

## **Telecommunications Privatization and Implications for Access to Information: The Case of Ghana and South Africa**

By Emmanuel Adugu

*“We believe that by the early part of the next century virtually the whole of mankind should be brought within easy reach of a telephone and in due course, the other services telecommunications can provide”*

Maitland Commission (1984, p.4)<sup>1</sup>

### **Introduction**

This study explores the privatization of the telecommunications sector in Ghana and South Africa and how that is related to access to telecommunications services for socio-economic development. The study focuses on economic and political factors that might have influenced privatization of telecommunications in both countries.

### **Methodology**

In this research, telecommunications is conceptualized as information and communications technologies (ICTs) such as telephones, mobile phones, Internet, computers and IP telephony (VoIP)<sup>2</sup>. Though the study focuses on economic and political factors that might have influenced privatization of telecommunications, it also considers the implications of these reforms on access to information for development.

Numerous sources of information were used. These were development agencies and international organizations such as International Telecommunications Union (ITU), the World Bank, books, reports and papers on telecommunications, communication and development.

The selection of the materials was based on their characteristic relevance to the purpose of the study and also a deliberate attempt on the part of the author to present an

informed view on the economic and political influences of privatization and ways they are related to universal service provision in Ghana and South Africa. Critical perspectives on privatization and its effects are also presented.

The main concepts of the study are:

1. privatization
2. telecommunications
3. ICTs (Internet, telephone, mobile phone, VoIP and computers)
4. development
5. policy
6. regulation
7. economy/economics
8. politics

The search for information on this study was guided by the above concepts. Books, journal articles, etc that deal generally with the concepts were immediate resources for the study. The search was then narrowed to Ghana and South Africa employing different combinations of the concepts in a meaningful way. For example, a combination like telecommunications privatization in South Africa led to several articles, books, etc. They are then critically reviewed with respect to content, source, date of publication, credibility of the author and the publisher.

Qualitative analysis was the principal instrument employed. However, tables were also used for purposes of illustration.

### **Rationale for the Choice of Countries of Study**

Telecommunications reforms can be shaped by both political and economic factors (Singh, 1999, Molano, 1997).<sup>3</sup>

In the early 1990s, the conditions in the telecommunications sector in Ghana were both politically and economically conducive for privatization. The incumbent state monopoly (Ghana P & T) offered poor quality of service, even though there was high-unmet demand for telecommunications services. There was public dissatisfaction leading to concerns about the viability of Ghana P& T. The organization was inefficient and a financial liability to the state. Ghana was itself in economic straits.<sup>4</sup>

Ayogu & Hodge (2002)<sup>5</sup> argued that the democratic elections of 1994 should be the starting point for any analysis of privatization in South Africa. The apartheid government tried to launch a privatization program in the early 1990s, but was thwarted by political pressures from the African National Congress (ANC). However, when South Africa had political change in 1994, the Government of National Unity accepted the concept of privatization (Cogburn, 1995).<sup>6</sup> Facing a severe shortage of capital, the Government of National Unity realized that privatization was an attractive source of funds. This led to the partial privatization of Telkom (the state incumbent South African telecommunications company).

Ghana and South Africa embarked upon privatization of their telecommunications sectors by newly elected democratic governments facing political and economic challenges in the early 1990s. It is therefore worth investigating how these two countries managed their strategies of privatization under those conditions and how they proposed to quit public telecommunications services in their respective countries.

The study will provide evidence showing, in times of financial constraints, there is the need to encourage private sector participation and competition in the provision of telecommunications services. Access to telecommunications services such as telephone, Internet, computers, and mobile phones can be enhanced by this means. Also when there are political influences on the process of privatization, the participation of “political players” must be solicited. The study will therefore be useful as a guide for policy makers and community leaders in ensuring the support of civil society for a more workable telecommunications privatization effort.

### **The Role of Telecommunications in Development**

Telecommunications is a vehicle for the conveyance of information and is therefore *sine qua non* for the process of development. By providing information links between urban and rural areas and among rural residents, telecommunications can overcome distance barriers that hamper rural development (Hudson, 1994).<sup>7</sup>

The International Telecommunications Union (ITU) Maitland Commission pointed out the importance of telecommunications to development and documented the gaps in access to telecommunication in the developing world in its 1984 report “The Missing Link”. It is for those reasons that the role of telecommunications in the development process received considerable attention during the later part of the last century.

Other studies have identified the social and economic benefits of telecommunications, such as “When Telephone Reaches the Village” (Hudson, 1984)<sup>8</sup>, and The Business Case for Rural Telecommunications (Annan, 1997).<sup>9</sup>

The National Research Council of the United States observed that for Africa, where population and economic activities remain largely rural-based, sharing of information is vital if Africans are to contribute to finding solutions to their developmental problems.

“Economic development in Africa will depend heavily on the development of the information sector. Countries will need the ability to communicate efficiently with local and overseas markets to determine where they may have comparative advantage for supplying their products to consumers or to purchase essential imports, based on current prices. Many of the economic development problems facing African countries have scientific and technological components that will require solutions to be developed in Africa by African scientists... Lack of information is a critical constraint”.<sup>10</sup>

Information is thus critical to development. Telecommunications as a means of information sharing is more than a connection between people; it is a link in the chain of the process of development and thus benefits the society.

Hudson (1984) mentioned the contribution of telecommunications in socio-economic development as follows:

- efficiency, or the ratio of output to cost;
- effectiveness, or the quality of products and services;
- equity, or the distribution of benefits throughout the society.

Telecommunications investments in the developing world may be for purposes of improving the efficiency of the economy improving on its management. Investments in educational infrastructure can enhance data collection. Telecommunications investments leading to VSAT (very small aperture satellite terminal)<sup>11</sup> services enhance data transfer among businesses and their customers. This results in efficiency of services and cuts down on transactional costs. Data can be transferred between different agencies of the same organization scattered among cities and nations. Such technologies attract businesses and promote economic development.

Telecommunication investments in developing countries also have political as well as economic benefits. Most elites live in the cities and desire telecommunications services for their business, to link government offices, health clinics and so on. In order to satisfy these elites and have their support, governments tend to direct investments to urban areas where they live and work. Such investments provide opportunity for researchers, lecturers, economists, and other professionals to have easier access to data services using satellite internet, VoIP and the like. The globalization of the world economy explains why investments in telecom are largely directed to urban centers where business, social and cultural activities take place first.

For these benefits to be realized by all citizens, there is the need for universal access to telecommunications in order for them to “get” the needed services. Forbes (1984)<sup>12</sup> defines accessibility as the ease of getting to a place. For Mosely (1979)<sup>13</sup>, access means that something is get-at-able. In relation to telecommunication services, accessibility can be conceptualized as the ease with which “it” is get-at-able by citizens. The fact that information is needed for every sphere of any economy means that

telecommunications is critical for the socio-economic development process. For example, Falch & Anyimadu (2003)<sup>14</sup> pointed to numerous studies that show the negative impact on opportunities for development caused by lack of telephones.

### **Universal Access**

Universal access is a deliberate attempt to provide individuals residences, rural and urban communities, remote villages, low income urban areas and high-cost locations with information technologies like telephone, internet, computer and innovative technology services necessary for active participation in the society. Universal access to telecommunications can be achieved in increments, for example with respect to their availability in all communities above a certain threshold, availability within a certain distance of all residents, or a minimal time required reaching the facility. In that regard, the connectivity of ICTs like computers, mobile phones and the Internet are a measure of the level of development. These technologies could not be imagined by the 1984 Maitland Report, which envisioned bringing humanity within the reach of a telephone. Today, tele-centers providing telephone, computer and internet services offer access for business, educational, social and other purposes for larger and larger numbers of the world's population.

An argument for universal service is that such access is a basic human right. Every person has a right to these services by the mere virtue of being a citizen. This perspective originally articulated as the entitlement argument, asserts that in modern societies, telephone communications, like education, basic medical care, and postal service, is an inherent attribute of citizenship (Pool, 1984)<sup>15</sup>. The moral basis of this claim is that telecommunications services have become so important that an individual

without access to them is not equipped for everyday life. The telephone is a necessity in a modern society. Therefore, no one, including the poorest of individuals, should be denied the opportunity to phone for help in an emergency or be denied the opportunity to participate in the life of the community that the telephone provides (Pool, 1984).

The issue of universal service is one that confronts developing countries like Ghana and South Africa where telecommunications industries are such that it is difficult to provide the necessary and desired services equitably to citizens. This then has created the conditions for mandatory telecommunications reforms, which have prompted a serious look at privatization.

### **The Context for Telecommunications Privatization**

In the early 1980s, developing countries like Ghana and South Africa made telecommunications a development priority and launched ambitious restructuring initiatives ranging from enhanced telecommunications service provision to the introduction of varying degrees of market sector competition. ICTs and the infrastructures for nation-wide communication were considered necessary for national economic prosperity. Restructuring initiatives such as accelerated service enhancement, liberalization and privatization, which are challenging the historical state-run telecommunications, are now widespread (Singh, 1999).

There are contradictory reports about the impact of telecommunications privatization. A study of 30 African and Latin American countries between 1984 and 1997 revealed that privatization of telecommunications was negatively related to mainline penetration and connection capacity (Wallsten, 1999).<sup>16</sup> On the other hand, Sawhney (1999) found that the development of universal service was greatly accelerated

by privatization.<sup>17</sup> The reason is that, competition motivates telecommunications operators to make investments that they otherwise would hesitate to make.

Whatever the real impact of telecommunications privatization, it continues to be the most attractive emerging policy of governments for providing social services and encouraging economic growth. This study focuses on the economic and political conditions for privatization and their implication for access to information.

*Economic Conditions:* Singh (1999) commented that severe domestic economic crises result in developing countries seeking international bailouts and the selling of state-run enterprises. He added that increasing globalization pushes states towards restructuring according to the priorities dictated by international actors and rules framed at the global level which tend to weaken the constituencies favoring state-run development strategies. Telecommunications is a way for developing countries to connect with the world markets and ICT adoption means that the country must adjust to the emerging global rules governing the markets it wants to be a part of. Both domestic and global economic realities make privatization of telecommunications an attractive solution to economic crises.

*The Political Conditions:* Decisions to reform inevitably also depend on political realities. For a reform to be politically feasible, reformers have to secure the local support and approvals necessary to enact the reform and overcome opposition (World Bank, 1995)<sup>18</sup>. Reforms tend to move ahead when political benefits from the changes proposed are greater than the political costs or when groups that benefit most from the status quo and have the power to block reform lose influence.

Another explanation relating to the political economy of telecommunication relates to how the public characterizes telecommunications services. According to Singh (1999), telecommunications is on the spectrum between a private good that is individually supplied and consumed, and a public good that no one can be excluded from in its consumption and none suffers from congestion or crowding with additional consumers. Those who hold the public good view may be politically opposed to privatization and offer stiff resistance. Paradoxically, they may demand government to provide universal services to their communities, irrespective of the economic realities.

### **Telecommunications Sector Conditions Leading to Privatization**

#### **A: Ghana**

##### **Background**

Ghana is a medium-sized West African country with a population of 20,467,747. It is located on the Atlantic Ocean. It was among the first countries in South Saharan Africa to become independent on March 6, 1957. It is bordered to the west by Cote d'Ivoire, to the north by Burkina Faso and to the east by the Republic of Togo. Ghana has ten administrative regions, which are further divided into 110 districts forming the basis of the country's decentralized political administration. Ghana has one of the highest literacy rates in Africa. The country has a total literacy rate of 74.8%, with that of females being 67.1% while their male counterparts have 82.7% in the year 2003.<sup>19</sup> The relatively high literacy rate may be due to the non-formal education program of the World Bank over the past ten years, which opened opportunities for informal education into the Ghanaian society.

Poor economic policies, especially the economic recession that engulfed the world because of high oil prices in the 1970s and 1980s led to a decline in the gross domestic products of many countries including Ghana. The Ghanaian economy during this period was characterized by persistent inflation, decline in production of exportable commodities, flourishing illegalities and political instability. There was also decline in per capita income, increased incidence of absolute poverty accompanied by a worsening income distribution, growing unemployment, and the emigration of skilled professionals to greener pastures mainly, Europe and the United States.

In response to the crisis, the then military government of the Provisional National Defense Council (PNDC) launched two reform initiatives, namely; the Economic Recovery Program (ERP) and the Structural Adjustment Program (SAP). The World Bank supported these programs with co-financing from the International Monetary Fund (IMF). The ERP (1983-86) preceded the SAP. The policy package in the ERP sought to reform prices, restate production incentives, reduce inflation, realign interest rate, reduce budget deficit, rehabilitate the rundown physical infrastructure and reintroduce priorities for the allocation of scarce foreign exchange resources.<sup>20</sup>

As a result of the ERP in 1983, the government liberalized markets, foreign exchange and international trade. The role of the state was reduced in favor of the private sector. The program continuously focused on divestiture of state holdings in order to stimulate the private sector.<sup>21</sup> This meant that private investors would also be participating in the provision of utility services like water, electricity and telecommunications.

### **Sector Conditions Leading to Reform in Ghana**

Conditions in Ghana's P&T necessitated the need for reforms. These conditions were with respect to deficiencies in the telecommunications infrastructure, the politics and commercial viability of the P & T operation.

*Service Conditions:* Services provided by P&T were very poor. In addition to that, penetration rates were also low. From 1980-93, the number of telephone mainlines only increased by 1000 a year on average. The ITU<sup>22</sup> estimated in 1985 that at then-current rate of line growth, it would take 80 years to connect people on the telephone waiting list. Further evidence for the need for phone lines was the emergence of telecenters.

In 1993, Ghana had only 25 payphones, which were all in the capital city, Accra (Anderson, 1993).<sup>23</sup>

As in most developing countries, available services were skewed toward Accra and other urban centers. According to the International Telecommunications Union (ITU), in 1994, over 80% of all phone lines were in urban areas and 53.6% were in Accra. The Northern part of the country with 40% of the population had only about 1% of the nation's telephones in 1993. Only 37 of the 110 district capitals were connected, meaning that large parts of the country were not connected to the communications grid at all (PORSPI, 1993).<sup>24</sup>

On the average, 20% of all mainlines were not functioning at anyone time. P&T had switches from six different manufacturers. Long repair times and high maintenance cost was characteristic of the company (Anderson, 1993). The P&T organization was heavily overstaffed, slow to respond to consumer complaints and corruption among the employees was rampant.

*Political Conditions:* In the view of the IFC (1995)<sup>25</sup>, privatization is always political. This was exactly the situation in Ghana. While the physical and financial conditions of Ghana's P&T favored reform, the decision to reform was influenced by the prevailing political conditions. According to the World Bank, reform occurs only when the political benefits from the reform are greater than the political cost; when the reformers are able to implement the reform and overcome opposition to the changes; and investors, workers and other actors view the change as credible.<sup>26</sup>

The fact that lack of infrastructure development in the telecommunications sector was hindering private investment was one of the factors accounting for the political support telecommunications privatization enjoyed in Ghana. The Government at the time considered privatization as an opportunity to correct the deficiencies in the communications system thought to be derailing economic reforms and undermining the political regime. It was a government goal to improve telecommunications infrastructure in hopes of attracting direct private investments. The idea was that private investment would accelerate economic growth as a balance to the fact that the government was cutting expenditures. Even so, a section of the public was against such a strategy.

*Economic Conditions:* Researchers Singh (1999) and Molano (1997) each have asserted that economic conditions can highly influence implementation of telecommunications privatization. Drazen, and Easterly (2001) also found evidence that a severe macroeconomic crisis with hyperinflation can induce substantial reforms. This seems to be true in the case of Ghana. Though the P&T posted accounting profits, large foreign exchange losses led to declining equity. Real local tariffs, already subsidized through high long distance and international charges were rapidly declining and were requiring

increasing direct government transfers. In that respect, P&T was a drain on the Ghanaian economy. Under those circumstances it is very unlikely that P&T's assets would command a high price when auctioned.<sup>27</sup>

In order to change the dynamics of the telecommunications sector from “what it is” to “what it ought to be”, the telecommunications reform was launched.

### **Ghana's Telecommunications Reform**

The focal point of Ghana's telecommunications reform was the Telecommunications Accelerated Development Plan (ADP) launched in 1994. It was meant to liberalize and revamp the industry through private sector participation and also meet the needs of Ghanaians as well as ensuring effective integration into the global system (Atubra & Frimpong, 1999).<sup>28</sup> The program had the following targeted goals among others:

- ensuring sustained improvement, the availability, reliability and quality of service;
- improving public access in rural and urban areas to telecommunications services through the provision of pay phone facilities; and
- enhancing Ghana's competitive advantage in the sub-region.

The strategies adopted to achieve these objectives were:

- privatization of P&T through the sale of a stake to an international company;
- creating a competitive duopoly by bringing a second operator into the country with the same rights and obligations as the monopoly;
- setting up a regulatory body for the sector; and

- allowing large corporate users to develop their own private networks.

As part of the reforms, the Postal Department of Ghana P&T was separated from Telecommunications. The Telecommunications unit, which is currently an independent organization, was named Ghana Telecom with a foreign strategic investor holding a 30% share. The Ghana Government holds the rest of the shares (Atubra & Frimpong, 1999).

### **Telecom Reform Outcomes in Ghana**

The reforms have resulted in improved access to services in many part of the country and brought about better quality of services. These reforms have also resulted in the emergence of new telecommunications technologies and infrastructures.

*Telephone Penetration:* The reforms produced rapid growth in fixed lines directly attributable to the entry of competitors into the industry. For example, prior to the reform, GDP growth, (the best measure of likely demand) outstripped growth in telecommunications supply. Also, GDP grew by 66% from 1984-95 while the number of lines in service increased by only 44% (CS First Boston, 1996).<sup>29</sup> Mainline penetration increased from 2.951 per 1000 inhabitants in 1994 to 11.568 per 1000 inhabitants in 2001. <sup>30</sup>Thus there was a dramatic increase of about 400% in telephone penetration following privatization.

*Mobile Phones:* Mobile telephony made a dramatic entry into the telecommunications sector of Ghana in 1993 with the introduction of the first mobile company, Mobitel. Other companies like Celltel, now known as Kasapa, Spacefone and GT entered the

market to ensure competition and added value to customers. Mobile communication has caught on very fast with Ghanaians, particularly with businessmen, women, workers and students. The mobile technology has made its way into the rural areas because of its popularity, convenience and reliability. It is also a manifestation of the fact that economic benefits of mobile phones seem to be of great economic value for rural dwellers who are therefore committing their money for the services

The ITU, 2002<sup>31</sup> reports revealed that Ghana was making significant progress with respect to mobile phone. Significantly, mobile phones are being utilized to promote businesses in the agricultural communities where land phones are not yet available. The mobile phone penetration increased from 0.197 per 1000 inhabitants in 1994 to 9.258 per 1000 inhabitants in 2001,<sup>32</sup> an increase of over 4000 per cent. Though disaggregated data on the number of rural and urban mobile users is not available currently, it is likely that the distribution will be skewed towards the rural areas where roll-out of land phones is still very slow and poor. The fact is that most people living in the rural areas need phones to support their livelihood systems.

*Communication Centers and the Internet:* The creation of countrywide networks of tele-based information centers or tele-centers offers a low cost opportunity to empower local communities in developed and developing countries to meet the challenges of the information society (Falch & Anyimadu, 2003).<sup>33</sup> In the case of Ghana, tele-centers developed in response to inadequate telecommunications infrastructure and the liberalization of the sector. The development of tele-centers in Ghana in a way compensated for the low penetration of telephones. According to Falch & Anyimadu (2003), most of these centers are private initiatives. They are becoming a common feature

in rural areas, offering much-needed services such as internet, fax, photocopying, and telephone services. In that respect, they are providing new forms of access to telecommunications in areas that were once unconnected to the regional capitals. Thus one way to achieve universal access to telephones and the internet is to establish a network of tele-centers where information and communication technology facilities are made available to the public.

Internet penetration in Ghana sharply rose from 0.004 per 1000 inhabitants in 1995 to 1.911 per 1000 inhabitants in 2001.<sup>34</sup> In 2003, Ghana had 313 internet hosts, 170,000 internet users, 7.8 internet users per 1000 inhabitants. However, the total number of Personal Computers (PCs) in 2003 was 82000, with 3.8 PCs per 1000 inhabitants.<sup>35</sup> The high differential between the number of internet users and the number of PCs has adverse implications for effective access to information, especially on the internet.

## **B: South Africa**

### **Background**

South Africa is a middle-income developing country. However, there are many poor communities in the country due to inequitable wealth distribution. It is an emerging market with an abundant supply of natural resources; well-developed financial, legal, energy and transport sectors; a stock exchange that ranks among the 10 largest in the world; and a modern infrastructure supporting an efficient distribution of goods to major urban centers throughout the region.<sup>36</sup> According to the World Fact Book, it was estimated that South Africa has a GDP real growth rate of 3% in 2002 and GDP per capita, purchasing power parity of \$10,000. The GDP composition by sector in 2001 is as follows:

agriculture: 4.4%, industry: 28.9%, and services: 66.7%. In South Africa, the telecommunications sector has grown dramatically to 4.5% of GDP, and the economy spends more on telecommunications as a percentage of GDP than most developed European nations.<sup>37</sup> All these factors have implications for the development of the telecommunications sector to meet the growing needs of the economy.

As in most developing countries, there is an uneven distribution of telecommunications infrastructure in South Africa with the urban centers and elites capturing much of the available services. The apartheid regime of South Africa, may have contributed to some extent to the inequitable distribution of telecommunications services skewed to the white communities. It was in pursuit of that question that Feyt & Edemuller (2000) learned that there was a high incidence of poor under developed rural areas existing alongside modern and well-developed urban areas resulting in an unequal telecommunications infrastructure distribution.<sup>38</sup>

### **Sector Conditions Leading to Reform in South Africa**

Like Ghana, South Africa Telkom is the state-controlled national telecommunications carrier. Telecommunications infrastructure, economics and politics were also factors influencing the privatization of Telkom.

*Service Conditions:* Unequal distribution of telecommunications services resulted in inequitable access across South African, especially in the black communities. The limited number of telephone lines per employee, long waiting lists for telecommunications services and low revenue indicated management inefficiencies.<sup>39</sup> This situation called for reform which led to national legislation focusing on privatization.

*Political Conditions:* Ayogu & Hogde (2002) concluded that telecommunications privatization in South Africa followed the preferences of pivotal interest groups and by extension were tied to the government's political fortunes.<sup>40</sup> Party ideology, the government and public influenced the political economy of the privatization in South Africa. It is worthy of note that the African National Congress (ANC) was opposed to privatization, ostensibly to win the favor of its black supporters. ANC's opposition to privatization could likely have been due to the party's ideological position that ownership by whites would mean a continuation of apartheid and white domination.<sup>41</sup> However, it was the ANC that privatized Telkom when it came to power involving the public, political parties and other stakeholders. In spite of the process of consensus building employed, the ANC government could not go in for total privatization because it was not entirely politically correct. A further study of this decision will likely show how such a politically charged issue as telecom privatization South Africa came to reality.

*Economic Conditions:* The South African economy performed poorly in the 1980s. There was foreign disinvestment as a result of stringent financial and trade sanctions against South Africa on account of its apartheid system of government. The socio-economic atmosphere was one not conducive for international businesses. This resulted in trade deficits and balance of payments difficulties. There were stagnant growth in sectors like agriculture and mining. Poor world price for gold, which is exported by the country coupled with international trade sanctions, worsened its state of affairs. The 1980s was a traumatic period in South Africa's political and economic history.<sup>42</sup>

On the telecommunications front, Telkom continued to incur losses coupled with low efficiency and productivity, which had to be covered from government revenues.

The needs of Telkom for capital expansion had to be met from the limited resources of the state. It was thought after careful review that privatizing Telkom could generate sufficient additional revenues for the government to alleviate its continual shortage of funds.<sup>43</sup>

### **Privatization of Telecommunications in South Africa**

The goals of the telecommunications reforms in South Africa focusing on privatization are:

- promote universal and affordable provision of telecommunications services;
- encourage ownership and control of telecommunications services by persons from historically disadvantaged groups;
- encourage investment and innovation in the telecommunications industry;
- encourage the development of a competitive and effective telecommunications manufacturing and supply sector; and
- ensure fair competition within the telecommunications industry.<sup>44</sup>

Currently, Telkom is privatized with a 30 percent share going to a consortium of USA Malaysian telecommunications investors.

### **Telecom Reform Outcome in South Africa**

The privatization of S.A. telecommunications has resulted in some remarkable developments with respect to services, productivity and new telecommunications technologies.

*Telephone Penetration:* Since privatization of Telkom, the fixed line market has continued to grow in lines per employee and in revenues.<sup>45</sup> The fixed line recorded a growth of about 28 percent from 1998 to 2000. This growth was primarily due to

increased fixed line use by Telkom's global and corporate customers, increased Internet traffic, the introduction of new value-added voice and data products and prepaid fixed line services.<sup>46</sup>

*Mobile Phones:* The prominent mobile phone companies in South Africa are Vodacom, MTN, and Cell C. Vodacom was the market leader in the mobile industry in 2001. GSM mobile services were launched in South Africa in 1994 and have since then experienced rapid growth in its users. Mobile subscribers per 100 inhabitants were 7.92 and 30.14 in 1998 and 2002 respectively.<sup>47</sup> This increase in the number of mobile phone users is a consequence of the popularity of prepaid services, increased affordability of handsets and a decline in the overall tariffs for mobile services.<sup>48</sup>

*Communication Centers and the Internet:* South Africa has the largest Internet market in Africa with 2.4 million Internet users in 2002. The number of Internet service providers increased very fast from seven in 1997 to 170 at the end of 2001.<sup>49</sup> Latest available statistics revealed that in 2003, South Africa has 288,633 Internet hosts, 3100,000 Internet users, and 3300,000 PCs.<sup>50</sup> Obviously there is a current gap of 200,000 PCs for effective accessibility. Some of the Internet service providers are: Telkom, Internet Solutions, AT& T, Global Network and MTN Network Solutions.

It is noteworthy that upon privatizing the state-owned monopoly (Telkom), the South African government set up a fund to support an agency that has the goal of enhancing national access to information and communication technologies. In that respect, it was estimated that South Africa needed four thousand tele-centers in order to make universal access a reality.<sup>51</sup> Tele-centers are today being used in S.A. as part of an

innovative means of increasing access, an alternative for closing the gap between the information rich and information poor in order to enhance socio-economic development.

### **Comparative Analysis and Universal Service Implications**

*Economic and Political Influence:* In both Ghana and South Africa, difficult economic circumstances have not allowed governments to continue using their scarce financial resources supporting telecommunications sectors which were inefficient, deteriorating in terms of infrastructure, and a drain on their economies. These were compelling reasons why their governments yielded to privatization of telecommunications policies being promoted by the developed world through international organizations such as the World Bank and the International Telecommunications Union.

There seems to be conflicting views in both countries on the political economy of telecommunications privatization as there are citizens in favor and against it. However, in each of these cases, there was public outcry against the old state telecommunications operators as a result of poor services and the financial drain on their respective economies.

In South Africa, the ANC party used telecommunications privatization as a political tool to win more followers. While the ANC considered privatization an inappropriate policy when it was in opposition, it privatized Telkom when it came into power. It appears however, that this was done through consensus among all stakeholders. In the case of Ghana, the government's ability to link privatization to the need to attract foreign investors which might lead to investments in other sectors, probably made the transition enjoy much public support.

In spite of the opposition in the two countries, there seems to have been a growing realization among governments, civil society and politicians on the need to change the long-standing perception that utility services like telecommunications must be state-controlled and should not be in private hands, especially foreigners. Until such a time that governments and civil society change their perceptions on state ownership and control as a result of the global economy, there could still be hindrances to privatization in the telecommunications sector.

There is much evidence to demonstrate that telecommunications privatization has brought with it mobile phones, tele-centers, internet, and improved services, which offer new choices for access to information.

*Telephone Penetration:* As a result of privatization, both Ghana and South Africa have experienced remarkable improvements in the penetration of telephones. This resulted in rapid decreases in the waiting list for telephones as shown in Table 1 below.

Table 1: Waiting Lists for Telephone Lines in South Africa and Ghana.

Waiting List for Telephone			Satisfied Demand	Waiting Time
000s	CAGR %		%	Years
1997	2002	1997-2002	2002	2002

South Africa	116.2	50.0	-24.5	99.0	.....
Ghana	....	154.8	....	63.9	4

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Source: ITU, 2004.

A CAGR (compound annual growth rate) of -24.5 for the period 1997-2002 for South Africa means that successive years after 1997 experience decreases in the number of people on the waiting list for telephones. This is reflected in demand satisfaction, which is 99 percent compared to 63.5 percent in Ghana. Tele-accessibility (number of mainlines per 1000 households) is 3.7 for South Africa and 1.82<sup>52</sup> for Ghana. This means that the length of time required to get to a telephone is less in South Africa compared with Ghana. It can also be inferred that the availability of telephones within a certain distance of all residents is higher in South Africa. These suggest that all is not well with respect to demand satisfaction and hence access to telephones in Ghana.

*Productivity and Tariffs:* The effectiveness with which an organization uses its resources such as labor and capital to generate products and services gives an indication of its efficiency and productivity.<sup>53</sup> In the telecommunications sector, higher numbers of phones per employee and increasing revenues are indications of improved efficiency and productivity. In both Ghana and South Africa, great strides were made with respect to number of telephones per employee and revenue generated after privatization. With respect to tariffs, according to the ITU in 2002, telephone subscriptions as a percentage of GDP per capita in South Africa and Ghana were 3.4 and 7.2 respectively. This could

make it difficult for citizens in Ghana to afford services compared to those in South Africa thus limiting effective accessibility.

*Computer Centers and the Internet:* In both Ghana and South Africa, there are tele-centers that provide access to ICTs such as computers and the Internet. However, the number of computers lags behind the number of Internet users. This could be an impediment to Internet access. Also, access in terms of price and Internet Service Providers is much far better in South Africa than Ghana.

*Mobile Phones:* Privatization and competition has led to a very rapid development of the mobile market in both Ghana and South Africa. This is shown in Table 2 below.

Table 2: Mobile Cellular Subscribers in Ghana and South Africa

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	Mobile Cellular Subscribers		
	Total	Per 100 inhabitants	CAGR (%)
	2003	2003	1998-2003
South Africa	16, 860	36.36	38.3
Ghana	800	3.56	80.5

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Source: ITU, 2004.

South Africa has a far greater percentage of mobile phones per 100 inhabitants than Ghana. This could be due to low connection charges and prices of handsets and better state of the South African economy. It may also be due to a more liberalized mobile market in South Africa leading to keen competition and more choices for consumers and lower prices.

Mobile telephony is experiencing exponential growth in both Ghana and South Africa compared with the telephone. The fact is that fixed line telephone development has been slow in both countries even after privatization. The rollout of wireless network occurs more quickly compared with a fixed-wire network coupled with the fact that wireless networks are geographically friendly and can be more easily deployed at lower cost irrespective of location. The high cost implications for telephone infrastructure encourage more investment in satellite-based technologies for mobile phones and for Internet access.

The penetration of mobile communications and fixed satellite access in both Ghana and South Africa favor Internet services and data transmission for business, health, education and other sectors. Until now, broadband Internet access has required a copper or fiber optic connection. However, these installations are not keeping pace with developments in broadband wireless. The increasing use of satellite-based technologies like VoIP, VSAT and high-speed internet connection implies that a point may soon be reached where the usage of these new technologies could be limited due to the lack of expansion of land infrastructure necessary to support them. This may offer new challenges to accessibility to information.

*Digital Access Index (DAI) for Ghana and South Africa:* The Digital Access Index is a new index developed by the ITU to measure the overall ability of individuals in a country to access and use ICTs. The index comprises the following factors that impact on a country's ability to access ICTs. These are infrastructure, affordability, knowledge, and quality and ICT usage.<sup>54</sup> Table 3 below illustrates the DAI for both Ghana and South Africa.

Table 3: Digital Access Index for Ghana and South Africa

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	Infrastructure	Affordability	Knowledge	Quality	Usage	DAI
South Africa	0.23	0.85	0.83	0.26	0.08	0.45
Ghana	0.02	0.00	0.64	0.15	0.01	0.16

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Source: ITU, 2004.

The following can be inferred:

1. South Africa has better index for infrastructure compared with Ghana as a result of its relatively high telephone subscriber lines, mobile subscriber networks, and Internet bandwidth.
2. Affordability is very much higher in South Africa compared to Ghana due to the fact that the former is a middle-income country whereas the latter is a low-income country.
3. The adult literacy rate in South Africa could have been higher than that of Ghana resulting in a higher knowledge index than the former.
4. If quality is a function of types investments in telephones, mobile phones, and Internet, it is reasonable that South Africa has a higher value due to better competition and market structure in its economy.
5. The cumulative effect of relatively higher values by South Africa on the components of DAI (infrastructure, affordability, knowledge, quality and usage) resulted in its score being much higher than Ghana.

South Africa therefore has higher ability to access and use ICTs like telephones, computers, Internet, mobile phones and IP telephony.

The improvements in the telecommunications sectors in both Ghana and South Africa could not have occurred without changes in their regulatory laws.

### **Regulation**

In Ghana, the National Communications Authority (NCA) that was set up by an Act of Parliament as part of the Telecommunications sector reform program has the responsibility to regulate the telecommunications sector.

The main roles of the NCA among others are:

1. establish regulatory policy and the associated procedures
2. regulate the competitive environment
3. issue and monitor compliance with operating licenses
4. set up a framework for commercial and technical interconnection

collect the rural systems development levy and administer the fund.<sup>55</sup>

In South Africa, Independent Communications Authority of South Africa (ICASA) regulates telecommunications and the broadcasting sectors. The Independent Communications Authority of South Africa Act No.13 of 2000 established the ICASA in 2000. Its key functions are to:

1. make regulations and policies that govern broadcasting and telecommunications
2. issue licenses to providers of telecommunication services and broadcasters
3. monitor the environment and enforce compliance with rules, regulations and policies
4. hear and decide on disputes and complaints brought by industry or members of the public against licensees
5. plan, control and manage the frequency spectrum and
6. protect consumers from unfair business practices, poor quality services and harmful or inferior products.<sup>56</sup>

It is worth noting that the regulatory environments in Ghana and South Africa are not fostering the development of the sectors. For example in Ghana, weak policy and regulatory framework has led to inadequate access to information and communications technologies such as telephones, computers and the Internet.<sup>57</sup> In the case of South Africa, it has been noted that Telkom, the monopoly landline phone

company has one of highest customer charges in the world. Even after years of dithering, the government has still not granted a license for a second national phone operator.<sup>58</sup>

ICT regulatory policies are important in the creation of climates that are conducive for investments in the sector. Studies show that bringing new technologies like VSAT services to the developing world can be greatly facilitated through policy reforms.<sup>59</sup> In Ghana for example, an entrepreneur in VoIP was arrested and her equipments confiscated for providing low-cost telephones over the Internet.<sup>60</sup> Such actions stifle innovation in the sector ultimately hinder access to ICTs for development. It is in that regard that sound and credible regulatory frameworks have to be put in place to promote the entry of ICT firms. All stakeholders in the communications sector must participate in the development of new regulations that promote competition, private investment, innovation and growth.

## **Conclusion**

Fiscal deficits played a critical role in motivating Ghana and South Africa to consider privatization policies. Political agents also proved to have powerful influence on these reforms. The study suggests the need for mutual agreement between all stakeholders (i.e. government, business and other civic leaders) for successful privatization. Without that, the process may be jeopardized, thereby compromising the desired outcome. The privatization reforms have resulted in increased accessibility to information with ICT adoption choices for information transfer. It is in that respect that telecommunications privatization in both Ghana and South Africa has rapidly enhanced the achievement of Maitland Commission's goal of ensuring that all mankind should be

brought within easy reach of a telephone and the other services telecommunications can provide. In 1984, the Maitland Commission noted that telecommunications was the “missing link” in much of the developing world. It is worth noting that currently, telephones, mobile phones, IP telephony, computers, and Internet, fit into the new set of “missing links” needed to promote socio-economic development in Ghana and South Africa. All these technologies could enhance the integration of the two countries into the global economy.

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