

Private and public interests in water and energy

David Hall and Emanuele Lobina

Abstract

Based on empirical evidence from developed, transition and developing countries, the article looks at how the introduction of private operators' interests into the water supply/sanitation and energy sectors may conflict with public interests in socio-economic, environmental and political dimensions. Case studies are used to illustrate the dynamics of these interactions, covering phenomena such as unsolicited proposals, misrepresentation and corruption; the exploitation of established positions by taking advantage of asymmetry of information and negotiating capacity in relation to public authorities; and exit from contracts or concessions when acceptable profitability cannot be attained. This experience indicates that the introduction of private companies into these sectors creates the permanent possibility of conflict between private and public interests. The services are too vital both socially and economically to rely on corporate self-regulation, and countries lack effective capacity to regulate such corporations. The authors conclude that policies relying on corporate activity in these sectors are unnecessarily risky, and that policy development should focus on building strong public sector institutions to provide these services.

Keywords: Water supply and sanitation; Energy resources; Public-private partnership (PPP); Corporate social responsibility; Competition; Corruption; Ethics; Contract renegotiation; Efficiency; Independent power plants (IPP); Public interest; Governance.

1. Introduction

The involvement of multinational companies in water and energy infrastructure has taken a number of forms, including long-term concessions, take-or-pay build-operate-transfer (BOT) agreements, and power purchase agreements (PPAs). All these create new relationships between the private interests of companies — which include a return on capital and limitation of risk — and the public interest involved in these sectors, which includes economic and environmental interests, and interests in transparent political processes. These interests are expected to be balanced through a combination of contract specification and independent regulation. In addition, corporate social responsibility (CSR) is expected to act as a form of industry self-regulation. This article examines these expectations against experience from the last decade with reference to three key stages. Particular attention is paid to the impact on environmental factors. In conclusion, the article discusses observed behaviour, and its implications for policy.

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2. Background

During the 1990s, there was a rapid growth in privatization in electricity and water supply, based on the belief that the private sector could deliver growth and efficiency more effectively than the public sector. Practice, however, has shown the problems and limitations of this policy, and there has recently been a rapid retreat from the belief that corporate activity would bring the necessary infrastructure investments into developing countries: the World Bank has acknowledged that its promotion of privatization was excessive due to 'irrational exuberance' (World Bank, 2004). Private sector investment in infrastructure has declined worldwide from a peak in 1997, and has remained a minor contributor compared with public sector finance. Many multinational companies have withdrawn due to losses and uncertainty. There is rising political resistance to privatization in the water/sanitation and energy sectors — as it is seen as benefiting mainly elite and corrupt interests at home and abroad. This has been coupled with a decreasing confidence in the ability of markets to provide solutions to infrastructure problems.

The superiority of private provision is no longer assumed, and future investment finance is expected to come from country and region, not from international capital, unless supported by State or World Bank guarantees (Saghir, 2003; World Bank, 2003; Buresch, 2003; Buresch,

2004; Nellis, 2003; Birdsall and Nellis, 2002; Gabriele, 2004).

A considerable literature now exists documenting the experience of privatization of both water and energy, most of it concerned with public policies on such issues as pricing, with company policies treated as benevolent or neutral. Few papers address the issue of the impact of corporate strategies on public policies: in water, this has been studied in relation to early cases in 19th century Finland (Katko *et al.*, 2002), and the case of Grenoble in France (Hall and Lobina, 2001). There is also a considerable literature on regulation in these sectors, much of which argues that regulatory mechanisms can provide adequate control over privatized services, while acknowledging the problems of delivering this in practice (Kessides, 2004).

This article examines empirical evidence of how corporate activity in these sectors affects the social and environmental impact of privatization and liberalization. It draws on research conducted over the last decade into interest-seeking behaviour by corporations and others in the context of water and energy privatizations. An analytical framework, building on this approach, is now being formalized as part of the WaterTime project (WaterTime, 2004) by focussing on corporate behaviour at three stages in the development of privatized operations. These stages are:

- initial formation of a contract or concession;
- processes of renegotiation during a contract; and
- exit from contracts.

The question of social responsibility is then addressed in a discussion of how the behaviour in evidence on the part of various actors should influence public policy decisions in these sectors.

2. Entry, extension, and renegotiation of contracts

The initial award of contracts or concessions is a critical stage for both negotiating parties. Public authorities can seek best value by evaluating policy alternatives, including public sector options, and transparent competitive procurement procedures. Companies, however, have a strong incentive — especially with large contracts such as long-term water concessions or IPPs (independent power plants) — to avoid risk of failure. This is accomplished through various devices that often include restricting competition, bribery, and misrepresentation. Such actions often have adverse consequences for the public interest.

2.1 *Unsolicited proposals, misrepresentation and corruption*

There is evidence of three types of private operator behaviour in pursuit of infrastructure contracts:

- Unsolicited bids,
- Strategic misrepresentation, and
- Corruption.

2.1.1 *Unsolicited bids*

Hodges (2003) identifies a category of ‘unsolicited’ infrastructure projects, where the proposal is initiated not by the public authority, but by the private company. The benefit to the company is realised through a higher profit margin, which, other things being equal, implies higher prices or lower quality for consumers (Laffont and Tirole, 1993). Companies initiating proposals hope to avoid a competitive process, but there is a high risk of corruption and inefficiency as well as higher prices. Hodges (2003) says that some of the most controversial projects in the world have originated as company initiatives, and gives as examples the Enron-initiated project at Dabhol (in Maharashtra, India) and the independent power plants set up in Indonesia in the 1990s, most of which were unsolicited, corrupt, and created major subsequent problems (Henisz and Zelner, 2002). There are many such cases in the water sector: for example, virtually all water contracts signed in central and Eastern Europe before 1995 were the result of unsolicited approaches and uncontested contract awards (Hall *et al.*, 2003).

2.1.2 *Strategic misrepresentation*

The second category is strategic misrepresentation by companies in tendering procedures, by submitting loss leaders, or unrealistic bids, in the expectation of later upwards revision. The extent and impact of such behaviour in infrastructure projects has been established by a global study of construction contracts for railways, which found that in 9 cases out of 10 the actual final cost of these contracts is higher than the original estimates (Flyvbjerg *et al.*, 2002). Flyvbjerg and his colleagues observed that the error is almost always an underestimate. The extent of underestimation in original estimates has not changed over a long period of time. Thus, it is not a case of technical error, where one would expect evidence of learning and improvement. Flyvbjerg *et al.* conclude that ‘Cost underestimation cannot be explained by error and seems to be best explained by strategic misrepresentation, i.e., lying . . . the cost estimates used in public debates, media coverage, and decision-making for transportation infrastructure development are highly, systematically, and significantly deceptive’ (Flyvbjerg *et al.*, 2002: 290)

2.1.3 *Corruption*

The third category is corruption. Bribery in international business dealings with governments is a worldwide problem of such proportions that the Organisation for Economic Cooperation and Development (OECD) agreed that global legislation was required, and introduced an anti-bribery convention in 1999, which requires member States to criminalise bribery overseas by their own companies (OECD, 1999;

OECD, 2000). The convention was introduced at the insistence of the United States. Although the United States had criminalised such bribe-paying by its own companies in 1977, intelligence accumulated subsequently showed that companies of other nations were paying bribes more freely, and thereby gaining a business advantage at the expense of US companies, which were more hesitant (Windrem, 2000). A survey by the World Bank and the European Bank for Reconstruction and Development (EBRD) of private companies operating in post-communist States found that companies were not simply paying bribes to get contracts but engaging in ‘State capture’, to control the State’s capacity to set the basic rules of the game through laws and regulations. It found that this behaviour paid off, and so was in the companies’ own interest, and that multinational firms were just as likely to attempt to capture the State as local firms, and more likely to offer bribes for contracts (Hellman *et al.*, 2000). The process of privatization of public services and infrastructure increases both the opportunities and incentives for bribery (Boehm and Polanco, 2003).

There are a number of cases of corruption convictions relating to water contracts, including three in France — at Angoulême, Réunion and Grenoble. At Grenoble, two company executives and the former mayor were convicted of corruption and given prison sentences in 1995. The court found that a 25-year water concession had been awarded to a Suez subsidiary in exchange for contributions to the mayor’s electoral campaign. The company then renegotiated the contract with the council on a different basis until the service was finally restored to the municipalities in 2000. The regional auditor found that the complete lifecycle of the contract had cost local consumers and taxpayers more than FF 1 billion (US\$150 million) (Hall and Lobina, 2001).

Another major case occurred in Lesotho, where the former Chief Executive of the Lesotho Highlands Water Authority was found guilty on 11 counts of bribery and 2 of fraud for accepting some US\$5 million in bribes from a dozen multinational firms in return for contracts worth hundreds of millions of dollars (McGreal, 2002). The scheme itself has been identified as an unnecessarily expensive way of supplying Johannesburg with water.

Effects similar to those of bribery can result from companies funding politicians in ways that are perfectly legal. The history of legislation on funding for political parties in the United States is a series of responses to scandals over funds being given in order to secure results — contrary to public policy and interests. The example of Enron is one of the most recent and perhaps the most extensive cases of a company giving generous donations to politicians in the USA, including a majority of senators and the presidential campaign by the time of the company’s collapse. Nothing Enron had done in terms of its campaign finance activity appeared to be illegal, but the overall implication of corruption was overwhelming (Cigler, 2004). In terms of the World

Bank’s definition, this legal funding was a successful case of State capture, as Enron’s Chief Executive Officer became an energy policy advisor to the Government, and secured policies on energy trading and global emissions that favoured the company and the industry as a whole, but at the expense of global policies on natural resources.

The initial terms of a concession contract can also effectively protect a winning company from future loss of business to competitors. The sheer length of water concessions represents a significant obstacle to competition. In Nice, the company Générale des Eaux has managed water supply and sanitation under a concession contract since 1864 (Global Water Report, 2002a). In Spain, the municipality of Barcelona awarded the water concession to Aguas de Barcelona (now controlled by Suez) for an indefinite period in 1868, and there is no economically realistic prospect that this 136-year concession can be brought to an end. In France, concessions were commonly renewed without tendering before a 1993 law, the *Loi Sapin*, provided for privatized concessions to be publicly and competitively tendered (Cour des Comptes, 1997). Even when contracts are re-tendered, however, the incumbent remains most likely to retain the contract. One reason is that under concessions, the incumbent can claim retrospective compensation for its investments, as illustrated by the case of Valencia in Spain. In 1902, the city awarded a 99-year water concession to a private company, AVSA. When it was re-tendered in the late 1990s, AVSA, now part of the Saur-Bouygues multinational group, and advised by the international accountancy firms Pricewaterhouse and Arthur Andersen, demanded compensation of €54 million if it lost the contract (Expansion, 2001). Not surprisingly, there was not a single competing bid and AVSA, now part of a joint venture with the city council itself, enjoys the concession for a further 50 years (Alfonso, 2001).

2.2 Renegotiation

The terms of the contract itself, and its enforcement, are often contentious, and dynamic processes can be observed in many cases where either side seeks to introduce changes or reinterpretations to their advantage. According to a World Bank paper, 55% of water concessions in Latin America were renegotiated in the 1990s (Harris *et al.*, 2003). In the electricity sector, the terms of the power purchase agreements in many countries have been renegotiated as conditions change or new information emerges. Some examples from water concessions, together with the case of the Indonesian power stations, are summarized below. These renegotiation processes highlight the behaviour of the parties involved, and the material interests that drive such behaviour.

2.2.1 Dolphin Coast, South Africa

In 1999, Saur, the water subsidiary of Bouygues, was awarded a 30-year contract worth 33 million French francs

a year¹ to provide water supplies and purification services to the Dolphin Coast area of South Africa. In 2001, the company hit financial problems, and in April, Siza Water refused to pay the scheduled 3.6 million rand lease payment² due to the municipality of KwaDukuza. Instead, Siza asked for relief under the contract, which allows for renegotiation if returns are either above or below a predetermined range. The problem was said to be that the development of middle-income and mass housing had fallen far short of projections. The result was a serious shortfall in Siza's expected revenues of about 12 million rand a year. The alternative to renegotiation was to go to the contract guarantor (a bank) and take back the performance bond (*Business Day*, 2001). The local authority approved the revised contract in May 2001. Water prices were immediately increased by 15%, plus inflation; Siza's investment commitment was cut by 60%, from 25 million rand to 10 million rand. However Saur continued to receive its fixed payment from Siza, in the form of the management fee (*Business Day*, 2001).

2.2.2 *Aguas Argentinas*

In May 1993, a consortium led by Suez-Lyonnaise des Eaux started operating a 30-year water supply and sanitation concession in Buenos Aires, Argentina. It was only eight months later that the operating company, Aguas Argentinas, requested an extraordinary review of tariffs, due to 'unexpected' operational losses. Despite tariff increases approved in June 1994, 45% of projected investments were not implemented in the first three years of the concession, for a total of some peso/US\$ 300 million³ (Azpiazu and Forcinito, 2002).

2.2.3 *Compensating IPPs in Indonesia*

In the 1990s, Indonesia under the Suharto regime negotiated 27 deals with multinationals to build new electricity generation capacity through independent power plants (IPPs). Local partners, who were relatives or friends of Mr. Suharto, gained substantial financial stakes in the projects without putting much or any money up front. The economic underpinning for these IPPs was a series of power purchase agreements with the State electricity company, PLN, guaranteeing that it would buy all their output, at dollar-denominated prices 30% higher than the international market price (Shorrock, 2002). According to the former president of PLN, Djiteng Marsudi, 'Most of the private power plants rely on their connections with Suharto's family and cronies . . . only one of the 27 private power

plant projects won a contract through a competitive bid' (Vallette and Wysham, 2002: 33). After the 1997 currency crisis and the fall of Suharto, PLN proposed cancelling or renegotiating all the power purchase agreements on the grounds that it could not afford to pay the prices specified; in any case, the original contracts were based on corruption and therefore void (Henisz and Zelner, 2002).

The companies persisted in claiming compensation for the loss of future profit streams. MidAmerican Holdings, following the suspension of two geothermal power projects (*Jakarta Post*, 2002), persuaded the US Government's Overseas Private Investment Corporation (OPIC) to pay out US\$260 million in political risk insurance. Enron successfully claimed US\$15 million for the collapse of another IPP project from its political risk insurance with the World Bank's Multilateral Investment Guarantee Agency (MIGA). MIGA officials acknowledged that: 'While we understand the circumstances that led to (the Enron) project suspension, international law dictated that the cancellation be compensated' (MIGA, 2001: 1).

These claims would themselves have had no further impact on Indonesian public interests, except that OPIC pressured the Government of Indonesia to reimburse the US\$260 million they had paid out, and MIGA insisted that the Indonesian authorities had to reimburse the US\$15 million paid to Enron. As an incentive, MIGA refused to issue further coverage for business in Indonesia until the money was paid. Once the Government had agreed to repayment terms, after lengthy negotiations, MIGA announced that it was prepared to provide insurance coverage for investors in Indonesia again (MIGA, 2001). The political support of the US Government was crucial, but came in response to demands from corporations. As the *Wall Street Journal* put it: 'The US threw its weight behind its business interests to the detriment of Indonesians' (*Wall Street Journal*, 2004: 1). Abdurrahman Wahid, who headed Indonesia's first democratic government after Mr. Suharto's fall, said that 'The private power projects were full of corruption. But since American companies benefited, the US looked the other way' (*Wall Street Journal*, 2004: 1). The American ambassador to Indonesia also put pressure on PLN to kill the corruption suit it had filed against the Paiton project, which involved US multinational Edison Mission Energy (*Wall Street Journal*, 2004).

2.3 *Exits*

In certain circumstances, companies are motivated to abandon contracts and concessions before their expiry. Of all the water infrastructure projects financed by the World Bank between 1990 and 2001, seven had been cancelled by the end of 2001, representing 11.5% of the total value of water projects (Harris *et al.*, 2003). This percentage has grown in the last few years. Recent examples include Thames Water's withdrawal from a water treatment plant concession in Shanghai, which was underwritten by a

¹ The average rate of exchange between the French franc (FF) and the US dollar in December 1998 was US\$1.00 = FF 5.5981. Source: <http://www.federalreserve.gov/releases/g5/19990201>.

² The average rate of exchange between the South African rand and the US dollar in March 2001 was US\$1.00 = 7.8980 rand. Source: <http://www.federalreserve.gov/releases/g5/20010402>.

³ From 1 April 1991 to 19 June 2001, the Argentine peso was pegged to the fixed rate of exchange of 1 peso = US\$1 (Hornbeck, 2002).

guarantee from the Shanghai City Council for a minimum 15% rate of return. When the Chinese Government declared such guarantees of profitability illegal and unenforceable (Global Water Report, 2004), Thames Water withdrew. Some high profile electricity projects have also been halted or interrupted because of corporate withdrawals, including withdrawals from OECD countries. For example, the largest coal-fired power station in Europe, Drax, in northern England, was abandoned by its owner, AES, in July 2003.

2.3.1 *Suez departure from developing countries*

Suez, one of the largest water multinationals, announced in January 2003 that it would withdraw from many investments in developing countries, except from activities that offered a better risk/return ratio and enhanced cash generation. The crisis in Argentina had caused losses of over US\$500 million to Suez, which responded by adopting a tough bargaining strategy. Contractual clauses in Argentina had permitted Suez to link prices in Buenos Aires to the US dollar, but crisis legislation ended this ‘dollarization’ (Suez, 2002a).⁴ In February 2002, the management of Aguas Argentinas — Suez’ main Argentinean subsidiary — informed the Government of the unilateral (by Suez) suspension of a number of obligations of Aguas Argentinas, including the investment objectives in the contract renegotiated as recently as January 2001 and the regulator’s rulings that Suez had to repay customers whom they had overcharged. According to a note in June 2002, Suez (2002b) stated that it would continue to pursue the Argentinean customers for payment of the loans of Aguas Argentinas.

The new company policy said it would favour ‘currency-risk exempt financing’. It should be noted that currency risk cannot be simply abolished; Suez is saying that someone else must carry that risk for them. Suez’ corporate strategy is now to adopt criteria which favour the quickest free cash flow generating projects and contracts. Projects will be expected to finance all their investments out of their own cash flow, so profits will not be redeployed across the group, and investments will not be made unless backed by profits from the project itself (Suez, 2003b).

The last two clauses in particular highlight the group’s conditions for any continued operation in developing countries. In effect, future dollarized profits must be guaranteed, or else Suez will not invest — or, if another economic crisis occurs, it will prepare to depart (Suez, 2003a).

2.3.2 *Exit from local liabilities in Mozambique*

Saur, one of the three main French multinationals, has for some time been uncertain about how and whether to continue in privatized water services in developing countries. The company’s CEO has expressed serious doubts about the viability of private provision of water for profit in devel-

oping countries, telling the World Bank in a presentation in 2002 that ‘. . . substantial grants and soft loans are unavoidable to meet required investment levels . . . the considerable dependence of the growth of the water sector in the developing world [is] on soft funding and subsidies’ (Talbot, 2002: 23, 25). This demand for support from State institutions reflected Saur’s decisions in the previous two years: to withdraw from a planned contract with the municipality of Gweru, Zimbabwe; to insist on a major renegotiation of a contract in South Africa; and to withdraw from a contract in Mozambique. The withdrawal from Gweru was based on two key factors: the 50% devaluation of the Zimbabwe dollar in the crisis of 1999–2000, and the municipality’s rejection of the 100% tariff increase proposed by SAUR (Plummer and Nhemachena, 2001; Hall, 2002; Hall *et al.*, 2002).

Corporate exit strategies, as discussed in this section, are devised in response to commercially unsustainable conditions, and may lead multinational companies to withdraw from their commitments even in situations where the needs of the country require extra investment, not less. This can be seen from the events of the last four years in Mozambique.

In 1999, Mozambique gave Aguas de Moçambique, a concession for 5 years in the cities of Beira, Dondo, Quelimane, Nampula and Pemba, and for 15 years management of water services in Maputo and Matola. Saur owned 38.5%, IPE-Aguas do Portugal 31.5%, and Mazi-Mozambique, a grouping of Mozambican NGOs and three private Mozambican companies, held 30% (WaterAid, 2002). However, the catastrophic floods in the year 2000 wrecked many of the water supply installations, particularly in Maputo and Matola, and instead of embarking upon new investment to expand the water service, Aguas de Moçambique was forced into emergency repairs of the existing installations. The consortium’s financial plans had been based on rapidly increasing the amount of water sold, but such expansion now proved impossible and the company took heavy losses in 2000 (Estamos, 2003).

Saur, with 38.5% of the shares, wanted to declare Aguas de Moçambique bankrupt at the end of 2001, which would have reduced the liability of the parent company. However, other shareholders — Aguas do Portugal and the Mozambican companies — disagreed. Saur then left, selling its shares to the others, who embarked on renegotiating the contract and agreeing to a new investment programme (Agencia de Informacao de Moçambique, 2003). In effect, Saur was unwilling for its shareholders to carry any of the extra liability that Mozambique’s water services had to face after the floods.

2.3.3 *Withdrawal of AES from Orissa*

In September 1999, the US multinational company AES bought a controlling interest of 51% in the Central Orissa Distribution Company (CESCO), one of four electricity distribution companies in the Indian state of Orissa. The other three distributors were privatized to the Indian company BSES (Frontline, 1999). In October 1999, a cyclone

⁴ For more details on Argentina see the PSIRU (2002) report on ‘Water Multinationals 2002’ August 2002 at <http://www.psiru.org/reports/2002-08-W-MNCs.doc>.

devastated Orissa, killing tens of thousands of people, and destroying homes and villages. The electricity network was severely damaged by the cyclone, with 19,000 villages cut off. In this situation, AES stated that it had not insured the CESCO network and therefore, any repair work had to be financed by the Indian Government (Bisoi, 1999). At the end of the year, all the electricity distributors were expecting significant price raises to be approved by the Orissa Electricity Regulatory Commission (OERC). Such price increases would have covered both the repairs and an improvement to the finances of the distribution company, which had been one of the objectives of the reform. AES asked for a 25% hike in electricity tariffs, arguing that the company had spent Rs 150 million⁵ on rural electrification (*Financial Express*, 2000). The OERC, however, kept down the lifeline tariff on the first 100 kWh/month, refused to allow companies to charge for interest payments on some borrowings, and stated that AES' rural electrification would be subsidized by the government of Orissa State (Newbery, 2002). In effect, OERC decided to prioritise the public interest objective of protecting people's incomes from further financial burdens in the wake of the cyclone, at the expense of the companies' objectives of progressing towards the target rate of return of 16% which was specified in the privatization agreements (*Financial Express*, 1999).

In January 2000, AES responded to the position taken by Orissa State. The company stated that it would reconsider whether or not it would go ahead with the restoration work in the rural areas in the cyclone-affected areas, which was supposed to be completed by March 2000 (Sreekumar, 2003; *Financial Express*, 2000). AES also stopped making payments to the state-owned grid company, Grid Corporation of Orissa (GRIDCO), for electricity supplied. The regulator responded again in May 2000 by issuing a default notice to AES, and, a year later, in July 2001, OERC imposed a fine of Rs 100,000⁶ on CESCO for failure to comply. The response of AES was to abandon the company by withdrawing its managers. A new CEO was appointed by the regulator to take over CESCO, with no opposition from AES (Ahmedullah, 2001).

Certain commentators nevertheless put the main blame on OERC for the debacle, as the regulator had not allowed AES to do what was necessary — namely raising primary tariffs in accordance with its financial plan. According to a report prepared by Frontier Economics, the consultancy for the World Bank, and quoted with approval by a Cambridge economist (Newbery, 2002), the OERC price caps on basic electricity delivery had totally undermined the financial recovery plan that had been prepared for GRIDCO.

⁵ The average rate of exchange between the Indian rupee (Rs) and the US dollar in December 1999 was US\$1 = Rs 43.52 (<http://www.federalreserve.gov/releases/g5/20000103/>).

⁶ The average rate of exchange between the Indian rupee (Rs) and the US dollar in July 2001 was US\$1.00 = Rs 47.18 (<http://www.federalreserve.gov/releases/g5/20010801/>).

3. Environmental impact

In the sectors of water supply and electricity generation/distribution, there are inherent environmental impacts, including consumption of natural resources, as well as construction impact on human and natural environments. In some cases, the strategies of certain private companies may exacerbate these impacts. The following cases show such impact on bulk water supply and water conservation.

3.1 Bulk water BOTs

Bulk water supply involves the construction of reservoirs and treatment plants by the utility or authority distributing water to final users. Such projects involve both major environmental impacts and large economic investments. Over the last 15 years, a number of reservoirs have been constructed by the private sector on a build-operate-transfer (BOT) basis. BOT means that the private company sponsors the investment in return for a guarantee that the water will be purchased under a long-term 'take-or-pay' agreement. As a private investor must seek the best return on capital with minimum risk, such an agreement is a necessary feature of the BOTs — without it, large scale investment, such as required in the water sector, would be too risky. For public authorities, however, the assessment is different as they do not have incentive to maximize returns, but are required and expected to secure water supply for local citizens in the present and future. For the private investor, however, it is crucial that the terms of BOT agreement seek to optimize the rate of return and provide the strongest possible assurance against risk.

One example of a BOT agreement in the water sector is that of the Yuvacik Reservoir in Izmit, Turkey, a US\$900 million 15-year contract for a water plant and dam, awarded to the UK company Thames Water. The project was completed in 1999, the largest privately financed water supply scheme in the world, and soon afterwards survived a major earthquake. The dam was intended to provide water for the town of Izmit, as well as an urgently needed extra source of water supply for Istanbul (*FT Energy Newsletters*, 1995). The contract provided that the water would be purchased over 15 years at a negotiated price. However, certain industrial users and neighbouring municipalities refused to buy water from the plant as it was too expensive. Among these were Izmit Municipality itself, which had initially undertaken to buy 492 million m³ (mcm) of water per year. Nevertheless, the township had made no provision for paying for the water in its 1999 or 2000 budgets (Boulton, 2002). Under the agreement, the purchase was guaranteed by the Turkish Government (PSIRU, 1995), which was thus expected to pay the equivalent of millions of US dollars for water that was too expensive for its intended customers. Since 2002, attention has shifted to the terms of the agreement itself. The Turkish Court of Accounts, the national public audit body, took the position

that the plant had cost far more than necessary — double the amount envisaged (Global Water Report, 2002b) — and alleged that treasury officials had known, before the guarantee was given, that due to the high price there was a possibility the water could not be sold (Boulton, 2002). An investigation of possible corruption was set up. It reported in November 2003, recommending the investigation for corruption of nine former ministers and the former mayor of Izmit (*Turkish Daily News*, 2003). Meanwhile, the water in the reservoir is legally considered to be a commodity owned by the company, which the company may sell to other buyers of its choice. In March 2004, the Yuvacik Company signed an agreement to export 100,000 tonnes of water monthly, by sea, to an Egyptian company for industrial purposes (MENA News Agency, 2004).

3.2 Leakage and water stress in England

One example of the environmental impact produced by the interest-seeking practices of private operators is illustrated by the tension between company strategies and public policies over leakage and water stress in the southeast of England. This part of the UK suffers a high level of water stress — demand is barely matched by available supply. Existing abstraction levels are not sustainable in summer time, there are no significant surplus water resources available, and global warming makes it likely that supply constraints will tighten. Also, the water industry both in England and Wales has a general problem with leakage, which has become worse in the UK since 2001, running at an average rate of over 23%, and even this high figure may understate the problem. The UK Office of Water Services (OFWAT) has criticized some companies for both their methodology in collecting data and the lack of progress in dealing with the wastage (OFWAT, 2003), and the Environment Agency has expressed general scepticism about the reliability of all companies' estimates of leakage and per capita consumption (Environment Agency, 2003).

The UK Government strategy for dealing with the water stress is to support demand management, by metering and other methods (including conservation pricing), to reduce the high levels of leakage, and then selectively increase supply. Some options, such as desalination, were ruled out, except for very exceptional circumstances, on the grounds that the production process has high energy costs and yields a waste stream of brine that is difficult to dispose of (Environment Agency, 2001).

However, business strategies point to different conclusions, especially regarding the priority given to leakage. The UK Select Committee on the Environmental Audit, a parliamentary committee, concluded that: 'Companies have little financial incentive . . . to reach their own economic levels of leakage. The benefits that companies see from reducing their leakage are often very small, largely savings in power and chemicals only. They do not receive any immediate benefits themselves from deferring the construc-

tion of a new reservoir etc. and thus in effect there is market failure' (House of Commons, 2000: Para 225). In 2003, the UK Environment Agency noted that none of the companies expected their leakage rate to fall over the next 25 years, and some expected it to rise. Most companies stated that they are already at or below their economic level of leakage (Environment Agency, 2003), although the calculated economic leakage levels themselves are kept secret (Brown, 2003). Most companies believe that demand management could not deliver savings, and they proposed new reservoirs or other supply options, including desalination plants, without setting out option appraisals. Few companies considered sharing resources with neighbouring companies.

In Germany, in contrast, a predominantly public sector water regime, coupled with the high political profile of environmental issues, has produced a situation where leakage rates are very low. Indeed, in 1995 a World Bank team suggested that the German water leakage rate was too low (Briscoe, 1995).

4. Discussion

The examples presented in this article from the water/sanitation and energy sectors demonstrate that the pursuit of corporate interests can and often does conflict with public interests in these sectors, and that entrusting the provision of water supply and energy in many instances has caused social, political, economic and environmental damage. It is suggested here that in many cases, companies have allowed such damage to result from their operations despite being perfectly aware of impacts and without considering mitigating action. Of course, the examples given do not prove that corporate involvement in these sectors will always produce negative consequences — this would depend on the specific circumstances of each case. Corporate goals may or may not coincide with public interests at any moment in time. However, when they diverge or conflict, the dynamic interaction between the two affects the impact of privatization in these sectors. The cases discussed in this article demonstrate that negative impacts from the involvement of private actors in the water/sanitation or energy sectors have arisen frequently enough to justify viewing such consequences as a systemic risk associated with privatization.

Ethics is not a suitable instrument for the analysis of these processes. The strategies of AES in Orissa, for example — the company's refusal to carry out repairs, its withholding of monies owed — are part of a normal corporate bargaining approach of threatening damage to the other party's interests while inflicting the least damage to the company itself. In the end, AES decided that carrying the costs of restoring the network was not compatible with an adequate return on its capital, for which it is responsible to its shareholders. The problem, thus, lies rather in the nature of the activity. The restoration of electrical connections to users, under the

circumstances that prevailed in Orissa after the cyclone, was of the greatest importance to the civilian population and to government authorities. But the corporate eye, as it concentrates on the short-range objectives of its own profitability, does not extend to such needs.

The difficulties with the pursuit of corporate objectives are especially acute in sectors with strong public service dimensions. One aspect of this derives from the monopoly characteristics of water and electricity distribution, where the permanent opportunity for exploitation creates a permanent economic incentive. However, the difficulty also applies in areas which are not natural monopolies, such as electricity generation or healthcare, but where commercial objectives may frequently conflict with public service requirements.

The widespread opposition to privatization in these sectors is evidence of public awareness of these underlying conflicts. Most opposition to the activities of private water and electricity companies centres on a demand for the service to be run by a public authority, and not by a private company at all. It is a demand for the water/sanitation and electricity distribution sectors to be withdrawn from the market altogether, not merely for better behaviour within the market. This is very different from most campaigns against corporate activities, which invariably focus on companies involved in activities such as mining or manufacturing, demanding more ethical behaviour or more respect for human rights. These campaigns do not request the banning of private actors from the sector in question (Manokha, 2004).

The provision of water supply/sanitation or energy services occupies an area where the market rationality of economic actors is of limited or negative value. The remedy for avoiding the problems described above lies not in adjusting corporate behaviour within these sectors, but in developing non-market mechanisms for delivering water and electricity supply. This policy approach forms part of a more wide-ranging recognition of the importance of the State, especially in the historical evolution of public services (Hall, 2003) and in general economic development (Chang, 2003a, 2003b).

John Kay has recently developed the notion of markets as ‘embedded’ in social institutions, including complex State institutions (Kay, 2004). Kay however rejects the notion of a generalised ‘corporate social responsibility’, and argues that ‘The legitimacy of capitalist organisations is not self-evident: it needs justification. The more competitive the environment, the easier that justification’ (Kay, 2004: 333). Outside competitive markets, Kay sees no legitimacy for corporate interests, and even dismisses the legitimacy of corporate political activity: ‘Legitimacy which is earned in the market is confined to the market. Business has no proper authority in matters which are properly the subject of democratic process — the desirability of lower taxes or the importance of protecting the rainforest — which is why its political lobbying is improper and the demands for corporate social responsibility misconceived’ (Kay, 2004: 333).

5. Conclusion

There needs to be a clear recognition of the constant possibility of contradiction between pursuit of corporate objectives and the public interest in public services. Expectations of private companies should be based on economic realism: the range of actions available to corporations is limited by the rate of return acceptable to shareholders. The discipline of competition cannot be effectively introduced, and the effectiveness of instruments such as regulation, is frequently limited by the bargaining asymmetry related to superior legal, technical and economic resources enjoyed by private water and energy companies vis-à-vis public authorities, especially when these are in developing countries.

The central policy conclusion must be that public authorities, development banks, donors and others should reconsider privatization and liberalization policies in water supply/sanitation and electricity distribution/generation. There is a well-known and established alternative available through public sector provision, that avoids the risks of corporate strategies producing damaging social and environmental consequences (Hall, 2001; Gabriele, 2004). Public operators have of course experienced their own problems, due to flaws in the institutional framework (lack of accountability of individual managers, staff or politicians), but not through an inherent inability of public operations to be effective, efficient, and equitable as well as environmentally sound. Policy should be based on developing sound institutional and operating principles, including transparent and participatory systems of accountability, rather than on privatization.

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