Multilateral Agency Conditionality Clauses.* Should persuasion fail, conditionality clauses may be a more powerful warning signal.

CONCLUDING REMARKS

Private operators face the challenge of overcoming public skepticism in an environment of cultural bias against private ownership (and more so against foreign ownership), the perception that utility services are entitlements, and a long history of bad and unreliable service. However, it has been shown time and again that even the poor are willing to pay for good quality services. This means that theft and nonpayment can, to a significant degree, be addressed through adequate strategies. This study shows that the companies that made a strong commitment to improving service quality in a relatively short period of time were successful in substantially reducing theft and nonpayment. Even better results could be achieved if companies tailored their efforts to local needs and realities, and in particular, focused on overcoming social, political and cultural problems that affect theft and nonpayment. Likewise, private operators must quickly create a positive image for the company and establish a constructive working relationship with government at all levels, from neighborhoods and communities to the central government. Conversely, relying on models that proved successful in developed countries without adapting them to local needs and realities is bound to fail because they carry higher transaction costs.

The outlook regarding political opportunism is much more pessimistic. In the absence of credible, independent institutions that can restrain policymakers from exercising their political will, the ability to avoid opportunism is likely to remain limited. Time inconsistency problems remain severe and will likely persist. They will

only lose their impact on regulatory policy when countries are able to strengthen their systems of checks and balances among the three branches of government. Conversely, political clientelism and populist leadership remain, improvements will be unlikely and stop-go policy cycles will be the norm. Multilateral lending agencies can

make a difference when dealing with well-meaning administrations, but will find themselves at odds when facing stubborn populist leaders whose priority is their short-term political goals at the expense of regulatory commitments, particularly if such commitments were made by a previous administration.

Introduction

The countries of Latin America have played a pioneering role in the privatization of public utilities that has taken place during the past fifteen years. However, the viability of private utility ownership is threatened by serious problems of theft, nonpayment and political opportunism; in addition, regulators and governments face intense pressure to hold utility rates down. Maintaining private ownership of public utilities is a challenge that extends well beyond the transfer of ownership from public to private hands.

The theoretically attractive models of private ownership and independent regulation, following the experiences of developed countries and especially of the United States, have not proven to be robust when applied to emerging markets. In theory, the profit motive would lead privately-owned utilities to crack down on theft and improve collections. In turn, improved performance and efficiency gains brought about by private ownership and regulatory incentives were to reduce utility costs sufficiently to allow the gradual reduction of rates (other things, such as fuel prices, being equal). Furthermore, fiscal constraints were supposed to limit the amount of subsidies that governments in the region could provide for utility service, leaving no other alternative than to increase collection levels and rates when costs went up. All of this would make it easier for private utilities to obtain adequate resources to finance not only their current operations but also network maintenance and expansion. In practice, however, this virtuous circle has often stalled. Moreover, the historical precedent of private utility supply in Latin America reflects a pattern of indirect utility expropriation by keeping rates below capital replacement levels. Weak political and legal checks and balances provide fertile ground for the executive branch to act unilaterally and change utility rates in order to maximize electoral goals. Likewise, much literature on the experience of industrialized countries inadequately addresses the issue of theft and nonpayment that

is endemic in post-communist and third world countries. Therefore, if we want to correctly address the problems plaguing utility regulation in Latin America today, first we must understand why politicians make changes to existing utility rate agreements, as well as why people consider water and electricity to be an entitlement and refuse to pay market prices for them. By the same token, understanding these problems will be useless unless we come up with solutions to them by identifying the factors behind successful experiences. Indeed, this second aspect is crucial for the sustainability of the infrastructure sectors and reforms in the region.

This report examines the problems of theft, nonpayment and political opportunism in the aftermath of privatization by considering the recent experiences of four private utilities in Latin America operating in water and sanitation, and electricity supply. The purpose of the report is to extract practical recommendations to assist managers, regulators, policymakers and, not least, the staff of the Inter-American Development Bank (and other multilateral financial institutions).

ANALYTICAL FRAMEWORK

The performance of utility companies in developing countries is affected by high levels of poverty and poor noneconomic institutions that affect them in ways that are very different from those experienced by institutions in advanced industrial nations. Noneconomic institutions in developing countries, and more specifically political institutions, impose significant transaction costs on economic activity by limiting the ability of governments to uphold laws and contracts. In fact, Douglas North (1990) and a growing number of economists argue that lackluster economic growth in developing countries is the result of high transactions costs.

When these considerations are applied to regulated sectors such as network utilities, it is clear

that best practice models that may work in advanced industrial societies face entirely different constraints in developing countries, an issue that must be properly understood and addressed. Specifically, attention to political transaction costs leads to a focus on factors such as political clientelism, corruption (both within the company at the time of privatization and within political institutions dealing with public utilities), the company's public image, and changes in government leadership and in macroeconomic conditions. The primary analytical focus of this report is on institutional factors. One of the objectives is to show that political transaction costs are often behind the time inconsistency problems that have had a negative impact on some of the cases studied.

However, noneconomic institutions and transaction costs are not the only determinants of the outcome of utility privatization in developing countries. High poverty rates and local culture elements also affect privatization. Particularly important are the purchasing power of consumers relative to tariff levels and cultural attitudes toward paying for utility services. The characteristics of the private operator also play a role in the outcome of privatization. The strategy followed by the operator before, during and after privatization may or may not identify these problems, which might lead to widely different results. Moreover, the operator's capacity to make any necessary investment, as well as tech-

nical and managerial improvements, can fundamentally alter the outcome of privatization processes.

METHODOLOGY

This analysis is based primarily on information supplied by participants in two workshops held at the Inter-American Development Bank in Washington, D.C., on September 9 and November 19, 2004. Information received from the staff of the Inter-American Bank as well as from external sources (see the References section) was also used.

The first workshop dealt with theft and nonpayment, and the second with political opportunism. In addition, each workshop discussed the experiences of electricity and water utilities to extract common lessons. The four selected cases concern distribution companies in these sectors. It is at the distribution level that private companies have daily contact with end users and where prices are typically regulated. This means that it is also at the distribution level where companies directly confront the problems of theft, nonpayment and unwillingness to increase rates.

In addition to utility managers and IDB staff, the second workshop also included the participation of regulators. Where appropriate, this report points out areas of continuing controversy that were raised at the workshops.

Addressing Theft and Nonpayment

This section analyzes the innovative experiments of two Colombian providers of electricity and water and sanitation services.³ To this end, representatives of Unión Fenosa (electricity) and Sociedad de Acueducto, Alcantarillado y Aseo de Barranquilla S.A. (water and sanitation) were asked to assess how theft and nonpayment affected their companies and what strategies they devised to respond to these problems. These two companies operate in the same geographic area and share the same customers and operating conditions. In addition, they are both subject to Colombia's regulatory framework, which is described in the Appendix.⁴

SOCIEDAD DE ACUEDUCTO, ALCANTARILLADO Y ASEO DE BARRANQUILLA S.A. (AAA)

AAA is a mixed company. A Spanish operator owns 60 percent of AAA, while the municipalities own 35 percent and the remaining 5 percent is owned by small private domestic investors. After the initial privatization, AAA began to progressively incorporate water and sanitation companies that had been previously managed by smaller municipalities.

Initial Conditions

At the time, Barranquilla and other municipalities decided to involve a foreign investor in the management and ownership of water supply and sanitation because the companies serving these areas were in a state of disarray, facing political, social, cultural and corporate problems, as well as theft and nonpayment.

³ Please see Appendix 2 for a description of Colombia's framework for the regulation of public utilities, including the names of the main government agencies involved in utility regulation.

⁴ The only difference in the customer stems from the fact that the AAA concession does not extend to all of the municipalities in the Caribbean region of Colombia. Water supply in Colombia is typically organized at the municipal level.

Political Problems

According to the presenters the primary reason for the problems faced by water companies was local political control. The companies were generally overstaffed with political appointees who lacked technical expertise. Politicization also fueled high staff turnover at all levels. National government subsidies earmarked for expanding water services to poor neighborhoods simply failed to reach the people for whom they were intended. Moreover, contracts were often manipulated to favor political cronies, staffing depended on political quotas; high staff turnover mirrored the political cycle; and investment was insufficient and politically motivated. Compounding the situation, state and city governments failed to pay their bills, and so did politicians and their friends, families, and supporters.

Social and Cultural Problems

Huge losses are generated each year by the culture of nonpayment that exists in the region. Nonpayment is not linked solely to inability to pay as government agencies and wealthy individuals are also delinquent in their payments. This can be explained by a variety of factors.

- Water and sanitation services are regarded as entitlements.
- About 27 percent of the basic needs of the population of Barranquilla remain unmet (see Figure 1 in the Appendix).
- Large numbers of people are displaced refugees from areas affected by the nation's ongoing guerrilla warfare and have often limited means of subsistence.
- A sense of community is lacking because the area's population is racially and ethnically diverse.⁵

⁵ There seems to be a contradiction between this opinion and UF's view of the same problem.

- Poverty affects 60 percent of the population of Barranquilla, while 19 percent live in indigence (see Figure 2 in the Appendix).

Company Conditions

- Municipal water companies were plagued by severe problems, which set in motion a perverse cycle. As facilities fell into disrepair, poor water quality led to an increase in infectious diseases. In addition, service quality was very poor and deteriorating; customer service was nonexistent and companies had a bad public image; coverage levels were low; labor productivity was low; financial losses were high; revenue collection was poor; there was an extreme dependence on government financing of investments; and accounting procedures and customer data were poor.

Theft and Nonpayment

As mentioned earlier, a culture of nonpayment affected all levels of society as well as government institutions. Large losses also resulted from lack of monitoring and enforcement, which turned payment evasion and theft into endemic problems. Fraud was rampant and included illegal connections, meter tampering and bribes to company employees who underreported consumption.

AAA Response

To tackle these multiple problems, AAA involved both consumers and local governments in the development of viable and sustainable solutions. The company developed a social responsibility program to show customers that they could rely on a much-improved quality of service and customer attention if they were willing to pay based on their income level. AAA revamped its database and developed appropriate strategies to identify the customers that were most likely to create problems. To enlist the cooperation of residents of slum areas, the company identified community leaders who could serve as intermediaries between the company and its customers and provide assist in devising strategies to meet specific community needs. The company also

relied on the community intermediaries to create community groups to provide information on the value of reliable water service and the importance of paying for it and preventing fraud. Local subcontractors with a good knowledge of these low-income areas were hired in an effort to overcome skepticism.

AAA developed a variety of responses that focused on service improvement, community upgrade, customer relations and anti-fraud activities.

Service Improvement

The company made major investments to substantially upgrade the quality of its water supply and sanitation services, as well as increase coverage. It also periodically updated its personnel training program to improve customer service. In addition, it instituted different pay rates and installment procedures adjusted to clients' ability to pay. AAA also simplified billing and payment procedures, making them easier to understand. Mobile units were made available to allow customers to pay their bills in their own neighborhoods. Finally, customers who paid their bills on time were awarded gifts and discounts.

Community Upgrading.

AAA invested in community activities to show that it had a stake in the well-being of the neighborhoods where it provided service. Communities showed particular interested in receiving support for sport activities. AAA also provided funds for educational and social activities at the municipal level.

Customer Relations.

AAA made an effort to improve its public image by revamping customer relations. The company developed a publicity campaign to highlight the affordability of water compared to that of gasoline or soft drinks. Moreover, individual customer attention was made a priority. For example, AAA established hotlines to report malfunctions and complaints that relied on well-known and trusted community members. They also

dropped previous fines and legal actions in an effort to persuade nonpaying customers or those who stole water from the system to regularize their situation. This resulted in an appreciable increase in the total number of paying customers.

Anti-fraud Activities

In addition to creating incentives to promote community cooperation, AAA also stepped up its anti-fraud efforts. Updating of the customer database provided a clear idea of who was not paying for service. Meters were better protected against tempering. Corrupt employees were fired, and the company regularly inspected meters and important installations. AAA also launched an educational program to highlight the negative impact on honest customers of gangs who stole water pipes and promote self-policing. Legal actions against offenders were coordinated with the police and the municipalities.

Results

These initiatives appreciably improved AAA's performance on a number of counts. Slowly but steadily, nonpayment gave way to cooperation. As Figure 3 shows, collections increased steadily in the first seven months of each year between 2000 and 2004. On-time payments went from 45 percent in January 1997 to 72 percent in May 2004, a net increase of 27 percent. The revenue collection index, which averaged 50 percent in January 2002, rose to 87 percent in July 2004 (Figure 4 in the Appendix). Higher revenues reflected improved collections from low-income areas as well as increased payments by national and local government agencies, which prior to privatization were notorious for not paying their bills. Tables 1 and 2 in the Appendix show the improvements in the indicators for the towns of Puerto Colombia and Soledad.

Public opinion polls mirror these improvements. As time went by people recognized AAA's effort to improve service quality and customer relations. According to AAA's own surveys, 80 percent of the people asked graded the company's service as excellent, 70 percent rated

garbage collection as good, and 70 percent described billing procedures as clear and understandable. One independent survey confirmed much of these findings. According to a poll conducted by the National Bureau of Standards, respondents consistently rated AAA over 4.0 on a scale of 0 to 5 (with five being the highest rating) with regard to: (i) being a modern company; (ii) being a company that continuously improves; (iii) being responsible; (iv) being concerned about the community; (v) providing ample coverage; and (vi) being a leader in the business community.

Another indicator of the high regard in which customers held AAA is the fact that 6,000 residents of the town of Soledad demonstrated in favor of privatization and against the inefficient local municipal provider.

In spite of these positive improvements, AAA representatives stressed that important problems persist. Although the company's collaboration with municipal authority in terms of coordinating and planning activities has improved, political corruption and interference in company operations remains the number one problem, particularly at the local level. Politics continues to have a negative impact on the way the government uses its scarce resources, which results in inefficient investments and waste. At the company level, management needs to speak clearly to customers about the benefits of their services for the community because nonpayment and fraud, although abated, are still very much a problem. Put it differently, negative attitudes can change only if there are long-term positive results.

UNIÓN FENOSA'S EXPERIENCE WITH ELECTRICARIBE AND ELECTROCOSTA

Initial Conditions

In 1994, the Colombian government initiated a major restructuring of the country's electric power industry. The key elements were the creation of a competitive wholesale market (modeled after the England and Wales pool), the creation of an independent regulator and the partial privatization of the industry. As part of this process,

in 1998 the vertically-integrated electric utility group serving Colombia's Caribbean coast, CORELCA, was split into its vertical components and the existing eight distribution companies were grouped into two, Electricaribe and Electrocosta.⁶ Sixty-five percent of the stock of Electricaribe and Electrocosta was sold in 1998 to a consortium that included Reliant (formerly Houston Light & Power) and Electricidad de Caracas (EDC). The rest of the shares remained in the hands of the Colombian government. In 1999, EDC became part of AES, a major international energy company based in the United States, placing both distribution utilities under the ownership of U.S. companies. In 1999, Reliant and AES initiated a partial retreat from their foreign positions, including the sale of Electricaribe and Electrocosta.⁷ The only buyer of the Colombian interests of the Reliant-AES consortium (which included a third utility, EPSA, located in the Cauca valley near Cali) was Unión Fenosa of Spain (UF).

Electricaribe's concession area covers the western half of Colombia's Caribbean coast, whose main urban center is Cartagena. Electrocosta supplies the eastern half, including the cities of Barranquilla, Santa Marta and Valledupar. Colombia's Caribbean coast is home to about 9 million persons who live in 186 municipalities. This region accounts for about 20 percent of all electricity consumers in Colombia.

Eighty-five percent of customers in this region as well as about 45 percent of the energy delivered are subsidized. Because socioeconomic conditions in the concession area are very difficult, this includes customers whose living conditions fall below the lowest official poverty level.

⁶ Under public ownership, Colombia's Atlantic coast region was serviced by Corporación Eléctrica de la Costa Atlántica (CORELCA). CORELCA's insolvency caused the government to privatize its distribution assets as two separate companies (Electricaribe and Electrocosta), but a lack of bidders forced the government to sell both to the same consortium (Ayala and Millán, 2003).

⁷ EDELCA is still owned by AES. In fact, in exchange for the sale of Electricaribe and Electrocosta to Unión Fenosa, the latter agreed to withdraw its bid for EDELCA.

Colombia's Caribbean coast has traditionally been one of the poorest areas of the country. This situation has been compounded recently by the migration of refugees escaping rural areas affected by guerrilla and paramilitary violence who have moved to the area's major urban centers of Cartagena and Barranquilla. These customers (so-called "subnormal customers") are not legally connected to the grid and include households living in refugee camps as well as preexisting slums.

When Unión Fenosa purchased Electricaribe and Electrocosta (ECC), the companies were plagued by legal, regulatory, political, sociocultural and corporate problems.⁸

- *Company Conditions.* Deficient company conditions included low collection rates (averaging only 62 percent), inefficient commercial systems (there were four separate systems) and inaccurate metering. This was aggravated by internal corruption, poor customer service (long waits and lack of facilities to pay bills) and a negative public image.
- *Social and Cultural Problems.* Sociocultural problems were reflected in widespread fraud and theft of electricity (energy losses were close to 42 percent of total energy purchases). In addition, consumers considered electricity an entitlement and low-income consumers, whose electricity supply was essentially free, used relatively high levels of electricity. Widespread poverty and a growing refugee population only exacerbated these problems.
- *Political Problems.* Political problems included a poor law enforcement system that made it very difficult to prosecute consumers for electricity fraud or theft. Moreover, the public sector was unable to alleviate widespread poverty and deal with the refugee problem. There was widespread public opposition to privatization and rate increases, including opposition by local politi-

⁸ Reliant and EDC claim that, in fact, they were already making progress to reducing losses by the time they sold Electricaribe and Electrocosta to Unión Fenosa.

cians whose interest lay in regaining control of the utilities.

- *Regulatory Problems.* These problems centered around the disruption of the wholesale market because of guerrilla attacks on the transmission network, which created local market power for generators in the Caribbean area.
- *Legal Problems.* The court system could not be counted upon to resolve disputes with customers or with the government.

Solutions Developed by Unión Fenosa

UF officials acknowledged that their prior experience in Spain, where losses, theft and fraud are small, had not prepared them for what they found in Colombia's Caribbean Coast, although they did find some successful practices in EPSA which they could replicate in Electricaribe and Electrocosta.⁹ Nevertheless, they did have a strategy for restoring profitability. The strategy had three basic components: improving internal efficiency, establishing a close relationship with the public sector to gain government support for its initiatives, and differentiating consumers to develop separate approaches for each group.

Improvements in internal efficiency were pursued through the implementation of a variety of corporate information systems developed by the parent company. These systems improved the quality of information flows from the bottom up, that is, from the meter all the way up to the company's financial results. A major objective of these changes was to obtain accurate and timely metering information that could be relayed to billing and collection systems, and from these back to purchases. Thus, fraud could be detected and eliminated (including the dismissal of employees involved in fraud). Better information about network conditions and faults could be used to make necessary improvements and

⁹ Some observers contend that Unión Fenosa was not interested in showing rapid improvements because they wanted a review of the distribution charges (arguing that the asset base was underestimated) and financial support from the government. In addition, if the company had shown large loss reductions, it would have been penalized at the next rate review.

increase the quality of service while decreasing operation and maintenance costs.

Unión Fenosa has also engaged in an extensive campaign to establish good relationships with governments at all levels. It has set up working groups with government ministers, the Superintendencia de Servicios Públicos Domiciliarios¹⁰ (SSPD), governors, mayors, and community leaders to reach agreements concerning subsidies, electricity supply, and improvements to distribution networks. According to UF executives, keeping the government as a minority shareholder is essential because it means that any policies that affect the utility will also affect the government. UF executives also stated that good personal relations with the president of Colombia and with the head of the SSPD are key to the company's success (and conversely, poor relations with the executive power and regulatory institutions made it much harder to improve company conditions). The SSPD lends credibility and legitimacy to the company's efforts, while presidential support protects the company from political attacks. Additionally, good relationships with municipal and community leaders may deflect the patronage mechanisms that pervade municipal politics. Lastly, it was also stated that UF is conducting training programs for judges and public prosecutors to better acquaint them with issues related to electricity fraud and theft because many of these officials tended to be quiet lenient with regard to such violations.

Unión Fenosa has also conducted a major public relations campaign to change the public's image of the company and emphasize its role as a social partner of the Caribbean communities. In part, this is necessary to counteract charges that UF delayed important investments and permitted the quality of service to deteriorate.

Unión Fenosa divided its customer base into three groups and developed a set of priorities and strategies to reach each group. The top priority was nonresidential customers and residential customers in the top three tiers of the official classification system, which yielded the highest

¹⁰ See Appendix for a brief description of utility regulation in Colombia, including the SSPD's role.

profitability for the company (see Appendix for a brief description of residential customer classification in Colombia). Next came the subsidized customers in the other three tiers of the official classification, and last, customers below the official poverty line. Two strategies were used in a combination depending on the group being targeted:

“Business-as-usual” Management. This strategy involves performance improvements using a “carrot-and-stick” mix of better quality of service and customer attention, and more aggressive prevention, detection and prosecution of fraud and theft. UF officials remarked that fraud and theft occur at all social levels, noting that theft and fraud perpetrated by politicians, corporations, and wealthy families was particularly corrosive. Going after these consumers helped counteract the general feeling of impunity and demonstrated that the company is serious about stopping theft and fraud. A variety of mechanisms were implemented to collect outstanding bills, including the establishment of multiple points of collection, gifts and prizes for on-time payment, and extended repayment under favorable contract terms. UF representatives noted that the purpose of the repayment contracts is to keep the customer legal and build good payment habits as much as it is to recover past due amounts.

“Base-of-the-pyramid” Approach. This approach involves the development of financial terms of service consistent with the income levels and flows of poor customers (e.g., daily payments). It also places emphasis on community self-improvement through the creation of local microenterprises for metering and collection (and eventually technical service), community responsibility for payment, and assistance for community initiatives (e.g., sports) and commercial uses of electricity. In addition it includes the establishment of a separate legal entity (Energía Social) to handle the very different organizational needs of this approach. Finally, this approach is heavily dependent on government involvement through subsidy schemes.

The base-of-the-pyramid approach was developed for the so-called “red areas,” where guer-

rilla presence and other problems make billing and collections very difficult. A combination of the two approaches is followed in refugee camps and slums. The business-as-usual approach is used for the rest of the market. Improvements in internal efficiency are closely tied to the first market segmentation approach (business-as-usual), whereas government relations have been particularly important for the second approach (base-of-the-pyramid).

Some of Unión Fenosa’s approaches were quite innovative. For customers handled under the business-as-usual approach (residential, nonresidential and subsidized customers), UF was willing to forgive part of the penalty for electricity theft if the customer was willing to attend an educational workshop, an idea borrowed from driver education programs in the United States. Indeed, many of UF’s actions were consistent with the lessons of the base-of-the-pyramid approach, which is a best practice for doing business with low-income consumers (Pralhad and Hart, 2002).

According to UF staff, the base-of-the-pyramid approach was facilitated by the fact that the Colombian society is highly organized. This meant that it was relatively easy for Unión Fenosa to identify community leaders and representatives. This can become a serious obstacle in less organized societies where the concept of community responsibility for utility supply may be difficult to implement. It also must be stressed that this approach was followed when more traditional ones failed. UF officials drew upon the experience of Sociedad de Acueducto, Alcantarillado y Aseo de Barranquilla, which was operating in the same area and had earlier faced many of the same challenges.

Company data show major improvements in performance indicators, with an overall reduction in energy losses from 42 percent at the time of the purchase (1999) to 19 percent currently, and an increase in collections from 62 percent at the time of purchase to 90 percent at present.¹¹

¹¹ These figures should be viewed with some care as they apparently include the effect of subsidies. Electricity delivered to low-income communities at the

It is remarkable that Unión Fenosa followed many of the same approaches in the Dominican Republic, without the same success. In the Dominican Republic, UF installed new information systems and customer meters, tried to create local microenterprises to handle collections in slums, and persuaded the government to create special police units to go after fraud and theft in other areas. Perhaps the anti-fraud measures would have worked in the absence of the macroeconomic crisis that befell the country in 2003, but there was little indication even before 2003 that, after three years, UF was making any inroads in slum areas. Nonetheless, UF's reliance on very high rates as a way to recoup the initial investment in the volatile political environment of the Dominican Republic, conspired against the success of the base-of-the-pyramid approach.

A fundamental question regarding Unión Fenosa's success so far is the extent to which it is due to its efforts at cutting theft and losses and increasing collections or its ability to obtain government subsidies and other favorable policies. For the 2001-2003 period, UF received government subsidies amounting to 72 billion Colombian pesos (i.e., 6 billion per month). These subsidies appear to be making up for the insufficiency of the cross subsidies built into the rates.¹² Additional subsidies were provided in 2004 under the Social Energy Special Fund (FOES), which uses 80 percent of congestion rents to provide up to 40 Colombian pesos per kWh for consumers living in refugee camps or slums (this is a special consumption subsidy for consumers with very low incomes). UF estimates monthly subsidies from FOES of 7 billion Colombian pesos per month. They also mention

circuit gate and paid for by the government is not counted as lost, and the revenue is treated as a collection, thus decreasing losses and increasing collections even if the company is not actively working with the community to induce greater individual responsibility. A similar pattern occurred in the Dominican Republic.

¹² These insufficiencies can occur if electricity demand is growing more rapidly in the subsidized sectors than in the subsidizing ones relative to the proportions used in the original rate calculation. This is a likely outcome of the cross-subsidies given a positive elasticity of demand for electricity.

a 2004 government budget of 39.5 billion Colombian pesos (3.3 billion per month) for refugee camps and slums, attributable to the legalization of illegal and dangerous connections. The total subsidy for August 2004 reached 10.3 billion Colombian pesos.

Some comparisons help put the magnitude of the subsidies into perspective:

- 2001-2003 subsidies (72 billion Colombian pesos) are equivalent to 19 percent of Unión Fenosa's total capital expenditure over this period (381 billion Colombian pesos).
- Total subsidies expected for 2004 (124 billion Colombian pesos) amounted to about 10 percent of total sales expected for the year, or about 60 percent of the expected net cash flow of 100 billion Colombian pesos.¹³
- If we estimate subsidies during 2003 at the historical level of 6 billion per month, the increase in subsidies from 2003 to 2004 (52 billion Colombian pesos) is equivalent to nearly one-fourth of the improvement in profit (loss reduction) expected for 2004.

It is thus clear that the level of subsidies is a significant element in the financial performance of Unión Fenosa's subsidiaries, but by no means the sole or even the main element. Even without the subsidies, UF would have significantly improved their financial and operating performance since the purchase of the Electricaribe and Electrocosta from AES and Reliant.¹⁴

Of greater concern, however, is the fact that Energía Social is far more subsidy-dependent than Electricaribe and Electrocosta. For the month of July 2004, Energía Social's collection rate was 54 percent with subsidies, but only 13 percent

¹³ UF expects losses of COP 100 billion for 2004.

¹⁴ There was some additional government help, first in the form of payment of all of the arrears owed by public entities, and second in an additional capital contribution to the company, although neither of these measures would affect the impact of the subsidies. The arrears were debts owed to Electricaribe and Electrocosta, and the capital contribution stemmed from the government's partial ownership of two companies.

without; the company is also planning to tap European Union subsidies for the refugees. Collection levels show a significant improvement from 2003 to 2004, but they include government subsidies payments. This could indicate that UF's success in dealing with theft and nonpayment hinges on its ability to extract rents from the government. However, it is also fair to ask whether the current level of subsidies is justified from a social welfare standpoint. Given the levels of poverty in the Caribbean region of Colombia, and the scale of the refugee problem, which are faced largely by Energía Social, the relative magnitude of the subsidies may not be excessive. Therefore, a more definitive conclusion about UF's performance on theft and nonpayment requires additional work. In all probability, the only way to ensure that Unión Fenosa is fully committed to tackling losses and noncollection is for the government to commit to, and sustain, a sunset provision for the subsidies over a reasonable period of time. Our inability to verify the claims made by UF about its progress in dealing with losses and collections, in the face of different—or even contradictory—possible interpretations of the available data, means that greater analysis is required in order to assess the company's performance.

Another issue that may also merit attention and quantification is that of power marketing regulations. In addition to the subsidies, UF was also successful in requiring power marketers to serve all consumer groups, preventing them from “skimming” the largest customers. Presumably, the loss of such customers would impair the

cross-subsidy scheme and jeopardize the financial well-being of Electricaribe and Electrocosta. However, current regulations may hinder the development of more competitive power markets in Colombia. Therefore, the impact of the regulations on companies' finances, and on the development of a power marketing industry may be a worthwhile exercise.

In conclusion, Unión Fenosa is making a significant effort to improve its subsidiaries' situation, and more specifically to address the severe problems of theft and nonpayment existing at the time of privatization and which, to a large extent, were inherited from the previous owners. The overall statistics for Electricaribe and Electrocosta show major improvements in its financial and operating condition. At the same time, we have been unable to independently verify the claims made by Unión Fenosa or its critics. Specifically, we are uncertain as to whether some of the reduction in losses and increase in payments are due to government subsidies or to actual improvements in the relationship between the utility and its customers. This is particularly true for UF's Energía Social subsidiary, which provides services in low-income communities. To measure actual progress in serving low-income consumers, we would need more detailed data showing which collections come directly from the public sector and which from customers disaggregated by customer segment. Although overall subsidy levels do not appear to constitute the only source of profitability for the company, they may play a major role in the case of low-end customers.

Dealing with Political Opportunism in Rate Setting

This section discusses the experiences of a water supply company and an electricity service provider in dealing with the crucial issue of time consistency in the tariff policy of public utilities. Specifically, this chapter delves into the problems in maintaining cost recovery tariffs in the electricity sector of the Dominican Republic, and those that arose after a concession for the water supply company of Guayaquil, Ecuador, was awarded to a private operator.

AES CORPORATION-EDEESTE (DOMINICAN REPUBLIC)

Few other countries in Latin America—indeed, around the world—better exemplify the impact of political transaction costs on major institutional reforms than the Dominican Republic. Attempts to improve the performance of the country's electricity sector by reforming the institutional framework have faced repeated challenges stemming from the inability to sustain policy commitments across electoral cycles. The experience of EdeEste, an electricity distribution company operated by the U.S. firm AES, reflects and illustrates the consequences of political opportunism, which refers to the attempt of elected officials to change the rules of the game (in our case, tariff rates are the most frequent targets) in order to gain political support from their constituencies.

Electricity Sector Reform in the Dominican Republic

As in most other Latin American countries, the development of electric utilities in the Dominican Republic is associated with concessions awarded to foreign utility companies. In 1957, the Stone & Webster's concession was nationalized and nationwide electricity supply entrusted to the state-owned Corporación Dominicana de Electricidad (CDE). Years of poor service by the CDE led in turn to initiatives to reform the sector during the 1990s. Private capital was first reintroduced through contracts with independent

power producers (IPPs) to expand generation capacity. It is perhaps symptomatic of the challenges faced by the reform that structural changes took years to become law, and then only in piecemeal fashion. State-owned generation and distribution assets were transferred to private control through capitalization (rather than full privatization) in 1999; legislation to define the new institutional setup would have to wait until 2001.

Reform in the Dominican Republic followed the regional pattern. The sector was vertically separated into generation, transmission, and distribution segments and a cost-based spot market was established for generation. Transmission and distribution rates were based on the cost of service for efficient notional service providers as in the Chilean model. As a result of the reform, large consumers can freely contract for electricity supply in the wholesale market. A regulatory commission, the Superintendencia de Electricidad (SIE), sets the regulated rates and service conditions, enforces the legal obligations of service providers, and monitors the wholesale market to prevent anticompetitive behavior.

The reforms deviated from regional standards with regard to ownership. The government retains a significant presence in the sector and is the sole owner of hydroelectric facilities. It also provides transmission service and is 50 percent owner of a significant number of thermal generation plants as well as the three distribution utilities, including EdeEste. State ownership is consolidated under the successor to the Corporación Dominicana de Electricidad—the Corporación Dominicana de Empresas Eléctricas Estatales (CDEEE). CDEEE is unquestionably the most powerful actor in the sector, especially since its takeover of the distributors EdeNorte and EdeSur upon Unión Fenosa's exit from this segment.

Government control over the sector has also remained very strong owing to the lack of regula-

tory independence. Although nominally a three-member commission, the decisions of the Superintendencia de Electricidad are, in practice, made by the presiding member, who so far has been appointed and dismissed at the whim of the government. The retention of so much control by the government has flawed the reform from the outset by making political opportunism a persistent problem. In effect, successive governments have been reluctant to carry out in practice what the reform sought in theory—a change in the locus of decision-making in the sector so that politics would cease to impair the sector’s ability to provide efficient universal service.

Company Background

EdeEste is one of the three distribution companies, of roughly equal size, carved out of the CDE during the capitalization process. EdeEste provides distribution service to the eastern part of the Dominican Republic, including about half of the Santo Domingo metropolitan area. The company has about 300,000 registered clients as well as a significant number of additional consumers who lack individual meters and reside in the low-income neighborhoods of metropolitan Santo Domingo and other major urban areas in its territory. Although EdeEste’s service area includes some of the country’s main tourist centers around La Romana and Punta Cana, these areas are mostly served by independent, privately-owned utilities.

AES, a major US energy company with a worldwide presence in electricity generation and distribution, won the capitalization auction for EdeEste in 1999, acquiring 50 percent of the company’s ownership as well as operating control.¹⁵ As a result of its acquisition of Gener, a Chilean generation company, AES also came to own an interest in Itabo, a major generation utility that was also capitalized by the government. AES’s generation holdings further increased

¹⁵ The other two distribution companies, EdeNorte and EdeSur, came under the control of Unión Fenosa, a Spanish utility with extensive holdings in the Caribbean basin.

with the development of the greenfield Andrés combined-cycle plant, which includes an LNG regasification terminal.¹⁶ In November 2004, AES reached an agreement with a US private equity group to sell its ownership interest in EdeEste while retaining operating control.

Initial Conditions

At the time of EdeEste’s capitalization, AES faced difficult conditions. There was no law yet specifying the regulatory framework for the electricity sector, only a provisional tariff administered by the Department of Industry and Trade and a provisional spot electricity market. In addition, most of the problems experienced under public ownership, while common to many utilities under this regime throughout the developing world, had not been addressed prior to privatization because the government preferred to leave it to the new private operators to resolve them.

Political Problems

According to the presenters, CDE had been managed in the past responding mainly to political criteria. Rates had been held down to appease political constituents, although they were significantly increased prior to capitalization in order to attract interest in the sector from private investors. Hiring practices were not responsive to company needs. Many customers, including major governmental agencies, did not pay regularly for their electricity, either because it would be politically unpopular to do so, or because corrupt employees facilitated fraud and nonpayment.¹⁷

¹⁶ EdeEste’s assets include a small generation plant at Los Mina, whose separation from the distribution utility was impractical for size and physical location reasons.

¹⁷ By nonpayment, in this chapter we mean not only nonpayment of invoiced amounts, as this term normally means, but also nonpayment for energy delivered to end users that is never invoiced because of fraud, theft, or lack of metering and customer registration.

Company Conditions

Low rates (prior to capitalization), excessive costs and high levels of nonpayment for energy hampered the financial condition of the Corporación Dominicana de Electricidad. As a result, it lacked the funds to provide acceptable service and to expand coverage, which in turn created a negative public image of the company.

Procurement Controversies

Lack of internal funds also led the CDE to enter into long-term power purchase agreements with independent private producers. However, the contracts were often privately negotiated under capacity shortages and adverse economic conditions, resulting in very expensive energy supply and widespread perceptions of corruption and exploitation by private companies. The high cost of these contracts added to the precariousness of the company's financial and operating condition.

Social and Cultural Problems

Clientelism had also created a culture of nonpayment and theft, not only in shantytowns but also in middle- and upper-income neighborhoods. People across income groups thought of electricity supply as an entitlement and refused to pay for it. Illegal connections and meter tampering were common. The government had condoned this attitude for many years by not acting against electricity fraud or theft, and even by building public housing units without electricity meters. The already low willingness to pay was further diminished by the company's poor service and coverage, producing a vicious cycle of revenue shortfalls leading to poor service and further revenue losses. At the time of capitalization, total energy losses in the system ranged from 40 to 60 percent of electricity production, and collection rates stood at 70 percent of total invoiced amounts. This means that of the total energy fed into the interconnected system, revenue was collected for only 30 to 40 percent. Sharply raising rates before capitalization without a concomitant rise in quality made these problems worse.

Reform in Practice

The history of the electricity sector in the Dominican Republic in the aftermath of reform can be characterized as a repeated cycle of crisis and recovery, where in each cycle the crisis grew deeper and the recovery was weaker. To be fair, some of the crises have been precipitated by events external to the sector, like the most recent combination of fiscal crunch, massive foreign exchange depreciation, and steep increases in oil and gas prices. But at the heart of each crisis we find the government failing to increase rates sufficiently, and the distribution companies failing to reduce nonpayment rapidly enough. Government opportunism can also be held partly responsible for the behavior of the distribution companies, since in a regulated sector we can expect such behavior to respond largely to the incentives created by the regulatory framework.

The problem of political opportunism becomes very clear when the sequence of events in the successive crises is examined closely. Each crisis was initiated by a government decision not to fully translate currency or fuel price movements into rate increases. The first instance of departure from the applicable indexed rates occurred in early 2000, only a few months after capitalization. The government's subsequent inability to fill the financial gap threw the sector off-kilter financially. When the private companies were no longer willing to cover shortfalls, the crisis reached its zenith in the form of massive supply shortfalls ("financial blackouts"). At this point, the government steps in and takes politically painful measures, such as raising rates and cutting subsidies (see Figure 5 in the Appendix for a graphic representation of the crisis cycles since capitalization). Government opportunism has also affected the behavior of the distribution companies, which preferred to let the government maintain some subsidies rather than addressing theft and nonpayment in other ways. The distributors realized that the government preferred to provide subsidies than to face additional unpopular measures, and they found it easier to collect subsidies than to collect from end users.

The so-called “technical defects” in the rate structure are also an indication of opportunism rather than of shortcomings in technical capacity of the regulator. The provisional rate structure adopted by the government prior to capitalization, and which remains largely in place, fails to allow for full recovery of street lighting costs, the cost of reactive power, the working capital costs associated with the indexation of rates for fuel prices or foreign exchange movements, and certain electricity purchase costs.¹⁸ Correcting these problems would most likely increase rates, hence the government’s reluctance to include them in the rate structure.

Lack of commitment by the government is also evident in the legal treatment of electricity fraud and theft. The civil code of the Dominican Republic does not adequately criminalize these activities, and imposes onerous due process requirements on utilities attempting to penalize end users and their accomplices who engage in fraud or theft. Yet instead of amending the laws, the government resorted to a clumsy and expensive scheme of setting up patrols of utility employees, police officers, and public prosecutors, to go after fraud and theft. According to AES, the return on this program is negative, as it costs the utility more than it obtains from cracking down on theft and fraud. This accords with the experience of utilities in Colombia’s Atlantic coast—a culturally and economically similar setting to that of the Dominican Republic—where legal remedies have been found to be economically unviable and are only pursued as a last resort.

Why Has It Been So Difficult to Maintain Commitment?

Ultimately, the problems of political opportunism are rooted in the nature of the political system of the Dominican Republic. In addition to the problem of imbalance between the executive and the other powers that is typical of political systems in Latin America, the Dominican Re-

public lacks a party system with major ideological differences among parties. The country also has a history of clientelism with the free or subsidized provision of public services acting as an important vote-buying tool. Political opportunism also creates a vicious cycle in the sense that it encourages opportunistic behavior on the part of other actors. For instance, private investors may be tempted to renege on prior commitments if they know that the government is amenable to renegotiation. The commitment to reform was also undermined by more specific problems, including unrealistic expectations, the strategy adopted by the service provider, frequent electoral cycles, the dominant mixed enterprise model, extensive state ownership in the electricity industry, and the quality of regulations.

Unrealistic Expectations

Reform of the electricity industry was initiated by the government of Leonel Fernández (during his first mandate, 1996-2000). Because of the controversial nature of the reform, the decision was made to “oversell” the reform as means of prevailing over its critics. As a result, the government encouraged unrealistic expectations regarding a quick decline in electricity rates, which had increased sharply. In fact, however, under the best of circumstances, it would take several years for efficiency improvements to be passed on to consumers. Moreover, rates could never decline to pre-reform levels because those only covered operating costs. More importantly, these promises ignored the fact that the largest component in the cost of electricity to end users is the cost of generation and, in a mainly thermal system like that in the Dominican Republic, the cost of fuel is subject to significant volatility and the impact of foreign exchange movements. Unrealistic expectations raised the bar for the new private operators as well as the probability of failure.

Company Strategy

At first, AES tried to enter the low-income areas where electricity consumption is, for the most part, not metered. Its attempts were met with acts of physical aggression against its staff (police intervention only led to an escalation of the

¹⁸ Specifically, the indexation of rates based on the price of diesel oil fails to take into account the fact that some power purchase contracts use other price indices.

violence). As a result, AES agreed to a government subsidy program that provides for no individual metering and very heavily subsidized rates. Although the program has undoubtedly had some educational value, not surprisingly it has turned out to be quite expensive and contributed little to a finding a long-term solution to the problem of nonpayment. It is worth noting that AES is mainly a generation company, and that prior to EdeEste, it had little experience in dealing with this type of situation.

It should be noted that Unión Fenosa had similar difficulties in low-income areas and has been accused of being as opportunistic as the government. Some observers hold that UF had no intention of operating through the institutional structure created by the reform, but that preferred to negotiate private deals directly with the president. Unión Fenosa's bargaining power derived from the fact that consumers also blamed the government for service quality problems, and this led it to provide subsidies to UF. When it exited from EdeNorte and EdeSur, Unión Fenosa was able to secure a significant payment from the government that was guaranteed by a lien on the sales revenues of the distributors' major customers.

Frequent Electoral Cycles

In an attempt to balance the executive and legislative powers, presidential and legislative elections in the Dominican Republic are held two years apart from each other. In practice, this creates an electoral cycle every two years, shortening politicians' time horizons and exacerbating political opportunism.

The Mixed Enterprise Model

In contrast with the success of mixed public-private utilities in Colombia and other countries, the coexistence of public and private ownership in the Dominican Republic seems to have created greater mistrust and conflict in the relationship between the government and private operators. As a shareholder, the government has sought financial transparency in the capitalized companies, questioning administrative decisions

that appeared opportunistic to the government.¹⁹ In fact, the government's dissatisfaction with Unión Fenosa's practices was one of the reasons for the renationalization of EdeNorte and EdeSur in September 2003.

Extensive State Ownership in the Electricity

There were at least two impediments to the government's commitment to reform that originated in the fact that a significant portion of the industry's assets were in the hands of a single state-owned company. First, the government used the Corporación Dominicana de Empresas Eléctricas Estatales as a financial go-between to provide subsidies. For instance, it did this by having the CDEEE sell electricity to the distributors at a lower price than it paid to the generators. Second, the existence of the CDEEE created a conflict of interest in the government because the Corporation's management might be inclined to reassert a leading role for public enterprise in electricity (for instance, after CDEEE took over EdeNorte and EdeSur, these companies received substantially more subsidies than EdeEste).

Quality of Regulation

The responsibility for service problems among distributors, the transmission company, generators, and the effects of government opportunism has not been clearly established, placing an extra burden on the distributors, which face regulatory penalties for service shortfalls.

Some Emerging Lessons

Strong pressure on the part of multilateral financial institutions and the political capital available to the current government have led to significant rate increases since July 2005, easing somewhat the financial pressures on electricity suppliers. Nonetheless, workshop participants agreed that a permanent solution must place the industry on a commercially sound footing and should not only rely on high rates. High rates for electricity,

¹⁹ The government accused UF of using contracts with its affiliates to siphon off profits through excessive contract prices, taking advantage of its operating control over EdeNorte and EdeSur.

combined with high levels of consumption and years of poor service have led to the extensive use of backup generation capacity and, in some cases, to disconnection from the grid. Thus, reliance on high rates alone may only encourage further substitution of network supply for alternative sources and worsen theft and fraud.

Following several years of ups and downs, research by AES is beginning to shed some light on the elements that make up a more permanent solution. For example, the company found that collection rates for nongovernment customers respond mainly to the quality of service and, specifically, to the number and duration of blackouts. At the same time, service problems do not appear to be the result of a deteriorated distribution infrastructure, but rather, of financial difficulties that cause generators to shut down for lack of fuel. This means that a virtuous cycle could be started through an infusion of funds to allow a sustained period of quality service, the establishment of rates that allow for full cost recovery and a strong collection effort.

Research also found that low-income consumers have few alternatives to network supply because they face high interest rates that make purchases of generators, for example, quite expensive.²⁰ As a result, their willingness to pay for service is high. This finding is consistent with the experience of other distribution utilities in countries with similar levels of per capita income. The distributor Luz del Sur in Lima, Peru, has been able to turn low-income users into legal customers and extend service to low-income areas that, until then, were not connected to the network.

AES also appears to be making an effort to reduce losses in order to break the vicious cycle of poor service, financial limitations and unreliable

²⁰ Other alternatives include kerosene lamps and inverters. The survey of household electricity usage conducted by the National Energy Commission (the energy planning agency) shows that low-income households use electricity mostly for lighting and powering small appliances such as televisions. Given the high cost of electricity, bottled propane gas is used for cooking and heating water, except where electricity is illegally obtained.

government subsidies. Losses have been significantly reduced, although the question remains of whether some or all of the improvements stem from government subsidies rather than from regularizing customers' status. Finally, the government is developing a more focused subsidy system to target resources to the neediest households instead of providing a blanket subsidy through the rate structure.

In addition to these emerging solutions, the issue of transparency in electricity policy and regulation also merits attention. The reform process itself was fairly transparent by international standards. The capitalization process was carried out with the help of reputable institutions and consultants, and full documentation is available from the capitalization agency (Fondo Patrimonial para el Desarrollo, FONPER). The Electricity Act was debated and enacted by the legislature. However, several significant informational problems remain.

- Lack of transparency in contracting with independent private producers created a negative perception of private sector participation and fanned the belief that the industry's problems could be solved by terminating these contracts under charges of corruption and negligence.
- Insufficient discussion of the impact of the reforms may have allowed the government to create misleading expectations about the reform.
- Inadequate communication between EdeEste and low-income consumers, and more generally, insufficient efforts to overcome the cultural resistance to private service provision, have complicated the resolution of the severe problem of theft and nonpayment by end-users of electricity.
- Lack of transparency in the management of EdeNorte and EdeSur by Unión Fenosa created or exacerbated mistrust between the government and its private partners in the capitalized companies, which also increased the public's mistrust of the companies.
- State ownership of transmission and hydro assets allowed the government to make use of nontransparent subsidy schemes, particu-

larly the resale of electricity at prices below purchase costs.

- Lack of transparency about regulatory and government decisions creates the perception that they result from dubious political deals rather than sound public policy.
- Poor information about the causes of service interruptions has heightened conflicts along the production chain and increased public hostility toward private generators and distributors.

Thus, there is an urgent need to increase transparency in decision making at many levels. Fortunately, a sound institutional architecture is already in place, so it is a matter of allowing the appropriate institutions to operate with the greatest transparency. The National Energy Commission is responsible for policy decisions, SIE is responsible for regulatory decisions and the individual companies, including EdeEste, are responsible for operational decisions and outcomes (such as service interruptions). Along with improved service, greater transparency can help diminish the current mistrust among consumers, utilities and public agencies, including the government.

INTERNATIONAL WATER SERVICES - (ECUADOR) INTERAGUA CÍA. LTDA.

Interagua is a special purpose company established to operate the concession contract for the provision of water and waste management services in Guayaquil and environs (with a population of over 2 million people). The duration of the concession contract is 30 years (2001-2031). Interagua's majority shareholder is International Water (established in the United Kingdom), whose shares are equally distributed between Bechtel (United States) and Edison (Italy).

Initial Conditions

Up until 1995 two separate companies independently managed water and waste services in Guayaquil. The municipality ran the wastewater

and rainwater drainage services while water services were provided by a provincial entity.²¹

Political Problems

Prior to privatization, the state-owned enterprises operating in Guayaquil displayed many of the same problems observed in Colombia. The management of both companies answered to political imperatives, fueling clientelism and preventing them from properly meeting the needs of the region's population. In 1995, only 65 percent of the population had access to water and 45 percent had access to sanitation services. More specifically, overstaffing was common and often responded to political criteria; municipal and central government institutions failed to pay their bills; and, lack of liquidity prevented needed investments in infrastructure and technology.

Social and Cultural Problems

Guayaquil and its surrounding area are characterized by high rates of poverty (40 percent) and unemployment (13 percent), contributing to a culture of nonpayment and theft. This was common not only in shantytowns but also in middle- and upper-class neighborhoods. People across the social spectrum think of water as an entitlement and refuse to pay for it. In turn, because the political will to go after the offenders was lacking, this led to huge losses.²²

Company Conditions

From a more technical point of view, both companies were plagued by problems common to SOEs in a highly politicized environment, which included: poor revenue collection and deficient billing; antiquated tariff structure and monitoring system; low coverage levels; bad service provision; bad customer service; bad public image; large financial losses; extreme dependence

²¹ As a consequence, Interagua is still providing four cantons outside its concession area with bulk potable water, which is distributed by those cantons.

²² Moreover, lack of metering allowed for billing based on estimated consumption, which was easily underestimated to avoid confrontation with users.

on government financing; poor labor productivity; and deteriorated infrastructure for lack of investments.

Theft and Nonpayment

Theft and nonpayment issues followed similar patterns to those already observed in Colombia. The high level of tolerance for theft and nonpayment had much to do with political interference. Fearing a popular backlash and loss of votes if payment for service was enforced aggressively, local politicians allowed these problems to continue. The consequences were a proliferation of illegal connections, tampering with meters, tolerance for employee corruption, and lack of proper billing.

A New Approach

By 1994, the performance of both SOEs in Guayaquil had deteriorated to the point that a decision was made to merge them into one new company (Ecapag). The intention of the government in creating this new company was to set the stage for privatizing the services by inviting international providers to bid for a long-term concession contract. The Inter-American Development Bank (IDB) provided a public sector loan to support this process, which included a structural strengthening component, support for labor retraining, and emergency infrastructure improvements for water and wastewater. It is important to stress the role played by strong political support in the success of these efforts. The mayor of Guayaquil at the time (León Febres Cordero) and his successor (Jaime Nebot), as well as their political party (Partido Social Cristiano, PSC) supported the reform. In addition, the PSC is an important party in Ecuador, particularly on the coastal region.

Following standard recommendations in the privatization literature, between 1996 and 2001,²³ Ecapag went through a substantial restructuring program aimed at reshaping the company and making it attractive for foreign investments. This entailed, among other things, improving the

company's image, eliminating company debt (which was taken over by the central government) and increasing economic efficiency.

During its first five years, Ecapag was successful on all fronts. The company's management was replaced with a more professional one. Ecapag also started an investment campaign to improve performance. A key decision that ensured the success of the privatization effort was to improve service quality. This, in turn, allowed increases in rates (which until then did not cover costs). Thus, popular rejection of privatization was avoided since it was not the private operator who had to increase service rates. Ecapag created a lucrative tariff structure that appealed to investors and incorporated cross-subsidies only between users of the service. It is also important to note that a deliberate effort was made to make the process transparent before and after privatization in order to ensure public support as well as the endorsement of political parties, key interest groups and the media.

Concession Contract

The concession contract also establishes the regulatory framework for Interagua. Ecapag's board of directors, which has five members, was turned into the regulatory body that supervises Interagua. Ecapag's president is appointed by the executive branch, while the mayor of Guayaquil and local institutions name the other four members. Ecapag's board has experienced a substantial degree of stability, which helped in achieving regulatory predictability.

The most important aspect of the concession contract focuses on service coverage, which had to increase from 60 percent to 95 percent. Priority was given to extending coverage to populations in marginal areas. The main additional indicators of compliance are quality standards for the water supplied, timely customer service, water pressure requirements and goals, notification of service interruption, and monitoring and control of industrial waste.

The concession contract establishes a review every five years to monitor performance targets. This applied also to the rate structure for the first

²³ The process was long, due in some part to the first failed attempt of 1997.

five years, which was to remain unchanged. The reference rate before privatization was set at the equivalent of US\$0.26/m³ in March 2000, and was based on a tariff structure that was put into place in 1998, long before the concession process resumed after the first failed attempt of 1997. This rate structure establishes charges according to consumption (see Table 3 in the Appendix) rather than type of customer (household, commercial or industrial). The tariffs have three components: (i) a fixed charge, (ii) variable charge for water and (iii) variable charge for waste disposal. Subsidies were established only for the first two categories²⁴ of consumption (up to 30m³) and were to diminish over time (they dropped at a slower pace than had been expected, see Table 4 in the Appendix). Reviews of the tariff structure were initially scheduled to take place every five years. In cases of irreconcilable differences between Ecapag and Interagua, the concession contract contemplated an appeal to international arbitration. In short, the concession contract established reasonable goals over an acceptable period of time.

The most important issue of contention has indeed been tariff adjustments. By the time Interagua took over, tariffs were 7 percent lower than what they were supposed to be according to the revision formula established in the contract. The contract allows for an automatic tariff revision (quarterly). Ecapag unilaterally decided that one of the components of the revision formula (the electricity index published by the Instituto Nacional de Estadísticas y Censos, INEC) did not correctly reflect changes in Interagua's costs and froze this component. The freeze had a negative impact on Interagua, which claimed that such a unilateral move was in violation of the concession contract. Figure 6 in the Appendix displays the difference between the two rates since the freeze took effect. Interagua claimed that, as a result of the tariff shortfall, it experienced liquidity problems that created an impediment to meeting its contract obligations. Moreover, it also claimed that it could not get access to long-term financing to pay for planned investments. The resulting dispute between Interagua and

²⁴ Those subsidies were paid for by consumers in the higher consumption ranges.

Ecapag lasted until a compromise was reached in July 2004.²⁵

Interagua's Response

Interagua's approach to resolving this problem followed a conventional path. Rather than initiating a social responsibility program (like the one developed by AAA for poor areas in Colombia), Interagua's management opted for educating consumers through public campaigns and door-to-door visits by company representatives. The main goal of the campaign was to teach customers to better manage their water consumption and avoid waste.²⁶ By teaching its customers how to use water more efficiently, Interagua believed that they would be able to appreciably reduce their water bills. Interagua also tried to improve service quality to existing customers and expand service to shantytowns, which traditionally had relied on water delivered by trucks as their only means of supply. Interagua also began to address a host of problems that Ecapag had not been able to solve, such as lack of accurate meters so that billing reflected consumption, an inefficient billing system based on estimated rather than actual consumption, and water waste. Interagua's major actions are described in the following paragraphs.

Service Improvement

New investments were made in water supply and sanitation as well as for improving the quality of the water provided. In addition, improvements were made to facilities and customer service to properly respond to customer claims. Service coverage was extended to marginal areas.

Customer Relations

Through educational programs and public campaigns customers learned how to use water in a more rational way, which resulted in lower consumption and lower bills. As service improved,

²⁵ Without recourse to the International Arbitration Court option contemplated under the terms of the concession contract.

²⁶ According to the company, complaints about tariffs were rooted in the problem of waste.

customers also came to appreciate the value of receiving a reliable and safe service. Service complaints were also addressed in a more timely fashion than before privatization. Improvements were also made to detect and prevent billing mistakes.

Anti-fraud Activities

Interagua's main strategy in this regard was to install a large number of new meters that were also more difficult to tamper with. Likewise, corrupt employees were fired and customers were urged to report company representatives who demanded bribes in exchange for service. The company also cracked down on illegal connections and their providers.

Results

In its first three years of operation, Interagua reported some noticeable progress. Service coverage (which largely favored poor neighborhoods) expanded through the installation of 20,000 new connections to cover more than 100,000 people. The installation of new meters allowed the company to improve billing and base it upon actual rather than estimated consumption. As consumption monitoring improved, so did payments because invoices matched total consumption more closely (see Figure 7 in the Appendix). In other words, as monitoring improved people began to consume less and pay more. As a result, Interagua's monthly collections jumped from \$3.3 million in January 2002 to \$5.3 million in October 2004. Likewise, the rate of monthly payments rose from 65 percent to 80 percent in the first 37 months of Interagua management. Service improvement was particularly remarkable in shantytowns. Prior to privatization, shantytown dwellers relied on water trucks, which were very unreliable. Once Interagua started to provide service, water supply became continuous and prices fell. Shantytown dwellers paid an average of \$0.26 per m³ of piped water as opposed to \$3.50 per m³ for water supplied by the water trucks.²⁷

²⁷ Average family consumption increased from around 5 m³/month when water was supplied by

These improvements have translated into better customer evaluations and public image for Interagua. According to an opinion survey of October 2004, 80 percent of the respondents were against changing the provider (Figure 8 in the Appendix). However, surveys show mixed reviews in terms of cost of service. In two areas serviced by Interagua (north and central), respondents found tariffs to be fair, whereas in the remaining three, opinions were either evenly split or tariffs were deemed to be expensive (Figure 9). In general, once service improved in a noticeable way, the nonpayment culture started to slowly change. Indeed, there is less resistance toward service payment today than in the past. Similarly, there have not been ideological objections to a foreign-owned private company managing a public utility. This would suggest that, as long as service is considered good and affordable, people do not care about the type of ownership or its nationality. What is also interesting is that people polled, including those living in well-to-do neighborhoods, thought that the number one priority for Interagua should be to invest in infrastructure serving poor areas (Figure 10). Interagua's management emphasized that the keys to success in dealing with customers rested on a substantial improvement in service quality, good communications skills, and a transparent, straightforward management style.

While poor people have been found to be willing to pay once the service improves, the same cannot be said for government agencies and other institutional customers. In fact, there are lingering problems stemming from categories of customers that enjoy special privileges, such as philanthropic and social associations, sport clubs, and, most of all, government institutions. Moreover, as in other Latin American countries, national and local government agencies and institutions are particularly prone to avoid payments. This is most troublesome because these institutions are large and potentially profitable

tankers, to 11 m³/month when they were connected to the network. In spite of doubling their actual consumption, those families are paying about a third of what they used to spend for water.

customers.²⁸ To overcome the problem, Interagua started to pressure institutional customers to pay their bills and reduce consumption. Table 3 shows three cases, including the regional penitentiary, the University of Guayaquil, and the Escuela Politécnica del Litoral (Espol). As the table shows, despite a reduction in consumption over time, the first two institutions still have multimillion-dollar debts.

Notwithstanding the progress made, Interagua still faces daunting problems. Cross subsidies fall heavily on large consumers (over 5,000 m³ a month, see Table 3 in the Appendix), which makes the unit price very expensive and creates the risk that large users may try to establish their own independent water and sanitation provision.²⁹ From a financial standpoint, the long-standing tariff dispute with Ecapag has made it difficult for the company to raise money domestically and internationally, which has a negative impact on its investment plans. The national legislation awarding special treatment and exemptions to some institutional customers with strong political connections creates uncertainty and legal controversies that are politically difficult and financially expensive to resolve. Likewise, national and local government institutions delay paying their bills or ignore them altogether,

which sends a negative message to the general public and is financially costly for the service provider. Moreover, although the relationship between the regulator and Interagua has been, for the most part, characterized by a spirit of cooperation, conflicts do persist that have not been resolved. Some problems relate to the transfer of public funds to the private operator. Contractual language in some cases is also vague enough to allow much room for interpretation. In fact, tariff increases depend also on the “acceptance level” of the population, which leaves the regulator with ample discretion that can be used to meet short-term political goals.

Other issues emerged when Ecapag unilaterally decided to include new service regulation requirements not contemplated in the concession contract, creating additional obligations for Interagua. This new regulatory provision allows Ecapag to fine the service provider for noncompliance, but it is perceived by some to respond more to political demands than technical issues. Thus, much still depends on the political will of individuals (i.e. the mayor of Guayaquil and the political interests represented on Ecapag’s board) whose decisions are crucial for the future of the concession contract.

²⁸ Although the central government is a party to the concession contract, it is not complying with its contractual obligations to pay for the service.

²⁹ This usually happens when large customers regard their rates as unduly subsidizing poorer customers. For example, electricity companies in the Dominican Republic have lost substantial revenues because of this.

Theoretical Insights

This report emphasizes institutional factors as explanations for the problems of theft, nonpayment and political opportunism. In this section, we consider the extent to which the observed facts agree or not with institutional theories as currently developed.

Political Opportunism and Political Transaction Costs

Kydland and Prescott (1977) were the first to outline the time inconsistency theory. It describes situations where policy makers change what they had originally regarded as the “optimal” long-term plan and switch in mid-course to an alternative plan that they had earlier discarded as being sub-optimal. What follows is a sequence of policy switches that, while appearing optimal in the short term, end up producing results that are much worse than the ones that would have ensued had they stuck to the original long-term plan. In other words, the political discretion to constantly maximize utility in the short run actually leaves society worse off in the long term. Although the time inconsistency theory was developed to explain failures in monetary and fiscal policy, its principles can apply just as well to regulatory policy. More generally, a policy maker who makes an agreement to receive something today against the promise of reward tomorrow will be tempted to renege and abandon a commitment, if such an action would increase his utility (especially his reelection possibilities).

The striking parallels between time inconsistency theory and Coase’s (1937) transaction cost theory, especially as more fully developed by Williamson (1985) to explain the organization of economic processes, led Dixit (1998) to coin the concept of “political transaction costs” as a more general label for time inconsistency problems in public policy. Just as economic transaction costs result from the existence of possibilities for opportunism in certain economic transactions, po-

litical transaction costs result from the possibility of time inconsistency and opportunistic behavior by the parties to a political bargain. A transaction, such as privatization, that is dependent on the future behavior of the government, may fail to attract the interest of private investors if there are no ways of constraining future government behavior or of mitigating the effects of opportunism. In infrastructure, the need for regulation makes reform processes heavily dependent on future government behavior, which imposes large transaction costs in cases where governments are less predictable.

Transaction cost theories can thus help us understand the different patterns of utility regulation in Ecuador and the Dominican Republic. Political conditions in the Dominican Republic (a presidential system with weak political parties and voters who respond strongly to patronage) created high transaction costs for companies participating in the capitalization process. Time inconsistency became a possibility because future governments might find it expedient to hold utility rates down (which is what actually happened) and there are no any obstacles to this type of behavior. Awareness of this possibility explains why some private operators may have demanded high tariffs as a condition for acquiring the capitalized companies (high tariffs could shorten the payback period for the investment or increase returns commensurately with the risks) and displayed a preference for direct negotiations with the government, bypassing the formal channel of the electricity regulator (the government being the key decision maker). Unfortunately, these strategies increased the likelihood of time inconsistency by creating more backlash (against high rates) and by undermining institutions, especially the regulatory agency. This led to a vicious cycle of opportunism. When companies opt to strike direct bargains with the executive power in the initial stage of the privatization process, as a way to ensure government commitment, they may gain in the short run but

not in the long term. The reliance on a direct line of communication with the executive branch undermines the transparency of the regulatory process and worsens the company's public image. In addition, as governments change, chances are that the company may not have the same kind of rapport with the new administration, leaving the private operator with no recourse mechanism. Regulatory agencies, which were ignored from the beginning, are unlikely to be sympathetic to the private company when the political climate turns for the worse.

This suggests that in these kinds of reform processes, we may have multiple equilibria: a "low-level" equilibrium in which opportunism is mutually reinforced by the behavior of all actors, and a "high-level" or virtuous cycle equilibrium, where low expectations of opportunism induce consistent behavior by all actors. The implication of the existence of multiple equilibria is that it may be quite difficult to break out of the low-level situation, as it requires consistent actions on the part of all major actors, although once the equilibrium shifts, it may be quite stable (as in Chile, for instance, where even a major drought and an opportunistic political response in 1999 did not result in a reversal of reforms).

Following this logic, water supply in Guayaquil may be an interesting instance of a "knife's edge" equilibrium, in which reform is sustained but remains very fragile. There, transaction costs were lowered thanks to the strong commitment to the success of the project displayed by the two mayors who presided over the restructuring first, and the concession contract later. In brief, the original "optimal" plan was kept on course. The long gestation of the restructuring process under Ecapag is also illustrative of the importance of transaction costs. The companies that became Ecapag were in too bad a shape to be a good business proposition for a potential investor. They were also marred by a management style that responded to political demands rather than economic efficiency. Coupled with Ecuador's political and economic instability in the late 1990s, these conditions posed formidable transaction costs. To reduce such costs, the company was restructured, there was a strong political commitment to the project, a strong political

coalition was built around it, and popular opposition was limited by making the process transparent, which gave it legitimacy. The key question in Guayaquil is to what extent the gains obtained so far will be dependent on ongoing support by the mayor, as opposed to being buttressed by a broader coalition of forces. The success of the Ecuadorian case so far has been highly dependent on favorable political will rather than strengthening regulatory independence. If the positive trend is to continue, political will must be balanced by a regulatory environment managed in a fair and independent way. Politicians' preferences change over time and, if left unchecked, can easily turn against privatization as soon as a new leadership is elected.

The inclusion of an international arbitration clause in the Interagua concession contract was an additional effort by the Guayaquil city government to lower transaction costs ensuing from weak domestic property rights and legal insecurity. International arbitration is a means to reduce the government's temptation to engage in political opportunism, as it places the arena for conflict resolution outside the control of the government. Nonetheless, it is far from a panacea, as the enforcement of arbitration decisions is ultimately in the hands of the government. Moreover, utility operators regard international arbitration as a last resort mechanism because it is very expensive and invariably creates antagonism between the company and the regulator. The consolidation of the reform effort will depend heavily on constraining governments more strongly, so that formal rules can prevail and create a more predictable and fair business environment.

Enforcement

Transaction cost theory postulates that the easiest way to enforce contracts is to rely on voluntary compliance rather than sanctions. Sanctions require additional costs related to monitoring and punishment. When these costs run too high, transactions could become economically unfeasible. In modern societies, the State plays the role of third-party enforcement institution. However, in developing countries law interpretation and enforcement usually depend upon the pa-

tronage interests of the government or judge in charge, which creates great uncertainty.

Colombia conforms to this scenario quite well. In many respects, it has fairly sophisticated regulatory policy and civil/commercial codes that, in theory, should establish clear rules and constraints. However, the reality is that formal rules were systematically ignored and the *modus operandi* of economic, political and social agents followed informal norms. Dealing with these types of constraints has been more difficult than dealing with technical issues. It is precisely because of poor enforcement that water and electricity companies chose to emphasize incentives leading to voluntary cooperation. Such incentives were less costly and more likely to bring the expected results. Strides were also made toward better legal enforcement, but as noted earlier it is time consuming and expensive, and its outcome still too unpredictable. The consolidation of the reform effort will depend heavily on weeding out such political constraints so that formal rules can finally prevail and create a more predictable and fair business environment.

Trust and Cooperative Institutions

An extension of the enforcement argument is that, in the absence of strong institutions that can enforce formal rules, trust is essential to encourage voluntary compliance. To create trust, particularly in a situation of weak third-party enforcement, it is necessary that parties engage in mutually positive transactions over a prolonged period of time. As more positive experiences occur, there is a stronger sense of mutual trust, and more complex exchanges can be attempted as time goes by. In so doing, negative cultural attitudes toward specific transactions (such as nonpayment, fraud and theft) can be turned into positive ones.

There was an obvious lack of trust in Colombia prior to privatization and in Guayaquil prior to reform. The utility companies seemed to have understood this problem well, even if some were slower to reach this conclusion. Poor people valued the availability of water and electricity very highly—the fact they would steal these services is clear evidence of their preferences. In

the past, however, they faced the wrong incentives, which reinforced cultural biases with regard to paying and stealing. The social responsibility programs initiated by AAA and Unión Fenosa, and the customer service and communication campaigns undertaken by Interagua showed that these companies were committed to the communities in which they operated. People came to realize that paying and participating in a company's program brought tangible benefits that offset the costs incurred. For their part, the initial positive results convinced the companies to redouble their efforts. The interests of both parties began to coincide. This created a better climate and better and more efficient cooperation, instead of relying primarily on conventional legal enforcement mechanisms in these countries, where such mechanisms work very poorly. By contrast, in the Dominican Republic no serious attempts were made to create trust. In fact, the behavior of the various actors involved only led to increasing mistrust and eventually to Unión Fenosa's exit from the distribution segment.

Within this approach, grassroots intermediary institutions played a pivotal mediating role between the needs of the communities and the financial and technical concerns of the utility companies in Colombia. Nonetheless, the different experiences highlighted two important caveats for grassroots involvement. First, it is essential that such experiments be sustained over time, otherwise, the positive initial results may be lost very quickly. Second, as we learned from Interagua's experience, at times even grassroots organizations are too politicized or dependent on patronage to act as suitable intermediaries between the utility and the community.

Transparency and Legitimacy

Transparency and political legitimacy are key factors that affect transaction costs and are often overlooked, but they are crucial in obtaining political support for concession contracts in politically sensitive sectors such as public utilities. In fact, sociological theories of institutions (for example, DiMaggio and Powell, 1991) emphasize the importance of legitimacy in explaining institutional change. New institutions are often

created because new institutional designs gain legitimacy; however, new institutions cannot be expected to survive unless they gain legitimacy. This is particularly appropriate for utility reform, as reform involves the creation of new institutions in the form of regulatory authorities and privately-owned utilities. In this regard, the experience of the Dominican Republic suggests that a more transparent and legitimate reform

process will result in lower transaction costs because the potential for political opposition is diminished. Indeed, one of the most common justifications used by governments seeking to change the terms of contracts and other commitments undertaken by their predecessors, is the claim that such commitments were marred by irregularities.

Comparative Assessment

KEY FACTORS AFFECTING PRIVATIZED NETWORK UTILITIES

For this study, seminar participants were asked to address the impact of a variety of factors often cited in the literature as affecting the theft of and nonpayment for utility services, as well as political opportunism in the regulation of private utilities in developing countries. The responses of participants in the two workshops show that factors can be broken down into different categories, depending on the extent to which they can be solved or at least mitigated.

SEVERE PROBLEMS THAT ARE MOST DIFFICULT TO SOLVE

Changes in the Country's Macroeconomic Conditions

Latin American economies are notoriously dependent on foreign financial inflows, commodity exports and other factors that create very significant economic volatility. Inflation, foreign exchange, interest, and economic growth rates, among other variables, can fluctuate sharply over short periods of time and have dramatic impacts the operating conditions of private utilities, placing great strains on regulatory mechanisms. Recessions and inflation can cause governments to resist tariff adjustments and create heated disputes about pre-existing agreements between companies and regulators. These problems can be seen most clearly in the countries with the greatest macroeconomic instability, Ecuador and the Dominican Republic. In the case of Colombia, however, the strongly pro-market stance of the current administration has made it possible to resolve potential conflicts between the private utilities and government agencies.

Following a long period of rapid growth and favorable economic conditions, macroeconomic instability has become a major problem in the Dominican Republic during the last two years. The U.S. recession beginning in 2001 and the

collapse of several major banks in 2003, precipitated a major fiscal crisis and a large depreciation of the peso. In turn, the government refused to allow full rate increases for fear of a popular backlash, precipitating the last and most severe financial crisis of the electricity sector.

In Ecuador, the desire to curb high and rising inflation led the president to issue an executive decree freezing electricity prices, which then gave rise to serious conflicts between Ecapag and Interagua.

Political Clientelism

Clientelism, which has a particular severe impact on public utilities, is pervasive throughout the region. Politicians find public utilities particularly attractive as vote-buying instruments because utilities can be sources of local employment and can also provide tangible benefits in the form of electricity supply, potable water, or sanitation to the poor. Having said this, clientelism has affected each of the four cases to a different degree, depending on local political conditions as well as the circumstances particular to each case. To some extent, Interagua has been sheltered from clientelism, while clientelism has had a particularly deep impact on the electricity industry in the Dominican Republic.

The pattern displayed in Ecuador may be explained by the fact that the mayor of Guayaquil was strongly committed first to the restructuring of the company under Ecapag and later to its privatization. This created a stable political environment and policy predictability in a country where both have been in short supply during the past decade at the national level. Indeed, the most important problem of opportunism occurred when the national government froze electricity rates in November 2001 in order to appease voters hurt by inflation. However, aside from this episode, the political clout of the mayor of Guayaquil has been instrumental in

sheltering the privatization process from further interventions by the national government.

During discussion of the Colombian cases, one workshop speaker was quite explicit in stating that the heart of the problem rests with political clientelism and the tendency of local politicians to regain some control over regulatory policy to favor themselves and their cliques. To this day, large subsidies earmarked by the central government to improve and expand water service fail to get to the companies. The worst impact of this kind of behavior falls on the poorest.

The government's commitment to reform did not curb pervasive clientelism in the Dominican Republic. Analyses of the country's political system (Espinal and Hartlyn, 1999) and anecdotal evidence suggest that during his long tenure in power, President Balaguer relied extensively on the provision of free goods and services, including free electricity service. According to *The Economist* (2004), the incumbent government was giving away motorcycles in the hope of gaining votes during the August 2004 presidential elections, despite the severe crisis. Alternating presidential and legislative elections every two years exacerbates clientelism making political competition a permanent issue. Moreover, the shift that took place in 2000 from the Fernández to the Hipólito Mejía (Partido Revolucionario Dominicano) administration robbed the reform of the commitment needed to resist pressures for patronage. Not surprisingly, the new government began to limit rate indexation shortly after taking power in the first months of 2000.

Changes in Government Administration

In the weak institutional setting of most Latin American countries, the dominance of the executive power—presidents, governors, mayors—means that regulatory independence is very rarely significant and that private operators depend on the goodwill of the current executive to a significant extent. As a result, changes in government can have a major impact on the conditions in which private utilities operate. New of

fice holders often do not feel bound to commitments made by their predecessors and can change the rules of the game overnight. This problem is particularly acute at the local level, where independent oversight of elected officials is often lacking. To this day, what matters is not the institution and what it is supposed to do, but rather the personality and policy preferences of political executives.

Speakers at the first workshop noted that the policy approach of Colombia's previous presidential administration often seemed indecisive and too weak to run against powerful political interests that benefited from established practices of political manipulation, nonpayment and fraud. By contrast, the current administration has taken a clear pro-business approach and consistently emphasized the importance of paying utility bills. The result has been much greater government cooperation through the enforcement of much of the same legislation that was poorly enforced under his predecessor.

As noted, a crucial aspect explaining the initial success of water privatization in Ecuador was the steady support of the government of Guayaquil since 1996. Political support from the municipality made it possible for Ecapag to keep its board of directors unchanged during its first seven years of existence. Ecapag's chairman, who stepped down recently, exercised a strong (although at times controversial) stewardship throughout his term in office that helped to keep the restructuring/privatization process on course.

Once again, the differences with the Dominican Republic are significant. The government of the Dominican Republic changed twice since the 1999 capitalization, leading to significant turnovers at the regulatory level. Indeed, governments replaced the head of the Superintendencia de Electricidad at will. To make matters worse, the previous government further compounded the confusion about electricity policy and regulation by appointing several ad hoc commissions in response to crises of the sector.

DIFFICULT PROBLEMS THAT CAN BE SOLVED

Customers' Purchasing Power

The large proportion of low-income earners in the countries studied has a fundamental impact on the problems of theft, nonpayment and political opportunism. All four cases involve the supply of utility services to major urban areas (Barranquilla, Guayaquil and Santo Domingo) that are ringed by shantytowns. At least some theft of utility services is simply the result of economic pressures on poor households. Low incomes challenge utility providers to develop affordable supply schemes for rural areas and urban slums. Poverty also favors clientelism. The poor tend to respond favorably to offers of "gifts" from public authorities in exchange for political support. However, purchasing power *per se* is not a good predictor of nonpayment or fraud. In fact, as already mentioned, these problems were very common in middle- and upper middle-income areas when the utilities were government owned. This suggests that the solution to these problems requires the political will to crack down on clientelism and corruption, and develop an appropriate policy of subsidies for poor (marginal) users.

The large number of poor people, including war refugees, living in Colombia's Atlantic coast represented a very serious problem for the utility operators. As noted, AAA (and later Unión Fenosa) devised programs that made payment affordable for poor customers through a multi-pronged approach that emphasized cooperation with poor communities and local governments. The companies' social responsibility programs, coupled with more traditional efforts (subsidies, improved monitoring systems) were quite successful and instrumental in gaining new paying customers and cutting losses due to theft and nonpayment.

Similarly, the large number of poor people living in Guayaquil and its surrounding areas posed a serious problem for Ecapag's commitment to steadily increase tariffs prior to privatization until they reached a satisfactory level. The general subsidies that existed prior to restructuring

were reduced over time. Ecapag made a deliberate effort to target the remaining subsidies to benefit the first two categories of consumers (Table 1 in the Appendix), which include the poorest residents. Moreover, subsidies were financed in part from taxes on telephone rates. Nevertheless, there is still a strong cross subsidy from large users (those consuming 5,000 m³ or more), creating the risk that large consumers may seek their own sources of water supply and exit the Interagua network (this took place in the Dominican Republic).

Concern about the ability of household users to pay for electricity has been a major issue in the Dominican Republic, and one that still awaits a sustainable solution. On several occasions, the government has relied on inability to pay as the reason for stopping rate increases allowed for in the legislation. This is not an unfounded reason. Several people have died in riots related to electricity service issues over the past five years. Lack of affordability is also a probable cause of the severe theft and nonpayment problem afflicting distribution companies. Financial pressures have forced the government to focus on needy consumers (at least those in urban areas). The government created a special program (PRA³⁰) to provide electricity at a nominal cost in shantytowns and educate consumers about the need to pay for utility services. More recently, the government reduced the blanket subsidy in rates to consumers below a threshold of 200 kWh/month. However, major problems remain. The contrast between distribution companies in the Dominican Republic, including AES, and those in Colombia or Ecuador is marked by their lack of effort at dealing with affordability problems (other than relying on government subsidies). PRA and the rate subsidy appear to be financially unsustainable. Urgent action is likely needed to avoid a new crisis. Data collected by the National Energy Commission and NRECA International show a significant ability or willingness to pay for electricity among the urban poor, suggesting that the problem is one of political will and company strategy.

³⁰ Programa de Reducción de Apagones (blackout reduction program).

Cultural Attitudes Toward Paying for Utility Services

In all three countries, there is a deep-seated belief that basic utility services, and particularly water, are an entitlement that governments should provide alongside other tax-financed public goods such as health care or law and order. Compounding this cultural bias is the perception that government agencies, politicians, and the higher-income people often get away without payment, which discredits the imposition of fees on lower income households. Changing this attitude is a major challenge for private operators, who need to convince users that better utility services can be provided on a fee-for-service basis, only if the operators are able to reduce theft, increase collections and avoid political backlash.

These cultural attitudes are quite entrenched in Colombia. AAA made a strong effort to improve coverage, service quality and customer service in a short period of time. It also instituted a social responsibility programs. The strategy paid off, as slowly but steadily customers came to appreciate the fact that paying for a reliable and safe service is much better than getting unreliable and poor service for free. AAA's success convinced Unión Fenosa to try a similar strategy at a later stage when traditional approaches failed.

This problem was tackled in a similar way in Ecuador. Interagua improved service provision substantially in a relatively short period of time. This effort played an important role in overcoming the initial hostility. People in poor neighborhoods actually welcomed the change. Once they were connected to the network they realized that the cost of piped water was 86 percent lower than what they had been paying to purchase water sold from trucks. However, government agencies continue to set a bad example by remaining delinquent on their payments for water services.

The outcome in the Dominican Republic was not as positive. Privatization resulted in high and increasing electricity rates and no improvements in the quality of service. This only created mis-

trust among people from all walks of life, who came to regard the private companies as thieves and to justify electricity theft and fraud. As a result, the government was reluctant to change the existing laws to facilitate the prosecution of these activities, and judges became less willing to sanction offenders. The experience so far has probably exacerbated the cultural bias against private service provision.

Legal Statutes and their Enforcement

We have already mentioned the legal problems encountered by AES in the Dominican Republic when it came to dealing with theft and fraud. Unfortunately, these problems are not unique to the Dominican Republic. Protection of property rights in the region is generally poor because laws generally favor the government and courts lack the power or willingness to enforce property rights. Judges often lack the appropriate training to make dependable rulings, forcing some private operators to organize special training workshops for judges to address the problem. Even with training, several company representatives stressed that their preference is to avoid the courts, whenever possible, because they are expensive and remain too unpredictable. As a result, private operators confront difficulties related to the enforcement (or lack thereof) of the regulatory framework and in taking legal action against theft, fraud and nonpayment of utility services. In many cases, governments do not to abide by existing laws and regulations, thwart the independence of regulatory agencies or do not pay for water and electricity services used by government agencies.

One of the major problems that private operators found in Colombia was not the lack of adequate laws (because the country's public utility legislation is quite good), but rather the enforcement of penalties against those who either did not pay for service or stole from the utility. Moreover, the courts, particularly the lower ones, were often so biased in favor of customers' rights that recourse to the tribunals became an expensive and ineffective means of redress.

In Ecuador, public utility tariff exemptions for large, nonprofit, institutional users create con-

troversies and substantial losses. These special privileges are also hard to justify but difficult to do away with because these institutions can count on the political protection of city and national leaders. The controversy over the presidential decree on electricity rates also shows the difficult task that regulators have in sheltering the concession contract from unilateral decisions by the executive branch. The international arbitration clause contemplated in the concession contract is a good safeguard that could help mitigate political manipulations. In fact, it was Interagua's decision to start the proceeding for an arbitration process in July 2003 that eventually brought Ecapag and Interagua back to the negotiation table.

The Dominican Republic shares some of the problems found in Ecuador. The government is also a poor payer and grants itself extensive exemptions from service cutoff for nonpayment, adding to the sector's financial woes. When politically convenient, the government has chosen not to enforce key components of the existing law, such as the indexation of rates. Instead of amending existing laws to facilitate collection efforts by distributors, the government created an expensive and ineffective program to deal with theft and fraud. In short, the quality of laws and especially of law enforcement is a major problem in the Dominican Republic.

In general, the experiences from the three countries point to the fact that companies regard the legal option as ineffective and unreliable, as it is used only in extreme circumstances. While legal codes may be adequate, company managers still think that the courts work too slowly and too many judges are either politically manipulated or biased toward customers' rights.

Behavior of the Regulatory Agency

Although there is wide variation in regulatory behavior across the four cases studied, the common pattern is one of limited or no regulatory independence from the elected government (local or national), which exposes private operators to arbitrary government decisions.

Electricity regulators often take a narrow view of their role. Unión Fenosa complained that the regulator tends to uphold standards that are better suited for mature, well developed markets more typical of advanced industrial societies than middle-income countries like Colombia.³¹ In addition, the regulatory system in Colombia is split between agencies that issue regulations (such as CREG and CRA), and an enforcement agency (SSPD).³² There are multiple regulatory jurisdictions, which on occasion come into open conflict with one another and create uncertainty about the regulatory environment. Up to 25 government institutions can get involved in regulating some aspects of water service, for example. Having multiple jurisdictions means that there are more opportunities for politicians to interfere with regulatory independence through courts, other regulators, ministries, or enforcement agencies (*superintendencias*). This weakens the credibility and legitimacy of regulatory institutions. Nevertheless, some progress has been made lately. The clearest example is the SSPD, which was known for the ease with which it could be manipulated by political interests. The SSPD is now under new leadership and has become more competent and independent, helping to deal with some regulatory issues that had proven very controversial in the past. Government regulators have also complained, noting that Unión Fenosa has sought to avoid serving the poorer, less profitable segments of the population. Regulators have also accused UF of seeking to solve its problems by appealing directly to the executive branch and bypassing them, which at times increased tensions between the company and the regulators.

In Ecuador, despite an electricity rate dispute that lasted more than two and a half years, representatives of both Interagua and Ecapag described their relationship as one based on cooperation. The concession clauses are well specified and understood. Ecapag has earned a good

³¹ According to Ayala and Millán (2003), CREG's regulatory style and deficient handling of regulatory issues shares an important share of the blame for the difficult regulatory climate in Colombia's electricity sector.

³² See Appendix.

reputation for defending the public interest. However, to a substantial degree its board responds to elected officials (Ecuador's president and Guayaquil's mayor), which can become a source of problems should their priorities change. For instance, Ecapag has created additional rules (in addition to the concession contract) and fined Interagua for reasons that appear to be political.

The electricity regulatory agency (SIE) in the Dominican Republic has practically no independence. The presiding member of its three-member decision-making board, who is directly appointed and removed by the government, appears to be making all key decisions. It is clear that the real locus of power in the electricity sector lies with the government and, to an important extent, with the head of the state-owned utility (CDEEE), encouraging private operators to negotiate directly with them rather than with the regulatory agency. The lack of regulatory independence arguably worsened the prospects for reform from the beginning. The higher risk of regulatory appropriation of private investment forced the government to offer high rates in order to attract private investors, but higher rates meant greater political backlash against the reform and hence a greater chance that future rate increases would be denied (which is what actually happened).

PROBLEMS THAT CAN BE REASONABLY SOLVED

Company Image

All four utility companies studied had a very bad reputation under government ownership. Many consumers felt that mismanaged and rampant corruption justified nonpayment or theft of service. Occurring as they did in an environment of cultural bias, these image problems made it imperative for the private utilities to quickly create a favorable image. The private companies had to convince consumers that they were being treated fairly and defuse the issue of the nationality of their ownership, which created the potential for accusations of exploitation to enrich foreign shareholders.

Overcoming biases against private and foreign ownership was a major challenge in Colombia, where there is strong preference for public sector management of utilities because many people believe that one way to address income distribution problems is to subsidize utilities. Opposition to privatization was exacerbated by the fact that the new investors were foreign, which gave rise to the notion that company profits would be repatriated to Spain. Overcoming the bad reputation of the previous management as well as a popular bias against private enterprise was a particularly onerous task for Unión Fenosa. The company seems not to have been aware of the need to improve its image until its reputation had deteriorated significantly. In fact, the political and social difficulties experienced by UF may have been due to initial lack of attention to the company's image after privatization. Indeed, it accumulated so much ill will that it is taking a substantial effort on UF's part to reverse it.

Water companies in the Guayaquil area had a very bad image on all counts, but things began to change once Ecapag took over their operations and made investments to improve service. This has continued and increased under Interagua's ownership, which made additional progress in improving service quality and customer relations. Indeed, surveys show that 80 percent of respondents prefer Interagua as their provider. Equally important is that, in a country where foreign investment has often been looked upon with suspicion, people do not seem to mind that a private Anglo-American consortium runs the company.

Private utilities in the Dominican Republic have had a very difficult time improving the public image of the companies. In a vertically unbundled sector, it is difficult to sort out who is responsible for the poor quality of service that has resulted from the sector's crises. Moreover, the controversy among independent private producers surrounding the high cost of electricity and the impact of fuel prices and foreign exchange depreciation has created a very negative image of private operators. The foreign ownership of the utilities has only made things worse. Unfortunately, the distribution companies appear to

have made very limited efforts to improve their image.

Corruption Within the Company

All four cases studied showed systemic problems of employee corruption under public ownership. Corruption boiled down to nepotism of some form or another. In some cases, employee's family members and friends were placed on company payrolls; in others, the companies failed to go after prominent persons (politicians and others) for fraud or delinquency. In all four cases, privatization led to major efforts to prevent, detect and punish corrupt behavior. This was the case in Colombia for both Unión Fenosa and Sociedad de Acueducto, Alcantarillado y Aseo de Barranquilla, and contributed to substantial losses.

Ecuador is the only case where a significant anti-corruption effort took place before privatization with the creation of Ecapag. Once the company was privatized, Interagua continued efforts to reduce corruption. According to management, by 2004 corruption was no longer a major issue.

In the Dominican Republic, the private operators were left to deal with corruption. Unión Fenosa installed new information systems at EdeNorte and EdeSur, and replaced all meters to prevent tampering. AES reported that internal corruption is no longer a major problem at EdeEste, although distributors continue to be affected by former employees who make money by helping users defraud and steal from the companies.

General Lessons

LESSON 1: UTILITY REFORM MUST PROVIDE QUICK AND TANGIBLE BENEFITS FOR USERS

The first lesson rests on the issue of service delivery. The two successful examples (AAA and Interagua) employed different strategies but had one element in common. They placed great emphasis in appreciably improving the quality and availability of service within a relatively short period of time. Unless there is a clear and tangible commitment in this regard reform will lack the necessary credibility to win over the public. As we have seen, even the poor are willing to pay when they are provided with good quality service, but companies must first prove themselves to customers (through quality improvements) to overcome cultural biases and hostility resulting from the poor performance of the government-owned utilities.

The goal of improving service can be achieved through a variety of efforts that were highlighted during the workshops, including community-based approaches, improvements to the well-being of communities, improved affordability, and prosecuting delinquency and fraud.

Community-based Approaches

As the experiences in Colombia show, substantial improvements in reducing delinquency and theft can be made by means of innovative approaches that involve the utility provider, community representatives, and the government to foster cooperation and trust. The U.S. Agency for International Development is sponsoring efforts of this sort through pilot projects in Brazil, the Philippines and South Africa.

Unlike traditional approaches that rely on the experiences of developed countries, the companies in Colombia tailored their approaches to the cultural, historical and political characteristics of the areas they served. Working under the premise that a winning formula could only be found if

the predicaments of the local market were understood and addressed, the companies developed strategies that incorporated community organizations and government representatives. This approach recognized that community-based organizations needed to be involved and had to be treated as stakeholders and that they had to recognize the benefits of cooperation (as opposed to the status quo). This meant that the companies had to show that paying for the services would improve community as well as individual well-being in terms of health, safety, social and cultural activities, and economic development.

A key element of this approach was identifying an intermediary that could bring the consumer and community together with the utility company and the government. This was deemed essential to establish a sense of trust in the local community and encourage it to cooperate. The choice of intermediaries depended upon the respect they could elicit from the community, their communication skills and the extent to which the community would actually listen to them. (In some cases, such as that of the Sociedad de Acueducto, Alcantarillado y Aseo de Barranquilla, the Catholic Church played a pivotal role.) Intermediaries were responsible for expressing the needs of the community and the problems they faced during the design of the program. Utility and government representatives trained the intermediaries so that they could perform the tasks assigned to them, such as, for example, explaining how the program would work and setting up self-policing tasks.

Special efforts were made to establish an environment of social responsibility where voluntary cooperation would make the need for policing and sanctions less important over time. Companies engaged communities and government representatives by delivering a persuasive message at town meetings and training programs, emphasizing that the companies, the communities and the government were all in the same boat. That

is, the companies could only do well if customers were getting better service. This, in turn, would allow the companies to expand service and invest in the community. Much effort was placed in educating people about the importance of paying for the service in order to ensure its quality. For its part, the government had to come up with the necessary subsidies to help companies offset infrastructure costs and low rates. Municipal governments were also asked to resolve land tenure issues and legalize the residency status of squatters. To increase the legitimacy of the process, in some cases (electricity), the regulatory institutions stepped in to assure that the new process was transparent and that the private company was not taking advantage of the situation.

Improving the Life of the Community

Decades of neglect and poor service create strong adversarial feelings among the public against the utility provider. This is particularly true in poorer areas that have traditionally suffered the greatest neglect. The AAA in Colombia is particularly interesting in that the company made a good effort at overcoming the deep seated cynicism of poor customers. To gain credibility and trust, Colombian companies made substantial efforts to show their commitment and social responsibility by:

- investing in education and parks (Colombia),
- supporting local soccer teams (Colombia),
- investing in community associations (Colombia),
- supporting nongovernment organizations operating at the local level,
- increasing local employment (Colombia),
- providing educational programs on conservation and safety procedures (Colombia and Ecuador) and
- promoting the legalization of residency (Colombia).

Making Utilities More Affordable and Easier to Pay

The experiences of Colombia and Ecuador show the importance of providing tangible improvements in customer service. The faster these improvements take place, the greater the chances that nonpayment and delinquency will be diminished appreciably. This task is not easy, but can be accomplished through a variety of means such as:

- providing flexible tariff rates (Colombia),
- providing heavily discounted rates for poor communities (Colombia and Ecuador),
- creating incentives for customers to pay on time (Colombia and Ecuador),
- providing convenient means for customers to pay their bills (Colombian water company),
- improving the quality and accessibility of service (Colombia and Ecuador),
- improving customer service and billing procedures (Colombia and Ecuador) and
- dropping fraud and theft charges if clients start to pay their bills (Colombian water company).

In addition, there is much that the companies can do to make the utility service harder to steal and easier to monitor. The experiences of Colombia and Ecuador show that investing in improved monitoring mechanisms pays off, particularly in the following areas:

- installing meters that are difficult to tamper with, and
- placing meters in visible places where they can be easily monitored.

Prosecuting Those Who Engage in Illegal Activities

Cracking down on illegal activity remains a difficult task because of the lack of a strong rule of law and policing system. Nonetheless, company managers emphasized that it is important to show to employees and customers alike that the utility operator is no longer willing to tolerate

illegal activity and is ready to take the necessary steps to confront the issue by:

- firing corrupt workers (Colombia and Ecuador),
- terminating illegal connections (electricity in Colombia),
- cooperating with the police and local communities to identify and prosecute offenders (electricity in Colombia), and
- launching media campaigns explaining that illegal activities harm the company and the community, exposing wrongdoing and informing about the legal consequences of fraudulent behavior (Colombia and Ecuador).

Within this overall strategy, company executives stressed that persuasion is far preferable to sanctions, although both must be adopted for a balanced approach. Monitoring and policing costs will always be higher than the costs of voluntary cooperation programs. For example, AAA estimated that an investment of US\$1 million in community programs would yield better results in terms of cooperation investing than US\$10 million on going after delinquent customers. The reasons for this are the costs and delays involved in going through the courts as well as the reluctance of many judges and police officers to enforce the law. In the case of Ecuador, for example, Interagua preferred to put pressure on large users through informal channels rather than using the courts in order to avoid political backlash.

LESSON 2: POLITICS MATTERS

The four cases reviewed during the workshop and in this report highlight the importance of politics in determining the final outcome. We asked workshop presenters if the most fundamental factors shaping their sector's performance were economic or political in nature. The response was that political factors tend to be more important although they are often intertwined with economic ones. In other words, the four electricity and water companies indicated that, in most cases, problems of an economic and/or technical nature could be resolved. How-

ever, they stated that the most difficult problems to resolve are political. Moreover, they noted that the weaknesses of government institutions make it possible for the individuals at their helm to have a disproportionate influence on the decision-making process. In other words, if there is political support for private participation, problems can be resolved and improvements accrue over time. However, if the mayor, governor, or president is not strongly committed to the privatization process, private companies face an uphill battle because government agencies and ministries retain tremendous power, which in the hands of opportunistic politicians can create serious if not insurmountable obstacles for private utilities. The situation becomes even more difficult once the administration that sponsored the privatization process is replaced by one that opposes it. This can result in time inconsistency problems where a new administration abandons the original commitment to the regulatory framework to appease short-term electoral interests. Moreover, no credible policy can be devised as long as national government agencies and municipalities continue to evade paying their own bills. With respect to the provision of subsidized utility services in low-income areas, governments must make sure that the subsidies reach their intended recipients and are not used to further political goals.

Political commitment has led to the relative success of privatization in Colombia (electricity and water) and Ecuador (water). Colombia's government supports the role of private enterprise and conflicts are generally resolved amicably. Private utilities no longer face the difficulties that they did in the past. In Ecuador, the political commitment of the mayors of Guayaquil to restructure and privatize the water company created predictability and contributed to the success of the process.

By contrast, in the Dominican Republic the government that privatized the electricity sector was replaced by a political party that was opposed to it. A government that was not committed to reform failed to meet preexisting rate indexation assurances, which led to increasingly severe financial crises for the industry because revenues failed to cover costs. In addition, as the govern-

ment abandoned its initial commitment, private operators responded in kind, creating an atmosphere of mutual suspicion and opportunism. The combination of financial pressures and a deteriorated relationship between the private companies and the government eventually resulted in the re-nationalization of EdeNorte and EdeSur, adding significantly to the sector's financial burden and producing a partial reversal of the reform, at least in the short run.

Workshop participants noted that to reduce political opportunism it is important to pay attention to the roles played by the government and multilateral agencies, the design and transparency of privatization strategies, and the appropriateness of the corporate strategies of the private companies that take over ownership of the utility.

The Roles of the Government and Multilateral Agencies

At the heart of many of the problems faced by private utility operators are social, cultural and political issues that do not respond to standard economic models that may not take these local realities into account. Thus, workshop participants stressed the importance of incorporating innovative approaches (such as discussions of social responsibility) into the assistance programs financed by multilateral agencies. In addition, program flexibility was also deemed essential to effectively address the problems of non-payment and theft. Governments should also support these types of initiatives in the aftermath of privatization.

Multilateral agencies could help fund initiatives whose social return exceeds their potential private return, such as electrification efforts in poor or rural areas where profits may be low. Governments can include service obligations in the concession contracts prior to privatization, which while possibly lowering privatization revenues, will reduce post-privatization problems. Guatemala's rural electrification trust highlights another alternative: governments can earmark all or some of the privatization revenues to subsidize activities whose social return exceeds their private returns. This would reduce

the public's negative perceptions about privatization. Measures such as these are probably more urgent than constructing a perfect regulatory framework from the outset. Experience shows that a perfect regulatory framework on paper is unlikely to resist negative political pressures if the social problems affecting utility service are not tackled. Addressing these problems from the outset is likely to increase the legitimacy of the privatization process and thus the likelihood that regulators will remain independent.

Private companies find it difficult to meet investment targets, particularly in the early stages of the concession contract when revenues are low. To remedy this problem, workshop participants stressed the need for multilateral agencies to provide timely and continued support once the privatization process is completed. At times, multilateral institutions have stepped in too late, when conditions had deteriorated and political backlash was inevitable.

Well-designed and Transparent Privatization Strategies Can Improve the Legitimacy of New Ownership

The State can play a positive role when it sets clear goals and guidelines in terms of broad macroeconomic and regulatory policy. The examples of Ecuador and the Dominican Republic provide two contrasting approaches. In Ecuador, the process was deliberately long. It aimed first at restructuring Ecapag to make it financially and operationally viable for a private operator. The process was also transparent, it recruited the support of key political parties and interest groups, and provided a clear regulatory framework prior to divestiture. Tariffs rose steadily under Ecapag ownership so that the private operator would not be identified with the price increases that could trigger a popular backlash. These actions improved the legitimacy of the private company after privatization.

In the Dominican Republic, crucial elements of the reform process suffered from a lack of transparency or from poor execution. Successive governments agreed in private negotiations to onerous power purchase agreements with inde-

pendent private producers to compensate private investors for their financial risk in entering an economy marked by a high degree of unpredictability. Rate increases were associated with capitalization, creating public outrage and undermining the reform process as users felt they were being exploited by unscrupulous investors and corrupt politicians.

Historically, most of the problems in Colombia's electricity sector stemmed from the fact that the State played conflicting roles. It was at the same time policymaker, regulator and entrepreneur, which created conflicts of interest, complicated the policy-making process, produced high levels of debt, and prevented the emergence of an efficient management style (Ayala and Millán, 2003). The reforms alleviated this problem, for instance, by placing the private sector in control of Electrocaribe and Electrocosta (although the State remains a minority shareholder). Unión Fenosa representatives at the first workshop stressed that the regulatory enforcement agency, enjoys great legitimacy because it is perceived as impartial, which in turn benefits Unión Fenosa when it can obtain the agency's approval for its actions.

The Appropriate Company Strategy Can Make a Difference

Private operators face the challenge of overcoming public skepticism in an environment of cultural bias against private ownership (and more so against foreign ownership) and the perception of utility services as entitlements. Hence, private operators must be prepared to quickly create a positive public image of the company and a constructive working relationship with government at all levels, from neighborhoods and communities to the central government.

The managers of the water utility in Colombia seem to have realized the need to create a positive public image as soon as they took over from the public sector. By contrast, the electric utility suffered from a change in ownership and Unión Fenosa's delay in addressing its image problems. Improvements in the relationship between Unión Fenosa and the central government (including the regulatory agency) may be the result of the company's learning about the Colombian political system and being better able to manage its relationships with the public sector, as well as the election of a government more favorably disposed toward private participation in the provision of utility services.

In Ecuador, Interagua built upon earlier efforts by Ecapag to quickly show tangible improvements in the quality of the utility service provided as well as customer service. This increased the company's legitimacy within the community.

With the benefit of hindsight, the strategy followed by the private distribution companies in the Dominican Republic can be characterized as inadequate. The distribution companies were content to seek short-term negotiated solutions with the government for major problems such as fraud or nonpayment, instead of engaging users and other stakeholders from the beginning to improve the companies' image, work out more sustainable solutions, and give legitimacy to the reform process. In some cases, the private operators may have even undermined reform by negotiating directly with the government instead of supporting the formal institutions created for the governance of the electricity sector, particularly the SIE. The contrast with events in Colombia and Ecuador is very significant.

Practical Recommendations: What Works, What Does Not

SPECIFIC SOLUTIONS FOR POLITICAL OPPORTUNISM

Workshop participants agreed that political opportunism is an endemic and very serious problem affecting public utilities, and that it is a much more difficult problem to tackle than theft and nonpayment. Political opportunism is one of the main reasons, if not the most important one, behind the time inconsistency problems affecting tariff structures. Even in those cases that appeared most promising, company executives lamented that preventing politicians from manipulating regulatory policy and interfering in company operations is their most challenging task.

This section discusses the measures that can help and hinder in addressing this issue, bearing in mind that there is only so much that can be done to shape political will, particularly from the standpoint of private public utilities and multilateral agencies. In fact, evidence suggests that when a government lacks political will, the most likely result is the failure of private ownership of public utilities. As a result, the suggestions offered here can only help if the government is fairly committed to the success of utility reform.

As mentioned, entering into direct deals with the current government administration is not conducive to good results. The approach used by some private utility companies to strike a bargain directly with the incumbent chief executive, at the expense of allowing the appropriate regulatory to play its role, can ensure regulatory predictability for only as long as the political leadership remains in power. Once a new political leadership comes along, gentlemen's agreements often no longer apply and may actually be the excuse for a substantial rewriting of regulatory policy at the expense of the service provider. Thus, such an approach should be avoided, as it is also per-

ceived to be highly collusive in nature and prone to corruption (Rosenzweig et al., 2004).

Some of the measures that have been shown to have some success in restraining political opportunism are ensuring transparency and establishing bipartisan consensus, the establishment of the regulatory agency prior to privatization, the use of international arbitration, the establishment of mixed companies, streamlining rules and regulations, the use of persuasion, and conditionality clauses established by multilateral lending agencies.

Transparency and Bipartisan Consensus

The experience of Ecuador shows that transparency in the privatization process, coupled with careful political deliberation to gain bipartisan support, add legitimacy to the process and its end results. Moreover, transparency and societal consensus make it more difficult for post-privatization administrations to change the rules of the game.

Timing for the Establishment of the Regulatory Agency

The establishment of a regulatory agency that operates under clear contractual obligations prior to privatization makes it more difficult to alter the rules of the game at a later time. However, this is no panacea, as shown by the tariff dispute that emerged shortly after Interagua took over from the municipal company.

International Arbitration

The experience of Ecuador also suggests that the inclusion of an international arbitration clause, invoked when regulator and utility have conflicting views, can also help. However, this is a mechanism to be used in extreme cases because

it involves potentially high economic and political costs for the service provider.

Mixed Companies

Some workshop panelists suggested that the creation of a mixed company, in which the government (national or local) retains a minority stake, can deter opportunistic behavior and make politicians more responsive to economic rather than political factors. However, other workshop participants contended that it is best to eliminate any trace of government ownership and that mixed companies simply provide yet another way in which politicians can engage in opportunistic behavior.

Streamlining Rules and Regulations

Even after privatization, the government can use a vast array of legal tools to engage in opportunistic behavior. The greater the number of rules and regulations, the greater the opportunity to use them in order to pursue political ends. One way to reduce overregulation is to reduce overlapping jurisdictions by ministries and special agencies. Similarly, laws and regulations overseeing public utilities should be streamlined and simplified to ensure a fair amount of clarity and predictability.

Persuasion

Utility operators, by themselves or in cooperation with foreign governments and/or multilateral agencies, can try persuasion to dissuade a government from engaging in political opportunism. This entails emphasizing the positive role

of private utilities in the country's economy and the financial costs of a return to government ownership should the operator be forced out or leave. Privatization helped to significantly reduce government expenditures to prop up money-losing state enterprises, generated tax revenues, and provided investment and know-how that the government could not supply. A return to government ownership may be politically expedient in the short term but economically disastrous.

Conditionality Clauses Imposed by Multilateral Agencies

Should persuasion fail, a more confrontational approach through conditionality clauses in multilateral lending may provide a more powerful warning. In cases where utility privatization was funded by multilateral agencies, and later on governments engage in clear cases of political opportunism, institutional lenders may put pressure on the government to respect their contractual obligations. This can take the form of withholding funds for other projects until opportunistic behavior is changed. An example of this is apparent in negotiations between Argentina and the International Monetary Fund, where the latter has refrained from disbursing funds already approved until (among other things) the government of Argentina resolves its dispute with utility operators, whose tariffs were unilaterally frozen in 2001. Although such a move is considered politically risky, it can exert substantial influence since governments are always looking for funds to finance the projects most important to them. Of course, multilateral institutions have little leverage if the government is not in need of funds.³³

³³ The government of Argentina is considering paying the IMF \$15 billion in order to avoid having to deal with it.

Concluding Remarks

Experience has shown that even the poor are willing to pay to receive good quality and reliable service. This means that, to a significant degree, theft and nonpayment can be addressed through adequate strategies to improve service quality and reliability. To successfully overcome social, political and cultural transaction costs, these strategies should be tailored to local realities and should not simply reflect models that worked in developed countries because transaction costs in those countries are very different. The experiences of Unión Fenosa and Sociedad de Acueducto, Alcantarillado y Aseo de Barranquilla in Colombia reflect the predicaments that utility companies face in poor and politically volatile environments and show how they can best be addressed.

The outlook with respect to addressing the problem of political opportunism is much more pessimistic. In the absence of credible, independent

institutions that can exercise some restraint on the will of policymakers, the ability to avoid opportunism is likely to remain limited and highly dependent on the disposition of the politicians themselves. Time inconsistency problems remain severe and will likely persist. One way to reduce the influence of transaction costs and time inconsistency problems on regulatory policy is to strengthen systems of checks and balances among the three branches of government. Conversely, if a political system remains permeated by political clientelism and populist leadership, improvements will be unlikely and stop-go policy cycles will be the norm. Multilateral lending agencies can make a difference when dealing with well-meaning administrations, but will find themselves at odds with populist leaders who give priority to their short-term political goals at the expense of regulatory commitments, particularly if such commitments were made by a previous administration.

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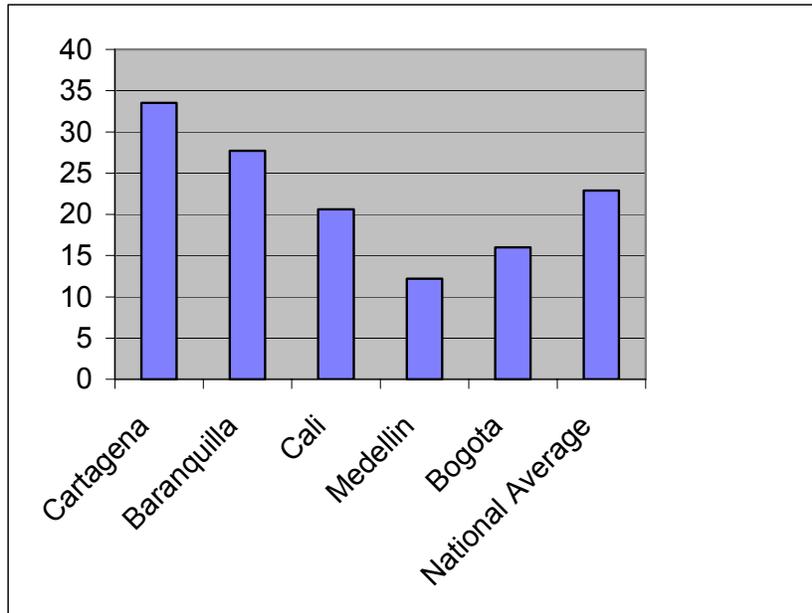
Appendix

A NOTE ON THE REGULATION OF NETWORK UTILITIES IN COLOMBIA

The regulation of network utilities in Colombia is characterized by certain peculiarities affecting AAA and Electrocosta/Electricaribe. Utility charges are set by sector-specific regulatory entities. For gas and electricity, the Comisión de Regulación de Electricidad y Gas (CREG) uses a price cap approach, whereas in water and sanitation, the Comisión de Regulación de Agua Potable y Saneamiento Básico (CRA) uses a cost of service approach. Residential utility charges are based on socioeconomic levels of the area served, according to a six-level cross-subsidy system whereby the top two levels subsidize the three lowest levels and the third level is charged at the actual allocated price cap. Cross-subsidies are supplemented by government subsidies whenever necessary. In electricity, generation, transmission and commercialization costs are passed directly through to the final customer (which can choose an electricity marketer³⁴); the water segment is vertically integrated. Unlike many other countries, where the regulatory agency is also in charge of enforcement, in Colombia the enforcement of regulations is entrusted to a single entity for fixed-line telecoms, water, gas, and electricity, the Superintendencia de Servicios Públicos Domiciliarios (SSPD).

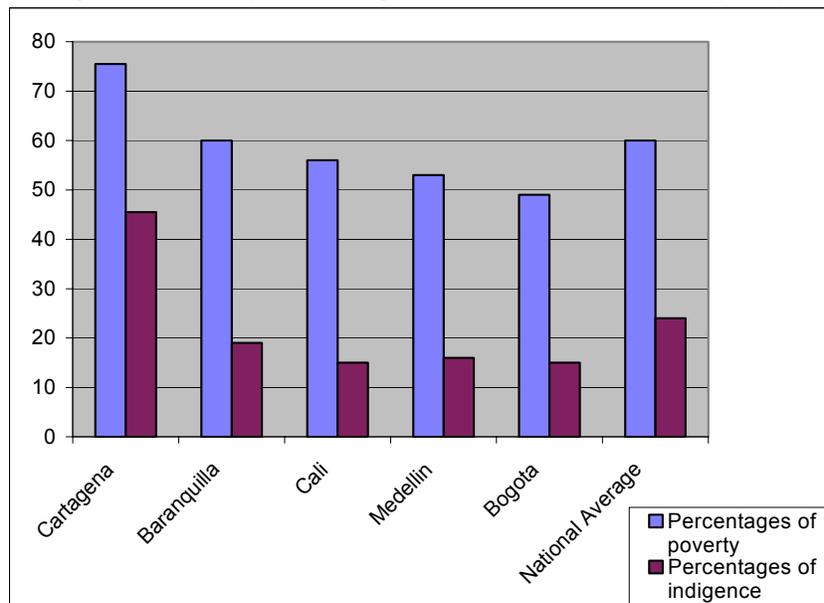
³⁴ Because of a flaw in regulation originating in the desire to subsidize small customers, commercialization charges are set by volume according to a formula that creates an opportunity for marketers to offer smaller commercialization charges to selected customers, allowing for cherry-picking by marketers and leaving the less profitable customers to the incumbent.

Figure 1. Unmet Needs of the Colombian Population by City.



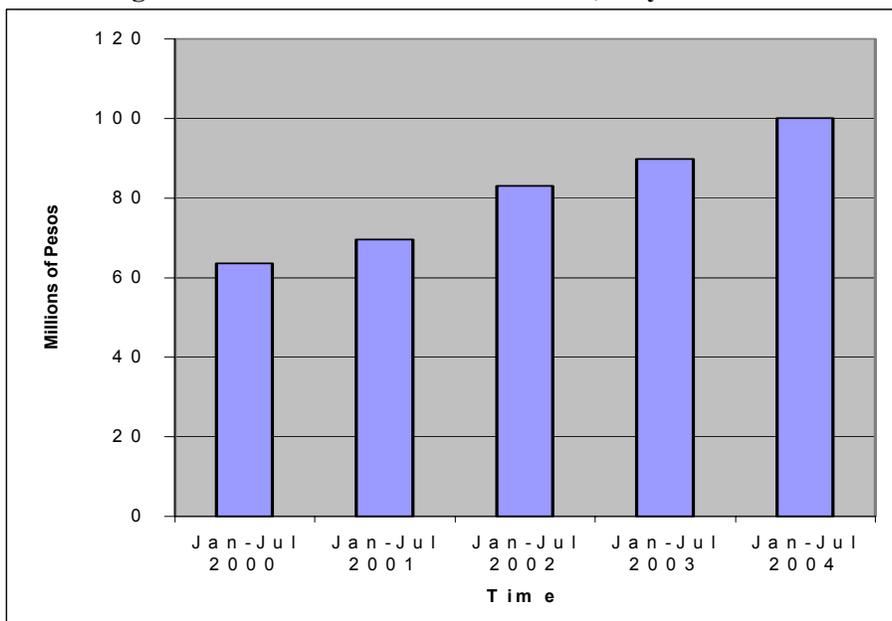
Source: AAA, 2003

Figure 2. Poverty and Indigence Levels in Colombia by City.



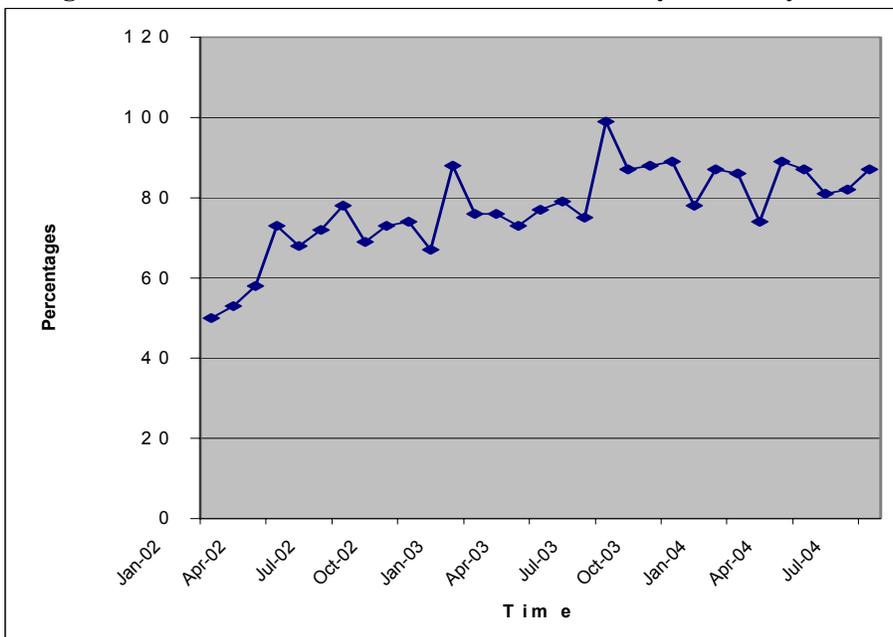
Source: AAA, 2003.

Figure 3. Evolution of AAA Collections, July 2000-2004.



Source: AAA, 2004.

Figure 4. Revenue Collection Index, AAA, January 2002-July 2004.



Source: AAA, 2004.

Figure 5. Electricity Tariff Cycle in the Dominican Republic.

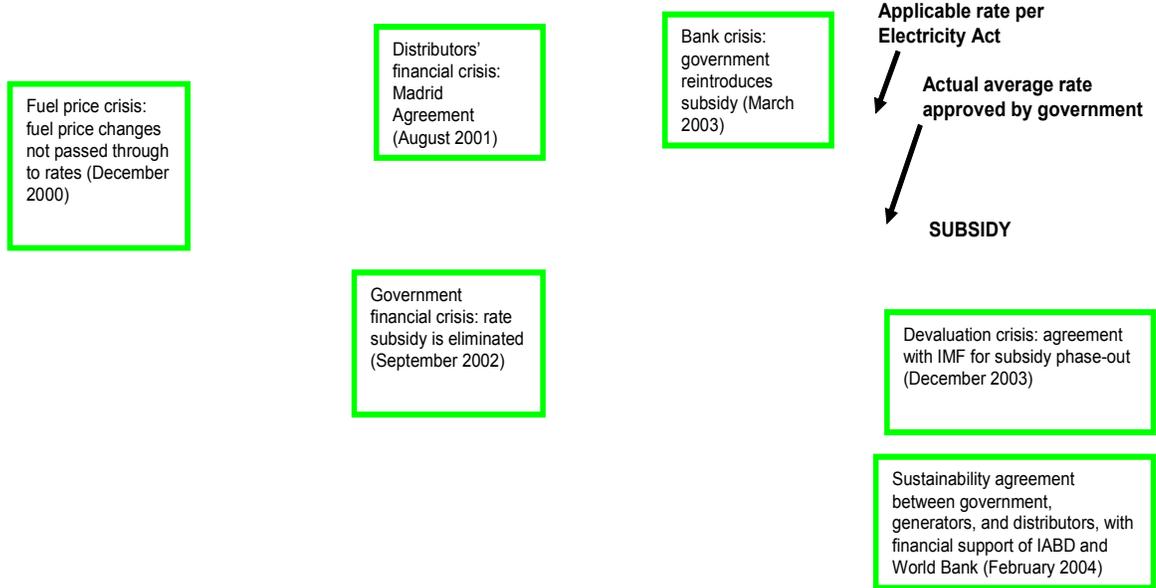


Figure 6. Interagua Tariff Structure (2001-2004)

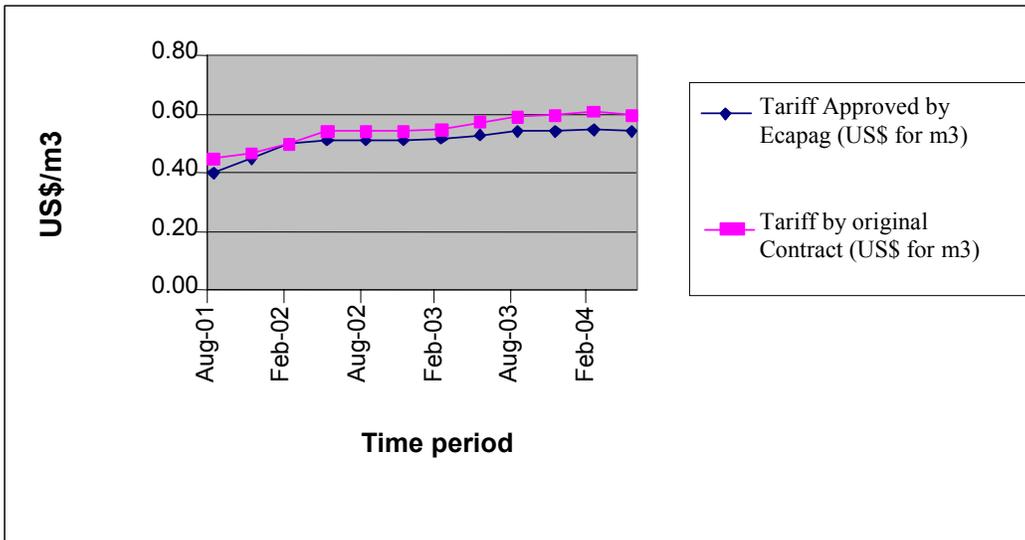


Figure 7. Interagua's Collection Ratio

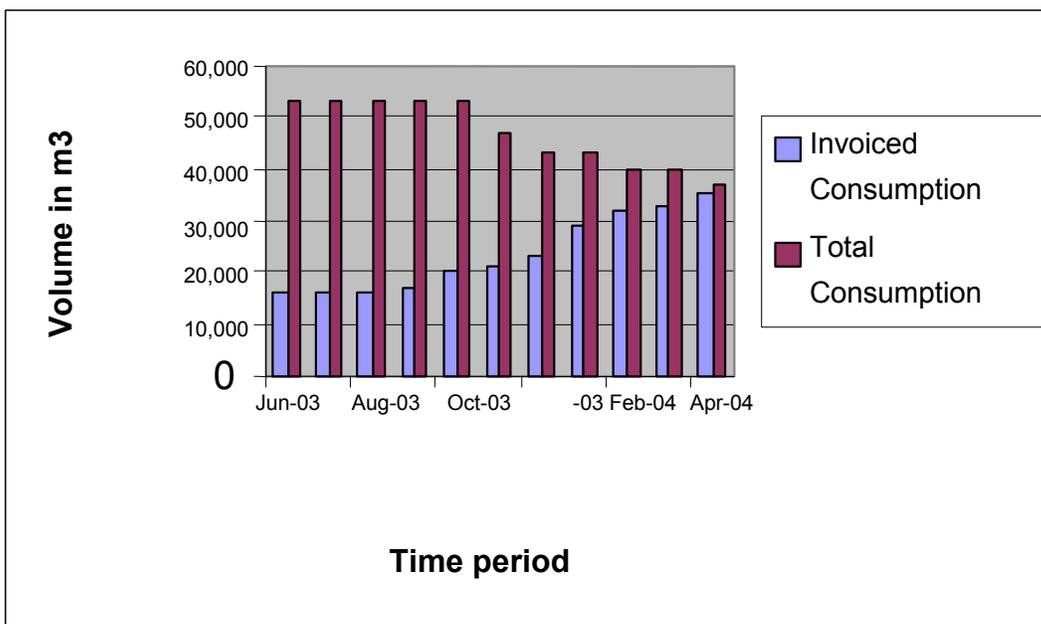


Figure 8. Percentage of Interagua Customers Who Would Like to Change Water Supplier, October 2004

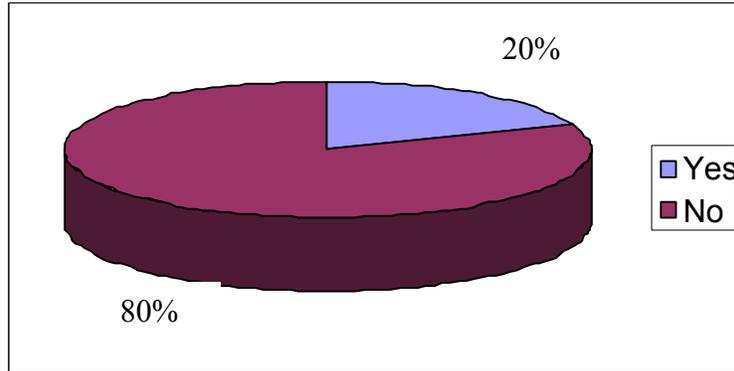


Figure 9. Opinion of Interagua's Customers About Rate Levels

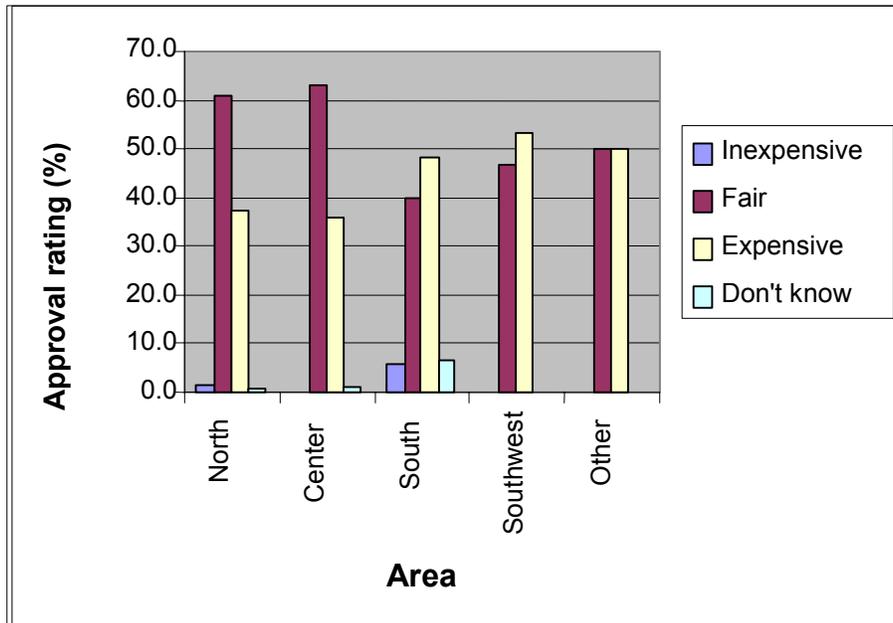


Figure 10. Opinion of Interagua Customers About Company Priorities

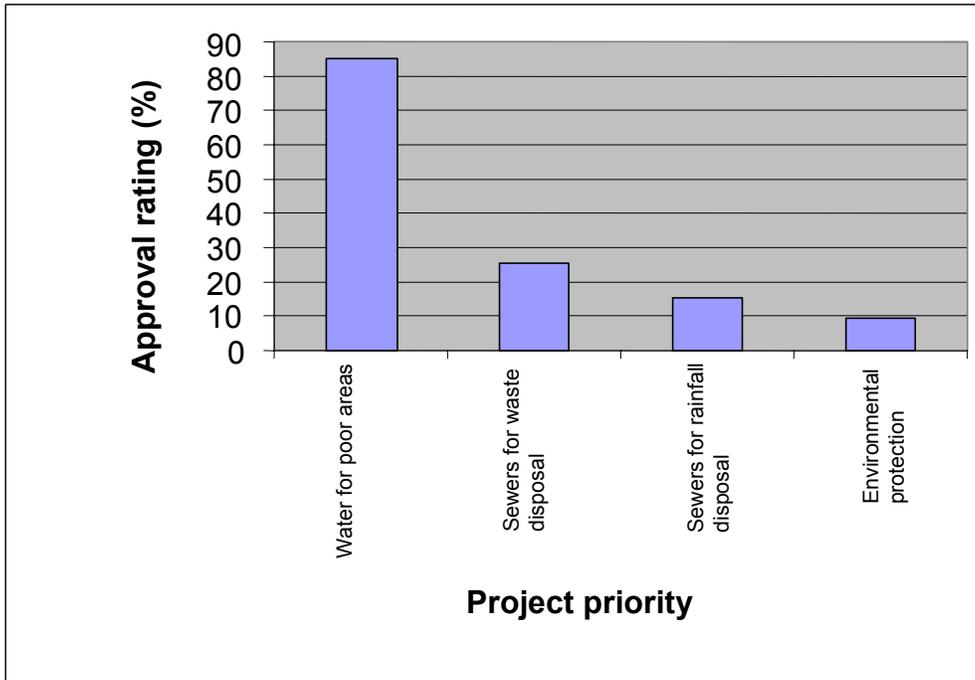


Table 1. Service Trend in the Municipality of Puerto Colombia (1997-2004)

Indicator	Unit	Mar-97	Dec-97	Dec-01	Dec-02	Dec-03	Jul-04
Quality	NTU	18	0.8	0.4	0.4	0.5	0.5
Production prd	M3/month	320,000	456,996	300,082	302,139	303,226	278,773
Meters	Unit	0	1,600	6,663	7,132	7,542	7,645
Losses	%	70	62	41	39	40	42
Aqueduct subscribers	Users	4,167	5,803	7,229	7,793	8,470	8,556
Aqueduct coverage	%	69	71	78	79	83	83
Sewer system subscribers	Users	2,136	2,218	3,308	3,597	3,690	3,737
Sewer system coverage	%	42	45	57	57	57	57
Invoicing	\$prm/month	30	49	189	214	271	294
	(millions of pesos)						
Collection	\$prm/month	5	40	167	192	243	296
	(millions of pesos)						
Collection efficiency	%	17	82	88	90	90	100

Source: Sociedad de Acueducto Alcantarillado y Aseo de Barranquilla S.A. (2004)

Table 2. Service Trend in the Municipality of Soledad

Indicator	Unit	2001	2002	2003	2004*
Quality	NTU	11	0,41	0,58	0,40
Production prd	M3/month	613,200	3,765,905	3,891,692	3,894,711
Meters	Unit	0	30,579	34,600	36,248
Losses	%	70	67	63	60
Aqueduct subscribers	Users	33,377	64,090	69,846	70,106
Aqueduct coverage	%	58	69	71	76
Sewer system subscribers	Users	26,939	58,452	62,698	63,003
Sewer system coverage	%	45	63	67	68
Invoicing	\$prm/month	240	1,515	1,560	1,791
	(millions of pesos)				
Collection	\$prm/month	36	1,028	1,340	1,525
	(millions of pesos)				
Collection efficiency	%	78	91	94	85

Source: Sociedad de Acueducto Alcantarillado y Aseo de Barranquilla S.A. (2004)

(*) Data from January to July only.

Table 3. Consumption Categories in Interagua's Tariff

Category	Consumption in cubic meters/month
1	0-15
2	16-30
3	31-60
4	61-100
5	101-300
6	301-2,500
7	2,501-5,000
8	5,001 and over

Source: Ecapag

Table 4. Difference Between Planned and Implemented Adjusted Factors

Initial Adjustment Factors As of Contract	Year	1	2	3	4
	AF1	0.39	0.45	0.56	0.67
AF2	0.59	0.60	0.70	0.80	
AF3	0.79	0.80	0.90	1.00	
Adjustment Factors Later Approved by Ecapag	From	Aug-01	May-02	Aug-02	Aug-03
	To	Apr-02	Jul-02	Jul-03	Nov-04
	AF1	0.39	0.42	0.45	0.48
	AF2	0.59	0.65	0.70	0.70
	AF2	0.79	0.80	0.90	1.00

Source: Ecapag

Table 5. Payment Arrears by Government Institutions

Period	Penitentiary of the Coast	University of Guayaquil	ESPOL
May-01	25,000	200	5,000
Oct-01	25,000	53,700	21,300
Oct-03	76,350	21,500	14,500
Oct-04	42,300	9,900	7,200
Cumulated debt (US\$)	4.7 million	995,000	No debt

Source: Interagua