

Implications of the World Bank's privatization policy for South Africa

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Received 21 March 2003; accepted in revised form 12 March 2004

Abstract

Providing potable water is a central issue for all nations and is of particular concern in developing countries where universal coverage does not exist. This paper evaluates the implications of the World Bank's privatization policy for the water sector in developing countries using South Africa as an example. The authors conclude that regardless of private investment, cost-accounting reform is needed both to provide universal services and to practice environmental stewardship. Based on theory and empirical evidence, concessions appear to be the optimal form of water sector privatization. The structure of the water sector in South Africa favors the use of concessions if a privatization strategy is pursued. The South African case shows that the success of attempts to privatize a monopolistic water sector depends on developing adequate regulatory and administrative capacity. This conclusion aligns closely with the current World Bank privatization policy. However, the authors argue that the Bank policy does not explicitly address several issues that are necessary to maximize the benefits of privatization. In addition, the authors agree with other analysts who suggest that the World Bank would benefit from a new paradigm for infrastructure privatization that is more transparent and includes a coalition of stakeholders with community involvement.

Keywords: Impact assessment; Infrastructure; Privatization; South Africa; Water resources; World Bank

Introduction

Poor infrastructure and institutional debt often prevent governments in developing countries from meeting the water needs of their citizens. Lack of clean water is often equated with real poverty. Governments and development organizations are dedicated to enabling each person to have access to water supplies. However, owing to increasing population, the need to conserve water supplies and the cost of water infrastructure, solving the world's water needs remains a concern.

The World Bank considers privatization as an effective way to make water available to poor developing countries while enhancing environmental sustainability. However, the decision about how

to fund a community's water supply system is not an easy one to make since privatization can have several disadvantages in terms of providing water. Recently, several examples of dissatisfaction with privatization have been publicized with protests coming from developed and developing countries, as well as private citizens, municipal workers and unions. The potential impacts of privatization are particularly severe for the urban poor and rural populations. Although significant investment is needed to ensure that water infrastructure in developing countries is updated, repaired and extended to reach those who previously had no service, many of these objectives cannot be met if consumers are unable to pay.

This paper presents an evaluation of the technological, economic and social implications of the World Bank's privatization policy for developing countries using South Africa as an example. The analysis uses a framework developed by one of the authors (Jones *et al.*, 2004) to focus the evaluation, as well as published literature describing the World Bank's current privatization policy, the current water supply infrastructure in South Africa and the reported impacts associated with privatization based on other case studies. South Africa is an interesting example for an evaluation of developing countries since the country has a progressive national water policy and is a base for regional economic activity in Southern Africa (Kerf & Smith, 1996). The World Bank has stated that it is particularly hopeful that South Africa will become another area that has private infrastructure activity similar to the situation in Ghana (Kerf & Smith, 1996). Lessons from South Africa may provide insights for other developing countries.

Privatization as a solution

There is a misconception that privatization refers solely to the complete transfer of assets from the public sector to the private sector. The National Academy of Sciences (NAS) reviewed the status of privatization in the USA as documented in a 2002 report. In the report, NAS defines privatization as covering a variety of water utility operations, management and ownership arrangements (National Academy of Sciences, 2002). NAS defines four categories of privatization including (1) contracting for defined services and supplies; (2) contracting for the large-scale operation and maintenance of water systems; (3) contracting for the design, construction and operation of new facilities; and (4) the sale of water system assets to a private company (NAS, 2002). In other words, the term privatization refers to many types of concession (or contracting) relationships in addition to the sale of assets.

The realization that privatization includes both concessions and asset transfer means that the decision as to whether to privatize is complicated because privatization may take many forms; some forms may work well for one type of infrastructure, but not as well for another type. The motivation to privatize water utilities comes from the alleged benefits to consumers that arise from competition (Cook, 1999). Because providing water (and wastewater) to a community is a capital-intensive endeavor with large infrastructure needs, typically only one supplier can serve such a market. Therefore, privatization of water supplies often results in a monopoly just as it would under public financing. As a result, if privatization is considered, concessions appear to be the suitable mechanism for the water sector, though small and rural communities may still find it hard to privatize owing to economy of scale.

Figure 1 shows a framework developed by one of the authors to evaluate the finance mechanism that may work best for those municipal services that are deemed essential to the public. Jones *et al.* (2004) suggest that the financing choice depends on several factors including (1) Is the infrastructure providing

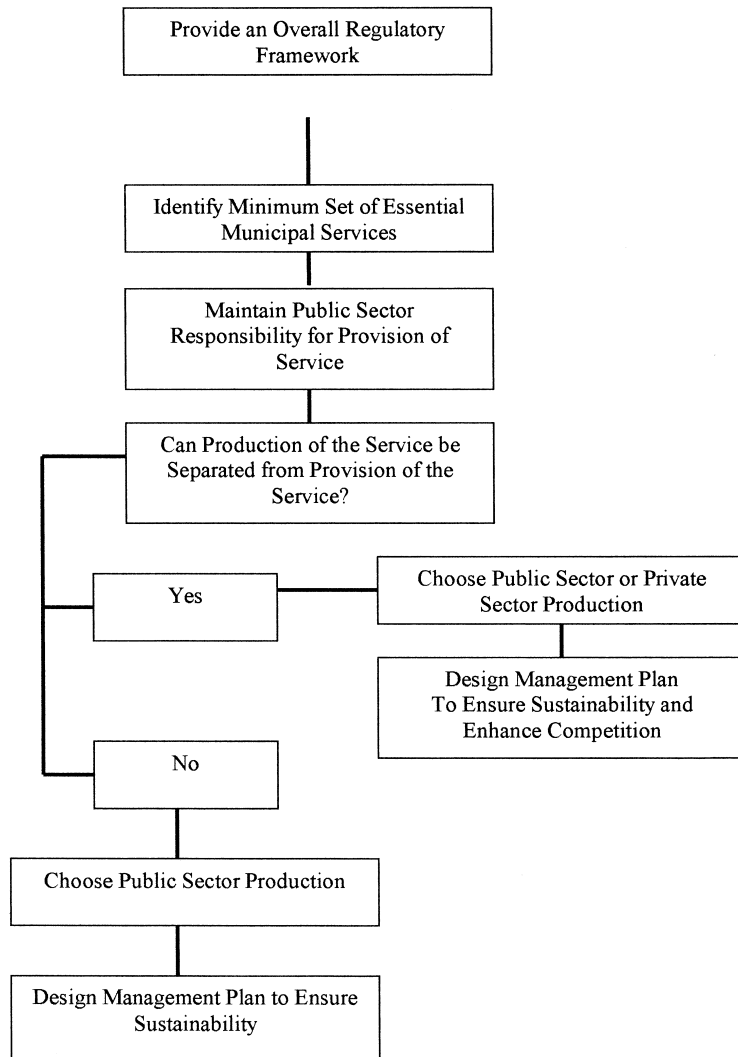


Fig. 1. A Framework for privatization decisions (Jones *et al.*, 2004).

an essential public good?;¹ (2) Can the production and provision of the good be separated so that government retains responsibility for providing the essential good, but has choices about the production of that good?;² and (3) Can competitive opportunities be created for the production of that good?

¹ Essential public good is defined as a good (service) that is determined to be necessary for all citizens regardless of their ability to pay. This definition is affected by the community's characteristics, technological changes, ideology, etc. (Jones, *et al.*, 2004).

² A public good is defined in the public finance literature as a good that exhibits two characteristics – non-exclusion and non-rivalry. These goods are difficult to privatize since it is difficult to ensure that every user of the good pays for the good unless mechanisms can be found to enforce payment by users. (Miskell, 1995) One mechanism is to separate the provision from the production of the good (Jones *et al.*, 2004).

Assuming that all three factors apply, the framework suggests that a concession is probably the best privatization mechanism. Consistent with this conclusion is an analysis of water systems that shows that concessions were the dominant (50% of projects and 80% of investment value) privatization mechanism used between 1990 and 1997 (Silva *et al.*, 1998).

A review of infrastructure privatization concluded that most developing countries used public sector monopolies to finance and operate municipal infrastructure until the 1990s (Gray, 2001). Gray goes on to note that public financing and operation led to technical inefficiencies, below cost pricing, inadequate maintenance, inadequate expansion of services and a drain on government budgets that limited the ability of governments in those countries to meet other social needs (Gray, 2001). In response, privatization of infrastructure in developing countries has increased from below \$20 billion (1 billion = 10^9) in 1990 to over \$80 billion in 2000 (Gray, 2001). The telecommunications and electricity sectors have dominated the investment, however privatization of water systems in developing countries has increased tenfold between 1990 and 1997 with a combined investment of \$25 billion for 97 projects in 35 developing countries (Silva *et al.*, 1998). By the end of 2000, more than 93 countries had partially privatized water and/or wastewater systems (Gleick, 2002). In the next 25 years, it is estimated that three billion people around the world will still be without potable water, therefore the potential global water supply market remains significant.

Unfortunately maximizing competition in the water sector is more difficult than for the electricity and telephone sectors for several reasons. A water resource system has to be local to the respective community because of physical constraints such as the source of the water, the topography over which the water travels, etc. Owing to economy of scale, multiple water distribution systems cannot exist for a single community. In addition, water quality control is critical since the consequences of multiple water suppliers on a common distribution system may lead to public health concerns. Multiple water suppliers may also lead to environmental concerns regarding over-withdrawals of the respective water resources. In fact many of the developed nations that are encouraging privatization for developing nations actively participate in subsidizing their own water supply at home. Statistics for the year 2000 show that less than 10% of the worldwide water supply is privatized. In the twentieth century USA, the shift was away from privatization of the water supply for urban areas, due in part to the reluctance of private companies to invest in poorer districts (Gleick, 2002).

Two examples of developed countries with active water privatization are the United Kingdom since the so-called “Thatcher” era (1989) and France since the nineteenth century (Lovei & Gentry, 2002; Gleick, 2002). In addition, there are only a handful of multinational private water companies. Two French companies, Vivendi SA and Suez Lyonnaise des Eaux, are the industry leaders with an estimated 200 million people being served. Other multinationals that have been involved include the USA companies of American Water Works, Bechtel and Enron, the British companies of Thames Water and United Utilities, Aguas de Barcelona of Spain and RWE AG of Germany. Recently, there have been several mergers among these multinationals leaving only a handful of large-scale private water companies. Several of these companies also own companies, such as US Filter, which provide water treatment chemicals and water treatment process (Gleick, 2002).

World Bank privatization policy

The World Bank’s privatization policy has evolved and it continues to evaluate its strategies. The World Bank’s International Finance Corporation (IFC) has stated that it is interested in water supply

(among other municipal services) for new private sector markets (Murray, 2002). And the World Bank's Water and Sanitation Program advocates increased participation by the private sector to create opportunities for efficiency and innovation as long as the focus remains on alleviating poverty (Sobiech, 2002).

The current World Bank strategy involves funding for policy-based loans, as well as investment loans to promote privatisation and to develop the regulatory framework and management capacity within the developing countries (World Bank, 2002a). The World Bank, through the IFC, continues to direct investments to infrastructure firms including some at the small-scale (World Bank, 2002b; Conference 1999). The World Bank advocates that privatization can facilitate universal access to water because private entities will operate more efficiently with competition (World Bank 2002a). According to the Bank, privatization is a strategy for dealing with inefficiencies in the market (assuming that private companies are more efficient than public companies), large external debts with heavy servicing requirements, high inflation and large budget deficits (Hentz, 2000). In terms of sustainability, the Bank suggests that giving value to the water supply will lead to resource conservation and facilitate sustainable practices by allowing the market to set the monetary value on water (World Bank, 2002c, World Bank, 2002d).

Recent studies concluded that several characteristics are important for a sustainable program for the water sector (Cramoes & Estache, 1996; Webb & Ehrhardt, 1998; van den Berg, 2000). A privatization program must be transparent, must involve the public to minimize social concerns and must have independent, skilled, regulatory oversight.

South Africa's existing water policy and water resources

The South African government and its policies changed significantly in 1994 when the Apartheid government was replaced. The Conference for a Democratic South Africa (CODESA) then guided the Constitutional Assembly that drafted South Africa's constitution, basic laws and national policies. The result is a very progressive water policy that emphasizes sustainability of the water resources in terms of the environment, people's basic needs and economics, while trying to address past inequities attributed to the Apartheid government. The National Water Act clearly states that users will eventually have to pay the full costs of providing access to water (above the basic needs) including the infrastructure and management activities. However, the policy recognises that some subsidy may be needed to achieve equity. The current South African water policy as approved in 1998 affirms that water is a national asset that should be held in trust by the government for the good of all the people (White Paper, 1997). However, the policy recognizes that water is a limited resource in South Africa, there is a limit to how much water can be stored and transferred and that Apartheid left a void in technical and managerial expertise within the country (White Paper, 1997).

In keeping with this policy, the South African Development Committee's (SADC) report to the 2002 World Summit in Johannesburg supports three principles for water development including (1) to recognize the environment as a resource, (2) to recognize the economic value of goods and services provided by water resources and (3) to include environmental sustainability criteria as the mainstream of water resources policy and management (Hirji, 2002). Based on this overriding policy, the South African National Water Act is designed to ensure that water resources meet the basic human needs of present and future generations while maintaining environmental sustainability (Republic of South

Africa, 1998). The South African National Water Services Act (Republic of South Africa, 1997) further states that everyone has a right to a basic water supply and sanitation system that is effective, efficient, economical and sustainable.

The right to water is codified in the South Africa's National Water Act as the Reserve. The Reserve includes two parts, basic human needs and ecological needs. Basic human needs are defined as water for drinking, food preparation and personal hygiene. Ecological needs are defined as the water quality and quantity to protect aquatic resources. The quality and quantity of the Reserve varies depending on the type of water resource and is defined by the respective government minister. Initially, basic human need was determined to be free access to a minimum of 25 liters of potable water per person per day (White Paper, 1997). The 25 liters is viewed as a short-term target that may increase as overall water resources capacity increases (White Paper, 1997). The ministry views the "basic water needs" as a very small fraction of the current use of water in South Africa (Turton, 2000). And, the ministry recognizes that large-scale development of water resources in South Africa requires private investment (Turton, 2000).

As shown in Fig. 2, currently South Africa has three layers of responsibility for water resources. Under the 1997 Water Services Act (1997), local authorities within communities provide the water service and own the infrastructure. These authorities have sole discretion to privatize the water service however they cannot sell the infrastructure. Fifteen regional water boards are the bulk suppliers of water and are responsible for extracting the supply and selling it to the local authorities. At the national level, the Ministry of Water and Forestry monitors the authorities and the boards. The Ministry can create new boards and replace authorities if water services are unacceptable, however it cannot prevent privatization (Orwin, 1999). The structure that is in place allows for privatization using concessions, with the government retaining responsibility for providing water while the private sector produces the actual service. The structure also allows for government responsibility over the watersheds via the water boards.

Meeting the water needs of the Southern African (not just South Africa) countries is a challenge since most of the accessible resources are already developed, there is high population growth and variable

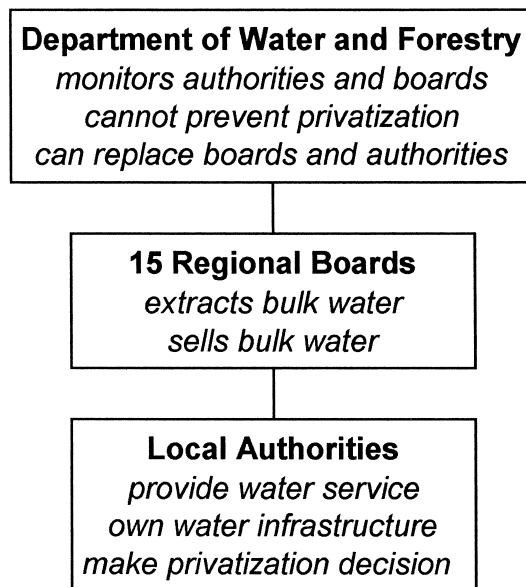


Fig. 2. The Water Sector Structure in South Africa.

climate, existing water resources are degraded and it is difficult to manage the numerous watersheds shared by several nations (Hirji, 2002). The World Health Organization and UNICEF estimate that over the next 25 years, Africa's overall urban population will more than double (Sobiech, 2002). The spatial distribution of people in Southern Africa also tends to differ from the spatial distribution of water and this pattern is getting worse over time owing to the high population growth and migration patterns (Turton, 1999). These characteristics suggest that substantial financial resources are needed to supply the infrastructure to transfer water from one location to the next. These types of transfers can also have significant environmental impacts.

According to the World Resource Institute (WRI), 2744 liters of water per person per day meets the needs for domestic, industrial and commercial purposes. A recent World Bank report states that water stress is reached when the quantity of water falls to below 1700 liters per person per day (Hirji, 2002). Based on a 1999 survey, South Africa is above the WRI limit with approximately 3000 liters of renewable freshwater resources per person per day, but is expected to fall under the limit and approach water stress levels owing to population growth (Orwin, 1999). The water demands are also expected to grow as the economy shifts from subsistence agriculture to commercial agriculture and manufacturing with increased power production needs (Hirji 2002; Sobiech, 2002).

A study found that infrastructure in some South African communities was inadequate (Jackson & Hlahla, 1999). The study concluded that only 44% of households had full access to water; defined as piped water in the dwelling and a further 16% had access to piped water in the yard. In other words, 40% of the South African population, or almost 18 million South Africans did not have access to piped water (Jackson & Hlahla, 1999; Orwin, 1999). A remaining 26% had access to a well or tap water and 14% obtained water from a dam, river or stream. This final 14% was determined to have an "inadequate" water supply (Jackson & Hlahla, 1999). A 2002 report further indicates that in South Africa, 20% of rural dwellers and 8% of urban dwellers are without adequate water services (Gleick, 2002). Orwin (1999) estimates that between 50 billion and 80 billion Rand is needed to eliminate the deficiencies. Urban population growth in South Africa may exacerbate these deficiencies without infrastructure investment.

South Africa's experience with privatization

Countries in sub Saharan Africa accounted for the smallest amount of water privatization between 1990 and 1997 with eight projects valued at \$37 million US (Silva *et al.*, 1998). Factors against privatization in sub Saharan Africa include limited administrative capacity, limited governmental track record and limited independent regulations (Cowen, 1997). Many Southern African countries are a high insurance risk for private investment with a significant likelihood of non-payment. In particular, South Africa is scored at 14.76, where 25 indicates no risk of non-payment and 0 indicates no chance that payment will be made (Kerf & Smith, 1996). The 1999 Conference on Industrial Partnerships and Investment in Africa reported that although South Africa received a major share of the direct foreign investment in Africa, the Continent overall received less than 5% of the worldwide foreign direct investment in 1999 (Conference, 1999).

Within this investment climate, South Africa began the process of privatization in the late 1980s as a response to the rising power of the African National Congress (ANC) and the projected end of apartheid (in 1994). It is argued that privatization before 1994 was based on deregulating and commercializing

public sector organizations and was politically motivated to encourage white South Africans to purchase shares or run public utilities (Hentz, 2000). Since 1994, the privatization debate in South Africa has shifted to the issues of water stewardship and water rights for people, as well as technological arguments that South Africa is not ready for privatized water in the western tradition. According to limited anecdotal sources, the city of Nelspruit was the first major South African city (250,000 population) to try to privatize its water and sewer services using concession agreements in 1997. The attempt led to political opposition with the municipal workers union in vigorous opposition (Orwin, 2002). World Bank databases that track privatization indicate that Nelspruit's water and sewer services were privatized by 1999, as well as water services for the Dolphin Coast community (World Bank, 1999).

However, anecdotal reports also indicate that the South African public's concerns are not rooted in privatization policy, but in the overall government plans for water system expansion and improvement. In particular, some South Africans have been upset by attempts to charge users for water despite the government's success in bringing water to over three million residents in the five years after the ANC took office (Wellman, 1999). An example of public protest was when the Sinthumule residents in the Northern Province destroyed water meters and used illegal connections (Wellman, 1999). Communities in Stinkwater and Luphisi (in Mpumalanga) were also reported to have refused to pay for water services and the government's cost recovery for water delivery in those communities was reported to be as low as 4% (Wellman, 1999). Grootdrink in the Northern Cape was reported to have flaws in the design of its new water system (Wellman, 1999). Another example is the KwaZulu-Natal Province in South Africa where residents had to start paying for what had previously been a free connection. As a result, 250 people died from cholera in 18 months because rural people turned to river water to avoid paying (Rostron, 2002; Grusky, 2002). Similar stories exist for Sandie in the Eastern Cape and Tjakastad in Mpumalanga.

Implications of the World Bank's privatization policy for South Africa

It is clear that the South African government is committed to improving access to water for both urban and rural settlements and to improving the efficiency of the water system. Regardless of the financing mechanism used (public or private), South Africa needs to find a way to expand services, improve technical inefficiencies, obtain investment capital, minimize environmental and social impacts and manage costs. It is clear that large-scale investment is probably necessary to accomplish the water resources goals of the South African government given the need to transport and store limited water resources. Such large-scale investment will likely depend on funding from external sources. Therefore, South Africa will probably have to accomplish its water resources goals within the context of the World Bank's policy that recognizes that the success of water sector privatization depends on the degree of competition that can be built in and the regulatory oversight provided. The implications of the use of privatization concessions for the South African water sector are discussed below.

Technology

A water supply system in the western world is typically energy intensive and chemical intensive. Water supply systems in developing countries are often inadequate because of non-existent infrastructure or aging systems that have substantial unaccounted for water, poor water quality, insufficient pressure and often no metering systems. In addition to financing the improvements and

expansion, the main issue is often choosing the most appropriate technology. This includes decisions on what type of treatment is appropriate given the economic constraints, whether skilled operators available and the overall question of sustainability.

An example of using local technology is the South African government's watershed protection program that involves local people pulling invasive weeds. This policy is intended to maintain the health of the watershed, the safety of water for the people and the native bio-diversity. Solutions like these may be ignored and inappropriate technologies may result in part, because technological professionals at large multinational water companies may not be as effective in communicating with local leaders. Non-profit agencies, on the other hand, seem to have more success coordinating activities with governments and stakeholders. Non-governmental organizations (NGOs) such as Water for People focus on simple solutions, local suppliers and local technology (Sobeich, 2002). These NGOs often work on a smaller scale, are accessible to the community, involve stakeholders and are willing to tailor the project to the situation (Sobeich, 2002; Water for People, 2002).

Related to the issue of appropriate technology is the question of how to develop affordable systems for rural and fringe communities that are not connected to the main distribution system given the large capital costs. One long-term strategy is to identify and develop systems for those independent settlements that eventually will be connected and brought onto a main system or a system that ties the communities together to reduce unit costs. This may be difficult to do in South Africa because the decisions about privatization are made at the local community level and may require involvement at a regional or national level. For rural communities and smaller settlements, there is also the issue of

Table 1. Considerations for water supply privatization for low-income developing countries.^a

Stakeholder	Objectives	Resources
Low-income settlements	Normal service Affordable service Integrated into social structure	Labor Participation and local knowledge
Country's government (local, municipal and national)	Infrastructure for all citizens Efficient operation Satisfied demand Sustainable watershed	Authority and legitimacy Financial resources Independent regulatory structure Political and economic stability
Private utility and public utility	Economy of scale coverage Controlled investment costs Efficient operation Profit-centered cost recovery	Technical expertise Financial resources Management expertise
Local NGO	Service to low-income areas Community integration Strengthened institutional links	Linkages between other stakeholders Technical expertise Management expertise Public participation facilitation
Development bank	Sustainable development Needs addressed across economic sectors	Financial resources Capacity development for regulatory, managerial, technical and financial expertise

^aModified from Hardoy & Schusterman (2000)

providing the Reserve (basic water needs) free to all people since it may be prohibitively expensive just to meet the Reserve unless alternative technologies are used. Such alternatives may include simple technologies such as rainwater collection and storage as opposed to a traditional distribution system with individual connections.

In terms of water and watershed quality, South African policy emphasizes environmental stewardship of the watersheds. The South African Ministry of Water Affairs and Forestry is set up to provide the independent regulatory oversight needed for either public or private management of the water sector at the community level. However, it is unclear if the Ministry has the regulatory capacity needed to enforce policy on either private or public water providers. And one study concluded that monopoly (as opposed to competitive) water suppliers that are regulated frequently benefit the environment because they “work better with long-term sustainable development and stable operating conditions” than do publicly held companies (Lobina, 2000). The World Bank’s privatization policy clearly emphasizes the development of a country’s independent regulatory capacity, however this development needs to occur within the context of South African policy objectives, environmental needs and technological capacity.

Economics

There are several studies that indicate that many rural people currently pay much higher costs for delivered water than for water provided via either a public or private utility (Gray, 2001). There are also several studies that indicate that consumers are willing to pay a higher price for reliable provision of potable water (Webb & Ehrhardt, 1998). South African Water Policy is consistent with people paying for the true cost of the water regardless of whether the system is privatized. However, anecdotal evidence shows that the issue of the price of water has caused some concern in South African communities in both rural and urban areas. New users may be at a particular disadvantage because the costs are often initially high for expanding system services particularly in low population areas. Many of the issues discussed above apply regardless of whether the water system is privately or publicly financed, however the advocates of privatization argue that these issues are more likely to be addressed under a privatization plan.

Unfortunately, accurate water pricing though key to a sustainable system, appears to be difficult owing to the lack of baseline data in many countries. A review (Gleick, 2002) of water prices shows that there is a factor of 50 between the cheapest and the most expensive locations. The most expensive is Germany at US\$1.81 per liter. The cheapest is Cairo at US\$0.04 per liter (1993 price). The USA’s average is US\$0.50 per liter. The developed countries with the most recent experience of privatization on a large scale include France at US\$1.17 per liter and the UK at US\$1.15 per liter (Gleick, 2002). However, there are many factors that affect the current prices for water that prevent a direct comparison between countries. One of the biggest factors is that the publicly financed water systems are often subsidized. Therefore the price does not reflect the true cost of the water. A review of privatization efforts indicates that it is unclear whether privatization leads to lower prices for the water sector because of the capital infrastructure needed and the degree of subsidization that may have existed before (Gray, 2001).

Fair pricing is also difficult because the water sector exhibits monopolistic characteristics. However there are ways of encouraging competition within the South African framework. Techniques to introduce competition include separating out certain operations for shorter term contracts that can be competitively bid, actively soliciting competitors for the initial long-term concession bid, developing the local capacity eventually to compete for aspects of the water concession, using a phased approach to

concessions with future phases dependent on performance in the initial phase, publicizing the comparative performance of the successful companies to motivate improvement, separating the bulk supply of water from the distribution of the water (as is done in South Africa), allowing the shared use of the distribution network and so on (Webb & Ehrhardt, 1998). Unfortunately, the World Bank privatization policy does not demonstrate that it educates countries about these various options.

In South Africa, where significant replacement or repair of infrastructure is required, it is likely that a water utility (public or private) will have to raise the price of water. Depending on the investment needs, these raises may be above what residents are accustomed to paying (Jackson & Hlahla, 1999). As stated, South Africa's water policy emphasizes the need for the financial sustainability of its water system (Jackson & Hlahla, 1999). However, South Africa has suffered from cost recovery problems in the past for reasons including political activism, inability to pay, inefficient billing and collection systems and a disinclination to discontinue services in the event of non-payment (Jackson & Hlahla, 1999). From this perspective, privatization may be able to overcome these problems if fair pricing is addressed through adequate regulation and subsidies for the very poor.

In addition to the problems of having adequate information to set fair prices, there is an equity issue when the privatization strategy includes expanding services to other communities because new connections are often much more expensive than repairs to the existing system. A potential consequence of privatization is that water companies may not provide facilities for squatters and informal settlements and, in South Africa, may leave a large proportion of the poor and rural communities without access, even though South African policy emphasizes every citizen's right to the Reserve. Hardoy & Schusterman (2000) suggest that a way for the World Bank and South Africa to address issues with poor and rural communities is to provide economic incentives to encourage a private water utility to develop infrastructure in low-income areas.

Combining public water supply authorities is another strategy that allows poor communities to be supported by the wealthier communities. However, this strategy is limited in South Africa because the estimate is that only between 100 and 150 communities (out of 843) are financially solvent so they can borrow (Jackson & Hlahla, 1999). "Some of the rest are eligible to borrow from the Development Bank of Southern Africa (DBSA), but at least one-third of all the communities depend on government grants administered by agencies such as the Department of Water Affairs and the Forestry Rural Water Supply Program" (Jackson & Hlahla, 1999). The consolidation of the water supply for rural communities means choosing a centralized system versus decentralized controls. A decentralized system for smaller communities may result in lower connection costs and ensure that water is available in isolated regions. However, such a system may be more difficult to manage owing to the staffing and maintenance needs of the network and coordination among the communities.

From an economic perspective, the main argument for privatizing parts of the water sector in South Africa is to improve cost recovery and help the government achieve its own policy. The World Bank policy supports such efforts that recognize the case-by-case specifics of each community's decision to finance its water utility. As with the technical and environmental implications, World Bank assistance is needed to fund the development of independent regulatory capacity to support any privatization efforts. And, as noted, the World Bank policy is unclear about the ways to achieve competition in the water sector other than the initial concession bidding. Development of management capacity for privatization within a developing country such as South Africa will necessitate clearer guidance and training on these issues. From a pricing perspective, more work is also needed by the Bank to provide sufficient information to set fair prices in the water sector.

Social

The privatization debate divides South Africa along party lines by constituency and by race (Hentz, 2000). Modern water privatization in South Africa is equated by some to a renewed apartheid since poor communities remain unconnected to water supply. Several authors conclude that a market-driven water delivery system will never meet the needs of those who live outside the formal economy, either in the slums and low-income areas of the cities or in the rural areas (Jackson & Hlahla, 1999). As stated, there are reported protests in various South African communities in response to increased water rates and other concerns.

Providing water services is not simply a matter of extending pipes or installing connections. Instead, installing services in a new location means a social contract with those served. For water sector reform, Hardoy & Schusterman (2000) advocate public–private partnerships that include four stakeholders: low-income settlements, local government, private companies and local NGOs. Hardoy & Schusterman (2000) argue that a partnership is necessary to ensure that the solution to the water supply problem is appropriate to the community and that the system will be respected and maintained. During World Bank Water Week in 1997, the inability of private companies to work in with the communities was identified by Hardoy & Schusterman (2000) as one of the factors contributing towards failure of attempts to work with low-income groups.

A key assumption in the Hardoy and Schustermann framework is that each stakeholder can provide resources, including the settlers and the villagers. Using the stakeholders in the decision making process provides a feeling of inclusion and empowerment in collective decision making that makes the settlers more comfortable with the service being provided. Involvement on the community level also makes payment of bills and collections a less confrontational process (Hardoy & Schusterman, 2000). South Africa's present program for watershed management is a good example of water policy that is very heavily rooted in the contributions of local labor. However, participation at the community level is varied depending on site specifics. The World Bank policy is unclear in terms of guidance to foster such public participation in privatization decisions.

Conclusion

It is clear that there is a need for substantial water infrastructure investment in developing countries such as South Africa. Unfortunately, developing countries often do not have the financial resources to meet these investment needs despite a strong commitment. It is also clear that privatization (or other types of water pricing restructuring) without consideration of the social context of a community is not an effective strategy. Privatization of water infrastructure will most likely initially lead to a monopolistic situation similar to a public utility and the data suggests that privatization does not necessarily lead to lower water prices. Instead, the primary reasons for implementing privatization of the water sector in a developing country appear to be the inflow of needed investment capital and the ability to enforce economic, environmental and social provisions. In the long term, the benefits of privatization depend on the degree of competition, the country's capacity to minimize social and environmental impacts and how well the privatization mechanism matches the country's objectives. However, the ability to implement a water privatization strategy successfully in the short term depends on the transparency of the process and the involvement of the affected community.

The evidence shows that the existing South African water sector can implement competitive strategies

using concessions to maximize the benefits of water privatization. However, it is unclear if the management and regulatory capacity currently exists within South Africa to design and monitor these concessions effectively so that these benefits can be achieved. Unfortunately, the World Bank's privatization policy does not explicitly address the unique aspects of the water sector in terms of its inherent monopolistic nature, nor does it promote the benefits of a concession and strategies to maximize the use of competition. And the World Bank policy, at least for the water sector, does not explicitly address the need for participatory approaches to ensure that appropriate technological and management solutions are developed for specific communities.

As stated, some critics suggest that the World Bank would benefit from a new paradigm for infrastructure privatization that is more transparent and provides for separation of regulatory and supply capacity (Hardoy & Schusterman, 2000). Particularly, where privatization is implemented, but also for public utility reform, Hardoy & Schusterman (2000) insist that organizations realize that water supply development should be considered as long-term neighborhood improvement that may be best managed by a coalition of stakeholders. Table 1 shows a modified (by the authors) version of the Hardoy and Schusterman stakeholder paradigm with an additional role for the World Bank.

The modified framework recognizes that in the long term, water pricing reform is needed to supply the required services and to maintain environmental stewardship. In the short term, the framework recognizes that privatization will probably be needed to support the provision of potable water in developing nations. However, a water provision scheme for a developing country (including privatization) needs to be developed within the cultural context of the respective country, has to address the financial limitations of the poor and has to provide for the basic needs of rural settlements. Any water provision scheme, particularly privatization, must include the development of regulatory capacity to oversee what will most likely be a monopolistic water supplier in the short term. To be sustainable, a privatization strategy also needs to include development of local capacity for managing, funding and operating the water supply in the long term and to increase competition within the water sector. Without such an integrated and long-term approach, the World Bank's privatization strategy is unlikely to meet the sustainable water sector needs of the developing world.

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