

**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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Working Paper

This working paper is being published with the sole objective of contributing to the debate on a topic of importance to the region, and to elicit comments and suggestions from interested parties. This paper has not gone through the Department's peer review process or undergone consideration by the SDS Management Team. As such, it does not reflect the official position of the Inter-American Development Bank.

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Executive Summary

Background

Privatization of public utilities has gone a long way over the past fifteen years and Latin America has been a pioneer in this regard. However, the viability of private utility ownership is threatened by serious problems of theft and nonpayment on one side, and political opportunism on the other, as regulators and governments face intense pressures to hold utility rates down. Sustaining privatization over time has proven to be a challenge extending well beyond the transfer of ownership from public to private.

The theoretically attractive models of private ownership and independent regulation, following the experiences of developed countries and especially of the U.S., 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 collections; 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 in practice.

Weak political and legal checks and balances provide fertile ground for the executive branch to act unilaterally and alter utility rates in order to maximize electoral goals. Therefore, understanding the reasons why: (a) politicians alter existing utility rate agreements for political goals; (b) people consider water and electricity as an entitlement and refuse to pay market prices for them, is a must if we want to correctly address the problems plaguing utility regulation in Latin America today. 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 the infrastructure sectors and reforms in the region.

The Challenges of Non-Payment 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 operating in two sectors: 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 Bank (and other

multilateral financial institutions), in dealing with the post-privatization problems of theft/nonpayment and political opportunism, on the basis of the four experiences and what applicable theories tell us about these issues.

In addition to the far higher levels of poverty in developing countries, their economies are embedded in non-economic institutions that impact the performance of utility companies in very different ways from the institutions found in advanced industrial nations. The non-economic institutions of developing countries, and more specifically the 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 political clientelism, 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 the macroeconomic situation. Our primary analytical focus in this report is therefore an institutionalist one.

Non-economic institutions and transaction costs are not, however, the only determinants of utility privatization outcomes. The high rates of poverty found in developing countries, and the elements of the local culture, are also key aspects to consider, particularly customers' purchasing power relative to tariff levels, and cultural attitudes toward payment for utility services. Lastly, the characteristics of the private operator should not be neglected either, 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 the participants in two separate workshops held at the Inter-American Development Bank in Washington, D.C., on September 9 and November 19, 2004. Each workshop was organized around each one of the two analytical issues, the first workshop being on theft and nonpayment, and the second workshop on political opportunism. In addition, each workshop discussed the experiences of two utilities, one in electricity and one in water, with the intention of extracting lessons common 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, where these companies face day-to-day contact with end users, and where prices are typically regulated, confronting the companies directly with the problems of theft, nonpayment, and unwillingness to increase rates. The workshops provided the opportunity for utility managers and IDB staff to present their experiences regarding the issue addressed in the workshop. In the second workshop, this format was extended to include regulators too.

In the workshop on theft and nonpayment, we analyzed the innovative experiments of two companies providing electricity and water/sanitation service provision, respectively, 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 the Sociedad de Acueducto Alcantarillado y Aseo de Baranquilla S.A., owned and controlled by European utilities. The comparison between these two companies is particularly informative for a couple of reasons. First, the two companies operate in the same geographic area and thus share the same customers and difficult operating conditions. Second, they are subject to a common Colombian framework for the regulation of public utilities.

For the topic of political opportunism, the second workshop involved discussion of two cases, one in water supply and another in electricity, facing the crucial issue of time consistency in tariff policy of public utilities: the problems in maintaining cost recovery tariffs in the electricity sector of Dominican Republic, particularly as they affected EdeEste, a distribution utility controlled by AES and owned in equal parts by AES and the Dominican government; and the problems arising after the concession to a private operator of the water supply company of Guayaquil, Ecuador.

Some Theoretical Considerations

This report emphasizes institutional factors as explanations for the observed problems of theft/nonpayment and political opportunism. We have therefore considered the extent to which the observed facts agree or not with institutionalist theories as currently developed:

Political opportunism and political transaction costs. Transaction cost theories can thus help us understand the different patterns displayed in utility regulation in Ecuador and the Dominican Republic. Political conditions in the Dominican Republic—a presidential system with weak political parties and strongly clientelistic voters—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, as it actually happened, without any obstacles to their 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 sectoral institutions, especially the regulatory agency, leading 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 clientelistic interests of the government or judge in charge, which creates great uncertainty.

Trust and cooperative institutions. 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. In so doing, negative cultural attitudes toward specific transactions (such as non-payment, fraud and theft) can be turned into positive ones. 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 some of the cases. 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, at times even grassroots organizations are too politicized or clientelistic to make them suitable intermediaries between the utility and the community.

Transparency and legitimacy. Transparency and political legitimacy are key factors affecting transaction costs that are often overlooked but are crucial in bringing political support for concession contracts in politically sensitive sectors as public utilities. New institutions are often created because new institutional designs gain legitimacy; on the other side, 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. More transparent and legitimate the reform process, the lower the transaction costs, 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 policy and regulatory policy.

Factors Affecting Utility Regulation

We asked the participants to address the impact of a variety of factors that are often cited in the literature as affecting both the theft and nonpayment for utility services, and 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 possibility to solve them or at least to mitigate them.

A. Severe problems that are most difficult to solve.

Changes in the country's macroeconomic conditions. Economic recessions and inflationary episodes are events that companies cannot control. However, they can induce 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.

Political clientelism. Clientelism is pervasive throughout the region, impacting public utilities with particular force. Because it is a phenomenon that is deeply rooted in the countries we surveyed, the best case scenario is to mitigate its negative influence when a company is facing a pro-market minded administration. 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 poor people who can hardly afford them. 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. 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 the public utilities. However, this can change very quickly for the worst once a new administration comes to power (see below) with a different political agenda as testified by the Dominican case.

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 to a significant extent 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 once a more market-committed President Alvaro Uribe replaced President Adres Pastrana. Conversely, new office holders often do not feel bound to commitments made by their predecessors and can change the rules of the game overnight as it was the case in the Dominican Republic. This problem is particularly acute at the local level, where independent oversight of elected officials is often non-existent. To this day, what matters is not the institution and what that institution is supposed to do, but rather the personality and policy preferences of political executives.

B. Difficult problems that can be solved.

People's purchasing power. The existence of major segments of the population earning low incomes throughout the region, and especially in the four workshop cases, has a fundamental impact on the problems of theft/nonpayment and political opportunism. At least some theft of utility services is induced by economic pressures on poor households,

while low incomes pose a challenge for utility providers to develop affordable supply schemes for rural areas and urban slums. Poverty also favors clientelism as the poor respond favorably to offers of personalistic or community-level “gifts” from public authorities in exchange for political support. However, purchasing power per se is not a good predictor for lack of payment or fraud. In fact, under government ownership these problems were very diffused in middle class and upper middle class areas due to the corruption and clientelism mentioned earlier. This suggests that the solution to these problems can be found if there is a political will to crack down on clientelism/corruption, in conjunction with an appropriate policy of subsidies for marginal users.

Cultural attitudes toward utility service payment. In all cases, there is a deep-seated belief that basic utility services, and water most of all, is 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 upper strata of society often get away without payment, which discredits the imposition of fees among the lower social classes. Altering this attitude is a major challenge for private operators, but can be solved if companies and government work together to devise strategies that address local socioeconomic and cultural challenges. Private operators have to convince users that utility services are better provided on a fee-for-service basis, if the operators are to reduce theft, increase collections, and avoid political backlash.

Legal statutes and their enforcement. Protection of property rights in the region is generally poor, due to laws that privilege the government and to courts that lack the power or willingness to enforce property rights. As a result, private operators confront difficulties in the enforcement of the regulatory framework and in the prosecution of theft, fraud and nonpayment of utility services. Governments freely choose not to abide by the 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 there is wide variation in regulatory behavior across the four cases, 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, as already mentioned. This problem, as in the previous cases, is not insurmountable but requires a political will to let the regulatory agency do their job and fund them in a way that they can count on a competent staff.

C. Problems that can be reasonably solved

Company image. Under government ownership, all four utility companies in the cases that we observed had a very bad reputation. The fact that the companies were mismanaged and corruption within them was rampant gave further justification in the eyes of the customers to avoid payment or steal service outright. Coming on top of the cultural biases discussed above, these image problems make it imperative for private utilities in the region to create a favorable image right from the start. Companies must

induce consumers to feel that they are being treated fairly and overcome the potential handicap of coming from abroad, which exposes them to nationalistic attacks of exploiting the people to enrich foreign shareholders. If this is done, this problem can be solved as shown by the positive experiences of AAA in Colombia and Interagua in Ecuador.

Corruption within the company. Since this is a problem where companies have much more discretion in tackling, it is also the one 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. The privatization process led in all four cases to major improvements to eliminate employee corruption, by firing corrupt employees and by instituting better controls to prevent, detect, and punish corrupt behavior.

Lesson #1: Utility Reform Must Provide Quick and Tangible Benefits for Users

The workshops also offered some general lessons. When analyzing the problem of nonpayment and theft, the first lesson that comes out rests on the issue of service delivery. The two successful examples (AAA and Interagua) on this issue employed different strategies but had one element in common. They placed great emphasis in 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 any utility reform will lack the necessary credibility to win over a public and will end up in failure as it has been the case in the Dominican Republic. In other words, even the poor are willing to pay when they are provided with good quality service, but companies must first convince customers through facts (quality improvement) in order to overcome cultural biases and hostility resulting by the bad performance of previous government-owned utilities.

The goal of service improvement can be integrated by a variety of efforts that can enhance reform success. The workshops pointed to the following:

Community-based approaches pay off. Substantial improvements can be made toward the reduction of non-payment and theft practices by designing innovative approaches involving the utility provider, community representatives, and the government to foster cooperation and trust. Some of the companies developed strategies that incorporated both community organizations and government representatives. The basic assumption was that a winning formula could materialize only if the predicaments of the local market were understood and addressed. 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, in order to establish a sense of trust within the local community and get it to cooperate.

Within this approach some companies made special efforts to establish an environment of social responsibility by companies and communities alike where voluntary cooperation would make the need for policing and sanctions less important over time. Through a variety of town meetings and training programs companies engaged communities and government representatives by delivering a persuasive message. Companies could do well only if customers were getting better service, which then would allow companies to expand service and invest in the community. In this regard, companies spent much effort in educating people through public workshops about the importance of paying to assure good service. For its part, government had to come up with the necessary subsidies to help companies offset infrastructure costs and low rates. Moreover, to give the process legitimacy in some cases (electricity), the regulatory institutions stepped in to assure that the new process was transparent and the private company was not taking advantage of the situation.

Acting fast to improve company image. As noted earlier, companies must invest in improving their image from the outset. Given the usual negative legacies of poor service and corruption inherited from the preceding state-owned utilities, and the often negative perceptions of privatization process and of the acquiring companies (accused of being the new imperialists), private owners must move fast to establish a positive image. Worse yet, after privatization rates are often increased significantly, whereas service levels can only be improved slowly as investment projects are rolled out. In this context, it is simply unrealistic to expect no adverse social and political reactions in the absence of a proactive approach by the new owners. These efforts must begin as soon as ownership is assumed, being planned prior to the transfer of ownership.

The need to improve the life of the community. Decades of neglect and poor service create among the public strong adversarial feelings against the utility provider. This is particularly true in poor areas that are traditionally the most neglected. To gain credibility and trust, Colombian companies made substantial efforts to show its commitment toward “social responsibility” affecting poor communities by investing in education and parks, or supporting local soccer teams, among many initiatives.

Making utilities more affordable and easier to pay. Both the Colombian and the Ecuadorian experiences show the importance of providing tangible improvements in customer service, such as providing flexible tariff rates or rewarding timely bill payments. The faster these improvements take place, the greater the chances that and non-payment trends will be diminished appreciably.

The approaches just mentioned can also be supported by more conventional ones such as:

Making utilities harder to steal and easier to monitor. Both the Colombian and Ecuadorian experiences prove that investing in improved monitoring mechanisms pay off, particularly 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 due to 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 offenders, for instance by firing corrupt workers, or by terminating illegal connections. Within this overall strategy, company executives stressed that the “carrot” (persuasion) is far preferable than the “stick” (sanctions), although both must be adopted to have a balanced approach. This is because monitoring and policing costs will always be higher than programs geared at voluntary cooperation.

Lesson # 2: Politics Matters

The four experiences show the importance of politics in shaping the final outcome. The problems most difficult to solve are political and the weaknesses of government institutions make possible for the individuals at their helm to have a disproportionate influence in the decision-making process. If the political executive supports the role of the private enterprise, things can get solved. However, if the mayor, governor, or president is not strongly committed, private companies face an uphill battle as government agencies and ministries still 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 opposed it. This can result in time inconsistency problems, which we examined earlier, where a new administration abandons the original commitment to the regulatory framework to appease its short-term electoral interests. The following are some of the suggestions that workshops’ participants listed as having some effect on taming political opportunism.

The role of the government and multilateral agencies. Multilateral aid agencies must incorporate innovative approaches (i.e. social responsibility) into their assistance programs, as socio-cultural and political problems are too often at the heart of the problem. Also, governments can also include service obligations in the concession contracts prior to privatization. Although such clauses may lower privatization revenues, they will reduce post-privatization problems. Alternatively, as in the case of Guatemala’s rural electrification trust, governments can earmark all or some of the privatization revenues for the subsidization of activities with a social return in excess of private returns, which has the advantage of reducing the public’s negative perceptions about privatization. In all, we would argue that these measures are probably more urgent than having a ‘perfect’ regulatory framework from the outset. A perfect regulatory framework on paper is unlikely to resist adverse political pressures in the Latin American context if the social problems affecting utility service are not tackled, whereas tackling these problems is likely to increase the legitimacy of the privatization process and thus the prospects for keeping regulators independent.

Although all the participants in the workshops agreed that political opportunism is an endemic and very serious problem affecting public utilities, there is just as much

consensus on the fact that it is a much more difficult problem to tackle than theft and nonpayment. Even in the cases that appeared most promising, company executives lamented that preventing politicians from manipulating regulatory policy and interfering in company operations is the most challenging task. 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, we can make some preliminary recommendations.

Deal-making. What does not seem conducive to good results is direct-deal making. As noted earlier, the approach used by some private utility companies to strike a bargain directly with the chief executive of the moment, at the expense of the role of the regulatory agency in charge, can only assure regulatory predictability as long as the political leadership with whom the agreement was originally made is in charge. 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.

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 take away many of the recriminations that are used by post-privatization administrations to change the rules of the game.

Timing of regulatory agency establishment. The establishment of a regulatory agency prior to privatization, operating under clear contractual obligations, makes it more difficult to alter the rules of the game at a later time, although it is no panacea.

International arbitration. The inclusion of an international arbitration clause, invoked when regulator and utility have conflicting views, can also help although 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 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 seminar participants contended that mixed companies simply provide yet another form of ammunition in the hands of politicians to 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 amount of rules and regulations, the greater the opportunity to use them in order to pursue political ends. One way to reduce the opportunity for over-regulation is to reduce multiple jurisdictions by ministries and special agencies. Similarly, laws and regulations overseeing public utilities should be streamlined and simplified in order to allow utility managers to work with under a fair amount of clarity and predictability.

Persuasion. Utility operators, by themselves or in cooperation with foreign governments and/or multilateral lending agencies, can try the soft card of persuasion to dissuade a government from engaging in political opportunism.

Multilateral agency conditionality clauses. Should persuasion fail, a more confrontational approach through conditionality clauses may be a more powerful warning signal.

Concluding Remarks

Private operators face the challenge of overcoming people's skepticism in an environment of cultural bias against private ownership (and more so against foreign ownership), the perception of utility services as entitlements, and a long history of bad and unreliable service. However, poor people are willing to pay when they get good service. Therefore, theft and nonpayment can, to a significant degree can be addressed through adequate strategies. The companies that we surveyed that made a strong commitment to improve service quality in a relatively short period of time were the ones that met with the greatest success in substantially diminish theft and non-payment practices. This effort can yield better result if companies design strategies tailored to local realities in order to have a greater chance of success in overcoming transaction costs in the social, political, and cultural realms. Likewise, private operators must be prepared to create a positive image of the company among the public and a constructive working relationship with government at all levels, from neighborhoods and communities to the central government, as soon as possible. Conversely, adopting uncritically models experimented in developed countries is bound to fail since the transaction costs in developing countries are very different and more costly. The experience of AAA and Interagua are a good example of the predicaments that utility companies face in poor and politically volatile environments and how they can be addressed in a positive manner. As far as political opportunism is concerned, on the other hand, the picture 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 reliant on politicians' own disposition. Time inconsistency problems remain severe and will likely persist over time. The more a political system makes strides forward in strengthening checks and balances among the three branches of government, the more likely transaction costs and time inconsistency problems will be less relevant in influencing regulatory policy. 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 when facing stubborn populist leaders who prioritize their short-term political goals at the expense of regulatory commitments, particularly if such commitments were made by a previous administration.

I. Introduction

Privatization of public utilities has gone a long way over the past fifteen years and Latin America has been a pioneer in this regard. However, the viability of private utility ownership is threatened by serious problems of theft and nonpayment on one side, and political opportunism on the other, as regulators and governments face intense pressures to hold utility rates down. Sustaining privatization over time has proven to be a challenge extending well beyond the consummation of the transfer of ownership from public to private.

The theoretically attractive models of private ownership and independent regulation, following the experiences of developed countries and especially of the U.S., 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 collections; 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 in practice. In fact, 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 alter utility rates in order to maximize electoral goals. Likewise, much literature developed on the experience of industrialized countries is completely inadequate in addressing the issue of theft and non-payment that is endemic in post-communist and third world countries. Therefore, understanding the reasons why: (a) politicians alter existing utility rate agreements for political goals; (b) people consider water and electricity as an entitlement and refuse to pay market prices for them, is a must if we want to correctly address the problems plaguing utility regulation in Latin America today. 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 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 two sectors: 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 Bank (and other

multilateral financial institutions), in dealing with the post-privatization problems of theft/nonpayment and political opportunism, on the basis of the four experiences and what applicable theories tell us about these issues.

Analytical Framework

In addition to the far higher levels of poverty in developing countries, their economies are embedded in non-economic institutions that impact the performance of utility companies in very different ways from the institutions found in advanced industrial nations. The non-economic institutions of developing countries, and more specifically the political institutions, impose significant transaction costs on economic activity by limiting the ability of governments to uphold laws and contracts. In fact, the high level of transaction costs in developing countries led North and a growing number of economists to argue that such costs are responsible for the poor growth record of developing countries through time.

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 political clientelism, 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 the macroeconomic situation. Our primary analytical focus in this report is therefore an institutionalist one, centered on the factors just mentioned. We will complement our argument by showing how political transaction costs are often behind the time inconsistency problems that have negatively affected some of the cases in our sample.

Non-economic institutions and transaction costs are not, however, the only determinants of utility privatization outcomes. The high rates of poverty found in developing countries, and the elements of the local culture, are also key aspects to consider, particularly customers' purchasing power relative to tariff levels, and cultural attitudes toward payment for utility services. Lastly, the characteristics of the private operator should not be neglected either. The strategy followed by the operator before, during, and after privatization may or may not identify these problems, leading to widely different outcomes. Moreover, the operator's capacity to carry out any necessary investment as well as technical and managerial improvements, can fundamentally alter the outcome of privatization processes. This means that throughout the report, we consider these factors in addition to institutional ones wherever appropriate.

Methodology

The basis for the analysis that follows is primarily the information supplied by the participants in two separate workshops held at the Inter-American Development Bank in Washington, D.C., on September 9 and November 19, 2004. In some cases we have been able to contrast it with information from staff of the Inter-American Bank familiar with the companies and issues at hand, with external sources (provided in the References section of this report) and with our own information.

Each workshop was organized around each one of the two analytical issues, the first workshop being on theft and nonpayment, and the second workshop on political opportunism. In addition, each workshop discussed the experiences of two utilities, one in electricity and one in water, with the intention of extracting lessons common 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. This choice is not casual, for it is at the distribution level that private companies face day-to-day contact with end users, and where prices are typically regulated, confronting the companies directly with the problems of theft, nonpayment, and unwillingness to increase rates.

The workshops provided the opportunity for utility managers to present their experiences regarding the issue addressed in the workshop, with a response from IDB staff with direct knowledge about the utility. In the second workshop, this format was extended to include regulators too, as a way of introducing additional perspectives into the debate. Where appropriate, in our report we point to the controversies raised by the different participants in the workshops.

In this study, the problems of theft and non-payment (section II) on the one hand, and political opportunism (section III) on the other, are in each case examined by comparing two companies per case. However, in assessing each case we will also describe to some degree other issues that will be analyzed more in depth in the comparative sections (IV, V, and VI).

II. Addressing Theft and Nonpayment Problems

In this section, we analyze the innovative experiments of two Colombian companies in electricity and water/sanitation service provision.¹ To this end, we asked the representatives of Unión Fenosa (electricity, UF henceforth) and Sociedad de Acueducto Alcantarillado y Aseo de Baranquilla S.A. (water and sanitation, AAA henceforth), to assess the degree to which the factors mentioned above affected their companies and what strategies they devised to solve them. The comparison between these two companies is particularly informative for a couple of reasons. First, UF and AAA operate in the same geographic area and thus share the same customers and operating conditions.

¹ 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.

Second, they are subject to a common Colombian framework for the regulation of public utilities, which is described in the Appendix.² Below, we will describe each company's experience and how, despite working in adverse conditions regarding culture of nonpayment and losses, they tried to address these problems.

Sociedad de Acueducto Alcantarillado y Aseo de Barranquilla S.A. (AAA)

The AAA is a mixed company whose ownership is divided into 60 percent to a private foreign operator (Spanish), 35 percent to the municipalities, and the remaining 5 percent to small private domestic investors. After the initial privatization it began to progressively incorporate water/sanitation companies that had been managed by smaller municipalities.

Initial Conditions

At the time, Barranquilla and other municipalities decided to involve a foreign investor in the water supply/sanitation management and ownership, their companies were in a state of disarray, being beset by the following problems:

Political problems. The primary cause of water companies' disastrous situation was that city politicians, who controlled local companies, used them in a very corrupt fashion that only rewarded their own clientelistic networks in what resembled fiefdoms. Mayors were de facto independent from central government's controls and disrespectful for the laws³. As a general rule, the smaller the town was, the more arbitrary and corrupt was the power exercised by mayors. Customarily, companies were overstaffed with people who often owed their job to political loyalties rather than technical expertise. Politicization also fueled high turnovers of people at all levels. National government subsidies earmarked for the expansion of water services to poor neighborhoods simply failed to reach the people for whom they were intended. Moreover:

- Contracts were manipulated to favor political cronies.
- Staffing depended on quotas dictated by political criteria.
- High turnover of employees that mirrored the political cycle.
- Investments were insufficient and politically arranged.
- State and city government failed to pay their bills.
- Politicians did not pay their bills and allowed their own friends, families, and supporters to do the same.

Social and cultural problems. A large amount of bills affecting government agencies, the wealthy, as well as the poor, went unpaid generating huge losses on early bases. People have been used to a culture of non-payment for a variety of factors.

² The only difference in the customer base is due to AAA's concession not extending to all of the municipalities in the Caribbean region of Colombia, as water supply is typically organized in Colombia at the municipal level.

³ In some cases, they were (and still are) former convicts.

- There is no culture of paying for public services as wealthy and poor people alike
- ignored bills.
- People regard water and sanitary services as entitlements.
- About 27 percent of the Barranquilla population's basic needs still cannot be met (Figure 1).
- Large numbers of poor refugees continue to flee guerrilla warfare and have precarious means of subsistence.
- Melting pot of races and ethnic groups makes it difficult the creation of a sense of civic community.⁴
- Extreme levels of poverty (60%) and indigence (19%) within the Barranquilla population (see Figure 2).

Company conditions. The municipal water companies were plagued by severe problems, which set in motion a perverse cycle. As a result, facilities fell in disrepair causing an increase in infectious diseases as people came to depend more and more on poorly sanitized water:

- Service quality was very poor and deteriorated steadily.
- Customer service was non-existent and companies suffered of bad public image problem.
- Coverage levels were low.
- Poor labor productivity.
- High financial losses.
- Poor revenue collection.
- Extreme dependence on government financing to pursue investments.
- Poor accounting procedures and customer data.

Theft and non-payment. As mentioned earlier, a culture of non-payment affected all societal sectors and government institutions at all levels. Large losses also resulted from the lack of company monitoring and law enforcement, which made possible for payment evasion and theft to be endemic problems. Fraud resulted from:

- Illegal connections.
- Tempering with meters.
- Bribes to company employees willing to under report consumption levels.
- Former employees offering to tamper meters for a fee to potential customers.

⁴ There seems to be a contradiction between this opinion and UF's view of the same problem (see page 8)

AAA Response

To tackle these multiple problems, AAA tried an approach that involved both consumers and local government in developing viable, sustainable solutions. The company developed a social responsibility program that could show customers that they could rely on a much-improved quality of service and customer attention if customers were willing to pay according to their income level. AAA revamped its database and developed appropriate strategies to identify the most likely difficult customers. To enlist the cooperation of slum areas, the company identified community leaders who could serve as intermediaries between the company and its customers. Intermediaries would provide inputs on how to devise company strategies based upon the specific needs of the communities they represented. In turn, companies and intermediaries would create community groups that would educate people on the value of water service, the importance of paying for it, and policing against fraud. Local subcontractors with a good knowledge of slum areas were also hired to overcome resident's skepticism.

AAA developed a variety of responses focusing on the following priority areas:

Service improvement

- Major investments were made to substantially upgrade the quality of water supply/sanitation service and increase the number of people covered.
- Different pay rates and installment procedures were created according to the client's ability to pay.
- Billing procedures were made clear so that people could easily understand them.
- Gifts and discounts were made available for people who paid on time.
- Payment procedures were simplified, which included the development of mobile units that would allow customers to pay without leaving their neighborhoods.
- Personnel training was updated periodically.

Community upgrading. AAA invested in community activities to show that it was not just another business but it had a stake in the well-being of the neighborhoods where it provided service. Communities seemed particularly interested in receiving support for their 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 show that it sold water at a very affordable rate when compared to gasoline and soft drinks. Moreover, individual attention to customers was made a priority. Phone hotlines to report malfunctions and complaints were created drafting well-known members within the community that people trusted. The company persuaded customers who previously had avoided payments or stole water to regularize their service by dropping previous fines and legal actions. This resulted in an appreciable increase in paying customers.

Anti-fraud activities. Besides creating incentives to promote community cooperation, AAA also stepped up its anti-fraud efforts. As noted, the customer database was updated to have a clear idea of who was getting the service but did not pay. Meters were better protected from tempering attempts. Corrupt employees were fired and company inspections of meters and important installations were made on regular bases. AAA also launched an educational program to promote self-policing of water facilities as gangs were stealing pipes, which negatively affected both the company and honest customers. Legal actions against offenders were coordinated with the police and the municipalities.

Results

The initiatives described above improved appreciably the AAA's performance on a number of counts. Slowly but steadily, the non-payment culture gave way to cooperation. As it can be seen in Figure 3, revenue collection increased steadily in the first seven months of each year between 2000 and 2004. Customer on-time payments went from 45 percent in January 1997 to 72 percent in May 2004, a net increase of 27 percent. Revenue collection index, which averaged 50 percent in January 2002, rose to 87 percent in July 2004 (Figure 4). The positive trend affected not only slum dwellers but also national and local government agencies, which prior to privatization were notorious for not paying bills. The general improvement on all indicators can also be observed from the statistics of the towns of Puerto Colombia and Soledad despite the fact that their services were privatized at different points in time (Tables 1 and 2).

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 the AAA's findings. According to the National Bureau of Standards' poll, respondents consistently rated AAA over 4.0 on a scale of 0 to 5 (with five being the highest mark) with regard to: a) being a modern company; b) being a company that improves continuously; c) being a responsible; d) being concerned with the community; e) providing ample coverage; and f) being a leader in the business community.

A further indicator that customers regarded AAA to be a better utility operator than the former municipality-run provider comes from the experience of the already mentioned town of Soledad. In this case, people mobilized so that water and sanitation services be provided by AAA rather than the inefficient local municipal provider. In Soledad, according to the AAA representative, 6,000 people demonstrated in favor of privatization.

In spite of these positive advances, the representative of AAA stressed that important problems still persist. Although the company's collaboration with municipal authority in terms of coordinating planning activities has improved, political corruption and interference in company operations still remains the number one problem, particularly at the local level. Politics still affects negatively the way the government uses its scarce

resources, which results in inefficient investments and waste. At the company level, management has to speak clear to customers about the positive impact that their services bring to the community on a sustained level as attitudes of non-payment and fraud, although abated, are still very much a problem. Put it differently, negative attitudes can change only if positive results are perceived over a long period of time.

Unión Fenosa's Experience with Electricaribe/Electrocosta

Initial Conditions

In 1994, the government of Colombia initiated a major restructuring of the country's electric power industry. The key elements of the restructuring were the creation of a competitive wholesale market, modeled after the England and Wales pool, the creation of an independent regulation 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 its eight distribution companies grouped into two companies, Electricaribe and Electrocosta.⁵ Sixty-five percent of the stock of Electricaribe and Electrocosta was sold in 1998 to a consortium of 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 was taken over by AES, so the two distribution utilities came 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.⁶ 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, with Cartagena as the main urban center. Electrocosta supplies the eastern half, including the cities of Barranquilla, Santa Marta, and Valledupar. The total population of these areas (hereafter ECC) is about 9 million spread over 186 municipalities. ECC comprises about 20% of all electricity consumers and electricity consumption in Colombia.

The vast majority (85%) of ECC's customers, and about 45% of the energy delivered, correspond to the subsidized strata, plus "subnormal" customers, whose conditions lie even below the lowest official stratum. The existence of subnormal customers has to do with the very difficult socio-economic conditions of the concession area. Colombia's Caribbean coast has traditionally been one of the poorest areas of the country. In recent years, this situation has been aggravated by the exodus of refugees from rural areas affected by guerrilla and paramilitary violence, to the area's major urban centers of

⁵ 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 lack of bidders forced the government to sell both to the same consortium (Ayala and Millán, 2003: 94).

⁶ EDEL CAR is still under AES' ownership. In fact, in exchange for the sale of Electricaribe and Electrocosta to Unión Fenosa, the latter agreed to withdraw its bid for EDEL CAR.

Cartagena and Barranquilla. Subnormal customers are those that are not legally connected to the grid, including households located in the refugee camps as well as slums existing before the refugee inflow.

At the time of UF's purchase of ECC, the companies were plagued a variety of problems:⁷

- Company conditions: low collection rates (62%); inefficient commercial systems (four separate systems), inefficient and inaccurate metering, aggravated by internal corruption of employees; poor customer service, with long waits to attend to customers' concerns and lack of facilities to pay bills; negative public image.
- Social and cultural problems: widespread fraud and theft of electricity (energy losses close to 42% of total energy purchases); electricity considered as an entitlement; low-income consumers used to relatively high levels of electricity use due to the availability of essentially free electricity; widespread poverty and growing refugee population.
- Political problems: poor law enforcement system that made it very difficult to prosecute consumers for electricity fraud or theft; inability of the public sector to alleviate widespread poverty and to deal with the refugee problem; widespread public opposition to privatization and rate increases; opposition to privatization by local politicians interested in regaining their clientelistic control over the utilities.
- Regulatory problems: disruption of the wholesale market due to guerrilla attacks to transmission network, which created local market power for generators in Caribbean area.
- Legal problems: the court system could not be counted upon to resolve disputes both with customers and the government.

Solutions Developed by UF

UF officials acknowledged that initially their company did not know how to decrease losses because their prior experience in Spain, where losses and problems of theft and fraud are small, had not prepared them for what they found in ECC. Instead, they claim UF learned from the experience of EPSA in Buenaventura. Another plausible explanation might be that UF was not interested in showing rapid improvements in ECC in order to obtain a review of the distribution charges, arguing that the asset base was underestimated, and to obtain financial support from the government. Also, showing important loss reductions would have penalized ECC at the next rate review, something

⁷ Reliant and EDC claim that in fact they were already making progress for the reduction of losses by the time they sold ECC to Unión Fenosa.

that was less of a possibility in EPSA's case because it was already in better shape at the time it was acquired by UF.

UF's strategy for restoring ECC to profitability consisted of three basic components: the improvement of internal efficiency, the cultivation of close relations with the public sector to obtain governmental support for its initiatives, and the segmentation of consumers and development of separate approaches for each segment.

Internal efficiency. Improvements were pursued through the implementation of a variety of corporate information systems developed by the parent company and applied throughout UF's subsidiaries. These systems improved the quality of information flows from the bottom up, i.e. from the meter up to company financial results. A major aim was to obtain accurate and timely metering information that could be relayed to billing and collection systems, and from these back to purchases, so that fraud, for example, would 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 increase quality of service while decreasing the operation and maintenance costs.

Government relations. UF has also engaged in an extensive campaign to establish good relationships with governments at all levels. It has set up working parties with government ministers, the 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 for UF because it means that any policies that affect the utility also affect the government. The executives also stated that good personal relations with the president of Colombia and with the head of the SSPD are key to UF's success. According to the executives, poor relations with former President Andres Pastrana made it much harder for the company to improve ECC's situation at first.⁸ The SSPD lends credibility and legitimacy to the company's efforts, while presidential support defends the company against attacks from other political forces. Additionally, the cultivation of good relations with municipal and community leaders may deflect the clientelistic mechanisms that pervade municipal politics towards other areas of municipal policy. Lastly, the executives also mentioned that UF is conducting training programs for judges and public prosecutors to acquaint them better with the issues related to electricity fraud and theft, as many of these officials tended to regard these actions very leniently.

Closely connected with the governmental relations effort, UF has conducted a major public relations campaign to change the public image of the company from villain to social partner for the Caribbean communities. According to critics, this is in part due to the fact that UF delayed important investments while allowing the deterioration of service quality.

⁸ Apparently, Pastrana promised UF to seek a favorable rate review in order to entice UF to buy ECC, but was later on unable to convince CREG to carry out the review.

Market segmentation. UF divided its customer base into three segments, which it addressed with different priorities and strategies. The top priority was non-residential customers and residential customers in strata 4-6. Next came the subsidized customers in strata 1-3, and last, customers in subnormal zones. The strategies to address the three segments were a variable mixture of two components:

- A “business as usual” management: performance improvements through 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 occurred at all social levels, with corrosive results arising from the negative examples of politicians, companies, and wealthy families. Going after these consumers helped counteract the general feeling of impunity and demonstrated the company’s seriousness of intent. A variety of mechanisms were implemented to collect outstanding bills, including multiple points of collection, prizes for on-time payment, and contracts that extended repayment over several years under favorable terms. UF representatives remarked that the purpose of the contracts is not so much the recovery of amounts past due (on a discounted basis, these amounts are practically pardoned), but to keep the customer legal and build good payment habits.
- A “base of the pyramid” approach: development of financial terms of service consistent with income levels and flows in the lower socio-economic rungs (e.g. daily payments); emphasis on community self-improvement through the creation of local micro-enterprises in charge of metering and collection (and eventually of technical service), community responsibility for payment for electricity, and assistance for community initiatives (e.g. sports) and commercial uses of electricity; establishment of a separate legal entity (Energía Social) to handle the very different organizational needs of this approach; heavy emphasis on government involvement through subsidy schemes.

The second approach was developed for so-called “red areas”, where guerrilla presence and other problems made billing and collections very difficult for ECC. In “subnormal” areas, a mixture of the two approaches was followed, and the first approach for the rest of the market.

These three components are obviously interrelated. The improvement of internal efficiency was closely tied to the first market segmentation approach, whereas government relations have been particularly important for the second approach.

Some of the approaches followed by UF were quite innovative. For the “normal” customers handled under “business as usual,” 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 U.S. Indeed, many of UF’s actions were consistent with the lessons of the “base of the pyramid” approach, the currently known best practices for doing business with low-income consumers.⁹

⁹ See Prahalad & Hart, 2002.

One important condition that facilitated the “base of the pyramid” approach, according to UF staff, was the fact that Colombian society is highly organized, which meant that UF was able to find community leaders and representatives without difficulty. In less organized societies, this can be an obstacle as the concept of community responsibility for utility supply may be difficult to implement. It also must be stressed that this approach came into play when more traditional ones based upon the Spanish experience failed. In so doing, UF officials drew upon the experience of AAA that was operating in the same area and had earlier faced many of the same challenges.

Company data shows major improvements in performance indicators, with an overall reduction in energy losses from 42% at the time of the purchase (1999) to 19% currently, and an increase in collections from 62% at the time of purchase to 90% at present.¹⁰

It is remarkable that many of the same approaches were followed by UF in the Dominican Republic, without impeding the company’s notable failure there. In the Dominican Republic, UF installed new information systems and customer meters, tried to create local microenterprises to handle collections in slum areas, and persuaded the government to create special police units to go after fraud and theft in “normal” areas. Perhaps the anti-fraud measures would have worked in the absence of the brutal macroeconomic crisis faced by the country since 2003, but there was little indication even before 2003 that, after three years in the country, 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 a base of the pyramid approach as tried in Colombia.

A fundamental question in UF’s success so far is the extent to which it is due to the company’s ability to obtain government subsidies and other favorable policies, as opposed to the success of the company’s efforts at cutting theft and losses, and increasing collections. For the 2001-2003 period, the company states that it received government subsidies amounting to COP 72bn (6bn/mo.), which appear to be related to making up for the insufficiency of the cross subsidies built into the rates.¹¹ For 2004, additional subsidies are being provided to ECC under the Social Energy Special Fund (FOES), which uses 80% of congestion rents to cover up to COP 40 per kWh for consumers in subnormal areas, i.e. a special consumption subsidy for very low income consumers. UF estimates monthly subsidies from FOES of COP 7bn per month. They also mention a 2004 government budget of COP 39.5bn (3.3bn/mo.) for subnormal areas, attributable to the legalization of illegal and dangerous connections. The total subsidy amount for August 2004 is thus COP 10.3bn.

¹⁰ These figures should be viewed with some care as they apparently include the effect of subsidies. The electricity delivered to low-income communities at the 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 ECC is not actively working with the community to induce greater individual responsibility. A similar pattern occurred in the Dominican Republic.

¹¹ Such insufficiency can occur if electricity demand is growing more rapidly in the subsidized strata 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.

To put the magnitude of the subsidies in perspective, several comparisons may be of help:

- The subsidies received during 2001-2003 (COP 72bn) are equivalent to 19% of total capital expenditure by UF over this period (COP 381bn).
- Total subsidies expected for 2004 (COP 124bn) amount to about 10% of total sales expected for the year, or about 60% of the expected net cash flow of COP 100bn.¹²
- If we estimate subsidies during 2003 at the historical level of 6bn/month, the increase in subsidies from 2003 to 2004 (COP 52bn) 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 ECC, but by no means the sole or even the main element. Even without the subsidies, ECC would have significantly improved its financial and operating performance since the purchase of the Electricaribe and Electrocosta from AES and Reliant.¹³

Of greater concern, however, is the fact that Energía Social is far more subsidy-dependent than ECC as a whole. For the month of July 2004, Energía Social's collection rate is 54% with subsidies, but only 13% without; the company is also planning to tap European Union subsidies for the refugees. This could indicate that UF's success in dealing with theft and nonpayment hinges on its ability to extract rents from the government. Collection levels show a significant improvement from 2003 to 2004, but as already indicated, they also include payment of government subsidies as additional collections. On the other hand, one must 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 to a large extent by Energía Social, the relative magnitude of the subsidies might not be considered 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 UF is fully committed to tackling losses and non-collection 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 UF's performance and degree of success so far.

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

¹² UF expects losses of COP 100bn for 2004.

¹³ There was some additional government help, first in the form of payment of all of the arrears owed by public-sector 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 ECC, and the capital contribution stemmed from the government's partial ownership of ECC.

marketers to serve all consumer strata, to avoid the “cream skimming” of its largest customers. Presumably, the loss of such customers would impair the cross-subsidy scheme and jeopardize ECC’s financial well-being. On the other hand, the current regulations may hinder the development of more competitive power markets in Colombia. Therefore, the impact of the regulations on ECC’s finances, and on the development of a power marketing sector, may be a worthwhile exercise.

In conclusion, UF is making a significant effort to improve ECC’s situation, and more specifically to address the severe problems of theft and nonpayment that ECC had at the time of privatization and which to a large extent were inherited by UF from ECC’s prior owners. The overall statistics for ECC show major improvements in its financial and operating condition. At the same time, we have been unable to verify independently the claims made by UF or those made by 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 confronts the most difficult cases of low-income communities. It would be desirable to have more detailed data showing which collections come directly from the public sector and which from customers by customer segment in order to measure actual progress in serving low-income consumers. 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 UF’s low-end customers.

III. Dealing with Political Opportunism in Rate-Setting

This section presents the discussion of two cases, one in water supply and another in electricity, facing the crucial issue of time consistency in tariff policy of public utilities: the problems in maintaining cost recovery tariffs in the electricity sector of Dominican Republic, and the problems arising after the concession to a private operator of the water supply company of Guayaquil, Ecuador.

AES Corporation-EdeEste (Dominican Republic)

Few other countries in Latin America—indeed, around the world—exemplify better the impact of political transaction costs on major institutional reforms than the Dominican Republic. Attempts to improve the performance of the Dominican electricity sector through reforms of its institutional framework, have faced repeated challenges stemming fundamentally from the inability to sustain policy commitments across electoral cycles. The experience of EdeEste, an electricity distribution company operated by AES of the US, both reflects and illustrates the consequences of political opportunism. Political opportunism refers to the attempt of elected officials to change the rules of the game (i.e., in our case tariff rates are the most frequent target) 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—again following the regional trend—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.

Like on past occasions, the Dominican reform followed the regional pattern. The sector was vertically separated into generation, transmission, and distribution segments. A cost-based spot market was established for generation. Transmission and distribution rates are to be based on the cost of service for efficient notional service providers as in the Chilean model. 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 ownership side is where the reforms have perhaps deviated from the regional standards to the greatest extent. The state retains a significant presence in the sector as the sole owner of hydroelectric facilities, the provider of transmission service, and 50% owner of a significant number of thermal generation plants and the three distribution utilities, including *EdeEste*. The state’s ownership role is consolidated under the CDE’s successor, called the *Corporación Dominicana de Empresas Eléctricas Estatales (CDEEE)*. As a result, CDEEE is unquestionably the most powerful actor in the sector, especially since its takeover of the distributors *EdeNorte* and *EdeSur* upon UF’s exit from this segment.

Government control over the sector has also remained very strong owing to the lack of regulatory independence. Although nominally a three-member commission, the SIE’s decisions are in practice made by the presiding member, which 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, as we shall see. 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 precisely so that political criteria 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 former CDE during the capitalization process. As its name indicates, EdeEste provides distribution service to the eastern part of the Dominican Republic, including about half of the Santo Domingo metropolitan area. At present, the company has about 300,000 registered clients, with a significant number of additional consumers without individual meters 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 worldwide presence in electricity generation and distribution, won the capitalization auction for EdeEste in 1999, acquiring 50% of the company's ownership as well as operating control.¹⁴ 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 also capitalized by the Dominican government; AES' generation holdings further increased with the development of the greenfield Andrés combined cycle plant, including an LNG regasification terminal.¹⁵ In November 2004, AES reached an agreement with a US private equity group to sell its ownership interest in EdeEste, although AES will retain operating control over the company.

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, as the government preferred to leave their resolution to the new private operators:

Political problems. CDE had been managed according to political criteria resulting in political clientelism and corruption. 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. Many employees were hired for patronage purposes rather than company needs. Many customers, including major governmental agencies, did not pay regularly for their electricity, either because it would

¹⁴ The other two distribution companies, EdeNorte and EdeSur, came under the control of Unión Fenosa (UF), a Spanish utility with extensive holdings in the Caribbean Basin.

¹⁵ 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.

be politically unpopular to do so, or because corrupt employees facilitated fraud and nonpayment.¹⁶

Company conditions. Low rates (prior to capitalization), excessive costs and high levels of nonpayment for energy hampered the financial condition of the CDE. As a result, it lacked the funds to provide acceptably good 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 (IPPs). However, the contracts were often privately negotiated under the duress of 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 non-payment and theft, not only in shantytowns but also in middle and upper class neighborhoods. People across social classes perceived electricity supply as an entitlement and refused to pay for it. Illegal connections and meter tampering were common. The state had implicitly condoned this attitude for many years by not acting against electricity fraud or theft, or 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 on to further loss of revenues. At the time of capitalization, total energy losses in the system ranged from 40% to 60% of electricity production, and collection rates stood at 70% of total invoiced amounts. This means that of the total energy fed into the interconnected system, revenue was collected for only 30 to 40%. Sharply raising rates before capitalization without a parallel rise in quality probably made these problems worse.

Reform in Practice

The history of the Dominican electricity sector 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 levels rapidly enough through a combination of service improvements with penalties for delinquent customers. In fact, 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.

¹⁶ 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 which is never invoiced because of fraud, theft, or lack of metering and customer registration.

The problem of political opportunism becomes very clear when the sequence of events in the successive crises is examined closely. Each crisis has been 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. Thus government opportunism has been at the origin of each crisis. The government's subsequent inability to fill in the financial gap has thrown the sector financially off-kilter. When the private companies have exhausted their willingness to cover the hole with their own resources, the crisis has reached its zenith, in the form of massive supply shortfalls ("financial blackouts"). Then, the government has stepped in to take some politically painful measures, such as raising rates and cutting subsidies (see Figure 5 for a graphic representation of the crisis cycles since capitalization). Government opportunism has also affected the behavior of the distribution companies, which at each crisis have preferred to let the government maintain some subsidies rather than having to address 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 on the part 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 price or foreign exchange movements, and certain electricity purchase costs.¹⁷ Correcting these problems would most likely increase rates, hence the government's reluctance to include them in the rate structure.

Governmental commitment problems are noticeable too in the legal treatment of electricity fraud and theft. The Dominican civil code does not adequately criminalize these activities, and imposes onerous due process requirements for utilities to penalize end users who engage in fraud or theft and their accomplices. Yet instead of amending the laws, the previous government resorted to a clumsy and expensive scheme of setting up patrols formed by 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 certainly 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.

¹⁷ 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.

Why Has Commitment Been so Hard to Attain?

Ultimately, the problems of political opportunism are rooted in the nature of the Dominican political system. To the typical problem of imbalance between the executive power and the other powers in the political system, common throughout Latin America, we can add a party system without major ideological differentiation (which makes parties more like electoral machines than programmatic organizations), and a legacy of clientelism in which free or subsidized provision of public services constituted 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 making changes instead of refusing to renegotiate with the private investors.

At a more specific level, several issues have aggravated the difficulty of sustaining a commitment to make the reform work:

Unrealistic expectations. The controversial nature of the reform led the government that initiated it (the Partido de la Liberación Dominicana under Leonel Fernández in his first mandate, 1996-2000) to “oversell” the reform in order to overcome its critics. The government encouraged unrealistic expectations that although rates had been sharply increased, they would quickly decrease. In fact several years would probably elapse before efficiency improvements could be passed on to end-users and rates could never decline to the pre-reform levels, which only covered operating costs. Of much greater importance, such promises conveniently ignored the fact that the most important component of the cost of electricity to the end user is the cost of generation, and in a mainly thermal system like the Dominican one, the cost of fuel, which in this case is subject to significant volatility and foreign exchange movements. Unrealistic expectations raised the bar for the new private operators and the probability of failure in the public’s eyes.

Company strategy. AES tried at first to enter the low-income areas where electricity consumption is mostly unmetered. Its attempts were met with acts of physical aggression against its staff, and bring in police support only led to an escalation of the level of violence. Faced with such a situation, AES preferred to agree on a subsidy program with the government 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 long-term solution for the reduction of nonpayment. It is worth noting here that AES is mainly a generation company, with little experience prior to EdeEste in dealing with this type of situations (when it purchased Electricidad de Caracas, the company was in relatively good shape). In contrast with the success of AAA, the water utility in Barranquilla, AES may simply have lacked the knowledge to interact with low-income communities, attempting to address the problem only through legal and coercive means that created an adverse reaction.

It is important to add that UF not only had similar difficulties in low-income areas, but has also been accused of being as opportunistic as the government. The argument is that, through the knowledge it gained about the country as a prior consultant to the CDE, UF had not intention to operate through the institutional structure created by the reform, but from the start preferred to negotiate private deals with the president, as he had the real power. UF's could derive bargaining power from quality of service problems to the extent that consumers also blamed the government for such problems, inducing it to provide subsidies to UF. It is striking that even UF's exit from EdeNorte and EdeSur was marked by controversy as UF secured—through private negotiation with then-president Mejía—a significant payment from the government, guaranteed by a lien on the sales revenues of the distributors' major customers.

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

The mixed enterprise model. In contrast with the success of mixed public-private utilities in Colombia and other countries, in the Dominican Republic the coexistence of public and private ownership seems to have created greater mistrust and conflict in the relations between the government and private operators. As a shareholder, the government has sought financial transparency in the capitalized companies and, in UF's case, questioned UF's administrative decisions, which appeared opportunistic to the government.¹⁸ In fact, the government's dissatisfaction with UF's practices was one the reasons alleged by the government for the renationalization of EdeNorte and EdeSur in September 2003.

Extensive state ownership in the sector. Leaving a significant portion of the electricity sector's assets in the hands of a single state-owned company created at least two impediments to the commitment of the government to reform. First, the government was able, as in the past, to use the CDEEE as a financial cushion to provide ongoing subsidies, for instance 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, as CDEEE management might be inclined to reassert a leading role for public enterprise in the electricity sector (for instance, after the takeover of EdeNorte and EdeSur by CDEEE, these companies have received substantially more subsidies than EdeEste).

Quality of service 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 the service shortfalls.

¹⁸ The government accused UF of using contracts with UF affiliates to siphon off profits through excessive contract prices, taking advantage of UF's operating control over EdeNorte and EdeSur.

Some Emerging Lessons

Strong pressure on the part of the multilateral financial institutions, and the political capital available to the new government, have finally led to significant rate increases over the past months, easing somewhat the financial pressures on electricity suppliers. Nonetheless, workshop participants agreed that a permanent solution must rely on placing the sector on a commercially sound footing and not on high rates alone. At high levels of electricity consumption, high rates in combination with years of poor quality of service have led to extensive use of backup generation capacity, and in some cases of full disconnection from the grid. Reliance on high rates alone may only encourage further substitution of self supply for network supply and further theft and fraud, ultimately making problems worse, not better. Fortunately, research by AES and other entities after several years of “roller coaster” experiences is beginning to shed some light on the additional elements of a permanent solution:

- Collection rates for non-governmental customers respond mainly to quality of service, and specifically the number and length of blackouts. At the same time, service problems appear to be largely caused by financial difficulties causing generators to shut down for lack of fuel, and not by a deteriorated distribution infrastructure. This means that a virtuous cycle could be “kick started” through an infusion of funds that allowed a sustained period of good service, combined with rates that allow for full cost recovery and a strong collection effort.
- In line with the previous finding, willingness to pay appears to be high for low-income consumers. This would be consistent with Interagua’s experience in the sense that the alternatives to network supply for the poor, such as kerosene for lamps or the use of inverters and small generators for other uses, can be quite expensive, for instance because the poor face very high interest rates for the acquisition of durable goods such as generators.¹⁹ It is also consistent with the experience of other distribution utilities in countries of similar per capita income levels, such as Luz del Sur in Lima, which have been able to make low-income users become legal customers and even to extend legal service to previously unserved low-income areas.
- AES appears to be making an effort to reduce losses as another key factor to break the vicious cycle of poor service and financial limitations, and as an alternative to unreliable government subsidies. As a result, losses have been significantly reduced, although as in the case of UF in Colombia, the ratio of losses is distorted by the fact that some or all of the improvement may come from government subsidies rather than from actually legalizing customers.

¹⁹ In the Dominican Republic, the survey of household electricity usage by the National Energy Commission (the energy planning agency) shows that low-income households use electricity mostly for lighting and small appliances such as TV sets. Given the high cost of electricity, cooking and hot water heating is done with bottled gas propane gas, except where electricity is illegally obtained.

- The new government appears to be trying to develop a more focused subsidy system that can direct resources to the neediest households rather than providing a blanket subsidy through the rate structure, as has been the case until now.

In addition to these emerging solutions, the issue of transparency in electricity policy and regulation also merits attention. The reform process itself was, by international standards, fairly transparent. The capitalization process was carried out with the help of reputable institutions and consultants, and full documentation is available from the capitalization agency.²⁰ The Electricity Act was discussed and passed by the legislature. However, the obstacles to commitment described above point to several significant informational problems:

- Lack of transparency in contracting with IPPs created a negative perception of private sector participation in the sector and the belief that the sector's problems would be solved by terminating these contracts under charges of corruption and negligence.
- Insufficient discussion of the impact of the reforms may have allowed the first Fernández government to create misleading expectations about the reform.
- Inadequate communication between EdeEste and low-income consumers, and more generally insufficient efforts to break the cultural resistance to private service provision, have complicated the resolution of the severe problem of theft and nonpayment by electricity end-users.
- Lack of transparency in the management of EdeNorte and EdeSur by UF 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 the transmission and hydro assets allowed the government to make use of nontransparent subsidy schemes, particularly the resale of electricity at prices below purchase costs.
- Lack of transparency about regulatory and governmental decisions creates the perception that they are the result of dubious political deals rather than sound public policy.
- Poor information about the source of service interruptions has heightened conflicts along the sector's production chain and increased public hostility towards the private generators and distributors.

²⁰ The Fondo Patrimonial para el Desarrollo (FONPER).

There is thus an urgent need to inject much more transparency in decision making at many levels within the sector. 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 for policy decisions; the SIE for regulatory decisions; and the sector companies, including EdeEste, 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 (Guayaquil) Interagua *cía.* Ltda.

Interagua is the special purpose company established in Ecuador to operate the Concession Contract for the provision of water and waste management services in Guayaquil and its surrounding area, which has a population of over 2 million people. The Concession Contract has 30 years duration (2001-2031). The majority shareholder of Interagua is International Water, established in the UK and whose shares are equally distributed between Bechtel (US) and Edison (Italy).

Initial Conditions

Up until 1995 two separate companies managed independently water and waste services in Guayaquil. The Municipality of Guayaquil ran the wastewater and rainwater drainage services while the water services were provided by a provincial entity.²¹

Political problems. Prior to privatization, the SOEs operating in the Guayaquil area displayed many of the problems already observed in Colombia. Both companies were managed according to political criteria that fueled political clientelism, corruption, and prevented them from addressing people's needs. In 1995, only 65 percent of the population had access to water and 45 percent to waste services. More specifically:

- a. Overstaffing was common and often responded to political criteria.
- b. Municipal and central government institutions failed to pay their bills.
- c. Lack of liquidity prevented needed investments in infrastructure and technology.

Social and cultural problems. Guayaquil and its surrounding area is characterized by high levels of poverty (40 percent) and unemployment (13 percent). This has contributed to a culture of non-payment and theft, which was well entrenched in Guayaquil. This was common not only in shantytowns but also in middle and upper class neighborhoods. People across social classes perceived water as entitlement and refused to pay. In turn, this led to huge losses since there was no political will to go after offenders.²²

²¹ As a consequence Interagua is still providing 4 "Cantons" outside its Concession area with bulk potable water, which is distributed by those "Cantons".

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

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:

- a. Poor revenue collection and deficient billing.
- b. Antiquated tariff structure and monitoring system.
- c. Low coverage levels.
- d. Bad service provision.
- e. Bad customer service.
- f. Bad public image.
- g. Large financial losses.
- h. Extreme dependence on government financing.
- i. Poor labor productivity.
- j. Deteriorated infrastructure for lack of investments.

Theft and non-payment. Theft and non-payment issues followed similar patterns already observed in Colombia. The high level of tolerance for theft and non-payment had much to do with the politicians to whom the companies responded. Fearing a popular backlash and a loss of votes had they approved an aggressive enforcement policy, local politicians allowed these problems to continue. The consequences were:

1. Proliferation of illegal connections.
2. Tempering with meters.
3. Tolerance for employees' corrupt behavior.
4. Lack of proper billing

A New Approach

By 1994, the performance of both SOEs in Guayaquil deteriorated to the point that the decision was made to merge them into one new company named Ecapag²³ with the view to privatize the services by inviting international providers to bid for a long-term concession contract. The whole process was supported by the Inter American Development Bank (IADB) through a Public Sector Loan (1026 EC) which included the following components (Structural strengthening previous to the transfer, support for labor orientation, emergency works for both water and wastewater).

The accord with the IADB was made possible thanks to the strong personal commitment of León Febres Cordero and his Partido Social Cristiano (PSC), without whom reform could not have materialized. It is important to stress that the PSC is the most important party in Ecuador, particularly on the coastal region and carries a substantial amount of political weight at the national level. When Febres Cordero stepped down, he was replaced by another PSC mayor, Jaime Nebot (2000-current), who renewed his

²³ The status of creation of Ecapag expressed the idea that the purpose of the creation of this entity was to prepare it for the transfer of the services to the private sector.

commitment to his predecessor's privatization plan. This policy continuity was of paramount importance for the success of the privatization plan.

Between 1996 and 2001²⁴, Ecapag went through a substantial restructuring program aimed at shaping up the company and making it attractive for foreign investments. In other words, what the city of Guayaquil and the IADB did falls into one of the standard recommendations mentioned in the privatization literature, which contemplates company restructuring prior to privatization in order to maximize the chances for a successful transfer. This entailed, among other things:

- a. Improving the company image.
- b. Eliminating company debt²⁵.
- c. Increasing economic efficiency.

During its first five years Ecapag reached significant results on all fronts mentioned above. The old company management was replaced with a more professional one. Ecapag also started an investment campaign to improve performance. Improvements in service quality were necessary before tariff increases could take place. As service improved, tariffs were allowed to increase steadily since previously they were far from covering costs. This was deemed as being a crucial decision for the success of the privatization effort. The intent was to avoid that tariff increases would be left to the private operator to decide at a later stage. Had this happened, it could have produced a massive popular rejection, thus jeopardizing the whole process. Thus, Ecapag created a lucrative tariff structure that could appeal to investors and that incorporated only cross-subsidies between users of the service. It is also important to note that the actors involved made a deliberate effort to make the process before and after privatization transparent in order to obtain public support. This helped in obtaining the endorsement or at least non aggression of political parties, key interest groups, and the media.

Concession Contract

The concession contract also provides the regulatory framework for Interagua. By the same token, Ecapag's board of directors turned into the regulatory institution to which Interagua is accountable. The board has five members. The Ecuadorian executive branch appoints Ecapag's president, whereas the mayor of Guayaquil and local institutions name the other four members. During its existence, the Ecapag's board has experienced a substantial degree of stability, which has helped in terms of regulatory predictability.

The most important aspect of the concession contract focused on service coverage, which had to increase from 60 percent to 95 percent. The priority in coverage extension targeted marginal areas. The five main additional indicators of compliance were:

- a. Quality standards for the water supplied.
- b. Customer service to be provided in timely fashion.

²⁴ The process was long, due in some part to the first failed attempt of 1997.

²⁵ Taken over by the central government.

- c. Water pressure requirements and goals.
- d. Notification of service interruption.
- e. Monitoring and control of industrial waste.

In terms of performance targets, the concession contract established a review every five years. This applied also to the tariff structure that was to stay the same for the first five years. The reference tariff before privatization was set at $TR^o = \text{US}\$0.26/\text{m}^3$ in March 2000, based on a tariff structure that was put in place in 1998, long before the resuming of the Concession Process after the first failed attempt of 1997, it established charges according to consumption (Table 3) rather than type of customer (household vis-à-vis commercial/industrial). The tariffs had three components: a) fixed charge; b) variable charge for water; and c) variable charge for waste disposal. Subsidies were established only for the first two categories²⁶ of consumption (up to 30m^3) and were to diminish over time although they actually dropped at a slower pace than expected (Table 4). Tariff revisions were initially scheduled every five years after privatization. In case of irreconcilable differences between Ecapag and Interagua, the concession contract contemplated the appeal to international arbitration. In short, the concession contract established reasonable goals over an acceptable period of time.

Since Interagua took over from Ecapag, the most important issue of contention has indeed been tariff adjustments. By the time Interagua took over, tariffs were 7 percent less than what they were supposed to be by the revision formula established in the contract. The contract allows for an automatic tariff revision (quarterly) and one of the revision formula's components is the Electricity Index published by the INEC (Instituto Nacional de Estadísticas y Censos). Ecapag unilaterally decided it was not reflecting correctly the evolution of the costs to Interagua, resulting in a freezing of this component of inflation recovery. The application of this freeze to Interagua affected negatively the company, which claimed that such a unilateral move was in violation of the concession contract. Figure 6 displays the difference of the two rates since the freeze took effect. Interagua claimed that as a result of the tariff shortfall, it experienced liquidity problems to meet its contract obligations and could not get access to long-term financing to pay for its investment plans. This situation generated a long-lasting dispute between Interagua and Ecapag, which lasted until a compromise was reached in July 2004²⁷.

Interagua's Response

Interagua's approach to problem solving followed a conventional path. The social responsibility program strategy that AAA developed in Colombia in poor areas did not materialize in Ecuador. Interagua's management believed that local associations could be prone to politicize a potential collaboration with the company and decided to use those contacts in a controlled manner. The management opted for an effort that would educate consumers by publicity campaigns as well as door to door visits by company representatives. The main issue of the campaign was to teach customers to better manage

²⁶ Those subsidies were compensated by the consumers in the higher ranges of consumption.

²⁷ Without recourse to the International Arbitration Court option contemplated under the terms of the Concession contract.

their water consumption and avoid waste. According to the company, people's complaints about tariffs were mainly the result of waste. By teaching on how to use water more efficiently, Interagua believed that customer could cut their bills appreciably. Moreover, Interagua tried to improve service quality to old customers as well as expand service provision into shantytown areas, which traditionally had relied on water delivered by trucks as their only supply. Interagua also began to address a host of problems that Ecapag had not been able to overcome, which included lack of efficient meters to bill according to consumption, an inefficient billing system based upon estimated rather than actual consumption, and waste of water resources. Interagua's major actions are described in the following paragraphs.

Service improvement. New investments were made in both water supply and sanitation as well in improving the quality of the water provided. In addition, improvements were made to the facilities and employees' attitude towards customer claims. Finally, service coverage was extended to marginal areas.

Customer relations. Through educational programs and publicity campaigns customers learned how to make use of their water in a more rational way than before and their bills became less expensive. As service improved, 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 large numbers of new meters, which were also more difficult to temper. Likewise, corrupt employees were fired and customers were urged to report company representatives demanding bribes to deliver service. The company also cracked down on illegal connections and their providers.

Results

In its first three years of operation Interagua reported some noticeable advances. Service coverage, favoring in large degree poor neighborhoods, expanded through the installation of 20,000 new connections benefiting more than 100,000 people. The installation of large numbers of new meters allowed the company to improve its invoicing procedures based upon actual, rather than estimated consumption. As consumption monitoring improved through meter installation, so did payment trends. An example of such actions and their results can be seen in Figure 7 where consumption invoices came close to match total consumption. In other words, as monitoring improved people began to consume less and pay more. As a result of its actions, 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's management. Service improvement was particularly remarkable in shantytowns. Prior to privatization, shantytown dwellers relied on water trucks whose delivery was very unreliable. Once Interagua started its service people began to have water around the

clock and pay for it an average of \$0.26 per m³ as opposed to \$3.50 per m³ under the old system²⁸.

Such improvements have translated in better customer evaluations and public image for Interagua. According to an opinion survey of October 2004, 80 percent of the respondents were against changing company provider (Figure 8). In terms of service cost, surveys show a mixed review. In two areas (north and central) serviced by Interagua respondents found tariffs to be fair, whereas in the remaining three opinions were either evenly split or found tariffs to be expensive (Figure 9). In general, once service improved in a noticeable way, the non-payment culture started to slowly change. Indeed, there is less resistance toward service payment today than in the past. By the same token, there have not been ideological objections to a foreign-owned private company managing a public utility. In other words, 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 to note 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 infrastructures serving poor areas (Figure 10). Interagua's management emphasized that the keys to success in dealing with its customers rested a substantial improvement in service quality, good communications skills, and a transparent, straightforward management style.

While poor people can be induced to pay once they receive good service, the same cannot be said for government agencies and other institutional customers. In fact, Ingering problems come from some categories of customers enjoying 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 such institutions are large customers, which are potentially the most profitable ones as well.²⁹ To overcome the problem Interagua started to put pressure on different categories of institutional customers to pay their bills and reduce consumption. Table 3 shows a small sample of three cases, including the regional penitentiary, the University of Guayaquil, and Espol (Escuela Politécnica del Litoral). As it can be seen, despite a reduction in consumption over time, the first two institutions still have multimillion-dollar debts still to be settled.

Notwithstanding the progress made, Interagua faces still daunting problems. Cross subsidies bear heavily on large consumers (over 5,000 m³ a month, see Table 3), which makes the unit price very expensive and creates a risk that large users may try to establish their own independent water and sanitation provisions.³⁰ From a financial standpoint, the

²⁸ While average family consumption when supplied by tankers was around 5 m³/month, it raised to 11 m³/month when those users were connected to the network. As a result, in spite of a doubling of their actual consumption, those families were paying about a third of what they used to spend for water from tankers.

²⁹ Although the central government is a party to the contract, it is not complying with its obligations since it is not paying for the service as per the conditions of the concession contract.

³⁰ This is a typical trend that large customers adopt when they regard their rates as unduly subsidizing poorer customers. It has already affected electricity companies in the Dominican Republic, causing them the loss of substantial blocks of revenue.

long tariff dispute with Ecapag has made it difficult for the company to raise money both domestically and internationally, which negatively affects 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.³¹ Likewise, national and local government institutions delay or ignore the payment of their bills, which sends a bad message to the public at large and is financially costly for the service provider. Moreover, although the relationship between 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 case is also vague enough to allow ample 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 appease short-term political agendas.

Other issues emerged when Ecapag unilaterally decided to publish new service regulation requirements that created additional obligations for Interagua, which were not contemplated in the concession contract. This new regulatory provision allows Ecapag to fine the service provider for non-compliance, but it is perceived by some to respond more to political exigencies rather than technical issues. This, in turn, leads to the last point. Much still depends on the political will of individuals (i.e. the mayor of Guayaquil and the political interests represented on the board of Ecapag) whose decisions are crucial for the future of the concession contract.

IV. Theoretical Insights

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

Political Opportunism and Political Transaction Costs

Time inconsistency theory was first outlined by Kydland and Prescott (1977). 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 by sticking 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 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

³¹ The Dean of Espol names one of the five directors of Ecapag.

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, political 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 even 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 sectors, the need for regulation makes reform processes heavily dependent on future government behavior, which imposes heavy transaction costs where governments are less predictable.

Transaction cost theories can thus help us understand the different patterns displayed in utility regulation in Ecuador and the Dominican Republic. Political conditions in the Dominican Republic—a presidentialist system with weak political parties and strongly clientelistic voters—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, as it actually happened, without any obstacles to their 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 sectoral institutions, especially the regulatory agency, leading 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. In the first place, the reliance on a direct line of communication with the executive branch to solve problems undermines the transparency of the regulatory process and worsens the company's public image. On the other hand, 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.

This suggests that in this kind 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 exigencies rather than economic efficiency. Coupled with Ecuador’s political and economic instability of the late 1990s, these conditions posed formidable transaction costs. To overcome them, the mayors of Guayaquil and the IADB worked to reduce such costs by restructuring the company, displaying a strong political commitment to the project, building a strong political coalition around it, and diffusing possible popular opposition by making the process transparent, which brought legitimacy to it. The key question in Guayaquil is to what extent will the gains obtained so far 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 a favorable political will rather than a strengthening of 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 with the election of a new leadership.

The inclusion of an international arbitration clause in the Interagua’s concession contract was an additional effort that the Guayaquil city government made to lower the 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 introduces 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 would not occur as they become economically unfeasible. 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 clientelistic interests of the government or judge in charge, which creates great uncertainty.

Colombia conforms to this scenario quite well. It has in many respects 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 the 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 we are also made toward better legal enforcement, but as noted earlier it is time consuming, 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. The more positive experiences occur, the stronger the sense of mutual trust becomes, and the more complex exchanges can be attempted as time goes by. In so doing, negative cultural attitudes toward specific transactions (such as non-payment, fraud and theft) can be turned into positive ones.

In Colombia prior to privatization, and in Guayaquil prior to reform, no one trusted anybody. The utility companies seemed to have understood this problem well, even if some companies 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 had been faced the wrong incentives, which reinforced cultural biases with regard to paying and stealing. The social responsibility programs of AAA and ECC, and the customer service and communication campaigns of 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 than relying primarily on conventional legal mechanisms of enforcement 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 different actors in the sector only led to increasing mistrust and eventually to UF'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 learnt from Interagua's experience, at times even grassroots organizations are too politicized or clientelistic to make them suitable intermediaries between the utility and the community.

Transparency and Legitimacy

Transparency and political legitimacy are key factors affecting transaction costs that are often overlooked but are crucial in bringing political support for concession contracts in politically sensitive sectors 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; on the other side, 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 Dominican experience suggests that more transparent and legitimate the reform process, the lower the transaction costs, as the potential for political opposition is diminished. Indeed, one of the most common justifications used by governments to seek to alter the terms of contracts and other commitments undertaken by their predecessors, is the claim that such commitments were marred by irregularities.

V. Comparative Assessment

Key Factors Affecting Privatized Network Utilities

We asked the participants to address the impact of a variety of factors that are often cited in the literature as affecting both the theft and nonpayment for utility services, and 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 possibility to solve them or at least to mitigate them.

A. 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 conditions which create very significant levels of economic volatility. Inflation rates, foreign exchange rates, interest rates, and levels of economic growth, among other variables, can sharply fluctuate over short periods of time, impacting very dramatically the operating conditions of private utilities and placing great strains on regulatory mechanisms. Economic recessions and inflationary episodes can induce 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 attitude of the current presidential administration has made it possible to solve potential conflicts between the private utilities and government agencies, arising out of macroeconomic conditions, to be worked out in a cooperative fashion.

In the Dominican Republic, macroeconomic instability has been a major problem after over the last two years after a long period of rapid growth and favorable economic conditions. The recession of the US economy from 2001 on, 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 the executive decree freezing electricity prices, which then gave rise to the serious conflict between Encapag and Interagua.

Political clientelism. Clientelism is pervasive throughout the region, impacting public utilities with particular force. 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 poor people who can hardly afford them. 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. At one extreme, Interagua has been sheltered to some extent from clientelism, while clientelism has affected the Dominican electricity sector very deeply.

The pattern displayed by the Ecuadorian case may be explained by the fact that the mayor of Guayaquil guaranteed a strong commitment 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 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 to shelter the privatization process from further interventions by the national government.

In the discussion about the Colombian cases, one speaker was quite explicit in stating that the heart of the problem rests with political corruption 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, which affect most negatively the poorest sectors of society.

In the Dominican Republic, clientelistic impulses were not checked by the continuity of a government committed to reform. First of all, clientelism is pervasive in the Dominican Republic. Analyses of the Dominican political system (Espinal & Hartlyn, 1999) and anecdotal evidence suggest that the provision of free goods and services, including free electricity service, was extensively used by President Balaguer during his long tenure in power. Even in the recent presidential election (August 2004), *The Economist* reported that the incumbent government was, despite the severe fiscal crisis, giving away motorcycles in the hope of gaining votes (Economist, 2004). The alternation of presidential and legislative elections every two years exacerbates clientelism by keeping political competition permanently strong. Second, the change in 2000 from the Fernández administration to the Hipólito Mejía (Partido Revolucionario Dominicano) government robbed the reform of the commitment needed to resist clientelistic pressures. Not surprisingly, the new government began to curb 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 to a significant extent 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. New office 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 non-existent. To this day, what matters is not the institution and what that institution is supposed to do, but rather the personality and policy preferences of political executives.

According to the first workshop's speakers, the policy approach of the previous presidential administration of Colombia seemed often indecisive and too weak to run against powerful political interests that benefited from established practices of political manipulation, non-payment, and fraud. By contrast, the current administration has taken a clear pro-business approach. It has consistently emphasized the importance of paying utility bills, resulting in much greater government cooperation through the application of much of the same legislation that was poorly enforced under his predecessor.

As noted, a crucial aspect explaining the initial success of the water privatization in Ecuador rested on the steady support of the city government of Guayaquil from 1996 up to now. Political support from the municipality made it possible to maintain Ecapag's directory 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 keeping the restructuring/privatization process on course.

Once again, the difference with the Dominican case is significant. As already mentioned, in the Dominican Republic the government has changed twice since the 1999 capitalization. At the regulatory level, the turnover has been even greater because governments have replaced the SIE head at will. And 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 the successive crises of the sector.

B. Difficult problems that can be solved.

People's purchasing power. The existence of major segments of the population earning low incomes throughout the region, and especially in the four workshop cases, has a fundamental impact on the problems of theft/nonpayment and political opportunism. All four cases involve the supply of utility service to major urban areas (Barranquilla, Guayaquil, and Santo Domingo), which as it typical of the region, are ringed by extensive shantytowns. At least some theft of utility services is induced by economic pressures on poor households, while low incomes pose a challenge for utility providers to develop affordable supply schemes for rural areas and urban slums. Poverty also favors clientelism as the poor respond favorably to offers of personalistic or community-level "gifts" from public authorities in exchange for political support. However, purchasing power per se is not a good predictor for lack of payment or fraud. In fact, under government ownership these problems were very diffused in middle class and upper middle class areas due to the corruption and clientelism mentioned earlier. This suggests that the solution to these problems can be found if there is a political will to crack down on clientelism/corruption, in conjunction with an appropriate policy of subsidies for marginal users.

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

The large amount of poor people in Guayaquil and its surrounding areas posed a serious problem to Ecapag's commitment to steadily increase tariffs to a satisfactory level prior to privatization. The existing general subsidies prior to restructuring were diminished over time. Ecapag made a deliberate effort to target the remaining subsidies to benefit the first two categories of consumers (Table 1), which include the poorest people. Moreover, subsidies were financed in part from taxes coming from telephone rates. Nevertheless, there is still a strong cross subsidy from large users (those consuming 5,000 m³ or more), creating the risk that, as it has happened in the Dominican Republic for reasons of price and quality, large consumers may seek their own sources of water supply and disconnect from Interagua.

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. Inability to pay has been the excuse used by the government on many occasions to stop lawful rate increases. The excuse was by no means unfounded. Several people have died in riots related to electricity service over the past five years. Unaffordability is also a probable cause of the severe theft and nonpayment problem afflicting distribution companies. Financial pressures have forced the government to focus on the needier consumers, at least those in urban areas. First, the PRA was created to provide electricity at a nominal cost in shantytowns, and to educate consumers about payment for utility services. More recently, the blanket subsidy in the rates was reduced to consumers below a threshold of 200 kWh/month. However, major problems remain. The distribution companies, including AES, contrast with companies in Colombia or Ecuador by their lack of effort at dealing with affordability problems, other than receiving government subsidies. On the other side, the PRA and the rate subsidy appear to be financially unsustainable for the government. Urgent action is likely needed if a new crisis is to be avoided. Fortunately, 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.

Cultural attitudes toward utility service payment. In all three countries, there is a deep-seated belief that basic utility services, and water most of all, is 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 upper strata of society often get away without payment, which discredits the imposition of fees among the lower social classes. In other words, "if the politicians are the first to violate the law, why should I not?" Altering this attitude is a major challenge for private operators. Private operators have to convince users that utility services are better provided on a fee-for-service basis, if the operators are to reduce theft, increase collections, and avoid political backlash.

Cultural attitudes justifying theft and nonpayment are quite entrenched in Colombia. To overcome them, AAA made a strong effort to improve coverage, service quality, and customer service in a short period of time. Coupled with the social responsibility programs, such a 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 a poor one

for free. AAA's success convinced UF to try a similar strategy at a later stage when traditional approaches failed.

In Ecuador, this problem was tackled in a similar way. Interagua provided substantial improvements in service provision in a short period of time. This effort played an important role in overcoming the initial hostility. People in poor neighborhoods actually welcomed the change, as once they were finally connected, they found out that the cost of Interagua's water was 86% cheaper than the water they previously purchased from water trucks. However, the bad example of government agencies continues unabated, as the worst delinquent payers of Interagua's services at present are all public sector entities.

In the Dominican Republic, the opposite trend took place. Privatization resulted in high and increasing electricity rates without a parallel improvement in service quality. Such a combination only created mistrust among Dominicans from all walks of life, who came to regard the private companies as thieves and to look more favorably upon electricity theft or fraud. In these circumstances, the government was reluctant to change the existing laws so as to facilitate the prosecution of these activities, and judges became less willing to rule against offenders. The experience of private electricity supply so far has probably exacerbated the cultural bias against private service provision instead of reversing it.

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, due to laws that privilege the government and to courts that 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, whenever possible, to use the courts as a means to solve problems since they are expensive and still too unpredictable. As a result, private operators confront difficulties in the enforcement of the regulatory framework and in the prosecution of theft, fraud and nonpayment of utility services. Governments freely choose not to abide by the existing legal requirements, whether in regard to regulatory independence or in paying for the consumption of water and electricity by government agencies, to cite only some of the most notorious examples.

On many counts, Colombia has a legislation dealing with public utilities that is quite good. As a result, one of the major problems that private operators found upon arriving there was not the lack of adequate laws, 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 toward the customers' rights that recourse to the tribunals became an expensive and ineffective means of redress.

In the Ecuadorian case, public utility tariff exemptions for large, non-profit, institutional users create controversies and substantial losses since they tend to affect large users.

They also constitute special privileges that in many cases are hard to justify but difficult to overcome as the same institutions can count on the political protection of city and national leaders. The controversy over the presidential decree affecting electricity rates also indicates the difficult task faced by regulators in sheltering the concession contract from unilateral decisions coming from the executive branch. The international arbitration clause contemplated in the concession contract is a good safeguard to mitigate political manipulations. In point of 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 is no exception to 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. The government has capriciously chosen not to apply key components of the existing law, such as the indexation of rates, when it has judged it not to be politically convenient. Regarding theft and fraud, the government chose an expensive and ineffective program, the PAEF, instead of amending existing laws to facilitate collection efforts by distributors. 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.

Regulatory agency behavior. Although there is wide variation in regulatory behavior across the four cases, 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, as already mentioned.

Colombia presents a staggered regulatory environment. Electricity regulators often take a narrow view with regard to their role. UF's complaint was that the regulator tends to uphold standards that are better suited for mature, well developed markets typical of advanced industrial societies than for a middle income country like Colombia.³² In addition, there are multiple regulatory jurisdictions, which on occasion come into open conflict with one another and create uncertainty about the predictability of the regulatory environment. In the water sector alone, up to 25 government institutions can get involved in regulating some aspects of that service. More jurisdictions means more possibilities for politicians to interfere with regulatory independence through institutions politicians can better control, whether courts, other regulators, ministries, or enforcement agencies (superintendencies). This weakens the credibility of regulatory institutions and their

³² According to Ayala and Millán (2003: 111), CREG's regulatory style and deficient handling of regulatory issues has an important share of the blame for the difficult regulatory climate in Colombia's electricity sector.

legitimacy. However, as of late, some progress in this direction has taken place. The clearest example is the SSPD, whose decisions in the past were infamous as being easily manipulated by political interests. Under new leadership, the SSPD has acted in quite a competent and independent fashion, which has helped overcome some regulatory issues that had proven very controversial in the past. From their part, government regulators have complained that UF has sought to avoid serving the poorer, less profitable segments of the population, engaging in effect in cream skinning. Moreover, regulators have also accused UF of seeking to solve its problems by appealing directly to the executive branch and therefore bypassing them, which at times increased tensions between the company and the regulators.

In the case of Ecuador, despite the electricity rate dispute that lasted more than two and a half years, both Interagua and Ecapag's representatives described their relationship as one based on cooperation. The concession clauses are well specified and understood. For its part, Ecapag has earned a good reputation in defending the public interest. However, its board responds to a substantial degree to elected officials (Ecuador's president and Guayaquil's mayor) which of course can create problems should such officials' priorities change. For instance, Ecapag has lately created additional rules (on top of the concession contract) and fined the company for reasons that may be political, such as the desire to look tough before the domestic public.

The Dominican electricity regulatory agency (SIE) enjoys practically no independence at all. Of the three members of its decision-making board, the presiding member appears to be making all key decisions, and is directly appointed and removed by the government at will. 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 these actors rather than with the SIE. 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 of attempts to deny future rate increases, as it actually happened.

C. Problems that can be reasonably solved.

Company image. Under government ownership, all four utility companies in the cases that we observed had a very bad reputation. The fact that the companies were mismanaged and corruption within them was rampant gave further justification in the eyes of the customers to avoid payment or steal service outright. Coming on top of the cultural biases discussed above, these image problems make it imperative for private utilities in the region to create a favorable image for themselves right from the start. Companies must induce consumers to feel that they are being treated fairly and overcome the potential handicap of coming from abroad, which exposes them to nationalistic attacks of exploiting the people 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, as many believe that utilities ought to be subsidized as a way to address income distribution problems. Opposition to privatization was reinforced by the foreign nature of the new investor when the company came under private management as people assumed that profits were leaving Colombia to enrich Spain. Overcoming both a bad reputation and a bias against the private sector constituted in both instances a serious task and particularly for UF, which seems to have only realized the need to improve its image when its reputation had already deteriorated quite significantly and had already been branded as a company of “conquistadores.” In fact, the difficulties experienced by UF at the political and societal level relative to AAA may have been due to initial lack of attention to ECC’s image. After ECC’s privatization, the company’s image was marred by the inability of its new owners to make significant inroads in improving the situation of the company; UF’s lack of attention to ECC’s image after it bought the company only compounded the problem. ECC accumulated a reservoir of “ill will” among the public that is requiring a substantial effort on UF’s part to reverse.

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 began to invest to improve service. The trend has continued even more so under Interagua’s ownership as service quality and customer relations made further positive progress. The very fact that after only three years from privatization over 80 percent of people surveyed preferred to keep Interagua as their provider indicates that the company enjoys strong public support. Equally important is that, in a country where foreign investments have often been looked upon with suspicion, people do not seem to mind either that a private Anglo-American consortium runs the company since it has produced results superior to those of previous SOEs.

Private utilities in the Dominican Republic have had a very difficult time improving the public image of the companies. In a vertically unbundled sector, the difficulty of sorting out who is responsible for the poor quality of service that has resulted from the sector’s crises, and the controversy about the high cost of electricity between the IPPs and the impact of fuel prices and foreign exchange depreciation, has created a very negative image of private operators in the public’s mind. The foreign ownership of the utilities has only made things worse, by opening them to populist accusations of exploitation of the Dominican people, particularly in the case of UF given the checkered history of Spanish control over the country. Unfortunately, the distribution companies appear to have made very limited efforts to improve their image, such as public relations campaigns to explain the financial causes of the blackouts. Much remains to be done.

Corruption within the company. In all four cases, there were systemic problems of employee corruption under public ownership. In several cases, family members and friends were included in company payrolls. 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 Colombia, it is

reasonable to assume that people linked to criminal and guerilla organizations enjoyed the same level of impunity. Poor service levels, poor management, and the clientelistic nature of some of the hiring decisions created favorable conditions for unscrupulous employees to facilitate fraud and theft in exchange for bribes. The privatization process led in all four cases to major efforts to eliminate employee corruption, by firing corrupt employees and by instituting better controls to prevent, detect, and punish corrupt behavior.

Both AAA and UF in Colombia found the companies that they inherited plagued by widespread internal corruption at all levels. This phenomenon was in turn responsible for substantial losses. As a result, AAA and UF instituted programs monitoring their employees and eventually forced those found guilty of illicit behavior out of the job.

Ecuador is the only case where a significant anti-corruption effort took place before privatization. The creation of Ecapag under new management started a process aimed at bringing corruption within the company under control. Once the company was privatized, Interagua continued efforts aimed at reducing the incidence of this problem at the company level. According to its management, by 2004 it no longer constituted a major issue.

In the Dominican Republic, the drive against corruption was left to the private operators. UF installed new information systems at EdeNorte and EdeSur, and proceeded to replace all customer meters, presumably to prevent manipulation, although paradoxically some customers interpreted this as an effort to defraud them under the claim that the new meters were “doctored.” AES reported that internal corruption is no longer a major problem at EdeEste, although distributors continue to be affected by existence of former employees who make money by helping users defraud and steal from the companies.

VI. General Lessons

Lesson #1: Utility Reform Must Provide Quick and Tangible Benefits for Users

The workshops also offered some general lessons. When analyzing the problem of nonpayment and theft, the first lesson that comes out rests on the issue of service delivery. The two successful examples (AAA and Interagua) on this issue employed different strategies but had one element in common. They placed great emphasis in 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 any utility reform will lack the necessary credibility to win over a public and will end up in failure as it has been the case in the Dominican Republic. In other words, even the poor are willing to pay when they are provided with good quality service, but companies must first convince customers through facts (quality improvement) in order to overcome

cultural biases and hostility resulting by the bad performance of previous government-owned utilities.

The goal of service improvement can be integrated by a variety of efforts that can enhance reform success. The workshops pointed to the following:

Community-based approaches pay off. Both Colombian experiences show that substantial improvements can be made toward the reduction of non-payment and theft practices by designing innovative approaches involving the utility provider, community representatives, and the government to foster cooperation and trust. The Colombian experiments, in this sense, are consistent with those sponsored by the U.S. Agency for International Development through pilot projects in Brazil, the Philippines, and South Africa.

Unlike traditional approaches that rely on standard methods of non-payment and fraud reduction based upon experiences from developed countries, the Colombian cases were tailored to address the cultural, historical, and political characteristics of the areas in which they had to work. To deal with these situations, the companies developed strategies that incorporated both community organizations and government representatives. The basic assumption was that a winning formula could materialize only if the predicaments of the local market were understood and addressed. The innovative part of the approach recognized that:

- Community based organizations needed to be involved and had to be treated as stakeholders.
- Communities had to recognize the benefits of cooperation as opposed to the status quo. This meant showing that paying for services rendered would improve community as well as individual wellbeing, 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 within the local community and get it to cooperate.

Intermediaries were chosen based upon the respect they could elicit within the community and had good communication skills and could deliver community compliance. In some cases the Catholic Church played a pivotal role in this regard (AAA). Intermediaries were responsible for the articulation of community needs and problems during the program design. Intermediaries were also trained by the utility and government representatives in order to perform the tasks assigned to them within the program. At the community level, intermediaries were responsible to explain how the program would work and set up self-policing functions.

Within this approach, companies made special efforts to establish an environment of social responsibility by companies and communities alike where voluntary cooperation

would make the need for policing and sanctions less important over time. Through a variety of town meetings and training programs companies engaged communities and government representatives by delivering a persuasive message. The sale pitch was that companies, communities, and government were all on the same boat. Companies could do well only if customers were getting better service, which then would allow companies to expand service and invest in the community. In this regard, companies spent much effort in educating people through public workshops about the importance of paying to assure good service. For its part, 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 squatters' residency status.

Moreover, to give the process legitimacy in some cases (electricity), the regulatory institutions stepped in to assure that the new process was transparent and the private company was not taking advantage of the situation.

The need to improving the life of the community. Decades of neglect and poor service create among the public strong adversarial feelings against the utility provider. This is particularly true in poor areas that are traditionally the most neglected. The Colombian experience, particularly that of AAA, is quite interesting in trying to overcome the deep seeded cynicism of poor customers. To gain credibility and trust, Colombian companies made substantial efforts to show its commitment toward “social responsibility” affecting poor communities by:

- Investing in education and parks (Colombia).
- Supporting local soccer teams (Colombia).
- Investing in community associations (Colombia).
- Supporting Non-Governmental Organizations (NGOs) operating at the local level.
- Increasing local employment (Colombia).
- Providing educational programs on conservation and safety procedures (Colombia and Ecuador).
- Legalization of residency (Colombia).

Making utilities more affordable and easier to pay. Both the Colombian and the Ecuadorian experiences show the importance of providing tangible improvements in customer service. The faster these improvements take place, the greater the chances that and non-payment trends 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 costs that poor communities could afford (Colombia and Ecuador).
- Creating incentives for customers to pay on time (Colombia and Ecuador).
- Providing easy means for customers to pay their bills (Colombia water).

- Improving quality and accessibility of service (Colombia and Ecuador).
- Improving customer service and billing procedures (Colombia and Ecuador).
- Dropping fraud and theft charges if the client started to pay (Colombia water)

The approaches just mentioned can also be supported by more conventional ones such as:

Making utilities harder to steal and easier to monitor. Both the Colombian and Ecuadorian experiences prove that investing in improved monitoring mechanisms pay off, particularly in the following areas:

- Installing meters that are difficult to temper with.
- Placing meters in visible places where they could be easily monitored.

Fighting back illegal activities. Cracking down on illegal activity remains a difficult task in all the countries examined due to 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 offenders by:

- Firing corrupt workers (Colombia and Ecuador).
- Terminating illegal connections (Colombia electricity).
- Cooperating with the police and local communities to identify and prosecute offenders (Colombia electricity).
- Launching media campaign explaining that illegal activities harmed both the company as well as the community, exposing wrongdoing, and informing about the legal consequences of fraudulent behavior (Colombia and Ecuador).

Within this overall strategy, company executives stressed that the “carrot” (persuasion) is far preferable than the “stick” (sanctions), although both must be adopted to have a balanced approach. This is because monitoring and policing costs will always be higher than programs geared at voluntary cooperation. In the case of AAA, the company estimated that an investment of one million dollars in community programs was going to yield much better results, cooperation-wise, than \$10 million spent by going after those who did not pay or engaged in fraudulent behavior. Courts often take a long time to render decisions and their costs are high. In addition, many judges and police officers still are reluctant to enforce the law for a variety of reasons. In the case of Ecuador, Interagua preferred to put pressure on large users through informal channels rather than using the courts as a way to avoid political backlashes.

Lesson # 2: Politics Matters

The four experiences show the importance of politics in shaping the final outcome. We asked the presenters if the most fundamental factors shaping their sector’s performance

were either of economic or political in nature. The response was that political factors tend to be more important although they are often intertwined with economic ones, which at times blurs clear-cut distinctions. In other words, the four electricity and water reviewed in the workshop seem to indicate that problems of economic/technical nature can be solved in most cases. The problems most difficult to solve are political and the weaknesses of government institutions make possible for the individuals at their helm to have a disproportionate influence in the decision-making process. This means that if the political executive supports the role of the private enterprise, things can get solved and improvements accrue over time. However, if the mayor, governor, or president is not strongly committed, private companies face an uphill battle as government agencies and ministries still 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 opposed it. This can result in time inconsistency problems, which we examine below, where a new administration abandons the original commitment to the regulatory framework to appease its short-term electoral interests.

Moreover, no credible policy can be devised in cooperation with private companies and local communities if national government agencies and municipalities still evade paying bills themselves. In the specific case of utility provision in slum areas, subsidies must reach their intended recipients rather than being utilized for clientelistic purposes.

The electricity and water experiences in Colombia lead to the preceding conclusions. Under the current government, which supports the role of the private enterprise, conflicts are mainly resolved amicably. This contrasts with the difficulties experienced by private utilities under the previous administration.

In the case of Ecuador, it was the political commitment of the mayors of Guayaquil to first restructure the water company and then privatize it that made the difference. Such a strong commitment over time created predictability and produced a success story.

By contrast, in the Dominican Republic the administration that privatized the electricity sector was soon replaced by the opposition party, weakening the government's commitment to the reform. The government's failure to meet the preexisting rate indexation commitments produced increasingly severe financial crises for the electricity sector, as revenues failed to cover supply costs. In addition, the unraveling of the initial commitment from the government encouraged a similar response from the private operators and created 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.

The following are some of the suggestions that workshops' participants listed as having some effect on taming political opportunism.

The role of the government and multilateral agencies. Company representatives stressed the need for multilateral aid agencies to incorporate innovative approaches (i.e. social responsibility) into their assistance programs. This is because socio-cultural and political problems are too often at the heart of the problem, which cannot be fixed by standard economic models that are alien to local realities. Program flexibility and the incorporation on non-economic factors are therefore deemed essential in the problems of non-payment and theft are to be addressed effectively. Governments should likewise push for these initiatives in the aftermath of privatization.

One part of the equation is to ask multilateral agencies to help fund initiatives that have a social return exceeding the potential private return to the new private owners, such as electrification efforts in poor or rural areas where profits may be low. But governments can also include service obligations in the concession contracts prior to privatization. Although such clauses may lower privatization revenues, they will reduce post-privatization problems. Alternatively, as in the case of Guatemala's rural electrification trust, governments can earmark all or some of the privatization revenues for the subsidization of activities with a social return in excess of private returns, which has the advantage of reducing the public's negative perceptions about privatization. In all, we would argue that these measures are probably more urgent than having a 'perfect' regulatory framework from the outset. The reason is that, as experience has shown, a perfect regulatory framework on paper is unlikely to resist adverse political pressures in the Latin American context if the social problems affecting utility service are not tackled, whereas tackling these problems is likely to increase the legitimacy of the privatization process and thus the prospects for keeping regulators independent.

Moreover, given the difficulty of acquiring financing while operating in difficult markets, company executives stressed the need for multilateral agencies to provide timely and continued support once the privatization process is completed. Without adequate or timely financing, companies find it difficult to meet investment targets, particularly in the early stages of the concession contract when revenues are still scarce. 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 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 policy and regulatory policy. The Ecuadorian and Dominican examples 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. By the same token, the process was transparent, it drafted the support of key political parties and interest groups, and provided a clear regulatory framework prior to state divestiture. Tariffs rose steadily under Ecapag so that the private operator would not be identified with the price increases and trigger a popular backlash. These measures legitimized government action as well as the standing 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 costs from IPPs 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 policy-maker, 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). The participants from UF at the first workshop stressed that the regulatory enforcement agency, the SSPD, enjoys great legitimacy because it is perceived as impartial, which in turn benefits ECC when it can obtain SSPD approval for its actions.

The appropriate company strategy can make a difference. Private operators face the challenge of overcoming people's 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 create a positive image of the company among the public and a constructive working relationship with government at all levels, from neighborhoods and communities to the central government, as soon as possible.

In Colombia, the managers of AAA seem to have realized the need to create a positive public image from the point they took over from the public sector, and to turn around the negative image that the company had at that time. By contrast, ECC suffered from a change in its ownership and UF's delay in addressing ECC's image problems. In addition, the improvement in the relations between UF and the central government, including the SSPD, may be due not only to the change in the government related to the electoral cycle, but also to UF's learning about the Colombian political system and being better able to manage its relationships with the public sector.

In the case of Ecuador, Interagua built upon earlier efforts from Ecapag to show tangible improvements in both the quality of service provision as well as customer service within a short period of time that legitimized its stand within the community.

With the benefit of hindsight, the strategy of the private distribution companies in the Dominican Republic can be characterized as inadequate at the least. Perhaps responding to the government's opportunism, or in some cases even following an opportunistic approach from the start, 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 legitimize 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 the Colombian and Ecuadorian cases is very significant.

VII. Practical Recommendations: What Works, What Does Not

Specific Solutions for Political Opportunism

Although all the participants in the workshops agreed that political opportunism is an endemic and very serious problem affecting public utilities, there is just as much consensus on the fact that it is a much more difficult problem to tackle than theft and nonpayment. In the political systems of developing countries, where the personality of office holders and their political agendas are of paramount importance and dominate the government institutions theoretically designed to restrain their authority (courts, regulatory institutions), political opportunism is the norm. Indeed, it 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 the most challenging task.

Below, we will discuss what does not help in tackling political opportunism and what can help in taming it. Nonetheless, one should bear in mind that political will remains the most crucial factor in this regard and there is only so much that can be done to shape it, particularly from the standpoint of private public utilities and multilateral agencies. In point of fact, the available evidence suggests that when a government lacks the political will to allow public utilities to succeed under private ownership, outright failure is the most likely result. The suggestions that we make below, therefore, can help if a government is fairly committed to the success of utility reform. Given this scenario, we can make some preliminary recommendations.

What does not seem conducive to good results is direct-deal making. As noted earlier, the approach used by some private utility companies to strike a bargain directly with the chief executive of the moment, at the expense of the role of the regulatory agency in charge, can only assure regulatory predictability as long as the political leadership with whom the agreement was originally made is in charge. 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 perceived to be highly collusive in nature and prone to corruption (Rosenzweig et. al., 2004).

On the more positive side, some factors seem to help in restraining political opportunism:

Transparency and bipartisan consensus. The Ecuadorian experience points to the fact that 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 take away many of the recriminations that are used by post-privatization administrations to change the rules of the game.

Timing of regulatory agency establishment. The establishment of a regulatory agency prior to privatization, operating under clear contractual obligations, 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 inclusion of an international arbitration clause, invoked when regulator and utility have conflicting views, can also help, as the Ecuadorian experience would suggest. However, as we noted earlier, 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 panelists have 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 seminar participants have contended that the best way to proceed is to eliminate any trace of government ownership. According to this point of view, mixed companies simply provide yet another form of ammunition in the hands of politicians to 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 amount of rules and regulations, the greater the opportunity to use them in order to pursue political ends. One way to reduce the opportunity for over-regulation is to reduce multiple jurisdictions by ministries and special agencies. Similarly, laws and regulations overseeing public utilities should be streamlined and simplified in order to allow utility managers to work with under a fair amount of clarity and predictability.

Persuasion. Utility operators, by themselves or in cooperation with foreign governments and/or multilateral lending agencies, can try the soft card of 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 on its own will. Privatization helped governments to cut substantially their expenditures to prop up money-losing state enterprises, generated tax money that before was not previously collected, 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.

Multilateral agency conditionality clauses. Should persuasion fail, a more confrontational approach through conditionality clauses may be a more powerful warning signal. 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 such governments to respect their contractual obligations. This can take the form of withholding funds for other projects that a given government would like to receive until it reconsiders its opportunistic behavior. An example of this case can be

seen in today's negotiations between Argentina and the International Monetary Fund, where the latter has refrained from disbursing funds already approved until (among other things) the Argentine government resolves its dispute with utility operators, whose tariffs were unilaterally frozen in 2001. Although such a move is considered politically very risky, it can exert substantial influence since governments are always looking for funds to finance the projects most important to them. Of course, to the extent a government is not in need of funds, as is also the case of the Argentine government at present, multilateral institutions will have little leverage.³³

VIII. Concluding Remarks

Poor people actually pay when they get good service. Therefore, theft and nonpayment can, to a significant degree, be addressed through adequate strategies. Such strategies should be tailored to local realities in order to have a greater chance of success in overcoming transaction costs in the social, political, and cultural realms. Thus, adopting uncritically models experimented in developed countries is bound to fail since the transaction costs in developing countries are very different and more costly. The experience of AAA and UF in Colombia are a good example of the predicaments that utility companies face in poor and politically volatile environments and how they can be addressed in a positive manner. As far as political opportunism is concerned, on the other hand, the picture 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 reliant on politicians' own disposition. Time inconsistency problems remain severe and will likely persist over time. The more a political system makes strides forward in strengthening checks and balances among the three branches of government, the more likely transaction costs and time inconsistency problems will be less relevant in influencing regulatory policy. 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 when facing stubborn populist leaders who prioritize their short-term political goals at the expense of regulatory commitments, particularly if such commitments were made by a previous administration.

³³ In fact, the Argentine government is considering paying \$15 billion to the IMF to avoid having to deal with the IMF and its conditions in the months to come.

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Appendix. A Note on the regulation of network utilities in Colombia

Regulation of network utilities in Colombia is characterized by certain peculiarities which affect both AAA and Electrocosta/Electricaribe. Utility charges are set by sector-specific regulatory entities. For gas and electricity, CREG³⁴ uses a price cap approach, whereas in water and sanitation, CRA³⁵ uses a cost of service approach. Residential utility charges are based on the socio-economic level of the area, according to a six-level cross-subsidy system whereby the top two levels subsidize the three lowest levels and the fourth level is charged at the actual allocated price cap. Cross-subsidies are supplemented by governmental subsidies whenever necessary. In electricity, generation, transmission, and commercialization costs are passed directly through to the final customer (which can choose an electricity marketer³⁶); 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 SSPD.³⁷

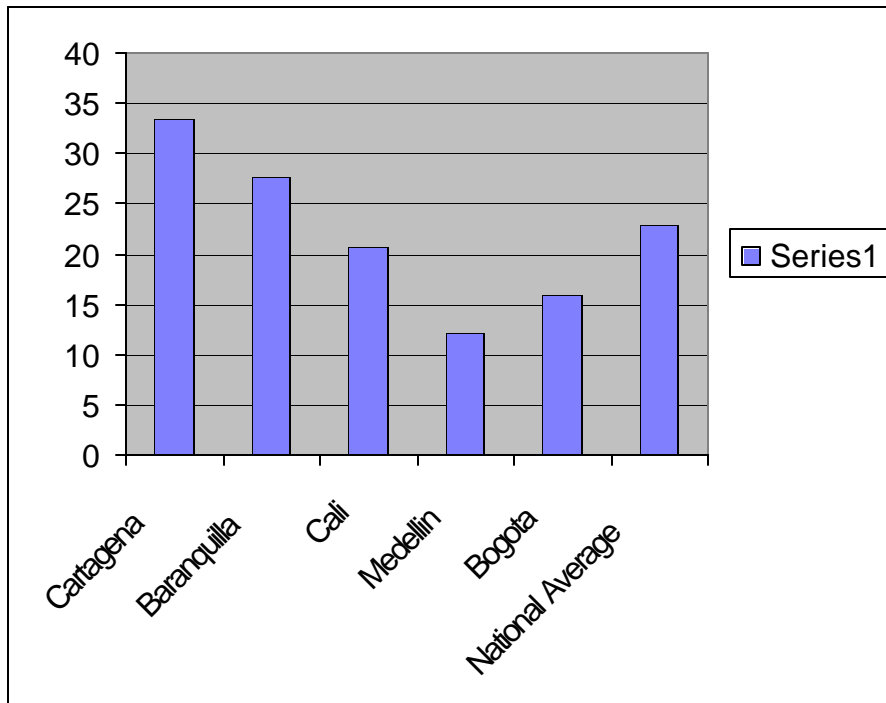
³⁴ Comisión de Regulación de Electricidad y Gas.

³⁵ Comisión de Regulación de Agua Potable y Saneamiento Básico.

³⁶ 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.

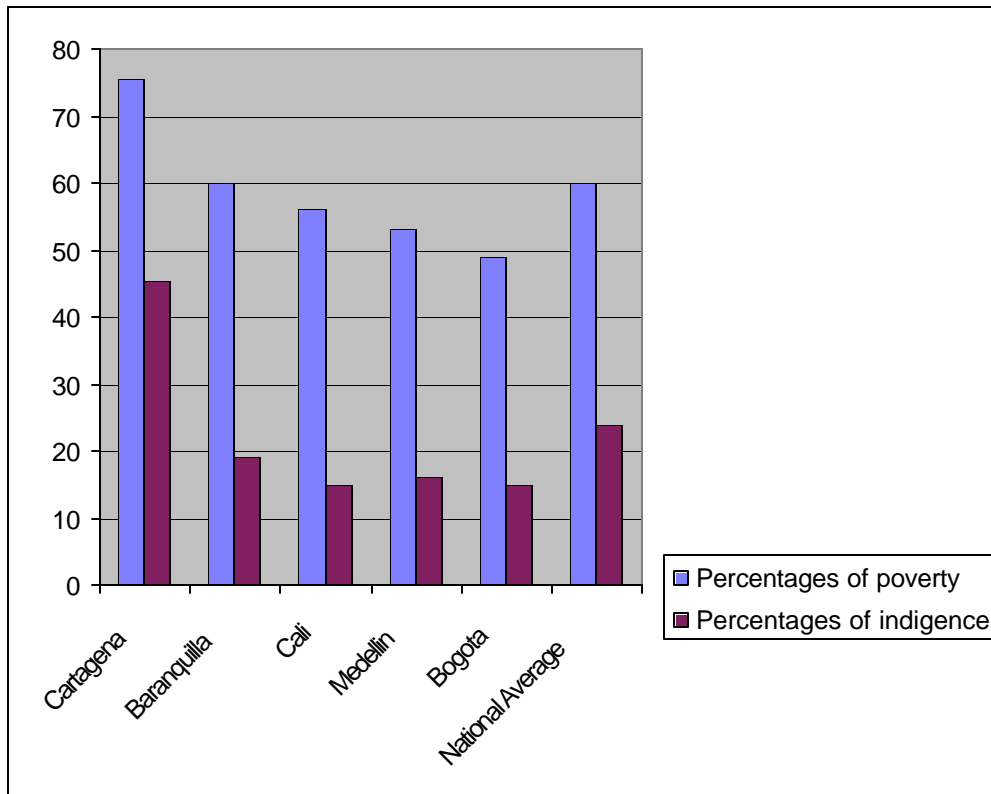
³⁷ Superintendencia de Servicios Públicos Domiciliarios.

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



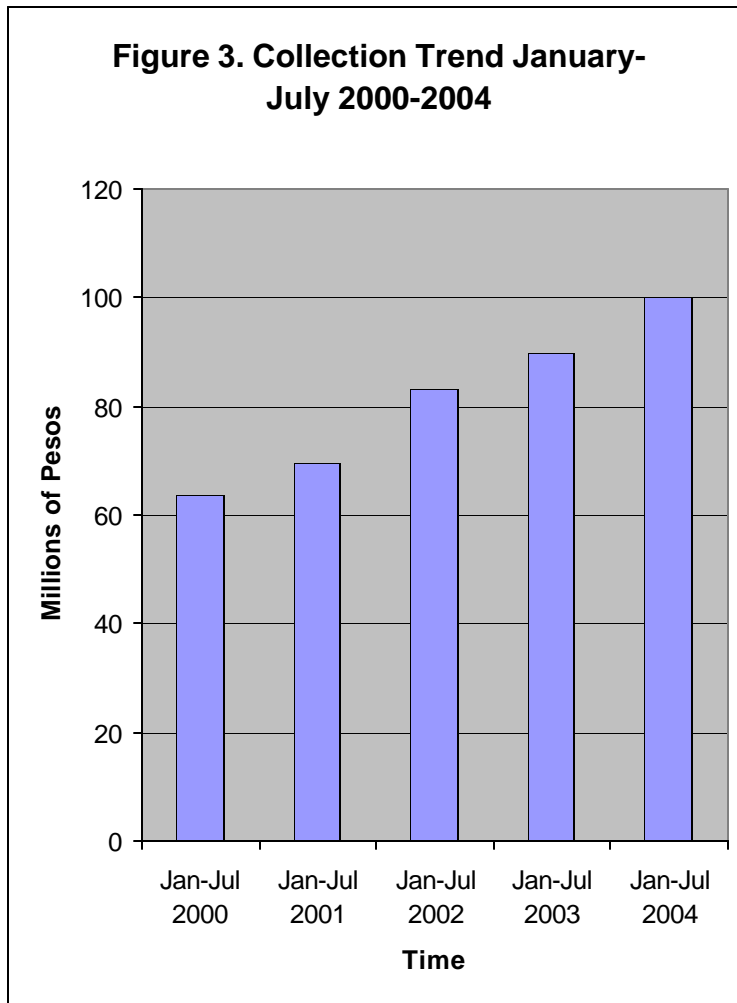
Source: AAA 2003.

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



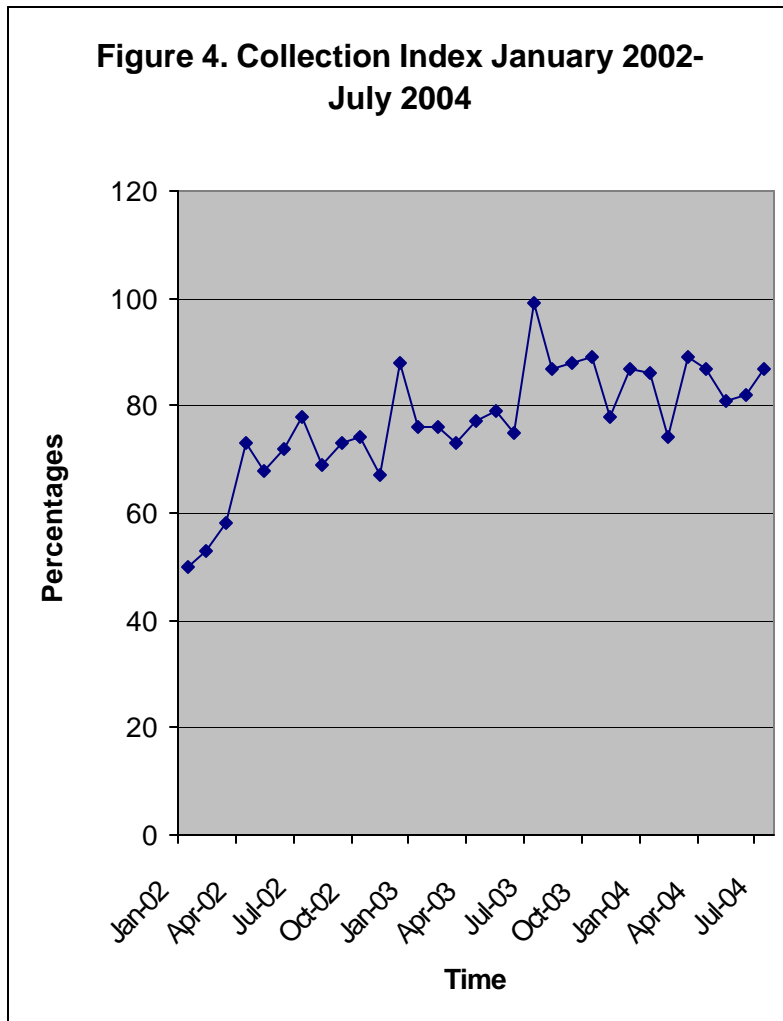
Source: AAA 2003.

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



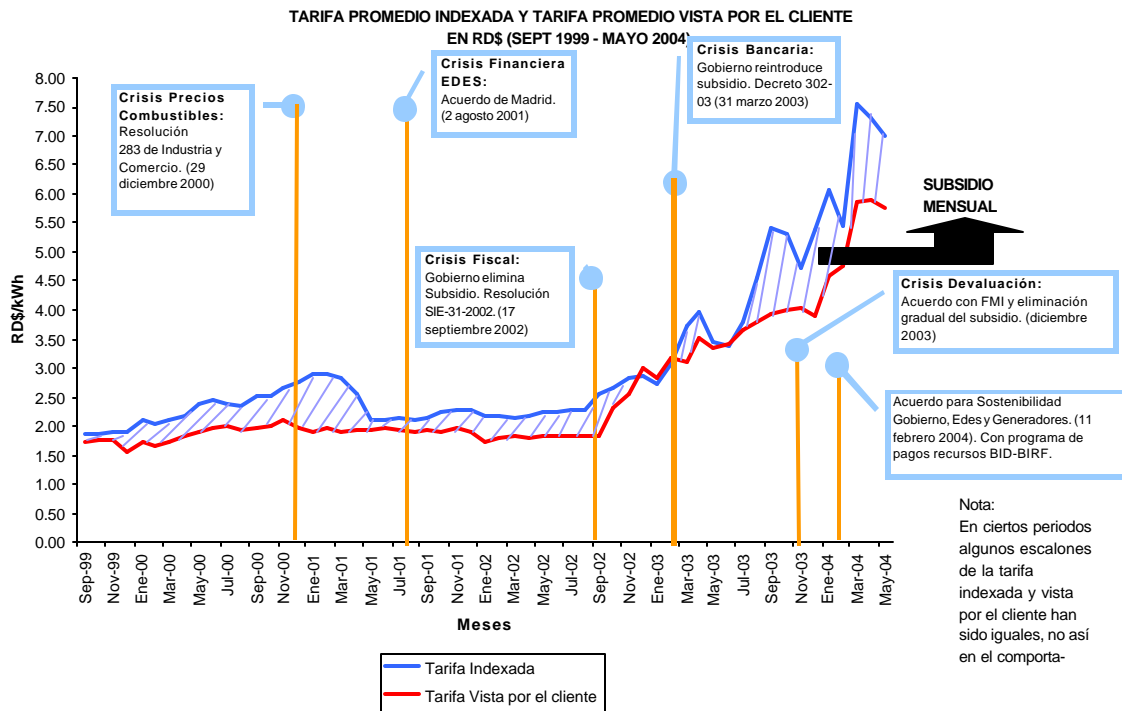
Source: AAA 2004.

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



Source: AAA 2004.

Figure 5. Electricity Tariff Cycle in the Dominican Republic.



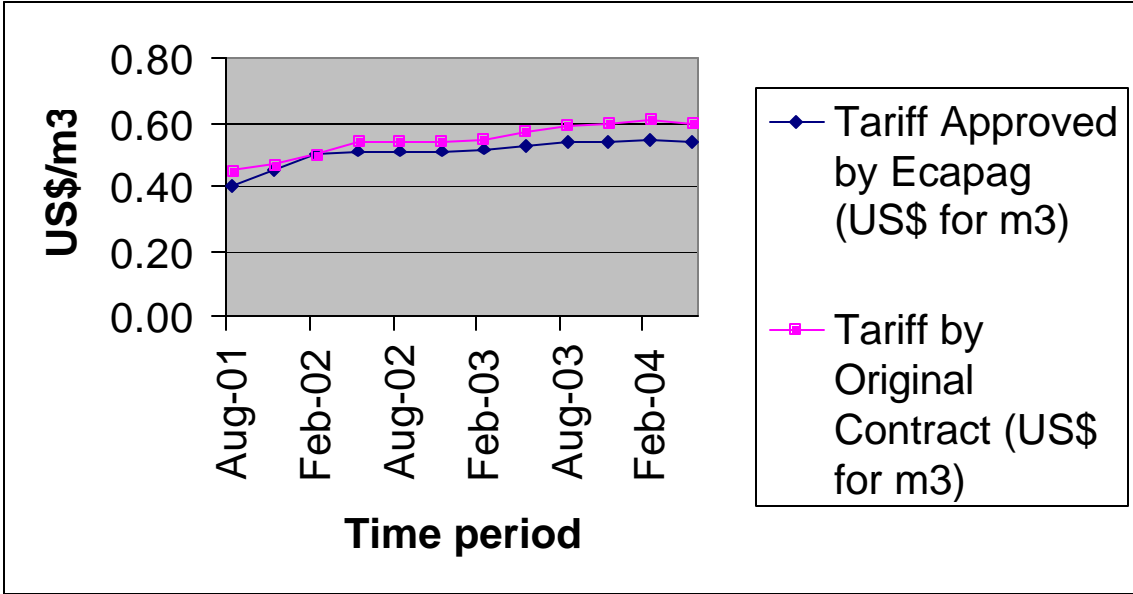


Figure 6. Interagua Tariff Structure (2001-2004)

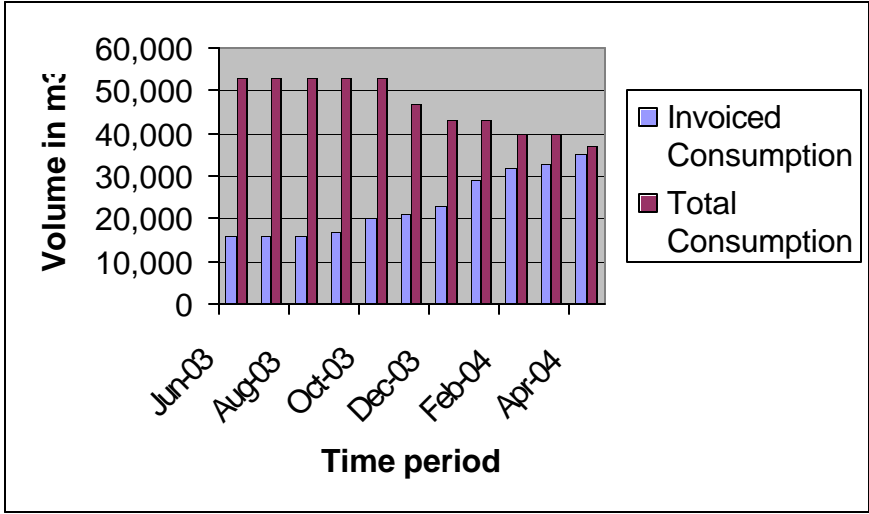


Figure 7. Interagua's Collection Ratio

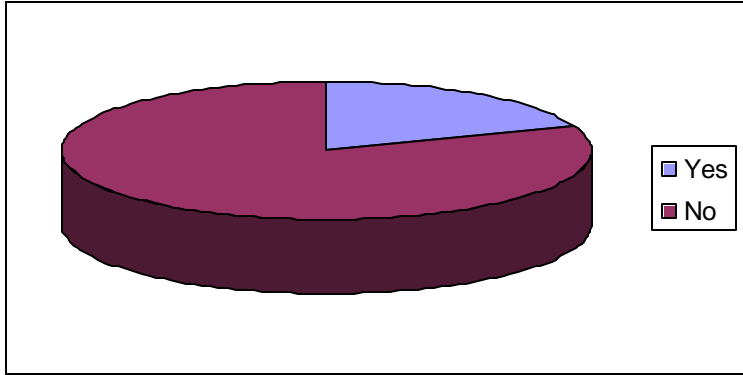


Figure 8. Percentage of Interagua Customers Who Would Like to Change Water Supplier, October 2004

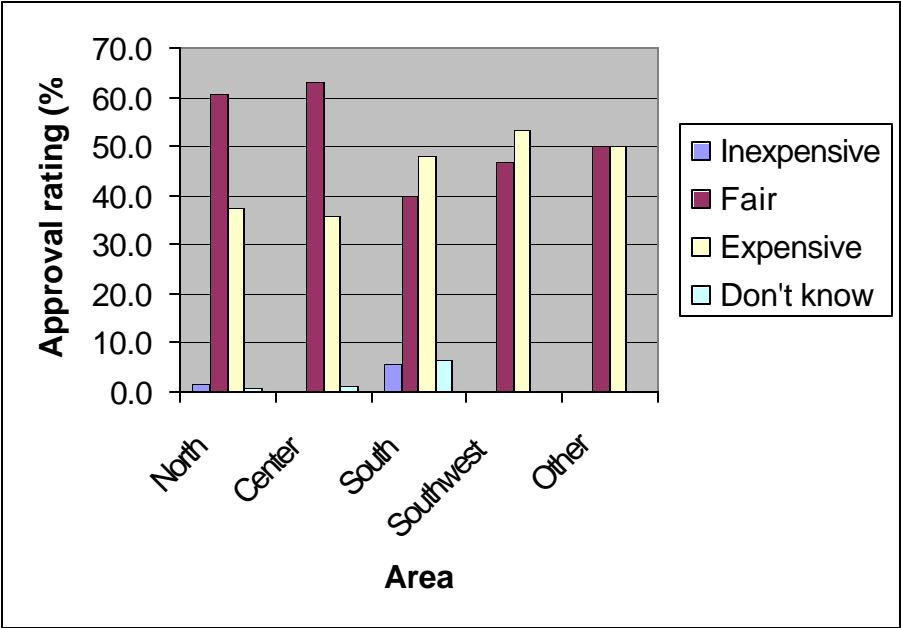


Figure 9. Opinion of Interagua's Customers About Rate Levels

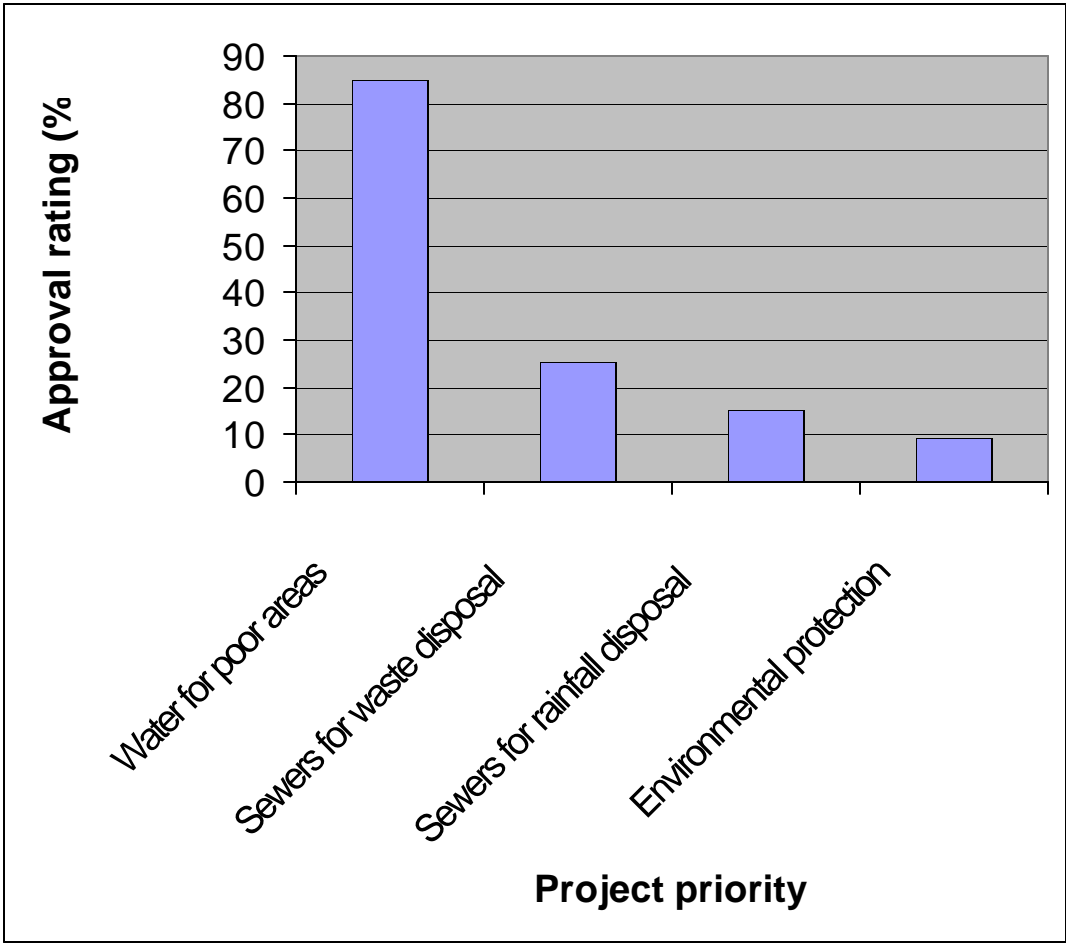


Figure 10. Opinion of Interagua Customers About Company Priorities

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

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

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

Table 2. Service Trend in the Municipality of Soledad

Indicador	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/motnh	240	1,515	1,560	1,791
	(millions of pesos)				
Collection	\$prm/motnh	36	1,028	1,340	1,525
	(millions of pesos)				
Collection efficiency	%	78%	91%	94%	85%

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

(*) Data from January to July only.

Table 3. Consumption Categories in Interagua's Tariff

Category	Consumption by monthly cubic meters
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	Year				
		1	2	3	4
As of Contract	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