

TELECOMMUNICATIONS AND NIGERIA'S ECONOMIC DEVELOPMENT: CHALLENGES, PROSPECTS AND POLICY SUGGESTIONS

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ABSTRACT

Efficient telecommunications sine qua non with national integration: speedy business transaction; and economic growth and development. However, after a century of telecommunications existence in the country, teledensity was still grossly inadequate at 1:281 in year 2000, in contrast to the International Telecommunications Union's (ITU) 1:100 standard. This was traceable to equipment obsolescence, among others. Recent developments such as the launching of the Global System of Mobile (GSM) telecommunications and the proposed privatization of NITEL are therefore welcomed. Furthermore, to realize the full potentials of telecommunications service in the Nigeria economy, both the traditional terrestrial line system and the GSM should be integrated for enhanced efficiency. Finally, policy measures recommended included: creating a level playing ground for operators, enthronement of robust surveillance process; integration into the global telephony system; paying special attention to rural areas; and purposeful development of human capacity and other ancillary services especially electricity supply through the national grid.

1. INTRODUCTION

In today's world, all countries that aspire to develop and be part of the global village make efforts to develop their telecommunication industry. This is because telecommunication infrastructure plays an important role in the economic, political and social development of a

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country. However, telecommunications in Nigeria was characterized by serious shortfalls between planned and realized targets, principally because of poor management, lack of accountability and transparency; and low level of executive capacity among others. The term telecommunication refers to the science of conveying information in verbal, written, coded or pictorial form, through the devices of telephone, telegraph, cable, radio, television and other such means (BGL, 2001). In this study our focus shall be on telephone sub-sector of the telecommunication sector.

Nigeria has a public network of about 700,000 lines capacity out of which 400,000 lines are connected. Nigeria, therefore, lags behind comparable and even less endowed African countries, let alone advanced countries. This slow pace of development could be attributable to Nigerian Telecommunications Limited (NITEL) which is the national operator and monopoly service provider for domestic and international services. This had serious repercussions in terms of efficiency, cost of service and universal access.

In realization of these problems and the potentials of telecommunications in economic growth, the government is presently revitalizing this sub-sector through privatization and liberalization. For instance, in March 2001, licences were auctioned by the Government to interested private operators for the operation of the Global System of Mobile Telecommunications (GSM). The objective of this paper therefore is to examine the challenges and prospects of telecommunication sub-sector as a facilitator of Nigeria's economic growth and development. For ease of presentation, the paper is divided into six parts. Following this introduction, Section II examines the role of telecommunications in economic development, Section III reviews telecommunications policy in Nigeria and in Section IV, we examined the challenges facing telecommunications development in Nigeria. The prospects and policy suggestions to improve telecommunications in Nigeria are the subject of

Section V, while summary and conclusion are contained in Section VI.

2. ROLE OF TELECOMMUNICATIONS IN ECONOMIC DEVELOPMENT

Telecommunications service as infrastructure plays an important role in the economic, political and social development of any country. Like any infrastructure, it is expected to stimulate economic growth and development. It has been shown that telecommunication services are used in connection with a wide range of economic production and distribution activities, delivery of social services, and government administration (Saunders, R. J. et al (1994) pp, 22-29). Similarly, the National Policy on Telecommunication (2000) observed that, telecommunication is a vital engine of growth of any economy; it is an essential infrastructure that promotes the development of other sectors such as agriculture, education, industry, health, banking, defence, transportation and tourism. It is indispensable in times of national emergency or natural disasters. It considerably reduces the risks and rigours of travel and arrests rural-urban migration.

Telecommunication is now widely considered a strategic investment to maintain and develop competitive advantage at all levels - national, regional and firm. It constitutes the core of, and provides the infrastructure for the information economy as a whole. For instance, telecommunications service is the bedrock upon which information technology and its derivatives such as electronic banking and commerce are built. Telecommunications facilitate market entry, improve customer services, reduce costs, and increase productivity. It is an integral part of financial services, commodities markets, media, transportation and the travel industry and provides vital links among manufacturers, wholesalers and retailers.

Information is regarded today as a fundamental factor of production, alongside capital and labour. The information economy accounted for one-third to one-half of Gross Domestic Product (GDP) and of employment in the Organization for Economic Cooperation and Development (OECD) countries in the 1980s. Information economy also accounts for a substantial proportion of GDP in the newly industrialized economies and the modern sectors of developing countries. For example, in their study of some countries in the Asia and Pacific region, Jussawalla, M. et al (1988), using data of the late 1970s, found that information sector as proportion of GDP were: Singapore 25 per cent, Indonesia 19 per cent and Malaysia 14 per cent. However, in Nigeria the telecommunication services contribution to GDP was paltry, averaging 0.3 per cent of total GDP during the period 1966 - 2000. Similarly, in terms of employment generation, private telecommunications operators generated only 7,000 new jobs since the first licence was issued in 1996.

Telecommunication services can substitute for other forms of communication (mainly postal service and personal travel) and are often more effective and more efficient than those forms in their use of time, energy and materials and in their effect on the quality of the environment.

Telecommunication is an essential feature of globalization of affecting international trade-flows of investment, technologies, services and the world economy as a whole, of which free market is today the moving spirit. Global telecommunication provides the opportunity for a country to share in the wave of science and technology developments, and the general economy in positive ways that account for the remarkable economic growth in advanced countries and the newly industrialized countries.

3. REVIEW OF TELECOMMUNICATIONS POLICY IN NIGERIA

Developing countries like Nigeria that want to participate effectively and become equal partners in the emerging global market need to have in place a functional and efficient telecommunications system. In order to be relevant in this new millennium and beyond, Nigeria must join the international telecommunications network as a step towards improving and positioning itself to compete in the economy. The critical relevance of telecommunications to the economy has made it to receive government attention since the colonial era. However, generally, official policy on the Nigerian telecommunications sub-sector is driven by a number of factors. These include political consideration, the capital intensive nature of the business, national security implications, demand level, classification of telecommunications services as public or private good and advancement in technology. Political consideration was the greatest factor during the colonial period. Thus, at inception in 1886, the Nigerian telecommunications was established to promote administrative functions rather than socio-economic development of the country. For instance, the external services linking Lagos with England along with other British West African Colonies received greater attention than internal services. At the domestic scene, only 18,724 telephone lines were available for an estimated population of 40 million in 1960 resulting in a teledensity of 0.4 telephones per 1,000 people.

Between 1960 and 1985, the provision of telecommunication services continued to be domiciled in the public sector principally because it was regarded as a social good. In addition, the demand level was low relative to the huge capital outlay required, while domestic private capital could not cope. Thus, the need for the state to open up new economic frontiers in the telecommunications sub-sector was overwhelming, while national security consideration also favoured its public provision.

Consequently, internal telecommunications facility and services were handled by the Ministry of Communications through the Department of Post and Telecommunications (P & T) and a limited liability company, while Nigerian External Telecommunications (NET) Limited undertook external services. During this period, installed telephone lines rose to 200,000 in contrast to a planned target of 460,000 lines with all the exchanges of the analogue mode (Nigeria, 1998). This translated to a teledensity of 1:440 as against the International Telecommunications Union (ITU) recommended teledensity of 1:100. The period was characterized by unsatisfactory quality of service as typified equipment obsolescence, unreliable and congested lines, and expensive service delivery cost and customer unfriendly telecommunication services.

Owing to the stated defects, the P & T Department was split into the Postal and Telecommunications Divisions. The latter was merged with the NET to form the Nigerian Telecommunications Limited (NITEL), while the Postal Division was reconstituted into the Nigerian Postal Services (NIPOST). The NITEL was saddled with the responsibility for planning; harmonizing and coordinating internal and external telecommunications services and provide easy access, efficient and affordable services. Given this re-organization, the direction of policy was in continuation of public control or state monopoly through government directives, regulations and laws. The period was characterized by excess telephone demand as a result of improvement in the standard of living of the citizenry. The sub-sector, however, suffered some inadequacies including high cost of installation, cumbersome billing system, and obsolete equipment and administrative red-tapism due to corrupt practices associated with state monopolies. The awareness of accelerated technological revolution at the global level against the backdrop of domestic inefficiency in the sub-sector inspired government to deregulate the sub-sector in order to satisfy the yearning demand for household and industrial users.

The post-SAP period (1986 to date) witnessed further reforms, including the deregulation of the sub-sector. This led to the commercialization of NITEL in 1992 and the carving out of a Mobile Telecommunications Limited (M-TEL) from NITEL in 1996 to manage and operate cellular telephony services in Nigeria. By 2000, the government merged NITEL and M-TEL preparatory to complete privatization of government stakes in telecommunication sector. This policy stance was informed by the inefficiency and ineffectiveness of NITEL and M-TEL to cope with increasing demand, the need to reduce government budget deficits consumed by inefficient public parastatals and embrace of market forces in the allocation of resources through competition. Other factors include: advancement in information technology that has made telecommunication a feature of globalization, paradigm shift which re-classified telecommunications as private good requiring only institution of a level playing ground by government to engender fair competition. Following the deregulation of the telecommunications sub-sector, private operators were licensed to operate, although they were to be connected to NITEL. Also Decree 75 of 1992, which brought the Nigerian Communications Commission (NCC) into existence, was promulgated. The NCC Decree marked a water-shed in the telecommunications development in Nigeria as a National Policy on Telecommunications was published in 1998 and approved in October 1999. The main objective of the national telecommunications policy is the achievement of an efficient, affordable, reliable, modern and integrated telecommunications networks and services capable of bringing about national economic and social development in a globalized environment. Arising from this broad objective, the NCC has responsibility for creating a regulatory environment for the provision of efficient and effective telecommunication services and promote fair competition and efficient market. These broad policy objectives are to be achieved by facilitating private sector participation and divestment of government equity interests in the sub-sector. It is also the duty of the Commission to co-ordinate and

regulate the activities of operators to ensure consistency in quality of service and fair pricing. The NCC is also empowered to establish and promote technical standards, capabilities and skills in the development of Nigeria's telecommunications industry. Thus, the new policy sought to remove arbitrariness and inexplicable inconsistencies of the past. In the same vein, it clearly delineates the roles and functions of each stakeholder; and installs an open, transparent, responsible and progressive regulatory framework, processes and procedures. In addition, the policy was supposed to be reviewed biennially. Good as the policy was, it suffered some setbacks. This included delay in the approval and release of the policy one year after the first review was due which rendered some of the policy prescriptions outdated, in an industry characterized by rapid technological changes. This invariably snow balled into delay in the policy implementation, hence the Global System of Mobile (GSM) telecommunications could not take off until year 2001. Similarly, both the short and medium-term objectives of divestment of government's interest in state-owned telecommunication companies; local manufacture of network components and spares; and the provisioning of telephone facilities within 5km radius of any community could not be met as at 2001.

In quantitative terms, Nigeria had installed capacity of 700,000 traditional landlines out of which 400,000 were operational by 1999. Consequently, Nigeria's teledensity at 1:288 persons continued to lag behind the ITU recommended level of 1:100. Even with the operational 26,500 lines of Cellular mobile network out of 210,000 installed by M-Tel, the teledensity still remains grossly inadequate. Although as many as 108 approvals for telecommunications were made, out of which 48 companies had paid for their licences only four (4) were operational as at year 2000. Despite this, the telecommunication industry is yet to be deregulated as private operators were still connected with NITEL. The telecommunications system is still characterized by a preponderance of

analogue exchanges, rather than digital system, while the transmission network relies mostly on terrestrial microwave routes and optical fiber cable as against the more efficient wireless GSM type.

As stated earlier, the Nigerian Telecommunications Policy was supposed to be revised at least once in every two years to accommodate changing circumstances and technological development in the industry. The first and only review to date was carried out in year 2000. Although there was no departure from the maiden issue, the year 2000 edition of the Policy amplified the broad objectives in minute details, including elimination of monopoly practices through advocacy of private sector-led development. It also stated appropriate regulatory framework, assigned functions and responsibilities of each stakeholder in line with international best practices. This is with a view to improving the socio-economic welfare of the average Nigerian as well as positioning the country strategically in a globalized world economy. The immediate positive development of the revised policy was the transparency and professionalism with which the GSM Telecommunications licences were issued through an international public tender invitation and competitive bidding in March, 2001. In addition, 51 per cent of government stake in NITEL was sold to core investor through the same process, but the investor failed to meet up the terms of payment and therefore, forfeited deposit. The remaining 49 per cent was to be sold to Nigerian citizens on the floor of the Nigerian Stock Exchange. This would have completed the privatization of the telecommunication industry. It is hoped that having started on a transparent note, the NCC and indeed all stakeholders will discharge their responsibilities in line with the letter and spirit of the Nigerian Telecommunications Policy such that Nigeria will be an active participant in global telecommunications services.

4. **CHALLENGES FACING TELECOMMUNICATIONS DEVELOPMENT IN NIGERIA**

The major challenge facing the telecommunication sub-sector is how to liberalize the sector and increase access to telecommunication service at affordable cost as this is the basis by which internationally accepted teledensity standard could be achieved. Others include, manpower development or capacity building as well as development of local components; extension of the services to the rural populace and increased competition among operators.

The decision of the government to auction the Global System of Mobile Telephone (GSM) and to liberalize the operation of the telecommunication sub-sector is encouraging. However, the challenge is, can the GSM companies perform the feat experienced in some countries? For example, within 18 months of introduction of the GSM in Morocco, more than 3 million Moroccans have signed on as GSM subscribers. Similarly, in Zimbabwe wireless subscribers increased by more than 800 per cent in 1999. In Botswana, Rwanda and Cote D'Ivoire wireless phone subscribers already outnumber users of the traditional telecommunications network. Or would it be like India which has 3 million mobile phones and 28 million land-lines for a population of a billion or more?

The greatest challenge facing the telecommunication sector, therefore, is the provision of services at affordable cost. While the two companies that won the GSM license namely: ECONET Wireless Nigeria Limited and MTN Nigeria Limited initially wanted to charge N29 and N30 per minute, respectively, the recent tariff announced by NITEL in which national (trunk) calls were adjusted from N1.90 to N4.30 per minute and national (trunk) calls above a radial distance of 700 kilometres raised from N19 to N42.90 per minute has great implications for cost. In fact, both ECONET and MTN thought that the recent (May 22, 2001) review

was more realistic. The fact that NITEL is responsible for interconnectivity and is charging N42.90 per minute, the GSM companies cannot charge less if they are to break even. The success of the liberalization of the telecommunication sub-sector hinges on this critical factor. Some Nigerians believe (whether erroneously or not) that operators would factor the high cost of the licenses (US\$285 million per operator) into the prices of their services. In addition, the high cost of doing business in Nigeria arising from poor support infrastructure would be priced into telephone services much like other industries. And if the tariff rates proposed above is anything to go by, the fear may be well founded.

A survey conducted by Bottomline Magazine No.15, March, 2001, indicated rates at which Nigerians would readily and comfortably acquire a GSM mobile phone.

Amount	Respondents (%)
Under N10,000.00	33
Under N20,000.00	38
Under N30,000.00	19
Under N40,000.00	5
Under N50,000.00	5

Some respondents claimed that at the above price, they would acquire more than two lines, even up to five. However, this does not compare favourably with what is obtained internationally. For example, in terms of cost in the United States, Cell phones cost about US\$35.32, in addition to 200 minutes of peak airtime and 1,300 minutes of off-peak airtime, weekend and holidays in a month. In the UK subscribers are given free connection at the prevailing tariff rate of British Telecommunication and Vodofane. South African charges can be as low as about R500 (US\$66) for “pay-as-you-go” system, while long-term contracts can be as cheap as R90 (US\$12) with a monthly charge for not less than 2 years. In Cote

D'Ivoire, the lowest price is around CFA55,000 (about N8,800) a pack including the handset and a charge card. One is at liberty not to have periodic bills but rather buy charge cards as and when needed, for as low as CFA2,500 (N400). Although at the initial stage (in Cote d'Ivoire) of introduction of cell phones some three years back, they were slightly more expensive than now. It is so cheap that everybody including taxi drivers and secondary school students has mobile phones.

From the tariff charged by the telecommunication operators, subscribers have started complaining about high charges. In fact some subscribers took their case to the National Assembly, urging the Assembly to legislate on tariffs. In addition, many subscribers complain of poor quality of service characterized by busy networks, poor call completion rates and frequent call drops. Another problem GSM subscribers are facing is incessant diversion of calls to voice mails, which they complained lead to frivolous charges.

Another challenge facing telecommunication sub-sector in Nigeria is lack of a productive base. This renders telecommunications a high import-content sector. Sadly, all equipment, including handsets (running into millions) would have to be imported rather than manufactured in Nigeria. In addition, operators complain of the high duties paid on the equipment. For example, for every US\$100 million of equipment import, - one is expected to pay duties of US\$30 million according to a private telecommunication operator. The implication of this is a further drain on scarce foreign exchange and putting more pressure on the exchange rate. However, with the establishment of the first Personal Computer (PC) Plant in Nigeria by Zinox Technologies, it portends good omen for the telecommunication's industry in Nigeria.

In view of the foregoing, the licensed telecommunications operators are faced with a number of challenges. In the first place, there is a need

for timely and appropriate operationalizing of the license. The license timetable specifying commencement of the GSM telephone system by May 2001 is already being delayed as actual commencement took place in September, 2001. It is hoped that the NCC will not rest on its oars having given out the licenses but monitor compliance. In addition to timeliness and adequacy of compliance, the telecommunications operators owe the consumers quality service no matter where they are located. This is important as location in time and space is no longer a barrier in the new economy. To be in a position to deliver quality service, telecommunications operators would have to build up alternative trunk transmission networks. This is one of the ways by which efficiency could be enhanced in the sub-sector.

The abolition of state control or monopoly does not mean the absence of regulations. If anything, the embrace of market system requires setting standards, putting in place appropriate legal and administrative framework, as well as checks and balances to avoid replacing state monopoly with private monopoly. Secondly, the regulatory framework must be backed up with surveillance and capacity to ensure that set standard is met as well as taking proactive decisions. It is for this reason that the NCC has a lot of responsibilities for the efficient functioning of the telecommunication system in terms of quality service at economic price. The NCC must put in place a good surveillance process to regulate and monitor service providers. In this connection, it must enforce the obligation of spreading telephony networks across the six geopolitical zones and the rural areas to improve Nigeria's low teledensity in the foreseeable future. It is by so doing that the economy will reap the immense benefits of the information economy. It is commendable that the NCC started on a transparent note. It is however, necessary that it should institutionalize this gesture on its surveillance activities through appropriate legislation and publicity of procedures, guidelines and regulations guiding telecommunication service delivery in Nigeria. Since the NCC cannot act

alone, it requires tremendous assistance and encouragement from the political authorities. In this wise, the NCC should be provided with the enabling environment by possessing instrument autonomy to act freely within set limits. Consequently, it behooves on government to build, empower and sustain the NCC in its onerous duty to midwife efficient and effective telecommunications system in Nigeria. Having performed well in the telecommunication licensing and privatization, the authorities should extend the same feat to other sectors that are yearning for deregulation especially petroleum and electric power. It is hoped that the challenges posed by the deregulation of the telecommunication system in particular and the Nigerian economy in general will be seen as an opportunity for Nigerian professionals to prove their mettle.

5. PROSPECTS AND POLICY SUGGESTIONS TO IMPROVE TELECOMMUNICATIONS IN NIGERIA

5.1 PROSPECTS

The prospect for telecommunications development in Nigeria is very bright subject to the successful resolution of the identified problems/challenges facing the sub-sector. Given the large population of about 120.0 million people, the current low level of teledensity and the stage of economic development, a large market awaits telecommunications operators in Nigeria. There is also room for manpower development, employment generation and enhanced sectoral contribution to national output. In terms of market availability, the Nigerian economy requires close to 10.0 million telephone lines to improve the teledensity from the current level of 1:288 to between 1:20 to 1:10 as well as make telephone facilities available within 5-kilometre radius. In the same vein, there is an unlimited market opportunity for other telecommunications and information technology services such as fax, internet connectivity, etc. In order to serve the Nigerian economy efficiently and effectively, there is also the need for two to three additional gateways

to the existing one being operated by NITEL. There is also room for licensing more telecommunications operators in addition to the three licensees approved by the NCC in March 2001, to engender efficiency through competition and thus enhance welfare.

A lot of opportunities abound in the areas of local manufacture of telecommunications equipment and components such as hand set, cables, microchips, etc. Other important areas of prospect involve ancillary services including electricity and information technology materials generally. Similarly, there would be no limit for human capacity building in the industry through education and training. Although specialized training might be required for this purpose, it is believed that in the end, the development of the sector will boost employment in the Nigerian economy.

The efficient functioning of the telecommunication industry is of immense benefit to the economy as a whole. As time and distance taken in any business transaction are collapsed through effective telecommunication services, fewer resources are required for each economic activity hence there would be improvement in productivity. Consequently, the resources saved in terms of time and finance are released for more economic activities that otherwise might not have taken place. In this regard, both the size of the gross domestic product and the contribution of the communications sector would increase by leaps and bounds as witnessed in the OECD, Asia and Pacific countries referred to earlier. The overall benefit is that the aggregate output level is raised while the overall economic welfare is improved.

5.2 POLICY SUGGESTIONS

The tremendous potentials the development of telecommunications sub-sector holds for the Nigerian economy is not in doubt given the

analyses contained in this paper. However, in order to fully reap the benefits of the sub-sector, the following policy options are considered as minimum conditions.

5.2.1. Telecommunications Policy Revision

The re-classification of telecommunications service delivery from government monopoly to competitive private investment status through the privatization of NITEL and licensing of more operators calls for a policy shift. This paradigm shift means that all monopoly clauses inherent in the existing telecommunications policy should be expunged and replaced with conditions that create a level playing ground to allow for fair competition in the industry. This is an area where the NCC should speed up and intensify its activity. The Commission should license more operators and also come up with anti-trust laws to avoid monopolistic or oligopolistic practices which no doubt are anachronistic to consumers' welfare.

5.2.2. An Integrated Telecommunications System

The launching of the GSM cell phone in Nigeria in September 2001 is a welcome development even though belated. However, we wish to sound a note of caution that good as the wireless cell phone may be, the traditional landline counterpart should not be jettisoned. Rather, the two should complement one another so that problem in one system will not compromise service delivery. This is necessary as some areas may be best suited for land lines in the near future given the current high cost of cell phones, the topographic peculiarities as well as the smallness of the market size of such areas. The necessary thing to do, therefore, would be to upgrade the land line phone system from analogue to digital system in view of the slow pace and low success rate of the former. It is in this connection that we advocate for an integrated telephony system to take advantage of developments in

both satellite and optic fiber telecommunication systems.

5.2.3. **Integration into the Global Telephony System**

The principal and fastest instruments of integrating a domestic economy into the global economy are telecommunication and information technology systems. It is for this reason that it becomes imperative that the Nigerian telephony system must be properly integrated into the global telephony system. To do this requires national and international frequency harmonization as well as installation of more gateways to adequately link Nigeria with the rest of the world. This requires some policy shift in view of the privatization policy of government in the telecommunications sub-sector. Operationally, since government's preoccupation is creating conducive environment for private initiatives through legislation, it behooves on operators to jointly finance more gateways to avoid unfair competition.

5.2.4. **Robust Surveillance Activity**

The acid test of the ruggedness of any system is the observance of ground rules guiding such a system and not the mere existence of laws. Private economic agents are, however, not known for complying with rules that are capable of diminishing their interests no matter how well such rules and procedures in a deregulated sector/economy therefore requires effective monitoring to avoid rent seeking activities and system failure. For this reason, both the Ministry of Communications and the NCC are enjoined to put in place an impeccable surveillance process to ensure full compliance with rules and procedures guiding telecommunications in the country. The transparency and professionalism displayed in licensing GSM operators and sale of majority equity interest to

strategic investor in NITEL is commendable. However, this is just the beginning, hence the regulatory body needs to brace up for the uphill task before it thus, ensuring an efficient and effective telecommunication service delivery. While the choice of technology is now the exclusive right of operators, government must continue to regulate the sub-sector to ensure internationally accepted best practices at affordable cost. The NCC should ensure that the initial delay in rolling out the GSM phone facilities does not derail the time-table of activity in terms of service quality, quantity and spread across both the urban centers and rural areas. In addition, operators must direct efforts at eliminating unfair practices while tariff must reflect cost of service provision to avoid the monopolistic practices of the past. To discharge its mandate creditably, the NCC might have to be reorganized and fortified with competent requisite professionals. In the same vein, the commission must be insulated from political interference and be judged only on the achievement or otherwise of its function.

5.2.5. **Special Attention to Rural Areas**

Prior to the deregulation of the telecommunications sub-sector, telephone service was not only an urban affair but was elitist in nature. The result was that the sub-sector could neither develop fully nor grow other sectors of the economy as a catalyst. The only way out of this problem is to increase access to all segments of the economy including rural dwellers. Since rural areas might not be lucrative enough to attract profit-conscious private operator and dictation to operate in certain areas is anti-competition, the government should come up with a special programme to link the rural areas. The GSM license fees could have been used to install exchanges and small aperture terminals (SATs) in the rural areas instead of sharing among the three tiers of government. Where the

stated fund could not be used due to constitutional or other reasons, funds could be sought from all the tiers of government to develop these areas in order to attract private operators.

5.2.6. **Availability of Ancillary Services**

The efficient functioning of telecommunications services requires some support services/facilities. Principal amongst them are uninterrupted electricity supply to ensure continuous transmission, production of plastic and cables for telephone handsets and cables, etc. At the moment, all these are being imported including electricity-generating sets to keep the telephone exchanges working. Consequently, the connection fee and tariffs are on the high side. The way out of this cost-push inflationary pricing is to ensure local supply of these essential inputs. Most importantly, electricity supply must be made stable on a sustainable basis through the national grid which would be cheaper than private provisioning. In the same vein, the local plastic manufacturing companies should be encouraged to produce telephone set components in order to bring down the cost of telephony.

5.2.7. **Human Capacity Building**

Telecommunications development requires high technology and highly skilled labour to install and maintain it. At the moment, there is dearth of the required human capacity in the county to deliver. The challenge thrown up by the situation on ground is the need to develop manpower through formal education and training as well as research activities not only to man imported technologies but also to develop local application. This requires time and money, but the time to start is now in order to indigenize telecommunication technology in the near future.

6. SUMMARY AND CONCLUSION

Attempts were made in this paper to evaluate the performance of telecommunications service infrastructure since its inception in Nigeria in 1886. This was with a view to examining how it could enhance Nigeria's economic growth and development due to its pivotal role in economic, social and political development within the domestic and the global economy. In spite of over a century of existence of the telecommunications sub-sector in the country, service delivery was only 1:288 teledensity prior to the launching of the GSM cell phone in March 2001. This was not only below internationally accepted level of 1:100 but grossly inadequate to service the Nigerian population of about 120 million. Consequently, its elitist nature robbed it of its ability to promote the growth of other sectors, while its contribution to GDP averaged 0.3 per cent in the five years period between 1996 and 2000.

Given this scenario, the greatest challenge facing the Nigerian telecommunication system and the NCC (the regulatory authority) is how to increase access rate at affordable price. While the choice of technology and other production decisions is that of licensed telecommunication operators having deregulated the sector, the NCC must ensure compliance with set standards and adherence to timetable of activity through effective surveillance. The launching of satellite cell phones, however, does not foreclose the development of traditional landline phone system. What is required is a well integrated telephony system combining both sub-systems for effective integration into the global economy. This way, the Nigerian economy would be in a position to reap the benefit of telecommunications in terms of employment, inter-sectoral linkages, contribution to GDP and growing the economy generally. However, given transition from monopoly to market system and the current low access rate, a number of policy measures must be undertaken. These include: review of telecommunications policy to accommodate paradigm shift, system

integration domestically as well as globally and a robust process. In addition, to surveillance, special attention should be paid to rural areas, while the development of human capacity and other ancillary services, especially electricity should be given priority attention.

The overhauling of the Nigerian telecommunications services is long over-due. While the launching of the GSM cell phone is a welcome development, it will not solve all the nation's telecommunication problems. One way of realizing its great potentials is through keeping pace with developments in the sub-sector, focused investment in indigenous technology and promotion of manpower development.

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