

Understanding the Ghanaian Telecom Reform: An Institutional Theory Perspective

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Abstract

Telecommunication reform, regulation and policies of various countries have been a subject of intense debate and analysis over the last decade or two. Almost all countries have embarked on some type of telecommunication reform with varied degrees of success and failures. Traditionally, the reason for the reform is solely placed on the inefficiencies of the incumbent national telecom provider. By applying the normative, rational-choice, historical and cultural-cognitive approaches in institutional theory, this study seeks to further explain the key factors that led to the Ghanaian telecom reform. And to assess the various exogenous and endogenous factors that interplayed to bring about the reform. And how various actors reacted to the institutional changes involved in the reform process. A combination of review of secondary data and empirical data from interviews were used in the analysis. The product of this study was a description of the reason and effect of this phenomenal institutional change on the telecommunication industry of Ghana.

Introduction

Telecommunication reform, regulation and policies of various countries have been a subject of intense debate and analysis over the last decade or two. The 1990s saw global pursuit of telecom liberalisation and regulatory reform that was unparalleled to any technological led reform since the beginning of the century and Ghana was no exception. An analysis of a number of World Bank reports and literature on telecom reform of the emerging economies depicts a high degree of global regulatory convergence, which meant that countries invited competition and reduced state intervention in managing their telecommunication sector. The two critical outputs in the telecommunication reform were competition which is safeguarded by regulation through the creation of a regulator.

The process of telecommunication reform often started with corporatization through privatization to total liberalisation involving competition. There are a number of factors that have been attributed to why the telecom reform started in most countries. Researchers like Cowhey (1990, 1999) argued that it could be attributed to a "revolution in telecommunication technology", whilst others argue that the performance of the incumbent was not the key driver for the telecom reforms. Samarajiva (2000), in his study of the telecommunication reform in Sri Lanka identified three key reasons for the telecom reform in Sri Lanka: World Bank and other international community's influence; influence of the colonial master, the U.K. and lastly itinerant experts who share certain view of the world. Also, Pisciotta (1999) posits that the key drivers for the telecom reform were technological change and

urgency need to attract financial investment in this sector. Whereas the technology change argument can be to some extent supported, the telecom reform actually started before the need for financial investment became crucial.

Furthermore, Cowhey and Klimenko (2000) posits that the WTO Uruguay Round which ended in 1993 was a major influence in the telecom reform of the developing countries. Whilst some consider endogenous (internal) institutional factors like poor economic situation, Foreign Private Investment (FPI) attraction and the existing political system (Haggarty et al, 2002). Furthermore, the inefficiency of the monopoly operator has been highlighted by most scholars as the main motivation for the reform (Melody, 1997).

Specifically to Ghana, some account of how the telecom reform unfolded has been documented in literature (Frempong and Anders, 2005; Haggarty et al, 2002; Ahator, 2004; Frempong and Atubra, 2001). Haggarty et al (2002)'s report goes further to describe in some details the institutional factors that contributed or enabled the government to make the change. However, there is a need to apply institutional theory approaches to explain extensively how institutional values, structures and powers interplayed in the creation of the reform, the reform process and the reform output through national policy decision-making.

Drawing on institutional theory this study seeks to provide a detailed account on how the liberalisation and privatisation process affected various actors and structures within the existing national institutions in Ghana. With the exception of Haggarty et al (2002) report most of the literature on Ghana's telecom reform concentrates on how the reform took place with little emphasis on why it happened and the reactions of the actors in the national institutions. The significant questions that this paper seeks to answer by applying the institutional approach are: why (and how) market liberalization and regulatory reforms in the Ghanaian telecommunications industry happened? Are there any resistance from the existing telecommunication service providers? If so, how and if not, why? How do the major actors in making telecommunications policy react to the changing world environment, with what ideas and interests in mind? In seeking answers to these questions, we analysed secondary data on the Ghanaian Telecommunication Reform, and applied the historical and cultural cognitive institutional theory approaches and Koppenjan and Groenewegen (2005)'s four-layer model for institutional analysis, to analyse how the institutional structures and values interplayed to bring about this great telecom policy change in Ghana. We also interviewed key personalities during the reform era to assess their understanding on the factors that led to the reform.

The structure of the paper is as follows: the next section will describe the conceptual framework, introducing institutional theory, its approaches and the four-layer model, that will be followed by the Ghanaian telecommunication overview and then the Discussions and finally a conclusion and policy recommendations.

The Conceptual Framework

The use of institutional theory in research as a tool for explaining political and social phenomenon cannot be overemphasised. From the development of government policies (Strang, 1990; Zhou, 1993) and an investigation to personnel policies (Tolbert and Zucker, 1983; Baron et al, 1986) to

explaining economic policies (Thatcher, 1999; Schneider and Tenbucken, 2003), institutional approach has been applied to seek understanding into these phenomena. Braathen also used an institutional approach to the study of telecommunication reform and policy development in Mozambique and Zimbabwe (Braathen, 2004). In his paper he used institutional factors to explain the reason why Mozambique's reform agenda is way ahead of that of Zimbabwe. However the approaches and concepts used in institutional studies are not properly structured (Clegg and Hardy, 1999; Searle, 2005). By using institutional analysis, we are able to assess how formal and informal arrangements shape political interactions and influence the outcome of government actions (Leparrouza, 2008).

Lieberman (2001) defines Institutions as the formal organizations and the informal but widely accepted rules of conduct that structure a decision-making or political process. An institution is made up of people and institutions that interplay to affect powers of groups, shape ideas, and influence public decisions and policy coordination (Scott, 2004). In a way, they can be described as a product of social interactions among people. As posited by North (1990) "institutions reduce uncertainty by providing a structure to everyday life". It provides the rules and norms that govern its actors who in turn influence how the institutional framework evolves. They provide a structure within which institutional actors can determine the outcome of their actions (North, 1986). The institutional forces shape the organisational system of its actors. By this, Scott (2001) stressed that institutions are in many ways made up of "cultural-cognitive, normative and regulative elements that, together with associated activities and resources, provide stability and meaning to social life". Thus, the institutional approach is based on these fundamental concepts. The level of emphasis on these concepts varies from one institutional scholar to the other, but there are some common themes that they will mostly agree with.

The first concept is described as normative approach. This approach argues that an understanding into the actions of the actors of an institution can be attained by assessing the "logic of appropriateness" that they acquire from the institution. The institutional actors are shaped by their environment. And the institutional environments can be differentiated by its rules and norms and that in turn differentiate its actors. This is sometimes referred to as the socialist institutionalism (Hall and Taylor, 1996). Second, the rational choice institutionalism (also referred to as regulative institutionalism) emphasises that actors of an institution have their own preferences outside the institution that they are part of, and that their behaviour is focused on maximising their utility (Peters, 2000). However, they realise the need for the institution in order to achieve their goals.

Thirdly, the historical institutionalism is based on the "path dependence" effect of institutions concept. This approach implies that decisions, structures and policies that are established at the inception of an institution will have a persistent influence over its behaviour throughout its existence (Skocpol, 1973). Lieberman (2001) posits that a central goal of most historical institutional analysis is to estimate the impact of variations in institutional forms and configurations on a particular outcome or set of outcomes. It is historical because analysts argue that once constructed at a moment in history, institutions typically endure for significant periods of time, influencing political dynamics and associated outcomes in subsequent periods. Therefore to understand why a national institution moves from its institutional form, there is a need to assess the policy-making process which formed it in the first place.

New institutionalism adds a new dimension to the institutional theory – cultural-cognitive approach. This approach posits that the actions of individuals are not based on rules or obligations (as in normative approach) instead they are based on conceptions. The fear of punishment or obligations does not affect or determine the actions of the actors in an institution. Instead, they act because they cannot see any other way of doing things. DiMaggio's article on culture and cognition is seen as one of the new institutionalism articles that define this approach (DiMaggio, 1997). The culture of "saa na yeye no"¹ meaning "that's how it's always done" is very familiar with the Ghanaian.

At this point we will like to admit that there are more approaches and further variations in the concepts of institutional theory. However, the interactions between these concepts can be used to seek an explanation to the subject matter. Although, from the surface these approaches seem to be totally distinct, there is some unification that can be drawn from them and applied to the subject at hand. Firstly, the normative, rational choice and history have structure as a common denominator (Peters, 2000). In the normative approach, actors are influenced by the institution meaning the structures of institutions work to stabilise social behaviour. The institutional actor in the rational choice approach also relies on the values in the institutional structures to achieve its individual preferences. However, these structures are not built in a monolithic institutional environment which means that structures are sometimes weakened and certain suppressed groups and interest may succeed in infiltrating with new values (Scott, 2004).

Conceptualising Institutional Change

Institutional change can be explained by looking at organizations process of institutionalization. Institutionalisation is the process that the organizations obtain value and structures. For example, a newly established agency in a government ministry will be deemed to be less institutionalized than a well established department. An Organisation develops these values and structures through its interaction with the society and thus an institution can be said to be a variable not a constant and that different organizations are at different levels of institutionalization (Peters, 2000). As a variable therefore, a set criteria is needed to effectively assess the level of institutionalization of an organization. Huntington (1965) posits that the level of institutionalization of any organisation can be measured by autonomous, adaptability, complexity and coherence. These can be used to assess how institutionalized a particular organization is.

These four aspects can be used in measuring the level of institutionalization an organization is at; Below is a brief explanation of each:

Adaptability is a function of an institution's environmental challenges and age. An organization can be said to be highly adaptable by the more environmental challenges it has overcome and how long it has been in existence. However, age as function needs to be tempered with how dynamic the institution is. An older institution in a static environment can be less adaptable than a dynamic young institution. However, in general, the younger an organization, the more rigid it is. By holding the environmental changes constant, Huntington suggests that adaptability can be measured by the age of the organization. Also, adaptability can be measured in terms of an organization's functions (Huntington, 1965). An organization is said to be more institutionalized if it has adopted one or more functions other than its primary function.

Autonomy represents the independence of the organization. How the organization is able to make its own decision outside its societal or political influence. A more institutionalized organization is determined by how independent it is in decision making. This can be measured in terms of budgets, appointments of management and autonomous sources of revenue (peters, 2000).

Complexity demonstrates the capability of the organization to manage diversity in terms of products and functions. The more complex an organization, the more institutionalized. Modernisation is likely to destroy a simply monotonous organization than it is able to destroy a highly diversified organization. And it can be measured by the diversity of subunits and functions within an institution.

Also, according to Huntington, the more coherent an organization is the more institutionalized. Coherence can be measured by the cleavages between members of the institution and its leadership. It can be assessed by the level of loyalty of the members to the institute.

Objectives and Research Questions

This study seeks to provide a further understanding and explanation on how institutional factors (exogenous and endogenous factors) have affected the reform of telecommunication in Ghana and to what extent various actors has progressed or hindered the reform agenda. Furthermore, it will seek to analyse the development of the regulator – National Communication Authority (NCA) and measure its institutionalization. It also seeks an explanation into the changing institution of the telecom regulator in the face of convergence in the context of Ghana. The research questions are thus formulated below:

- The causes of institutional change: What were the exogenous shocks and endogenous processes in bringing about telecommunication reform in Ghana, and which institutional factors were more important in achieving the reform?
- The process of institutional change: Ghana's journey to telecom reform, under what circumstances is change deliberate or spontaneous, sudden or gradual, a cooperative venture or an outcome of conflict?
- The outcome of institutional change: how efficient has the NCA as an institution been in the delivery of its institutional mandate?

For the purpose of examining the telecommunication reform in Ghana, I will adopt the historical institutionalism and the cultural-cognitive approaches. By adopting this approach, factors such as national cultural practices and structures, political leadership, institutional isomorphism and the central institutional context are all considered. Thus, I will seek to explain why the existing weak political system in Ghana during the period to the reform should be considered as the main factor but not the popular belief of the inefficiencies of the monopoly. And that the other endogenous and exogenous institutional factors contributed to the need for the reform.

Ghana Telecom Reform: Overview

The Ghanaian telecommunication reform has been documented in a number of scholarly study since the late 1990s (Frempong and Atubra, 2001 Haggarty et al, 2002; Frempong and Henten, 2005; Frempong, 2008). Through a critical analysis of these studies we would like to present a brief

overview of the reform in three phases: Pre- reform; The Telecom Reform Process; and The Regulator).

Pre-Reform

Before the early 1990s when the main telecommunication reform started in Ghana, there were a number of significant projects which were earmarked to improve the operations of the incumbent GP&T and also to introduce competition into the sector. In 1975, GP&T started a series of projects known collectively as the First Telecommunication Project (FTP) which aimed at rehabilitation, modernization and expansion of Ghana's national telecommunication network (Allotey and Akorli, 1996). The project which was sponsored by the Government of Ghana (GoG) and some international donor agencies from Canada, Japan and the Africa Development Bank totalled \$76million and was planned to last from 1975 to 1979. The FTP was delayed as a result of changes in government, economic recession, and other social factors, it was eventually completed in 1985. There were marginal accomplishments from this project.

A Second Telecommunication Project (STP) with an eight years plan was initiated in 1987. The project aimed to modernize much of the existing network and to expand network capacity from 56,000 lines to 76,000 lines. Some of the objectives were achieved, with the installation of a new international telephone exchange, the rehabilitation of the satellite earth station for international service and rehabilitation of various exchanges and external cable network (World Bank, 1995). The STP was funded by the World Bank, GoG and some donor agencies. The table below shows the distribution of contributions:

Source	Foreign (millions of US\$)	Local (millions of US\$)	Total (millions of US\$)
Government of Ghana	1.5	9.8	11.3
CCCE (France)	21.7	-	21.7
Holland (NKF)	18.8	-	18.8
Japanese grant/JICA	9.2	-	9.2
Japan (EXIM)	7.0	-	7.0
Japan (OECF)	69.5	6.7	76.2
Ireland	1.7	-	1.7
IDA	18.3	0.7	19.0
Post and Telecommunication	2.3	5.5	7.8
T o t a l	150.0	22.7	172.7

Adapted from: Allotey and Akorli (1996)

During the same period the Government of Ghana (GoG) through the Ministry of Transport and communication (MoTC) introduced the Accelerated Development Program (ADP) for the telecom sector. ADP was for the period between 1994 and 2000. ADP was created with the assumption that competition is needed for improved access, reliability and quality of service (Frempong and Atubra,

2001). This conviction in competition was later reflected in the National Telecommunication Policy of Ghana, 2005 which states:

“the interest of consumers and business in Ghana to achieve optimum access to the best quality and most cost effective telecommunication services will be accomplished through the wisdom and incentives of the competitive market”
(Telecom Policy, 2005)

Meanwhile, before the ADP, in 1992 the government under the administration of the Ghana Frequency Regulation and Control Board (GFRCB) had issued licenses for the establishment of cellular providers in the country. And by 1996, Ghana had three mobile phone operators – Mobitel (1992-1993), Celltel (1995) and Spacefon (1996) established and providing mobile services (Haggarty et al, 2002).

Identical to most monopolistic National Telecommunication Providers, Ghana Post and Telecommunication (GP&T) was at its worst position by the end of the 1980s with only 3 phones per 1000 inhabitants with a distribution skewed towards those leaving in Accra (the capital) and other urban areas (Ahator, 2004). Most of the district centres were not connected and the Northern part of the country which accounts for 30% of the inhabitants only had 1% of the total number of phones (Haggarty et al, 2002). As stressed by Haggarty et al (2002) the telecom sector at that time was characterised by poor management and inefficiencies.

The structure of GP&T meant reduced responsibility and accountability on the part of the management of GP&T (Haggarty, 2002). The powers and individual interest of the institutions involve interplayed to some extent in making the management of GP&T inefficient.

An executive of the erstwhile GP&T interviewed during this study insisted that the management of GP&T were very efficient and that what is described as inefficiency of the organization would be better put as the manipulations of government. He went on to stress that, ministers and senior managers of the ministry were micro managing the activities of the organization. “GP&T was seen by the government in power as a cash cow”, he added. In that the government uses the revenue from the organization to finance other projects without investing in the infrastructure. To gain support for the reform, certain operations of the organization was intentionally stalled increasing the inefficiency of the organization. From the cultural-cognitive perspective, since the establishment of the organization in the colonial era, the structures had not been modified in anyway. The institutional structures were as laid down by the colonial masters making reform and significant changes almost impossible.

Reform Process

In the early 1990s divergent models of telecom reform process emerged, mostly tailored around that of the developed world. Even though there are some similarities of the ultimate outcome of the process, the actual circumstances between the developed countries and the developing countries scenarios make it difficult for any meaningful comparison (Sanatan & Melody, 1997). However, there are some basic elements that seem to have been featured in both the developed and developing countries reform processes. In Ghana the telecom process could be said to have started with the launch of the Accelerated Development Program (ADP) for the telecommunication sector in 1994

(Ahator, 2004). The program was developed after an extensive consultation with telecom service providers, policy makers, financiers, donors, users and consultants (Anderson Management International) (Haggarty et al, 2002). It set out to revamp and revitalize the telecom sector through the introduction of competition and to attract new investments both foreign and local with an objective of Ghana becoming the gateway to West Africa.

The ADP is the program which set out the policy objectives for the telecommunication reform in Ghana. The program stressed on the need for competition to ensure reliability, quality of service and price reduction. It also emphasized the need of a national single regulator. It identified the following specific objective items:

- Achieving a density between 1.5 and 2.5 lines per 100 people;
- Competition in the sector by introducing a second network operator
- Improving public access in rural and urban areas, through the provision of payphone facilities (public and private);
- Expanding the coverage of mobile services;
- Liberalisation of value added services
- Promoting Ghanaian ownership and control of telecommunications companies; and
- Retaining an overall public regulatory control of the sector through the creation of a single agency: the National Communications Authority (NCA).

To achieve the above mentioned objectives ADP adopted the following strategies: the authorisation of two national network operators: Ghana Telecom and a new independent operator; support of new financing: arrangements which promote investment in new telecommunications infrastructure throughout the country; and the privatisation of Ghana Telecom through the sale of a strategic stake to an international operating company combined with measures to broaden share ownership in Ghana.

The second significant step in the Ghanaian telecom reform process was the incorporation of Ghana Telecom as a public limited liability company in 1995, separated for the Post. Melody (1997) posits that major restructuring of national public telecom operators through corporatisation and/or privatisation has brought about the essential change in focus to efficiency and customer service. And therefore Ghana Telecom's corporatization was seen as a step in the right direction. The Posting aspect of the Ghana Post & Telecommunication also became Ghana Post.

To introduce competition, the policy called for a second network operator (SNO) to create a duopoly, the privatization of the incumbent by selling 30% share through an international competitive bid and to set up a telecom regulator. The SNO like the Ghana Telecom was supposed to provide services both locally and internationally. The new SNO was also going to have a 20-year initial license. During the first five years, the two carriers were to be given nationwide exclusive rights over fixed line telecom services (Allotey and Akorli 1996). The license for the operation of the SNO was auction at the same as the sale of 30% share of the incumbent (Ghana Telecom). A duopoly was created in December 1997 when Westel paid 10.5million U.S. dollars for the SNO licence. Also, the 30% sale of Ghana Telecom was completed with the Malaysian Telecom emerging as the winner.

Reform Output - National Communication Authority

The establishment of the regulator is often seen as part of the telecom reform process. It is usually created to foster competition and protect the consumer and new entrants from the powers of the incumbent. As posit by Cave (2006);

“ ... regulators balance the interests of firms (dominant, fringe and potential), customers and societal stakeholders”.

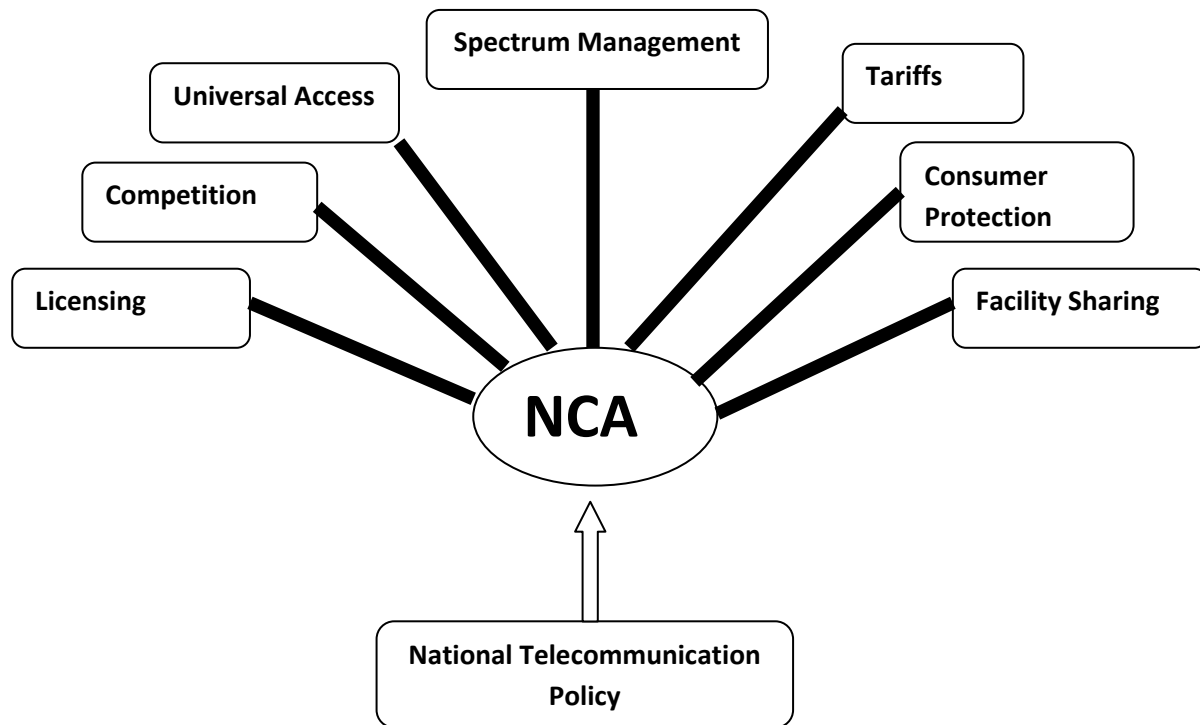
For example, in the Ghanaian telecom reform process, the SNO introduced has no existing market presence and customer base to compete with the incumbent. The regulator was established by the National Communication Act (NCA) of parliament Act.524 1996. As stressed earlier, it was established to provide controlled competition into the telecommunication industry (Alhassan, 2003).

The NCA act defines the responsibilities of this regulatory body as: (i) setting technical standards; (ii) licensing service providers; (iii) providing guidelines on tariffs chargeable for services; (iv) monitoring the quality of service providers and initiate corrective action where necessary; (v) setting terms and guidelines for interconnections of the different networks; (vi) considering complaints from telecom users and taking corrective action where necessary; (vii) controlling the assignment and use of the radio frequency spectrum; (viii) resolving disputes between service providers and between service providers and customers; (ix) controlling the national numbering plan; (x) controlling the importation and use of types of communication equipment; and last but not the least, (xii) advising the minister of communications on policy formulation and development strategies of the communications industry (NCA Act, 1996).

In 2004 a National Telecommunication Policy (NTP) was developed to provide a framework within which the sector will evolve. This policy document stipulates the government’s overall policy objectives for the telecommunication sector. Central to the objectives of the policy was to develop competition in the telecommunications sector while maintaining universal service provisions to protect vulnerable customers. The National Telecommunication Policy Objectives is further broken down into specifics as described below:

- Universal access for all communities and population groups in Ghana to telephone, internet and multimedia services by the year 2010.
- National penetration universal telecommunications service to reach 25% of the population, including at least 10% in rural areas, by the year 2010.
- Connection of all schools, medical clinics, and Government offices and public and community broadcasting stations to advanced telecommunications services;
- Fully open, private, and competitive markets for all telecommunications service
- Streamlined, efficient, and effective regulation of the telecommunications industry on a fully transparent, technologically neutral, and competitively balanced basis
- Affordable prices for telecommunications services, particularly for low income citizens
- Profitable investment opportunities for businesses in all segments of the market
- Ghana shall be seen as a first-class hub for international telecommunications and information industry investment, jobs, and development, and a leader in the transformation of Africa toward a full participation in the Information Society.

To achieve this central objectives the National Telecommunication Policy (National Telecom Policy, 2004) in line with the NCA Act further simplifies NCA functions and responsibilities as shown in figure 1 below:



This roles and responsibilities identified are in line with the generally recommended core responsibilities of regulators used in the policy document of most countries. Apart from these core responsibilities other functional roles including establishment of standards, provision of advice to the Minister and the public education campaign are considered in the NTP.

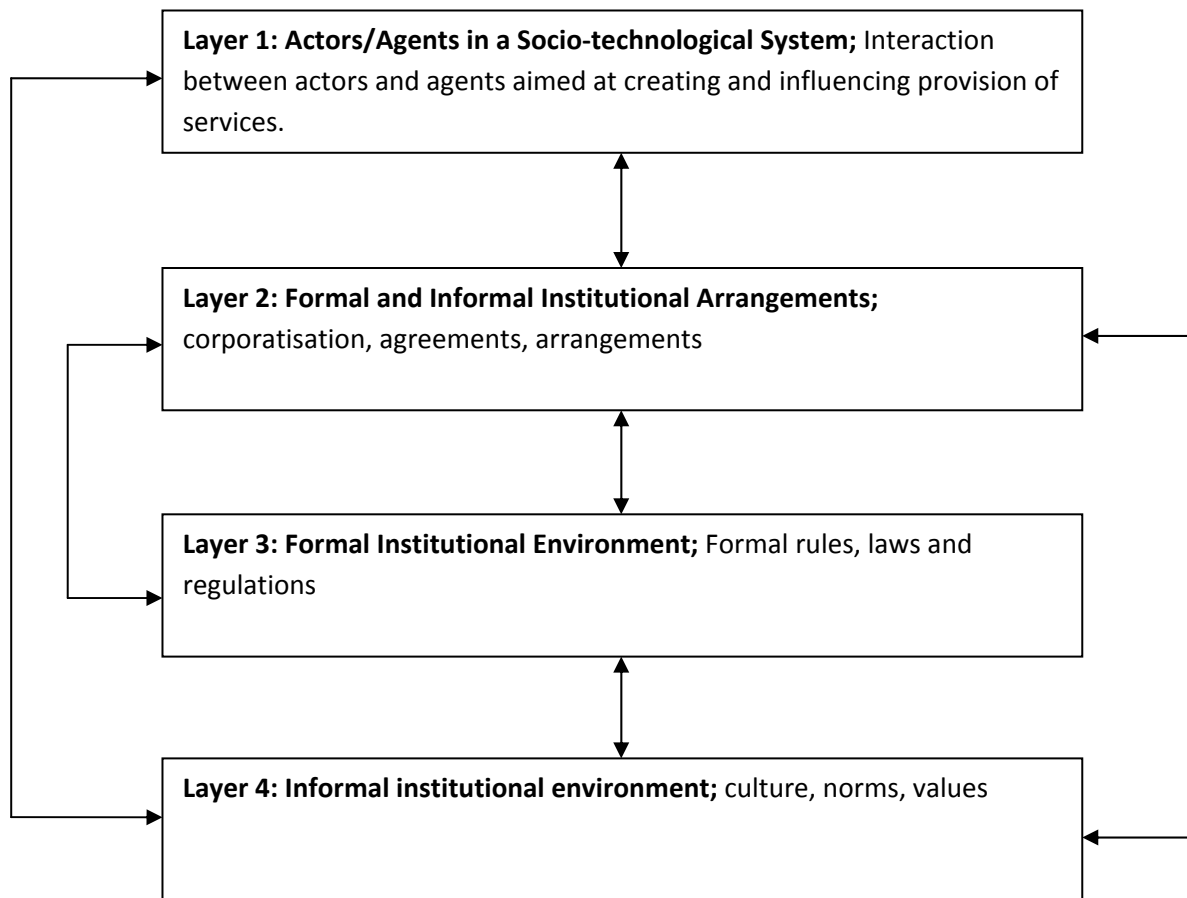
Reform Output - Increased Competition

By the year 2001 the number of telecom providers providing mobile services in Ghana had risen to 4 namely OneTouch (Ghana Telecom), Scancom Ltd, Kasapa, and Mobitel, with Ghana Telecom and Westel providing fixed line services. This was a major achievement in the young telecom reform history of Ghana. And by the end of 2009 has increased the number of mobile network providers to 6 providing competitive pricing to their customers. With a significant increase in the number of mobile service subscribers from meagre 2000 in 1994 to 15,504,612 in February 2010. However, this success story would not have been possible without the telecom regulator – National communication Authority. Fink et al (2002) in their analysis of 86 developing countries across Africa, the Middle East, Latin America and the Caribbean observed that improvement in performance of the telecom sector is maximised when privatization and competition is supported by an independent regulator (Fink et al, 2002).

Discussions – The Institutional Analysis

Though telecommunication reforms are commonly found in many countries, the processes and outcomes of the reform are not the same at all. There are basic factors that can cause national

differences and some of this will be explained below using the Koppenjan and Groenewegen (2005)'s four-layer model.



Source: Adapted from Koppenjan and Groenewegen, 2005

The four-layer model which has its roots in Williamson's transactional cost economics (Koppenjan and Groenewegen, 2005) is relevant for this analysis because it provides a layered approach to analysing institutions. It distinguishes the different kinds of institutions involved in the reform at the various levels of the model. It also depicts the interaction between the institutions of the layers involved. The 1990s saw global pursuit of telecommunication liberalization, privatisation and regulatory reform that was unparalleled in the history of the utility sectors and has Ghana was no exception. Though it was argued that the world was moving towards a regulatory convergence through privatization and similar telecom regulatory policies, the ways and means of achieving their goal varied according to the structures and institutions of individual countries (Hong, 1998). Also, adopting the historical institutionalism approach, the success of the reform of any individual country can be traced to its policy development process. The import of this section of the study is to analyse the institutional factors and actors that interacted in the Ghanaian telecom reform process. Why (and how) the Ghanaian telecommunication reform? Was there any resistance either from existing telecommunication institution or interest groups? It is argued that the nature of national institutions determines a country's redistribution of property rights in the process of reform. As posit by Thatcher below:

“National Institutions are important for the starting point of reform. Policy modifications in a country are related to past circumstances, notably the institutional framework, which influence the actors involved in reform, their aims and ideas, and the distribution of resources and power amongst them.”(Thatcher, 1999)

There are three key inferences that can be drawn from Thatcher’s statement: reform can result from changes in the policies that guides the operations of a national institution; from changing the institution entirely; or by changing the power play that may influence exogenous factors that will intend affect the reform. Thus, a critical analysis of the process and scope of telecom reform in Ghana will require an understanding of the institutions and structures of Ghana’s political economy regarding the telecommunication sector.

Layer 1 – Actors, Agents and Games

The key actors and agents identified in the Ghanaian telecom reform were; World Bank, WTO, British Government (Colonial Masters), Government of Ghana, GP&T Management, Ghanaian public, Western Wireless, and GP&T employees. The interaction between these actors and agents determined the reform process and affected the nature and output of the reform.

The World Bank as a major financier of GP&T’s capital expenditures was interested in the privatization of the GP&T because officially, it saw telecom liberalization as a catalyst for economic growth and increased in GDP (Mustafa et al, 1997). However, the perception of the key people interviewed as part of this study was that the World Bank’s interest was suspicious. When asked “what role and influence did the World Bank have on the Ghanaian reform process, a former board member of GP&T answered that, the whole process was forced on Ghana as part of the World Bank’s economic restructuring program for Ghana. In his opinion, the agency was interested in opening up Ghana’s telecommunication industry for the Telecommunication giants of the developed world. He added that, the entire process was designed by the World Bank on the basis of contemporary European experience. He cited the internal structures of GP&T, Ghana’s young democracy and the lack of locally developed private sector as what he meant by wrong timing.

The Government of Ghana (GoG) was a principal beneficiary of the telecom reform process. GoG effect on the telecommunication industry was exercise through the various arms of government notably MoTC, GFRCB, and the board of GP&T. Also, it was generally perceived by the interviewees that GP&T was micro managed by the government through the ministry. It was used to employ political activists and party foot soldiers which contributed to the most acclaimed inefficiencies of the management of GP&T. Furthermore, the government failed to invest in the infrastructure of GP&T whilst its income was used to finance other national projects.

Furthermore, the inefficiency of the telecom sector was costing the government huge sums of dollars and threatens to derail it from its economic recovery agenda.

In addition the workforce of the incumbent telecom operator (GP&T) was generally not influential in the reform process. When asked, how did the workforce of GP&T react to the reform process, a former worker and an executive member of the Industrial and Commercial Workers Union responded, that the government had total control over the decisions of the union. And all efforts to

get the voice of the workforce to be heard proved futile. Key staff members were promised shares in the organizations whilst others were promised to keep their job. In all 474 workers were to be retrenched. Two strike attempts by the workers were also thwarted. He added that the inefficiencies of the organization had caused public resentment against its workers which meant that they had little support from the general public.

“The recession in 1980s meant that there was a huge migration outward. Teachers, Nurses and other professionals left the country for Europe and the United States. They enjoyed telecommunication services in those countries and when they return because of the civil rule demanded similar services from the local monopoly who could not offer. There was internal pressure from a section of the citizens for the GP&T to deliver. There was huge backlog of applications for telecom services. However, since there were a few people with telephone, there was less concern among the public on the effect of the sale on tariff (Haggerty et al, 2002).

The above discussions depicts that a combination of poor performance by GP&T, strong government manipulations (without opposition in parliament), weak Workers’ Union and a general public apathy are the key endogenous factors that led to the Ghanaian Telecom Reform.

Layer 2 – Formal and Informal Institutional Arrangements

1992 saw Ghana moving to a constitutional government over a period of instabilities in military regimes. There was a need for the new civilian government to show some form of policy changes which are in harmony with international policies. Also, an initial Structural Adjustment Programs (SAP) had not been successful in reforming the utility sector. Furthermore, the country was coming out of a great economic recession in the 1980s and need the reform to stimulate the economy. The government needed to assure investors of liberalization. The reform was introduced gradually when cellular entry was allowed in 1992.

In the meantime, the World Trade Organisation (WTO) had initiated negotiations to liberalized the basic telecommunication market under the Uruguay Round discussions. In 1997, a new agreement which combines binding commitments on market access from its participants with a statement of “procompetitive regulatory principles” that have rapidly become the definition of the policy revolution under way in this market emerged (Cowey & Klimenko, 2005). Ghana was credited for being one of the few African countries to sign the Uruguay Round agreement in 1997. This shows that Ghana was committed to competition and meeting its World Trade Organisation obligations towards liberalisation of the sector straight from the beginning. It was believed that the import for the WTOs Uruguay Round was to open up the telecommunication industry of the developing countries for the companies in the developed economy.

In 1995 Ghana Telecom was incorporated as a limited liability company separated from the postal services. And the same year witnessed the sale of the license for the Second Network Operator (SNO) to Western Wireless an American company.

Layer 3 – Formal Institutional Environment

The inefficiencies of GP&T management was compounded by the fact that the regulation of the sector was divided among conflicting agencies namely, the GP&T, MoTC, Ministry of Finance and GFRCB; all responsible for certain aspects of the firm (Haggarty et al, 2002).

Key Regulatory Tasks and Regulators

Regulatory Tasks	Key Regulators
<u>Licenses: A. General</u>	<u>MoTC</u>
<u>B. Frequency</u>	<u>GFRCB</u>
<u>Tariffs: A. Service Charge</u>	<u>GP&T, MoTC</u>
<u>B. Frequency Charge</u>	<u>GFRCB</u>
<u>Allocation of number services</u>	<u>GP&T, MoTC</u>
<u>Frequency Regulation</u>	<u>GFRBC</u>
<u>Type Approval</u>	<u>GP&T, GFRBC</u>
<u>Interconnection Agreement</u>	<u>MoTC, GP&T</u>
<u>Arbitration</u>	<u>MoTC, GP&T</u>
<u>International Regulatory cooperation</u>	<u>MoTC, GP&T, GFRCB</u>
<u>Legal Means of Enforcement</u>	<u>MoTC, GP&T, GFRCB</u>
<u>Advisory function vis a vis MoTC</u>	<u>None/GP&T</u>

Adapted from Haggarty et al (2002)

There were two Acts of Parliament involved in the Ghanaian telecom reform process. The 1995 Act which enabled the establishment of the Ghana Telecom as an private limited liability company separated from the postal section. And the December 1996 Act NCA 524 gave the regulator considerable autonomy and powers as described earlier. However, its total independence was impaired since the minister of communication has overall responsibilities over the operations of the regulator. Appeals against NCA decisions are made to the minister of communication before if not settled could appear at the high court. Our investigation reveals that the government had a hard time passing the bill to an Act. It had to appear twice in parliament before being passed. It was seen to be in conflict to Ghana's 1992 Constitution which states; "There shall be no impediments to the establishment of private press or media; and in particular, there shall be no law requiring any person to obtain a license as a prerequisite to the establishment or operation of a newspaper, journal or other media for mass communication or information" (Constitution of Ghana, Chapter 12, article162 Sect. 3). A Supreme Court decision in 1996 gave the government the right to regulate the radio spectrum.

Layer 4 – Informal Institutional Environment

National telecom networks in developing countries are generally valued as symbols of national pride. In general, the main endogenous force against the privatization of GP&T was the public's view of GP&T as a national asset. These observations hold true for both in the parliamentary debates about the law that deregulated telecom and the government's timid efforts to implement it. The fear of alienating the people and making them feel a sense of national loss may have accounted for why Ghana did not totally privatize, but rather opted for a regulated sector with controlled private sector participation. During the debates in 1994, a Member of Parliament posed a caution to the House that Ghana Telecom (GT) "is a symbol of national sovereignty and that any communication policy should aim at protecting it (Alhassan, 2003). Similar views were held by the populace about the privatization of the organization. Those interviewed as part of this study identified the above point as their main reason for being against the liberalization and privatization process. Some goes as far as seeing it as re-colonization of Ghana.

Conclusion

Management inefficiency of the monopolist national telecom provider is usually cited by scholars as the fundamental reason for the reform (Frempong & Atubra, 2001; Ahator, 2004; Haggarty et al, 2002). Even though that might be one of the significant factors identified, there were some other pertinent factors that extends our understanding into why the government of Ghana engaged in telecom reform at that specific time. Whilst Haggarty et al et al, (2002) gives some account on the state of the incumbent which contributed to the reform.

We identified the following as possible additional endogenous factors: the political economic situation; Migration; lack of institutional policies. And also exogenous institution factors like WTO agreement (Uruguay Round); USA Telecommunication Act 1996; Group on Basic Telecommunication 1997; and attracting Foreign Private Investment (FPI). We also, found that the exogenous factors were far greater than previously noted in literature and that the World Bank, and WTO had far more influence on the reform than internal endogenous factors.

References

- Ahortor, C. R. (2003). *Regulatory Impact in Ghana*. Manchester.
- Alhassan, A (2003). *Telecom Regulation, The Post colonial State and Big Busines: The Ghanaian Experience*. West Africa Review,
- Bijl, P. d., & Peitz, M. (2008). *Innovation,convergence and the role of regulation in the Netherlands and beyond*.
- DiMaggio, Paul J & Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48:147-160.
- Frattasi, S., Olsen, R. L., De Sanctis, M., Fitzek, F. H., & Prasad, R. (2005). *Heterogeneous Services and Architectures for Next-Generation Wireless Networks*.
- Frempong, G. (2008). *2007 Ghana Telecom Sector Review*. Research ICT Africa.

- Frempong, G., & Atubra, W. (2001). Liberalisation of telecoms: the Ghanaian experience.
- Frempong, G., & Henten, A. (2005). Telecom Development and Investment in Ghana. In T. W. Economies, *Stimulating Investment in Network Development: Roles for Regulators* (pp. 297-307).
- Ghana-Telecommunications Sector Investment Project, " World Bank Project Report . Washington, Dc: World Bank, 1995
- Henten, A., Falch, M., & Anyimadu, A. (2004). Telecommunication Development in Africa: filling the gap. *Telematics and Informatics* , 1-9.
- Huigen, J., & Cave, M. (2008). Regulation and the promotion of investment in the Next Generation Networks - An European dilemma.
- ITU. (2009). *Measuring the Information Society - ICT Development Index*. Internation Telecommunication Union.
- Koppenjan, J., & Groenewegen, J. (2005). Institutional design for complex technological system. *Int. J. Technology, Policy and Management*, Vol. 5, No. 3, , 240-258.
- Mahan, A., & Melody, W. (2005). *Report on the World Dialogue on Regulation; Stimulating Investment in Network Development: Roles for Regulators*. The World Dialogue on Regulation for Network Economies.
- Mayo, E., & Cullum, P. (2006). *The Consumer Agenda on Regulation*. Ofcom.
- Melody, W. H. (1997). Policy Objectives and Models of Regulation. In M. e. al, *Telecom Reform, Principles, Policies and Regulatory Practices* (pp. 11-24).
- Melody, W. H. (1997b). *Telecom Reform, Principles, Polices and Regulatory Practices*. DTU.
- Melody, W. H. (2006). Markets and Policies in New Knowledge Economies. In M. e. al, *The Oxford Handbook of Information and Communication Technologies* (pp. 55-75). Oxford.
- Meyer, John. W., and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology*, 83(2), 340.
- Reding, V. (2007). *The Review 2006 of EU Telecom rules: Strengthening Competition and completing the internal market*. European Commission Information Society and Media.
- Scott, Richard W. 2001. *Institutions and Organizations*, 2nd ed. Thousand Oaks: Sage Publications
- Waverman, L. (2006). The challenes of a digital world and the need for a new regulatory paradigm. In Ofcom, *Communications the next Decade*. Ofcom.