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UTILITIES REGULATION IN GHANA

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1. INTRODUCTION

A major aspect of the economic reforms that took place in developing countries in the last two decades was the increasing withdrawal of the public sector from the direct production of goods and services. The introduction of private involvement in the public sector necessitated the setting up of independent institutions to oversee and ensure competition, efficiency, affordable pricing and quality of services. These institutions were formed as part of the reforms within the public sector and mandated to perform functions that include policy-making, commercial operations and regulations.

Regulation has however become the key word in most developing countries over the period in their bid to attract investments into their inefficiently run public sectors. Unfortunately, in many cases, regulatory institutions have been hastily set-up in order to satisfy the requirements of donors that have been approached to inject new capital into the facilities, and also to deal with the outcry from consumers, either in protest against a particular reform condition or against increases in prices by producers of services considered to be a right for all citizens. In Ghana, the Public Utilities Regulatory Commission (PURC) was quickly set-up by government to deal with tariff issues. The Electricity Company of Ghana (ECG) and Volta River Authority (VRA) announced a 300% increase in electricity prices in 1997 in the course of the power sector reforms. Electricity consumers protested and refused to pay the new price set by the producers, insisting the price was exorbitant and that the average Ghanaian could not afford it. The Government of Ghana (GoG) stepped in to resolve the controversy by first suspending the new prices and then setting up PURC to find suitable prices for utilities (electricity and water).

We have elsewhere expressed the view that the initial imposition of measures to foster regulation and competition in economic activities, including utility services, has been out of a sense of compulsion and not necessarily out of a public conviction about the benefits of these principles, as in the attainment of social objectives (Aryeetey and Ahene, 2005). Later, however, the need to have strong regulatory bodies became increasingly accepted as a part of the processes of economic liberalization and the democratisation processes.

This paper outlines the regulatory experience of Ghanaian utilities against the background of concepts of regulation. It looks at the institutional development of regulatory bodies for the utilities, as well as guidelines to improve regulatory activities in a congenial environment for the government, utility service providers and consumers.

2. CONCEPTS AND IMPORTANCE OF REGULATING UTILITIES

The OECD (1995) defines regulation as legal instruments by which governing institutions at all levels of government impose obligations or constraints on private sector behaviour. It is also a rule, order or standard adopted by any state agency to implement, interpret or make specific the law enforced or administered by it or to govern its procedure. Utilities are sensitive essential public services that operate under a unique public franchise obligation. Providers of these services have exclusive franchise through licensing; obligation to serve on a no-discriminatory basis; necessity of service to the public; and normally tend to be natural monopolists. Natural monopolies have economies of scale and large entry and exit costs, implying, one producer can supply a market at a lower cost than could two or more. Utilities having these characteristics usually operate in market failure conditions, where producers could abuse market power and consumers would be unable to make alternative choices due to lack of information and competition.

Based on the above-mentioned features, utility services are normally provided by governments in order to avoid monopolistic pricing, reduce or prevent market failure as well as ensure social welfare. Most economists initially endorsed public ownership of natural monopolies as a solution to imperfect competition, incomplete information and incomplete contracts (Berthelemy et al., 2004). However, most governments especially in developing countries are seen to be operating utility services inefficiently by setting uneconomic prices, employing obsolete technology and infrastructure, and have poor management in apathetic environments, thus belying the status of a panacea to overcome market failure[1]. Sheshinski and Lopez-Calva, 1998, also observed that, public ownership could lead to substantial efficiency losses, overcoming the gains obtained by resolving the issue of market failure. Failure of governments to efficiently operate public utilities has led to the prompting of private involvement but subjected to a credible regulatory framework backed by a strong political commitment. The framework includes price setting, quality and efficient delivery of services as well as guidelines for private investments.

[1] This is the case where markets do not produce economically efficient outcomes and lack of universal accessibility.

The main objectives in regulating utilities are to reduce or manage the risk associated with market failure, to achieve certain social objectives such as providing services in remote areas and reducing risks to public health and safety (The Office of Water Regulation, 1999). Investments in utilities usually tend to be long-term, thus a good regulation is an important incentive and a source of guarantee for investors (ILO, 1999). A well established regulatory framework gives investors incentives to improve efficiency, which could have a key influence over the rest of the economy through improved production processes and reduced user costs, especially in utility service delivery (Berthelemy et. al., 2004). Regulatory framework remains a key determinant of access and quality improvements of utilities (ibid). Regulating utilities would thus provide benefits in the society as in market situations where there are choices and competition, provided the cost of regulation does not outweigh its benefits (The Office of Water Regulation, 1999).

The regulatory framework in general and the utilities in particular should endeavour to achieve the harmonization of a number of different objectives concerning the profitability of the operator, the continuity and quality of the general interest services provided, compliance with commitments entered into, the implementation of the necessary infrastructure investment, the management of externalities and environmental concerns, for example, pollution of water sources, over-pumping of groundwater, and the need for flexibility to allow adjustments to be made as and when required (ILO, 1999).

The World Development Report 1997 also highlights the importance of well-designed regulatory systems in the wake of reforms and the new role of the state. The report reiterates the point that, regulation could help protect consumers, workers and the environment as well as foster competition and innovation while constraining the use of monopoly power. Utilities play a crucial role in the development of a country and mostly serve as a source of national pride (USAID, 2000). As a result they become a thorny issue when the question of private participation is raised. The consequences of any changes in a utility structure would not only affect consumers and workers, but the whole economy at large (ILO, 1999).

Due to its monopolistic features, large capital outlays and inefficiencies of governments' involvement in utilities, very few private investors are interested in them. In recent years, however, and in the wake of the "Washington Consensus" with the growing influence of the World Bank and the IMF in the economies of many developing countries, the need for reform and privatization have gained currency.

Consequently, several state enterprises have either been sold outright or have had to enter into partnerships with the private sector. To begin the reform processes, the status of utilities had to change from government corporations to companies with a further aim of privatisation. This emphasised the need to establish regulatory institutions that would help the nation to achieve its goal of total privatisation or private-public partnerships but not without the welfare of consumers taken into consideration. The experiences from U.K, Chile and the U.S indicate that reforms were successful in these countries due to the presence of an independent regulator (Adu, 2004). The regulator ensured equity and fairness to both providers and consumers as well as enabled utility providers to operate safe, adequate, reliable and efficient services to consumers who are also expected to be willing and able to pay for the services provided (ibid).

3. EVOLUTION OF PUBLIC UTILITIES PROVISION IN GHANA

In this section we review the evolution of public utilities provision in Ghana with particular emphasis on water supply, electricity and telecommunications. The review would briefly discuss the legal framework within which these utilities were established as well as their main functions.

Water Supply

The provision of public water supply in Ghana began in 1928 with a pilot pipe-borne system managed by the hydraulic branch of the Public Works Department (PWD) in Cape Coast. At the time, the PWD was responsible for both urban and rural water supplies. However, in 1958, the Water Supplies Division of PWD became an autonomous entity directly responsible to the Ministry of Works and Housing (MWH). Subsequently, in 1965, the Ghana Water and Sewerage Corporation (GWSC) was created by an Act of Parliament (Act 310) as a legal utility charged with the responsibility of providing and managing water supply and sewerage services for domestic and industrial purposes throughout the country.

The Ministry of Works and Housing (MWH) among other responsibilities, is the key ministry responsible for the water sector. It has the authoritative function of initiating and formulating policies, coordination of budgeting, monitoring and evaluation to ensure the efficiency and performance of its specific sector. Specifically, the ministry formulates and implements policies and programmes for the provision of safe drinking water, and the development of infrastructure facilities in the area of water and flood control systems, sanitation, drainage and coastal protection works, operational hydrology, for the benefit and

improvement of all people living in Ghana. The Community Water and Sanitation Authority (CWSA) is an executive agency under MWH entitled with responsibility for water supply to rural communities, including small towns. CWSA also deals with household sanitation and the promotion of a hygienic environment.

Electricity Supply

Electricity generation began well before the completion of the Akosombo Dam, which was constructed after the formation of the Volta River Authority (VRA). Prior to the construction of the Akosombo Dam, diesel generators in the major urban centres of Ghana produced electricity. The Akosombo and Kpong Dams, as well as the construction of a thermal plant at Aboadze in the Western Region later augmented these generators. The principal actors in the electric power sector are the VRA and the Electricity Company of Ghana (formerly the Electricity Corporation of Ghana). The VRA was created in 1961 by an Act of parliament (the Volta River Development Act 46). The Electricity Corporation of Ghana (ECG) was established by a decree (NLC Decree No.125) in 1967 and replaced the Electricity Department of the Ministry of Works and Housing. However, under the provisions of the Statutory Corporations (Conversions to Company) Act, 1993 (Act 461), ECG has since 1997 been converted into a limited liability company called Electricity Company of Ghana.

The VRA is primarily responsible for electric power generation by developing the hydro potential of the Volta River. The VRA has been the sole producer of electric power in Ghana, hence conferring on it a natural monopoly status. VRA supplies to both internal and external markets. The main consumers internally are the Electricity Company of Ghana[2] (ECG) and the Northern Electricity Department (NED)[3]. These two institutions are mandated by law to distribute electric power in Ghana. The VRA is also responsible for the operation of the transmission system and the distribution of electricity to all types of customers in the Brong Ahafo, Northern, Upper East and Upper West regions through the NED. Additionally, the VRA is responsible for the development of the Volta Lake for fishing as well as transportation. Prior to 1987, ECG was responsible for distributing electricity throughout Ghana when it receives bulk supply from the VRA. The ECG's responsibility for distribution is now limited to the Ashanti, Western, Central, Eastern, Greater Accra and Volta regions.

[2] It was formerly known as the Electricity Corporation of Ghana, until it was transformed from a state enterprise to a public company, although it is largely under the authority of the Ministry of Energy.
[3] A subsidiary of VRA

Telecommunications

Following the establishment of the first automatic telephone exchange in 1953, in the then Gold Coast, the second automatic exchange was set up in 1957, which marked a major development in the telecommunications sector in Ghana. A new chapter in the development of Ghana's telecommunications system began in November 1974, when the Post and Telecommunications Department was declared a public corporation by National Redemption Council Decree No. 311. Under an instrument of incorporation, the Post and Telecommunications Department became the Post and Telecommunications Corporation (P & T). Its principal functions were the provision of telephone and telegraph services, as well as postal delivery services.

The establishment of these public utility providers was through state laws and decrees, and thus conferring on them the status of state corporations. Thus, with these instruments the state assumed active participation in the regulation and delivery of public utilities acting through the relevant Ministries, Departments and Agencies (MDAs). These MDAs served as the regulators for the various sectors within which a particular utility provider fell. The MDAs, by virtue of their being conduits of state administration could therefore not be described as independent. Hence, the state was both a provider and regulator of its activities.

4. THE INSTITUTIONAL SUPERVISORY BODIES SINCE INDEPENDENCE

This section briefly outlines the statutory bodies in charge of the three public utilities, noting only their functions and their responsibilities in so far as they served as watchdogs over these state corporations, and guardians of consumer interests.

The State Enterprises Commission (SEC) was established to oversee the operations of all state-owned corporations and companies. The SEC develops and puts in place annual performance contracts to serve as benchmarks to be achieved in a given year for state-owned companies. The performance contract is to develop good management practices and improve performance.

Early Regulation of Telecommunications

Under the instrument of incorporation, the Post and Telecommunication Corporation (P&T) was administered by a Board of Directors who functioned as the corporation’s governing body. There was a Director General, who was the chief executive accountable to the board

of directors and responsible for the organization, maintenance, and development of all the corporation's services (domestic and international) as well as the determination of financial policies. The Director General also ensured that government policies on telecommunication were implemented and that rules and regulations governing the various services as well as international conventions were correctly interpreted and acted upon.

Until the late 1970s, the P&T was responsible for assigning and issuing radio frequencies to private, public, and government institutions for the operation of radio equipment. In 1977, however, the Ghana Frequency Registration and Control Board (GFRCB) was established by the Frequency Registration Decree of 1977, and these responsibilities were transferred to it. Membership to the GFRCB was made by Ghana's Head of State with the advice of the National Security Council. Its functions were as follows: approve and issue licenses to commercial and amateur radio operators; monitor the training of commercial and amateur radio operators; and perform tasks that GFRCB deems to be incidental or conducive to the exercise of its function.

Early Regulation of Electricity

Electricity was under the mandate of the Ministry of Mines and Energy (MME). The Ministry was the policy making body for electricity and petroleum with a primary responsibility of ensuring policy development and coordination of the power sector, assisted by VRA and ECG. The Ministry also had the responsibilities of setting tariffs for electricity consumption prior to reforms in the power sector. The utilities made tariff proposals to the MME, which reviewed and revised it in consultation with the utility companies. This was later sent to the Cabinet and Parliament for approval (Edjekumhene et al., 2001).

Water Regulation

While the Water Resources Commission (WRC) ensures effective and efficient management of the natural water bodies, the State Enterprises Commission (SEC) for long set the objectives and operational targets for water provision institutions, while the Ministry of Works and Housing provided policy.

Currently, the Water Restructuring Secretariat (WRS) is an *ad hoc* body that advises the sector minister and oversees the introduction of private sector participation in urban water supply. The Environmental Protection Agency (EPA) ensures that the activities of water operators do not harm the environment and water bodies whilst the Ghana Standards Board (GSB) sets standards for drinking water quality. Potable water supply is provided by the

Ghana Water Company Limited (GWCL) which produces and distributes water in urban areas, and Community Water and Sanitation Agency (CWSA). CWSA works with the District Assemblies (DA) to ensure the sustainability of water service delivery in the rural communities. This arrangement draws the Ministry of Local Government and Rural Development (MLGRD) into the organization of rural water service delivery. In the various communities there are Water and Sanitation Development Boards (WSDB) which set tariffs and application procedures, connection and re-connection fees, maintain financial records and manage the water delivery facility in the small towns. District Water and Sanitation Teams (DWST) also provide technical approval for WSDB and the financial status of the community water system whilst Water and Sanitation Committees (WATSANs) monitor, evaluate and educate the communities on water and sanitation issues. There is also the presence of the Civil Society Groups, as well as Consumers' Associations who monitor policies affecting water provision in Ghana.

5. RECENT TRENDS IN THE REGULATORY ENVIRONMENT FOR THE UTILITIES

This section traces the evolution of regulation with respect to the three utilities being considered. As earlier indicated, the new thinking about state enterprises, and hence regulation, of the 1990s influenced how Ghana's public utilities have been perceived. They were assessed to suffer from mismanagement, poor operational performance and distorted tariff structures, resulting in poor economic efficiency and low returns on investment. This served as one principal rationale for seeking private participation and the consequent establishment of independent regulatory bodies to oversee their operations. However, in many cases, the poor financial management of the public utilities could not entirely be blamed on management, since they were in a number of cases the result of non-payment of bills by customers – especially government.

Regulatory institutions were created considering private involvement in the public sectors to set and enforce rules for competition and consumers' welfare. The regulatory institutions check the operations of utility services and prevent consumers from bearing the full brunt of private sector involvement in the provision of services that were formerly delivered by the public sector. The regulatory institutions are also to ensure that in seeking the welfare of consumers, the economic efficiency of service providers is not compromised. Regulators are therefore placed in a position of seeking the welfare of both consumers and service providers. In an illustration by Berg (2000), the regulator's position is in a triangle with the government, producers and consumers at the corners of this triangle. He explains that, the

regulator should be able to liaise with all three entities as efficiently as possible while maintaining its independence.

As noted earlier, public utilities provide essential public services that are quite sensitive and in addition operate under a unique public franchise obligation. The inefficient delivery of utility services in Ghana, as in most developing countries, led to a heavy financial pressure on the Government of Ghana (GoG). The move toward the establishment of independent regulatory agencies with oversight responsibilities corresponds with a global push for separate national regulatory bodies different from the regular ministries or departments of state. In 1990, there were only 12 of such bodies throughout the world (ITU, 2001). Samarajiva (2001) has noted that national regulatory agencies emerged as part of the global demand for the creation of independent, non-arbitrary and consistent decision-making agencies to guarantee stable environment for long-term investment in the relevant sector they were to oversee.

The three major utilities in Ghana, water, electricity and telecommunications, were subjected to structural reforms at various periods. The different reforms took the form of restructuring, commercialisation/corporatisation, competition and privatisation. The reforms also provided the government with an alternative source of funding these utilities that lacked investment and had low revenues as a result of low tariffs. The utility sector reforms' objectives were that, through donor funding and private capital, the utility sector should become financially self-sustaining through the establishment of mechanisms to ensure that consumers paid for efficient services (Adu, 2004). In order to achieve these objectives, an independent regulator with the ability to establish a regulatory environment deemed to be fair, open and transparent had to be established in Ghana (Ibid).

The Public Utilities Regulatory Commission (PURC) was established to regulate the provision of water and electricity[4], and the National Communications Authority (NCA) to regulate telecommunication. The remainder of this section would outline some of the institutional structures responsible for overseeing the utilities, their functions, challenges and how to achieve better regulatory prowess.

Structure and Functions of the Regulatory Institutions in Ghana

There are two major regulatory institutions in Ghana that oversee the operations of utilities (electricity, water and telecommunications). These are the Public Utilities Regulatory Commission (PURC) and the National Communications Authority (NCA). These two

[4] PURC regulates electricity in consultation with the Energy Commission formed under Act 541.

institutions work closely with the relevant sector ministries to administer the operations of the utility companies. The Electricity Company of Ghana, Volta River Authority, and the Ghana Water Company are under the regulatory supervision of the PURC. NCA also regulates Ghana Telecom, Millicom Ghana, Scancom Ghana, Kasapa, all internet service providers, radio stations, as well as those that provide earth based satellite services in Ghana.

The NCA was established by an Act of Parliament, the NCA Act 524, 1996, as part of Ghana's telecom sector reform policy implemented in 1996 to introduce privatization, liberalization, and controlled competition into the telecommunications industry. The Ministry of Communication and Technology is responsible for policies concerning the provision of telecommunication in Ghana. The Ministry is to enable government develop policies that will help integrate information technologies into the activities of the society and also harness the full potential for effective development. The National Communications Authority (NCA) is the regulatory authority for telecommunication with the responsibility of ensuring a level playing field in the industry and the attainment of public policy goals in communications. Specifically, its functions include the regulation of communications by wire, cable, radio, television, satellite, and other related technologies in Ghana. There are four divisions under NCA, namely, frequency management, regulation and licensing, legal and finance. NCA is to ensure the provisions of highly efficient communication services throughout the country, promotion of fair competition among producers and the protection of consumers' interests.

The NCA act defines the responsibilities of this regulatory body as: setting technical standards; licensing service providers; providing guidelines on tariffs chargeable for services; monitoring the quality of service providers and initiate corrective action where necessary; setting terms and guidelines for interconnections of the different networks; considering complaints from telecom users and taking corrective action where necessary; controlling the assignment and use of the radio frequency spectrum; resolving disputes between service providers and between service providers and customers; controlling the national numbering plan; controlling the importation and use of types of communication equipment; and last but not the least, advising the minister of communications on policy formulation and development strategies of the communications industry.

The Public Utilities Regulatory Commission (PURC) was formed under the Public Regulatory Act (Act 538) in 1997 to regulate and oversee the provision of utility services in Ghana. The Commission is made up of nine members: a chairman, an executive secretary, an

institutional representative each for labour, industry, domestic consumers as well as four experts in various aspects of the Commission's work. PURC was then specifically mandated under Act 568 to enforce regulations concerning utilities (water and electricity). The Public Utilities Regulations 1999, dealing with the termination of service, LI 1651, sets out the circumstances under which utility services to consumers may be terminated; and Public Utilities Complaints Procedure Regulations 1999, LI 1665, states the procedures by which any person (utility or consumer) may lodge a complaint with the Commission.

Generally, the Commission seeks to protect the interest of consumers and providers of utilities; monitor standards of performance for provision of utilities; initiate and conduct investigations into standards of quality of service given to consumers. The commission also gives guidelines for fixing the rates of utilities and seeks compensation for consumers. PURC has a mandate to make regulations for and ensure efficient services of the Ghana Water Company Limited, Private Water Providers including Tanker Services Association, and Electricity Company of Ghana in conjunction with the Energy Commission. As part of its regulatory activities, PURC also participates and monitors the reform processes of both water and electricity in the country. PURC is however a centrally located institution with regional branches dealing only with urban utility services and not rural and small town systems which is managed by the districts and communities.

In addition to the PURC, there is also the Energy Commission, which is required by law to regulate, manage and develop the utilization of energy resources in Ghana; to provide the legal, regulatory and supervisory framework for all providers of energy in the country: specifically by the granting of licenses for the transmission, wholesale, supply, distribution and sale of electricity and natural gas; refining, storage, bulk distribution, marketing and sale of petroleum products and related matters. Ghana Energy commission is a statutory body corporate with perpetual succession and a common seal established by an Act of the Ghanaian Parliament, the Energy Commission Act, 1997 (Act 541). The Energy Commission also works with the PURC to develop standards of performance for the supply, distribution and sale of electricity or natural gas to customers by licensed public utilities.

6. INTERNATIONAL BEST PRACTICES OF UTILITY REGULATION

Regulation is generally a tool for addressing market failure and for utilities in particular, it is to ensure that, the service provided by either the public or the private sector would not marginalise sections in the society especially the poor. In order to achieve this, regulators

hold consultations with stakeholders on major issues concerning utility services. There are normally public hearings, consultations with utility providers, government and consumers as well as embarking on public awareness and educational programmes.

Some studies on international best practices of regulatory agencies expound on characteristics that promote effective and efficient utility regulations. Lamech and Saeed, (2003) in their World Bank survey on potential foreign investors in electricity in developing countries found that a consistent, transparent and enforceable regulatory system is important in attracting investments.

The independence of a regulator is explained by Berg (2000) as a corresponding role the regulator plays among government, producers and customers. Smith, (1997a) placed more emphasis on the meaning of an independent regulator by stating that, the regulator should be given a distinct legal mandate and free from any ministerial control; there should be a prescribed professional criteria for appointment of the regulator; cabinet and parliament should be involved in the appointment process; regulators should be appointed for fixed terms and protecting them from arbitrary removal; they should also be exempted from civil service salaries rules to attract and retain well-qualified staff; their terms of office should not coincide with the election cycles; and providing the regulatory agency with a reliable source of funding. In addition, commissioners must have qualities to resist improper pressures or inducements.

The Australian utility regulatory forum outlined nine principles as best practice utility regulation. These are:

- Communication: helping all stakeholders to understand regulatory initiatives and needs
- Consultation: effective and early consultation between regulators, customers and utilities is vital for ensuring appropriate regulatory systems
- Consistency: treatment of participants across service sectors, over time and across Jurisdictions should be consistent to give confidence in the regulatory regime.
- Predictability: utilities should be able to confidently plan for the future and be assured that their investments will not be generally threatened by unexpected changes in the regulatory environment; this is more so in the utilities which is characterised by major infrastructure works with long investment time horizons
- Flexibility: ability to mix of regulatory tools, evolve and amend the regulatory approach over time as the external environment changes. This assumes that the

organisation has knowledge of, keeps up to date with, and is open to alternative regulatory approaches.

- Independence: regulatory decisions should be free from undue influences that could compromise regulatory outcomes. The principle of independence is a necessary element in providing stakeholders with confidence in the regulatory system, and is linked to achieving the principles of consistency and predictability.
- Effectiveness and efficiency: an assessment of the cost effectiveness of the proposed regulation and an assessment of alternative regulatory is imperative. Suitable measurements should be established to monitor the benefits established through regulatory controls, and provide an assessment of the costs incurred by the regulatory body and utility.
- Accountability: this involves regulators taking responsibility for their regulatory actions. This requires regulators to establish clearly defined decision-making processes and provide reasons for decisions. Supporting the decision-making processes should be effective appeal mechanisms and adherence to principles of natural justice and procedural fairness.
- Transparency: requires regulators to be open with stakeholders about their objectives, processes, data and decisions. Regulators should establish visible decision-making processes that are fair to all parties and provide rationales for decisions. Such openness can assist in gaining stakeholders' confidence and acceptance of the regulator's decisions.

Generally, a set of minimum characteristics normally found in most studies of international best practices of regulatory agencies are: independence, enforcement powers, transparency and accountability, and competence.

7. CHALLENGES OF UTILITY REGULATION

Due to some peculiar characteristics of developing countries, implementing utilities' regulations is a lot more difficult than in developed countries. Some of the obstacles outlined by Laffont (2004) are as follows:

- Prevalence of corruption and the inability to fight it;
- The inability to impose penalties on offenders of regulatory outlines;
- Lack of up-to-date accounting and auditing system as well as the political and social difficulties that hamper the payment of incentive salaries to auditors to reward effort and discourage corruption;

- The lack of checks and balances typical of well-functioning democracies (supreme courts, government auditing bodies, separation of powers, independent media) make the governments an easier prey to interest groups and patronage;
- The lack of political democracy and well-functioning political institutions increases the uncertainty of future regulators and make it difficult for the government and the regulatory institutions to make credible commitments to long run policies;
- Weakness of the rule of law;
- Poor enforcement of laws and contract biases, contracting toward self-enforcing contracts or leads to renegotiations; and
- The liberalisation and deregulation of public infrastructure in developing countries often fail to attract the level of foreign capital that is necessary.

Operations of Ghana's Regulatory Institutions

Although the regulatory institutions are tasked to oversee the activities of utility service providers, their attention has also focused on helping the service providers to improve their performance, especially in relation to coverage and quality. The PURC reports that it has turned some of its attention from tariff[5] to non-tariff issues[6] since 2003, especially in the water sector. The commission's focus now is on social policy and strategy for water regulation to ensure consumers access to safe, adequate, efficient, reasonable and non-discriminatory water services.

The PURC has recently undertaken a study to improve its understanding of the issues relating to water supply. The rationale for the study were as follows: to provide reliable data to enable the commission to understand the current level of service performance; to draw attention to priorities for water supply improvement as perceived by consumers; and provide useful information on the cost of water and quality which consumers are able to obtain through the different access routes. According to the survey, only 15% of the poor have access to piped water either directly or through yard taps (PURC, 2002). This has led to the working definition of urban poor by PURC as those without direct access to regulated piped supplies; depend on secondary and tertiary suppliers; and buy by the bucket.

The social policy objectives of PURC are to improve accessibility, affordability, quality, community involvement and duty of care with particular emphasis on the poor (PURC,

[5] Which was the primary reason for its establishment
[6] Quality service, reliability of service, accessibility and consumer protection issues

2005). The development of a social policy document by PURC will enable it to focus on its major mandates. These include consumer needs as well as giving all stakeholders in the water sector better understanding of social issues by regulators. In pursuing these objectives, PURC is working in collaboration with Ghana Water Company Limited, Water Resources Commission, Environmental Protection Agency and Water Aid to achieve a well-documented social policy that could be easily implemented.

Challenges of Regulating Utilities in Ghana

Public utilities in the electricity and water sectors generally have monopolistic tendencies with those in telecommunications being oligopolistic. Hence there is the need for a credible regulatory framework coupled with strong political commitment, which is important in ensuring efficient delivery of services. The government therefore, through the PURC and NCA, aims at ensuring the effective and appropriate investments in utilities. However, the objectives of government and these regulatory bodies are not easily achieved due to challenges involved in regulating utilities in Ghana. Some of these challenges are:

a) Social and public considerations may assume higher priority than economic considerations.

- Achieving full cost recovery tariff may be difficult because of consideration of the poor in society.
- Government pro-poor policy may influence regulatory actions, thus curtailing the independence of the regulator through active influence from the government. For example, the imposition by the World Bank and IMF of an automatic water rate adjustment mechanism on the state regulator, PURC, was part of a package of conditionalities that ensure that water rates adjust automatically as the local currency appreciates or depreciates against the US dollar. The rates have however been adjusting upwards since its inception. Therefore it is unlikely that the profit motives of the private operators protected by the IMF and principles of full cost recovery will be consistent with policy objectives of the government to supply to the poor[7].

b) Public utilities do not respond adequately to incentive mechanism.

[7] Amenga-Etego, R., Water Privatisation in Ghana: Still born or born deformed? Advocacy and Campaign Programmes, Integrated Social Development Centre, (ISODEC), Accra-Ghana.

- Rewards to be derived from efficiencies are not responded to. This is because monopolies and oligopolies do not generally produce efficient levels of output.

c) Applying regulatory sanctions or enforcement of regulatory decisions

- Due to inadequate investment, it is difficult to rigidly apply sanctions and impose penalties that could affect the already precarious financial positions of the utilities.
- Utilities may be turned into limited liability companies, that is, corporatised but attitudes of staff may remain unchanged and the efficiency objective not achieved. This defeats the objectives of the reforms.

d) Unhealthy financial performance

- Losses are mostly picked up by government as a majority shareholder and in many cases the financier of last resort.
- Tax payer eventually pays for these losses.
- Balance sheets burdened by on-lent loans from government are not being serviced.

e) Lack of skilled personnel

- The absence of experts in the industry is also one of the main challenges to regulatory effort. Seeking expert help from the industry could undermine regulators independence and neutrality.

f) Lack of information and data

- Additionally, the effectiveness and incentives of regulations are hampered by limitations in the availability and access to information and data on economic and social parameters of national development. This therefore affects the efficacy of any planning strategy formulation by the regulators.

8. IMPROVING UTILITY REGULATION IN GHANA

Ghana is quite new to the business of regulations and as seen from the challenges stated above, a lot of attention need be given to the institutions in order for them to achieve their objectives. First of all, regulations and procedures of regulation should be made simpler so it would be generally understood by all stakeholders. Companies in the utility service deliveries

should be allowed to decide how best they could achieve the set objectives, given the rules or laws set by the regulatory institutions. The legal framework of the regulatory institutions should be one that promotes competition, thus consumers would be able to make rational and informed choices which would encourage innovation, growth and improve the operational performance of service providers. The regulator has to achieve its objectives without compromising the labour, health and environmental standards of the society[8].

The regulator should also have complete access to information in the utility service being regulated since the utility service provider may decide not to pass on any benefits it has acquired to the consumer (Makaya, 2001). The regulator should therefore be given a legal backing to request for information from companies providing utility services in the country. Non-compliance of this rule should be punishable by law (Ibid).

Regulatory institutions also lack utility-specific human resources to make utility regulating smooth-sailing in Ghana. Companies normally have more expertise than the regulators and could easily hide information from regulators. Regulatory institutions should therefore have attractive remunerative schemes to entice the best professionals. In addition, staff should have regular training to be up-to-date with new technologies in the industry being regulated. Regulators could also give out work that needs to be performed by a professional to private experts with a guarantee of the required independence and neutrality of a regulator (Ibid).

Since regulation is a sensitive and political undertaking, especially in the utilities service deliveries, and is itself the product of a bargaining process involving not only government departments, private companies and financial institutions, but political parties, trade unions and consumer groups, a lot more effort should be exercised to ensure an open dialogue among the principal actors (ILO, 1999). This open participatory approach would guarantee a more transparent and responsible regulator able then to enforce decisions arrived at, and to arbitrate disputes more effectively.

Other areas that require action to improve the regulatory environment include the need to adequately address the following specific issues;

[8] Source: Ministry of Labour and Human Resource Development, Government of Kenya, The Better Regulation Guide, Nairobi, n.d.

Independence: The Acts of parliament that resulted in the formation of these regulatory bodies should enshrine sections relating to their independence, that is, emphatically make provisions that will protect regulators from being subject to the direction of any person or authority in the performance of their functions. However, given the level of influence of the President of the Republic in the appointment of members to these bodies, it is highly unlikely they would not yield to the political pressures that might result from the Presidency.

Again, donor and creditor agencies have been highly influential in the processes of privatization, liberalization and de-regulation in Ghana. To the extent that PURC is not seen by all parties as being fully independent and able to take its own decisions based on its own studies, the role of the regulator is always called into question. The NCA has also been accused of ineptitude by industry players, especially regarding licensing, enforcement of existing regulations, etc. An independent NCA is thus crucial for effective supervision of the telecoms sector.

Flexibility: The fast pace of development in the telecommunications sector requires a dynamic regulator able to anticipate future trends in the industry, particularly in relation to technology in order to facilitate the required transformation needed to ensure growth and evenly distributed benefits to all concerned. Hence through appropriate streamlining of the regulatory environment, improvements in technology would translate into growth with the sector and the economy at large.

Removal of Constraints: The existence of rules in the telecommunications sector that prevent VSAT (Very Small Aperture Terminal) operators from providing value added services like Voice over IP (VoIP). In addition, VSAT operators feel constrained by the licensing and government fees required of them.

Together with the Ministry of Communication, the NCA should define Ghana Telecom's status either as an ordinary operator or as a common carrier. The role of other telecommunications entities in Ghana should be categorized so as to determine their obligatory roles, as content and service providers. This is because industry players are not of equal size, and recognition of this would help them fashion out appropriate policies to ensure a level playing field.

Increased Access: As part of its responsibilities, the NCA is to ensure greater access throughout the nation. It therefore would be appropriate to delineate the current market into urban and rural in order to put in place policies that would encourage increased

investments in the rural under-served regions. Currently, Ghana is considered one big market, and this does not encourage greater development within the sector. Dividing Ghana up into delineated markets will give the licensing agency a way to encourage service providers to select areas of operations where competition is less. Should the Ghanaian market be divided into sectors, the regulatory agency could offer incentives to VSAT operators and others to deploy in the underserved and rural communities.

Increased Competition: As part of its responsibilities, the NCA is to ensure competition within the sector. NCA should work to promote "dynamic competition" as opposed to "static competition" within the industry. "Dynamic competition allows competing technologies and new products to challenge the old ones and, if they are really better, to replace them. New technologies can render instantly billions of dollars of embedded infrastructure, accumulated over decades obsolete" (Dyson *et al*, 1994).

Improved Enforcement: Guidelines related to standardization, interconnections, arbitration and negotiations should be drafted and made public. Such rules eliminate much of hostile business relations that exist between the big and smaller operators. The NCA needs to enforce arbitrated agreements. Currently the communications industry in Ghana is muffled by the non-existence of well defined regulatory rules to guide industry practice[9].

Expertise: Although membership of the regulatory bodies also requires the inclusion of other persons with knowledge in matters relevant to the functions of these bodies, it is equally important for the regulatory agencies to adequately equip themselves with persons with the expertise in their respective sectors. As noted earlier, the lack of expertise is one serious constraint that NCA and PURC have particularly faced since their inception.

Improved Finances: Finally, the work of the regulators would be greatly enhanced if their financial capacities are tremendously improved, not solely from the state, but significantly from other stakeholders within the sector, whilst at the same time maintaining its independence and neutrality in disputes.

[9] Kwasi Boateng, *Satellite Communication in Ghana-challenges and Prospects*, School of Telecommunications, Ohio University, Athens, Ohio.

9. CONCLUSION

The paper has traced the development of state involvement in utility service provision from independence, noting the statutory bodies that were involved in ensuring quality service delivery. However, many years of mismanagement, under investments, and poor pricing resulted in the near collapse of these utilities. The inception of economic reforms in the early 1980s subsequently led to the involvement of private operators in a hitherto publicly provided service.

To assure improved supervision and monitoring of operations and reforms in the utility services, the PURC and NCA, as well as others were formed as regulatory institutions. Although remarkable strides have been made in respect of the operations of these regulators and their impact on electricity, water and telecommunications sectors, the need to strive towards improved regulations is imperative.

However, the work of these regulators has been hampered by their inability to attract experts to assist them in their activities, non-cooperation by some key industry actors, and lack of sufficient funding. Against this background is the need to earnestly pursue efforts at improving the work of the regulatory bodies to effectively play their roles in this dynamic environment. Regulators should therefore endeavour to develop and implement rules and regulations for establishing and sustaining a fair investment environment; promote competition; protect consumers against market players' abuses; and educate consumers about competition. In order to achieve its objectives, regulators need to be independent, have the ability to enforce rules, be competent, accountable and transparent.

Whilst current debates in Ghana centre on the inability of these bodies to effectively address serious challenges within their respective sectors, especially relating to tariff setting, competition, and unsatisfactory service delivery, it is also clear that these pertinent problems could be resolved by improving the effectiveness and efficiency of the regulatory agencies. Guidance from international best practices suggests ways by which regulation could be improved. Clearly, it is imperative for the utility regulators to show sufficient levels of proportionality and consistency in their handling of issues within their sphere of influence. Additionally, there should be a commitment of operating as transparently as possible for all actors to appreciate how decisions are arrived at and enforced, whilst at the same time demonstrating considerable expertise in the industry they oversee. Finally, regulatory bodies should display significant levels of efficiency in their businesses if they are to ensure reciprocal behaviours from utility service providers. By no means are these exhaustive in the

Ghanaian case, notwithstanding, they indicate clear landmarks which regulators could follow in their bid to improve the regulatory environment.

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