

## CHALLENGES TO URBAN WATER MANAGEMENT IN GHANA: MAKING PUBLIC-PRIVATE PARTNERSHIPS WORK.

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### Abstract

*The urban water supply sector in Ghana is in the early stages of privatization. In spite of the perceived benefits of private sector participation in the water sector, civil organizations in many developing countries remain skeptical about the role of the private sector in the water industry. It is argued in this paper that the public-private-partnership could be fashioned out to address the challenges in the management of the water sector. Critical areas include education of the general public, a model for privatization and regulatory framework for the privatization of the urban water for Ghana need to be addressed.*

**Keywords:** Public-Private-partnership, Regulation, Privatization, Leases, Management.

### Introduction

Access to potable water is essential for human health in particular and development of socio-economic activities in general. To draw attention to the need for safe water and sanitation, the UN declared the 1980s as the International Water and Sanitation Decade (IDWSD). It was anticipated that guaranteeing reasonable access to safe water to all inhabitants in the world by 1990 would be followed by significant improvements in health and social conditions (Poppel and Heijden, 1997). However, by the end of the water decade, majority of the people, especially in the developing countries, had limited or no access to potable water (World Development Report, 1994; 1998/99). Currently, 1.2 billion people worldwide are without

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access to potable water (WASH, 2002). Millions of deaths worldwide every year are directly attributable to water-borne diseases such as diarrhea, which constitute a world wide silent killer (WASH, 2002).

Access to safe water in urban areas varies by socio-economic status of households. In 1991/92, 23 percent of the very poor and 42 percent of the non-poor in Ghana had access to potable water. By 1998/99 these proportions had reduced to 8.3 percent for the very poor and 36.5 percent for the non-poor (Ghana Statistical Services, 1998/99). But the proportion of the very poor, which used natural sources of water, increased from 21.2 percent in 1991/92 to 24 percent in 1998/99. The picture is one of declining access to safe drinking water to the majority of Ghanaians, especially the very poor. This may be related to inability of the people to pay for water due to increases in the tariff levels.

Worldwide, urban population is forecast to more than double from about 2.5 billion in 1994 to about 5.1 billion by 2025. Urbanization is located in developing countries: in 1970, 50% of the world population lived in urban areas in these countries; this rose to 66 % in 1994 and is forecast to be 80 % by 2020 (UNICEF, 2000). Infrastructure financing accounts for more than one-half of all spending and about 20 % of all investments in developing countries (Whittington et al., 1999). The results are now perceived to be unsatisfactory. These put a heavy strain on public finance; and the poor often do not benefit from these investments. The government of Ghana hopes to attract local and foreign investors for urban water supply. Therefore, the key to the success of the urban water supply in Ghana lies in active private sector participation with its attendant proper pricing.

The increase in per capita demand for water is partly due to increase in population and urbanization. The water infrastructure in the country is old and rusty thus resulting in high levels of leakages and partly contributing to high levels of un-accounted –for

–water (UFW) of about 40 percent. Furthermore, most dams are too small and shallow (due to siltation) to capture the surplus water in the rainy season. The two problems result in chronic water shortages in the urban areas. The above problems are similar to other water systems throughout many developing countries (Le Moigne, 1992). The government of Ghana needs US\$ 1.5 billion for urban water rehabilitation and expansion (MWH, 1999). There have been shifts in dominant development paradigms in the delivery and management of urban water infrastructure services in the 20<sup>th</sup> century in most developing countries in several ways. The focus on building or expanding dams to meet increased demand of potable water has now shifted to maintenance and concern for environmental effects of new projects (World Bank, 1994; Aligula, 1999). This shift in focus is based on the fact that the cost of providing new water infrastructure is more expensive than the cost of maintenance of old infrastructure (Munasinghe, 1992). Secondly, the major state involvement in delivery and management of water infrastructure is also giving way to increased private sector involvement in delivery and management of water. Finally, there is the need for increased consumer involvement by way of paying economic tariffs for water consumption to supplement private sector financial support.

In spite of the perceived benefits of private sector participation in the water sector, the Trade Union Congress (TUC), civil servants and other civil organizations in many developing countries remain skeptical about the role of the public-private partnership (ppp) in the water industry. It appears that not much awareness has been created on the private model to be adopted by Ghana under its urban water privatisation scheme. This paper discusses the model with the view of creating understanding into the pros-cons. It also offers suggestions on how to make the partnerships workable in the interest of the pro-poor.

The paper is structured into four main sections. Section one presents a brief introduction while the second part describes the main back-

ground issues to the study. The third section discusses the main public-private partnerships (PPP) initiatives and the challenges they pose. The final section ends with a conclusion on the way forward with ppp initiatives in the water industry in Ghana.

## **2.0 Background**

The Ghana Water Company (GWCL) for the past 40 years of operation is saddled with problems, especially finance. This is due to inadequate cost recovery to cover operations and maintenance costs of the system. Other factors contributing to this weak financial performance include high proportion of leaks, and a weak billing and collection system. It was to address these problems that the government in 1991 at Kokrobite came out with a declaration to privatize the Ghana Water Company (GWCL), especially the urban water sector.

There are two fundamental reasons why very little private sector financing has gone into water supply in developing countries (Briscoe,1999; Whittington et al. 1999). First, because the level of cost recovery in the water sector is so much lower than it is for other infrastructure. Second, because the capital intensity of the water industry means that pay back periods and hence vulnerability to political risk are particularly high (Briscoe.1999). Therefore the management of the water sector in most developing countries has been the sole responsibility of the government. This has accounted for the poor performance in the sector over the years. Throughout the developing world water companies are run as a direct agent of government. As a rule, these are politicised ,bureaucratic and inefficient,with the result that coverage is low and services are costly and of poor quality (World Bank,1994).

Apart from the creation of monopoly power and higher prices, loss of jobs is the most commonly cited as the main problem of privatization. There is also the fear of provision of cheap and inferior goods and services thereby holding the national security at risk especially in times of crisis. Because of the desire not to play into the

hands of political opponents at a time when democratization is under way, there has been a strong tendency in Africa to shy away from the difficult issues that privatisation brings. Lack of transparency in the privatization process is a common finding of the country case studies in Africa (White and Bhtia,1998). African governments have done very little to monitor employment or to gauge the welfare consequences on the families of retrenched workers. Not one programme in Africa has been in place for monitoring and evaluating post-privatization performance.

Opposition parties in Ghana as well as civil servants have openly kicked against the decision to privatise the provision of potable water in the country (Daily Graphic,2001). Other groups that oppose water privatization in Ghana include the National Labour Forum(NFF) and Intergrated Social Development Centre (ISODEC). Their main concern is the high tariffs which are likely to go along with privatization.

In spite of the perceived disadvantages of private sector participation (PSP) the available evidence of its advantages seem to outweigh the disadvantages. According to Lee and Jouravlev(1997), cited in Aligula,(1999):there are reasons to believe that the private sector is more efficient than the public sector for the following reasons: Experience in Latin America and the Carribean suggests that a relationship exists between public ownership and political interference. Much of the blame for the poor performance of the public sector in the water industry is attributed to political interference in the day-to-day affairs of the industry. Privatization solves principle-agent problem existing when the state as the owner and the manager of public utilities gains comparative advantages in capturing the regulatory framework. Consequently, managers face little competition and lack incentives to operate efficiently.

Additionally,the public sector as principal speaks with several voices. Utilities are required to fulfil several social and economic goals, not always consistent with one another. This gives ambiguity

between the principal and the agent, creates incoherence in managerial decision-making, and makes evaluation and monitoring of managers difficult. Private companies have to obtain their financial resources from the capital market, and are thus subject to the rigours imposed by private capital market and the market for corporate control. Public utilities, on the other hand, are financed through the state and even when they do raise their finances, from the capital market, they do receive explicit guarantees from the state. Additionally, private sector managers have a stake in the profitability of the company. This is lacking in the public sector. Commercial objectives are subordinated to political goals and the threat of bankruptcy is absent. Thus, the planning horizon of public sector managers are short and often tied to the electoral periods of their political masters. This short term horizon, increases their susceptibility to political pressure. The administrative orientation of public utilities gives little reward for personal initiatives and innovations.

In most developing countries the development and management of water resources have traditionally been dominated by the central government. It was believed that only the state was able to handle the large investment and operations necessary and that the crucial role played by water justified government control. The fiscal crisis in the developing world that began in the early 1980s, however, demonstrated the weakness of much of this argument. The deteriorating and inadequate water supply system throughout the developing world has exposed the serious institutional deficiencies of many government agencies responsible for water resources. These include lack of motivation and accountability of agency staff, high level of political interference, and inadequate concern for users. 'Consequently, users are not motivated to share in the cost of investment and maintenance or to pay for services (World Bank, 1993).

In West Africa, Guinea, Togo and la Cote d'Ivoire have embarked on privatization of their water sectors (Kendie, 1997). While the Guinea and la Cote d'Ivoire cases were in their early stages of de-

velopment, Togo's has not been very successful due to undue interference of the government in the day-to-day activities of the private sector (Kendie, 1997). During the past 25 years the urban water sector in la Cote d'Ivoire has been operated by a private company, (SODECI), under a mixture of concessions and lease contracts .In Santiago, EMOS, private company is one of the best in the world. They do a lot of service contracts for meter reading, billing and collection. What has not come out clearly is the role of public private – partnerships to address the concerns of the civil sector and other stakeholders in the water industry.

### 3.0 Public-Private-Partnership Initiatives (PPP).

The involvement of the private sector in municipal water management can take many different forms. The main options for public-private partnership (ppp) can be distinguished by how they allocate responsibility for such functions as assets ownership, operation and maintenance and capital investment between the public and private sectors ( Table 1):

Table 1: Types of PPP in Water Sector Management

Institutional Options	Asset ownership	Operation & Maintenance	Capital Investment	Duration (years)	Example(s)
Service contract	Public/private	Public/private	Public	1-2	Chile India
Management contract	Public	Private	Public	3-5	Trinidad & Tobago
Lease	Public	Private	Public	8-15	la Cote d'Ivoire Guinea
Build, Operate & Transfer (BOT)	Private	Private	Private	20-30	Malaysia, Australia
Concession	Public	Private	Private	25-30	France, Argentina
Divestiture	Private	Private	Private	Indefinite	England and Wales

Source: Author's construct adapted from Aligula (1999) Table 2

### **3.1 Service Contract**

The simplest form of PPP is for a utility company (public) to sub-contract out various activities (such as meter reading, billing and collection) to a private investor. They are contracted for short periods, typically from six months to two years. The main benefit of service contract is that it allows the public utility company to tap private sector expertise for specific tasks and open these tasks to competition. Efficiency gains are possible, but only if the contracting utility is well run (which is often the real cause for concern) especially Ghana Water Company.

### **3.2 Management Contract**

Management contracts transfer responsibility for the operation and maintenance of the entire water system to a private sector operator for a period ranging from 3-5 years. In its simplest form it provides for a fixed fee for reimbursing the contractor for its services. It allows the private company full responsibility for operating and maintaining the water supply system with freedom to make day-to-day management decisions. Management contracts are most useful where the main objective is to enhance a utility's technical capacity and efficiency and strengthen its management and operation. Management contract is a first step towards more full-fledged private sector participation. A management contract might be the best arrangement in a country where tariff levels are high to support the sector. The management contract is an initial short-term arrangement that can lead to immediate efficiency improvement while giving the government the time to improve the political, technical and financial position of the utility company for a more advanced public-private partnership such as lease or concession. This approach has been used in Trinidad and Tobago with much success.

### **3.3 Lease**

Under lease arrangement, a water company (public) releases its assets to a private developer for about 10-15 years to operate and maintain. Because the private firm, as lessor, in effect buys the rights to the incomers from the utility it assumes much of commer-



cial risk of the operation. A lease contract has built-in incentives for improving operation efficiency. Leases leave the responsibility for financing and planning investment with the government.

### **3.4 Concession Contract**

Under build, own, operate and transfer arrangements (BOOTs), the state assumes the role of assets owner and the client for a contract for the provision of services under specified terms and for specific periods. Performance monitoring and control mechanisms are needed to ensure that the contractual deliverables are achieved. A concession gives the private partner responsibility not only for the operation and maintenance of a utility's assets but also for investments. The government owns the assets and the private partner operates and maintains the facilities usually for 25-30 years. Concessions are usually bid by price: the bidder that proposes to operate the utility and meets the investment targets for the lowest tariffs wins the concession. The main advantage of a concession is that it passes full responsibility for operation and investment to the private sector and so brings to bear incentives for efficiency in the utility management and operation. Abidjan is noted for this type of operation. This operation requires that the government maintain a good regulatory framework.

### **3.5 Boots**

Boots arrangement are administratively simple in that they do not involve the private sector in detailed construction of retail water distribution systems and do not involve replacing the billing and collection process of the water utility by the private sector, but fails to capture the larger efficiency gains that are available by bringing the private sector into a retail concession.

### **3.6 Asset sale –privatization**

Divestiture of water sector through a sale of assets or shares or through a management buy out can be partial or complete. A complete divestiture gives the private sector full responsibility for operation, maintenance, investment and ownership of the assets of the

company. Again, the government has a role to play through regulation, since in theory the private company should be concerned about maintaining its assets base. This is the final phase of PPP initiatives. It requires a strong regulatory framework and strong commitment on the part of the government. Only England and Wales have adopted this form of privatization.

Stakeholders might oppose any arrangement that has the private sector acting alone, but may support joint ventures with the public sector. The government will have to engage in a dialogue with all of them to gain support or to diffuse opposition to the proposed public-private partnership arrangements as outlined above by addressing all issues affecting each sector. This has not been adequately done in the country. If the purpose of bringing in the private sector is primarily to improve operational efficiency and management and administration a management /lease type contract would be most appropriate. If, in addition, investment is sought to increase service coverage, a concession may be the preferred option. If there is need for a new plant, a build, operate, and transfer (BOT) may be the best way of tapping private sector know-how and financial resources. Experience around the world demonstrates that political commitment and regulatory framework are absolutely crucial.

#### ***4.0. Regulatory body under PPP initiatives***

In a natural monopoly situation such as the water industry, competition alone cannot ensure that the private sector will perform efficiently. Government needs to introduce safeguards against potential abuses of private operator's monopoly position by providing incentives for the private sector to operate efficiently. There will also be a need for public oversight of the activities of the private operator. The nature of the relationship between the public and private sector are determined by the regulatory framework that the government adopts. The need for regulation is least for simple operations and maintenance contracts. Long-term concessions and divestiture will require a much more comprehensive system of public scrutiny and vigilance.

In most countries there are two distinct mechanisms that determine the regulatory framework: one, general and sector-specific laws that establish the broad principles of regulatory policy and set national standards for minimum drinking water quality. Two, contractual agreements between the private operator and the government that govern the issues not covered by general or sector-specific laws. Detailed and rigid contract conditions do have advantages in that they leave very little room for dispute and minimize political discretion, but they also limit responses to changing social, economic and technical conditions which are bound to develop in unpredictable ways over the life of a 20-year contract. Regulation is required to deal with increases in prices, monitor private operator's performance, contractual compliance, arbitrate disputes between the utility company and its consumers and to impose sanctions if agreed standards are not met.

Price control regulation involves the setting of a general cap on prices. This cap is usually determined by reference to the rate of inflation and to an assessment of the potential for efficiency improvement by the regulatory utility. The main advantage of this approach is that it provides utilities with an incentive to reduce cost and operate efficiently. If the price is set too high the private operator will earn high profits, which may not be acceptable to the public. If the price is set too low the level and quality of service may fall because the operator finds it impossible to obtain a reasonable rate of return and investors are then placed at risk and the cost of capital may increase accordingly. Price caps may not be attractive if the primary concern is to promote new investments by the regulated utility. Both rate of return and price cap regulation require extensive and reliable information on all aspects of the utility business.

Decentralised regulation can generally be more responsive to local needs and conditions, ease monitoring and ensure better access to information. It can increase regulatory cost through replication of regulatory agencies, reduce regulatory effectiveness, and because of lack of capacity, increase the danger of poor regulation. It is there-

fore recommended for most developing countries to adopt the centralised system as a short term measure while the latter becomes the long term plan when more experience would have been acquired on PPP initiatives.

To be effective, the regulating agency must operate independently from both short-term political pressures and the regulated companies. If regulatory authority lies with the political control of government, there is always the danger that prices, service standards, investments priorities will be manipulated to serve short-term electoral interests.

Regulatory capacity can determine which private sector option is most appropriate in a given situation. The regulatory system chosen can affect the willingness of the private sector to participate and the cost of its participation. There is no one right way to mix contracting and regulation or to define the most advantageous regulatory setup. Options have advantages and disadvantages, and what works best will vary across countries and within cities in the country. The very purpose of regulation is: one, to ensure that the interest of the consumer and the private operator are protected; two, any choice must be realistic and compatible with the country's legal framework and its human resource capacity. A balance must be struck between the ideal and the achievable and three, regulation should not be too restrictive or controlling. Overly restrictive regulation could deter private companies from entering into private sector arrangements or limit their ability to introduce innovative and efficient operating practices. Any regulation that seeks to control in detail how the private contractor runs its business risks defeating one of the central purposes of private sector participation-improving efficiency of service delivery by unleashing the know-how and creativity of the private sector. The very reason for choosing the private sector is that the private sector can operate in a less restrictive business environment compared to the public sector. Government must realise that bringing in the private sector cannot compensate for misguided and restrictive policies.

## **5.0 CONCLUSION**

One of the challenges for the twenty-first century is how to provide present and future population with adequate and safe water. The financial resources required to provide facilities for the people who do not have access to these services are enormous. Human capacity to manage and operate these services better is also needed. Public sector management of the water industry in most developing countries has proven to be ineffective. Many decision-makers are reluctant to seek the assistance of the private sector because of the natural monopoly features inherent in the provision of water; therefore, the private sector and public sectors must form partnerships.

The crucial options available to Ghana Water Company to make the privatization of the urban water work include the following;

1. **Public Education:** A nation wide discussion on whether Ghana should privatize its urban water sector need to be carried out along the lines of the National Reconciliation Commission. Once people are well informed, a worker framework for urban water privatization would be reached by consensus.
2. The nation-wide discussion should also identify the framework for privatization of the urban water sector, if accepted by Ghanaians. Given the strengths and weaknesses of each model (see table 1) Ghanaians may opt for the simplest form of privatization – service contract for a reasonable period then move to the advanced forms of privatization such as, management, leases, and if possible sale of assets. It must be emphasized that GWCL may not necessarily go through the whole process of the privatization model as indication in table 1.
3. Finally, for a successful privatization process GWCL will require transparent and workable regulatory framework which will address critical issues such pricing, quality control and consumer complaints. Both the interest of the consumer especially the urban poor and the private sector company should be adequately catered for by the regulatory framework. The key actors

in the regulatory framework shall include the Public Utility and Regulatory Commission (PURC), the Ghana Water Resources Commission and the Ministry of Private Sector Participation.

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