

AN EVALUATION OF THE IMPACT OF NIGERIAN COMMUNICATION COMMISSION (NCC) ON THE CONTROL OF GSM SERVICE PROVIDERS IN NIGERIA: CHALLENGES AND PROSPECTS

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Abstract

The Federal Government has been taking measures to restructure and re-engineer the telecommunication sector with a view to repositioning it for improved services and increased scope of operation. The sector has also been grappling with the problem of disequilibrium in the market structure which has resulted in poor and limited scope of service. In order to tackle the above problems, the federal government embarked on phased and full deregulation of the sector. The deregulation of the sector necessitated the establishment of a regulatory agency that would regulate the activities of the stakeholders, hence the establishment of Nigerian Communication Commission (NCC). This seminar paper is designed to critically evaluate the activities of Nigerian Communication Commission (NCC) in the regulation of the activities of the operators in the sector with a view to identifying the problems and prospects of such regulations. The regulation of the sector has resulted in increased scope and improved quality of services by dismantling the disequilibrium in the market structure and engendering competition. Through effective regulation, the sector has contributed significantly to the growth of the country's GDP, attracted both local and direct foreign investments and generated employment opportunities to the teeming unemployed youths. In spite of the above positive contributions to the economy, the regulatory agency (NCC) is still grappling with the problems of insecurity, cyber crime and vandalism, which the introduction of modern ICT has engendered. To improve the effectiveness of the commission in its regulatory activities, the following recommendations are made: to review the Act establishing the commission to include security as one of its cardinal oversight functions and closer collaboration between the commission and the security agents.

Keywords: *Telecommunication, Nigerian Communication Commission (NCC), GSM Service Provider, Deregulation, Market Disequilibrium*

Background to the Study

For the past twenty five years, the telecommunication sub-sector has been going through restructuring and re-engineering to reposition the sector to meet the changing needs of the market. The restructuring of the sector started sometimes in 1985, when the technical section of the defunct Post and Telecommunication dept (P & T) was merged with the defunct NET to form what we have now as Nigerian Telecommunication Limited (NITEL). These defunct telecommunication outfits were 100% Federal Government owned, enjoyed monopoly of service provision in the industry and operated on statutory basis. This means that they were not profit oriented and their operations were funded and controlled by the Federal Government. The above factors resulted in poor service provision and limited scope of telecommunication services in the country. A retrospective appraisal of the sector's performance prior to the establishment of NITEL shows that government and indeed the general public had shown serious concern over the poor services of P and T. The above situation prompted Njoku (1980) to observe that after 1960, the need for telephone facilities was no longer confined to government functionaries because of the increased tempo of development of trade, commerce and industries which also needed efficient telecommunication services. To support this argument statistically, he cited the increase in the number of telephone lines in the country from 70,000 in 1970 to 119,000 in 1974.

Anderson (1982), observed from his own perspective on the situation in the telecommunication sector, that the demand by subscribers in the rapidly expanding industrial and commercial sectors of the economy has given rise to congestion, failure of calls and poor services. He went further to state that Nigeria economic development requires a much better telephone service than we have at present, but there have been difficulties to overcome such. This is as a result of the fact that equipments are not standardized and this created difficulties of expansion. From the foregoing, it is obvious that the then government of the federation had suddenly realized the importance of efficient telecommunication services in the economic and social development of the country.

Hence, Anderson (1982), remarked that the third National Development Plan included the complete reorganization of Nigerian Telecommunication Limited to be managed on a business- like manner. The reason for the decision to run the corporation as a business organization may be traced to the lapses experienced in services offered by the government ministries and departments. The above situation prompted the establishment of NITEL by the Federal Government with a charge to be self-sustaining and more efficient with a view to improving the quality of services and increasing the scope of operation to meet the changing needs of the market. The Nigerian Telecommunication Limited (NITEL) could not meet up with

this charge and in 1992, the Federal Government embarked on a phased deregulation of the industry aimed at involving the private investors in the industry. This, the Federal Government started by setting up Nigerian Communication Commission (NCC) which was charged with the responsibilities of putting together a regulatory framework that would ensure private sector participation in the provision of telecommunication services in Nigeria.

Statement of the Problem

The Telecommunication sector has been grappling with the problem of disequilibrium in the market structure which has resulted in poor and limited scope of telecommunication services in the country.

Objectives of the Study

This study is designed to generally appraise the performance of operators in the telecommunication sub-sector prior to the establishment of Nigerian Communication Commission (NCC) and the regulatory activities of NCC after deregulation with a view to establishing the impact of NCC regulation on the service quality of GSM operators and Nigerian economy. The other specific objectives of this study are as follows:

1. To appraise the performance of operators in the telecommunication sub-sector prior to deregulation and the regulatory activities of NCC.
2. To identify the problems and challenges confronting NCC in executing its regulatory functions in the telecommunication sector.
3. To highlight the positive impacts of the regulatory activities of NCC on the Nigerian economy.
4. To also highlight the negative impacts of NCC regulations on Nigerian economy.
5. To make recommendations on the appropriate strategies NCC should adopt in its regulatory activities in order to improve service quality, ensure fair competition and check the use of ICT in the perpetration of crime.

Literature Review

Problems and Challenges in the Telecommunication Sector Prior to the Establishment of NCC and Issuance of Operating Licenses to GSM Operators

Prior to the establishment of Nigerian Communication (NCC) and the issuance of operating licenses to GSM operators, the sector was characterized by poor service provision resulting from the inability of the only service provider in the sector (NITEL) to cope with the demands of the market. In 1998, the Federal Government embarked on a phased deregulation of the industry by issuing operating licenses to five private operators, to provide fixed wireless telephone services alongside NITEL providing land line telephone services. Even with the issuance of operating license to the five private operators and the massive expansion programme embarked by NITEL, the operators in the industry were still not able to meet with the market needs and the International Telecommunication Union (ITU) teledensity ratio of one telephone to one hundred persons. Manuwa (1991), confirmed the situation when he observed that the telephone density as at 1991 was one telephone to four hundred persons and he went ahead to state that the poor teledensity ratio was as a result of the monopoly enjoyed by NITEL which limited private sector initiative in the industry.

Nigeria had a population of about one hundred and twenty million (120m) people as at 1992(Federal Office Of Statistic, 1990). The installed capacity of NITEL and the five private operators throughout the federation stood at seven million, two hundred thousand (7,200,000) lines with connected services standing at six hundred and sixty thousand (660,000) lines, out of which only four hundred and twenty thousand (420,000) telephone lines were functional before the advent of GSM telephone services in the country (NITEL Service Bronchure, 1997). A comparative analysis of Nigerian population vis - a - vis the installed capacity of the operators in the industry revealed a wide gap between the supply and demand of telecommunication services in the country as at then. Again, the increasing globalization of trade and the growing sophistication of telecommunication services the world over called for a review of the country's telecommunication policy (Nebo 2007). Ndukwe(1997), while assessing the post deregulation state of telecommunication service in the country, observed that NITEL was finding it essentially difficult to acquire spare parts to refurbish the analogue system which accounts for the erratic and unreliable telephone service in the country . It is therefore seeking optic fibre transmission network as an ideal medium for the anticipated line up of traffic. He also went ahead to observe that some NITEL External Lines Plants or underground telephone cables have been buried for over twenty years.

The need to redress the above situations prompted the federal government to embark on a full deregulation of the sector by issuing operating licenses to four GSM operators. The federal government also took further step to ensure full deregulation of the sector by divesting its 51% stake with NITEL and this move was to strengthen and prepare the organization to cope with the competition that would be engendered by the deregulation of the sector. It is important to note that the attempted privatization of NITEL by the federal government was frustrated by the staff union of the organization in collaboration with other interested groups. The full deregulation of the telecommunication industry tremendously boosted the tempo of business in the sector. This situation therefore necessitated the establishment and/or strengthening the existing regulatory agencies in the sector to provide a level playing ground for the operators and ensure full protection of the consumers in the sector. Based on the above situation, Nigerian Communication Commission which was established in 1992 was restructured, strengthened and re-empowered in 1999 to regulate the activities of the operators in the sector in order to ensure fair play and improved quality of service in the sector.

Nigerian Communication Commission (NCC): Background, Objectives and Functions

The Nigerian Communication Commission (NCC) is an independent National Regulatory Authority set up by the Federal Government in 1992 to oversee and regulate the activities of operators in the telecommunication industry in Nigeria. The commission is specifically charged with the responsibility of creating an enabling environment for the participation of private operators and investors in the provision of telecommunication services in the country. By this charge, the commission was supposed to ensure fair competition among the operators in the industry by providing a level playing ground that would break the monopoly power of the erstwhile monopoly service provider (NITEL) in the sector. It was also charged to ensure provision of qualitative and efficient telecommunication services to Nigerians.

The mission of this commission is to support a market driven telecommunication industry and promote universal access. It hopes to achieve this through consistent enforcement of clear and fair policies that protect stakeholders, ensure efficient resource management, share industry best practices and deliver affordable, quality telecommunication services. The commission's vision is to bequeath an information rich environment comparable globally in quality telecommunication service provision to Nigerians, regulated by a responsive, world class organization. The commission is driven by three guiding principles (fair, firm and forthright) in carrying out its duties and functions as the National Telecommunication Regulator. These principles drive the commission's core values of integrity, excellence, professionalism, responsiveness and innovation (www.ncc.gov.ng).

The primary objectives of the Act that established the commission is to create and provide a regulatory framework for the Nigerian Communication industry and all matter related thereto and for the purpose and without detracting from the generality of the foregoing, specifically to:

1. Promote the implementation of the national communication or telecommunication policies as may from time to time be modified and amended;
2. Establish a regulatory framework for the Nigerian Communication industry and for this purpose to create an effective, impartial and independent regulatory authority;
3. Promote the provision of modern, universal, efficient, reliable, affordable and easily accessible communication services and the widest range thereof throughout Nigeria.
4. Encourage local and foreign investments in the Nigerian communication industry and also encourage participation of Nigerians in the ownership, control and management of communication companies and organizations;
5. Encourage the development of a communication manufacturing and supply sector within the Nigerian economy and also encourage effective research and development effort by all communication industry practitioners;
6. Protect the rights and interest of service providers and consumers within Nigeria;
7. Ensure that the needs and interest of the disabled and elderly persons are taken into consideration in the provision of communication services and
8. Ensure an efficient management, including planning, coordination, allocation, assignment, registration, monitoring and use of scarce national resources in the communication sub-sector, including but not limited to frequency spectrum, number and electronic addresses and also promote and safe-guard national interests, safety and security in the use of the said scarce resources. (www.nigeria.law.org)

The Regulatory Activities of NCC, its Impact on Operators, Consumers and the Society

The federal government's effort to address the telecommunication problems of this country through mobile cellular phone came to limelight in 1993 when Global System for Mobile phone (GSM) license was issued to a telecommunication company known as EMIS. This was followed by the issuance of similar licenses to other operators by the last military administration and these licenses including that of EMIS were later revoked. Still in an effort to improve the quality of telecommunication services through the introduction of Global Mobile telephony services, the federal government inaugurated the National Telecommunication

Policy in 1999 which was later reviewed in 2000 to consider other options of Global Mobile telephony services like Code Division Multiple Access (CDMA), GSM and International mobile Technology (IMT 200).

However, Nigeria made an indelible landmark on January 17, 2001 when the auction for the four mobile cellular licenses for the deployment GSM technology was held at Abuja. The auction was conducted and supervised by Nigerian Communication Commission under the chairmanship of its former chief executive, Engr. Ernest Ndukwe. Seventeen telecommunication companies participated in the auction bid and only five of them qualified for the final bid. It should be noted that only three licenses were available for auction with the fourth already reserved for mobile cellular company limited, an offshoot of the merger of the Nigerian Telecommunication Limited (NITEL) and Nigerian Mobile Telecommunication Limited (M-TEL).

After the final bid, three out of the four bidders emerged winners. They are Econet Wireless Nigeria Limited, MTN Nigerian Communication Limited and Communication Investment Limited. As part of the regulatory functions of Nigerian Communication Commission (NCC), it mandated the three winners to pay the sum of \$285million each as license fees, latest February 9, 2001 and upon compliance the commission would approve the requisite frequency band for the winners. The sum of \$285million license fees was paid by each of the winners and this was to cover the cost of frequency spectrum, numbering plan, international gateway and interconnectivity. The Nigerian Communication Commission's rule further states that the licenses require that an annual operating levy representing 2.5 percent of the licensees' audited net revenue be paid within three months, at the end of the second year of the license. Thereafter, assessed net revenue on the licensee's income should be paid within thirty (30) days to the end of such a quarter to be adjusted immediately on receipt of the audited annual financial statement of the licensee (Ayoade 2001).

Upon commencement of business by the three newly licensed GSM operators, the tempo of business activities in the sector tremendously increased thereby necessitating the intervention of the regulatory agency (NCC) to:

- I. Protect operators from each other
- II. Protect subscribers from unfair business practices
- III. Protect the larger interest of the society

The major objective of the deregulation of telecommunication sector by the federal government was to adjust the disequilibrium in the market structure from pure monopoly to deregulated market by breaking the monopoly of service provision in the sector by NITEL. This noble objective was far from being realized after the commencement of business by the three licensed G.S.M operators as two operators (Econet Wireless Nigeria Limited and Mobile Cellular Company Limited) could not meet up with the stipulated three hundred thousand (300,000) lines deployment except MTN that exceeded the mandate by over 200% within the first three years of operation.

The above situation created another kind of disequilibrium in the GSM market structure (as was the case in the landline market structure) as the combined capacity of the two operators could not be a match to MTN. MTN took advantage of the weakness of the two operators and its wealth of experience, technological expertise and strong financial backing from parent company in South Africa to capture almost 80% of the total GSM market in the industry. This situation did not go down well with Nigerian Communication Commission (NCC) whose objective in issuing operating licenses to the three operators was to provide a level playing ground that would ensure fair competition among the operators. In order to redress this situation, Nigerian Communication Commission (NCC) issued the fourth license to Globacom and this was followed by issuance of operating licenses to other operators. The action of NCC actually challenged MTN as the market leader. Though, it still remained the market leader but for the first time it became conscious of the fact that there are competitors lurking around to take over its position.

In the area of price control, Nigeria Communication Commission (NCC) did not and has not engaged in direct price control in the sector, rather it allowed the market forces to determine both the tariff charges and prices of simcard. Prior to the commencement of business by Globacom and other newly licensed operators, MTN dictated the price in the sector. MTN simcard sold as much as thirty thousand naira while its tariff billing was on per minute billing pattern. Globacom, on commencement of business adopted per second billing pattern and crashed the price of simcard to as low as N1,000. MTN had no option than to follow suit as it was not ready to lose its customers. With the increasing crime wave occasioned by the use of GSM, Nigerian Communication Commission (NCC) directed all GSM subscribers throughout the country to register their simcards.

It further directed all operators to ensure that subsequent subscriptions are registered and this is to ensure monitoring and tracking of the use of GSM in the perpetration of crime. It is noteworthy to state that crime wave as a result of the use of GSM increased both in quantum and sophistication to the extent that the federal

government had to intervene to check the trend through effective regulation of the use of GSM. Also to ensure effective monitoring of the use of GSM in the perpetration of crime, Nigerian Communication Commission (NCC) directed the operators to install devices and equipments that should be monitoring the use of GSM. This directive was to compliment the efforts of the law enforcement agents like Nigerian Police Force (NPF) and Economic and Financial Crime Commission (EFCC) in the control and prevention of crime in the country. The full implementation of this laudable goal is being delayed by the inability of NCC to conclude the simcard registration exercise as crime prevention and control through monitoring and tracking of GSM users cannot be effective without comprehensive record of GSM subscribers in the country.

Challenges and Prospects of NCC in its Regulatory Activities in Nigeria

One of the major challenges confronting Nigerian Communication Commission in its regulatory function is how to check the increasing crime wave resulting from the use of GSM. Crime pattern in Nigeria (especially in the South East & South- South geopolitical zones) of the country has shifted from armed robbery to kidnapping and cybercrime with the advent of GSM. The kidnappers waylay their victims, take them hostage to unknown places and use their victims' cell phones to demand ransom from their relations. They place price tags on their victims ranging from ten million to one hundred million depending on how rich they consider them to be. So many prominent members of the society like politicians, companies' chief executives and top level civil servants have fallen victim of the kidnappers.

The expatriate oil workers in the oil producing states were actually the first set of victims of this ugly trend and the activities of these people have so badly affected oil exploration in these states to the extent that most of the expatriate oil exploration and servicing companies have shut down their plants. It is also noteworthy to state that cybercrime has been on the increase since the advent of GSM. The adoption of GSM technology has brought about improvement in information technology and telecommunication infrastructure in the country that banks have started adopting modern technologies like Automated Teller Machine ATM and International Credit and Debit Card ICDC. Cyber-criminals have capitalized on the newness of these technologies in the Nigerian banking industry and the ignorance of the bank officials and their customers to gain access to coded information and divert peoples' funds.

The activities of the Boko Haram insurgency has not only adversely affected the nation's economy in terms of colossal loss in human capital resources but also in terms of loss of revenue accruing to the federation account through the destruction of the telecommunication mast and trans receiver stations in some northern states of

the country. This situation has posed serious challenges to the regulatory activities of NCC as GSM operators that have been adversely affected by the insurgency would not be able to live up their financial obligation to the regulatory agency. According to United States Embassy 2011, the information and communication technology sector of the Nigeria economy is the fastest-growing and most robust economic sector, contributing more than manufacturing, banking and solid mineral combined. Ogunbanjo (2012), described the damages caused by the attack as terrible. He called on the Minister of Communication Technology to advise the President of the Federal Republic of Nigeria, President Goodluck Jonathan to declare a state of emergency on the nation's communication sector and also to declare the telecommunication infrastructure and facilities national property just like petroleum pipeline.

Ladi (2001), in assessing the security implications of adopting modern information technology in the emerging electronic commerce in the country, noted that issue of security and how our country, given the pervasive state of decadence in our national telecommunication infrastructure can actually guarantee risk-free e-commerce for individuals as well as corporate bodies. He went on to state that Nigeria has begun to have its share in the estimated \$400 billion global computer fraud as various cases of losses continue to be incurred at the domestic environment as the scammers intensify their poaching on innocent people's communication systems by intercepting, diverting and making use of diverted information to commit big fraud at the international money transfer highway. The combined effects of the cybercrime and the kidnapping saga have badly affected the country's international image and the economy that the country has been listed as one of the terrorist countries in the world. The above ugly practice in the use of GSM has raised a question mark as to the competence of Nigerian Communication Commission in discharging its duties as a regulatory agent in the telecommunication sector in Nigeria.

The unemployment situation in the telecommunication sector was so bad that International Telecommunication Union (ITU) noted that Nigerian's expenditure on the development of telecommunication before the advent of GSM stood at 1.1 percent of Gross Domestic Product, well below the African's average of 1.7 percent. The teledensity ratio in the country then stood at 1 telephone to 400 people and this was far below ITU's recommended teledensity ratio of 1 telephone to one hundred people. The above situation started changing as captured by Ayoade 2001, with the advent of GSM as Nigerian's economy started opening up to private foreign and local investments.

As was also captured in the same report, over N4.2 billion was staked by foreign investors in the nation's telecommunication sector in 2000 fiscal year as direct foreign investment. During this period, an Australian based telecommunication company, Tetra, entered into a \$10 billion investment with Virgin Technologies, a Lagos based Telecommunication Company on V-SAT telecommunication project. Within the same period, another US-based telecommunication company opened a representative office in Lagos as a solution provider to several corporate bodies. It announced a \$10 million long term investment plan for the next five years in the country. Several other foreign telecommunication companies entered into the country and these investments opened up employment opportunities to Nigerians. With the regulatory activities of NCC, these foreign telecommunication outfits were given employment condition of reserving at least 80% of the employment quota to Nigerians.

Currently, the sector is the fastest growing sector of the economy given the volume of direct foreign investment it has attracted to the nation's economy. In the first half of 2012, telecommunication companies invested over N400 billion on the transceiver and base stations. Juwa (2012), said that the sector had attracted more than \$18 billion worth of investment by 2009. Through frequency spectrum sales, the federal government has made N300 billion from telecommunication companies enabling it to plough revenues earned from the sector back into the provision of development infrastructure. He added that the percentage share of Gross Domestic Product, GDP from the sector rose from 0.06 percent in 1999 to 2.39 percent in 2007 and moved up to 2.90 percent in 2008, and 3.66 percent in 2009. By 2010, ICT had contributed 8.2 percent to the nation's GDP. The sector's foreign direct investment currently stands at \$25 billion. In spite of the security lapses associated with the use of modern information technology and telecommunication equipment in trade and commerce, the country has witnessed tremendous improvement and increase in trade and commerce since the advent of GSM and modern information technology. The use of modern information technology and telecommunication has compressed the world to a global village.

Trade and commerce especially at the international level can hardly be effectively carried out without the application of ICT technology. Therefore, e-commerce and e-payment have become imperatives in international trade and commerce. With the initial security challenges associated with the use of modern information technology and telecommunication equipment in trade and commerce in Nigeria, the Nigerian Communication Commission (NCC) in collaboration with EFCC have been making concerted effort to sanitize the use of these modern technologies in trade and commerce through effective regulation.

Finally, the banking sub sector has witnessed tremendous improvement in the quality of service as a result of the deployment of modern information technology and telecommunication equipment in their services. Before now, a single bank transaction could take a customer four hours to conclude but with the use of modern information technology such transaction could be concluded under minutes. The adoption of modern banking practices like ATM, universal banking and western money transfer could not have been possible without the use of modern information technology and telecommunication system. Bank transactions have become swifter and less cumbersome in spite of devastating activities of the cyber criminal in the sector. Juwah (2012), also observed that the sector has boosted e-business and trading as evidenced by the use of electronic banking facilities such as Automated Teller Machine, online financial transactions, international credit and debit card facilities. Pyramid Research (2012), indicated that revenues generated by the telecoms industry amounted to \$8.6 billion in 2010 and has maintained a steady growth. The report predicted that revenues would hit \$11 billion (N1.7tn) by 2013. The Nigerian Communication Commission (NCC) is putting together regulatory framework to check the activities of these criminals with a view to sanitizing the sector.

Conclusion

Prior to the deregulation of the telecommunication sector, the industry was characterized by poor service provision and disequilibrium in the market structure as a result of the monopoly of service provision enjoyed by the defunct government owned corporation-NITEL. In order to increase the scope and improve the quality of service in the sector, the federal government issued operating licenses to the GSM operators and this resulted in the deregulation of the sector, necessitating the establishment of the Nigerian Communication Commission NCC to regulate the activities of the operators in the sector.

The regulation of the sector by NCC has resulted in increased scope and improved quality of services by dismantling the disequilibrium in the market structure and engendering competition. Through effective regulation, the sector has contributed significantly to the growth of the country's GDP, attracted both local and direct foreign investments and generated employment opportunities to the teaming unemployed youths. In spite of the above positive contributions of the regulation of the sector to the economy, the regulatory agency NCC is still grappling with the problems of insecurity, cyber crime and vandalization occasioned by the use of modern ICT.

To improve the effectiveness of the commission in its regulatory activities, the following recommendations are made: government should review the Act

establishing the commission by making security one of the cardinal oversight functions, intensify effort to conclude the simcard registration exercise and collaborate with the security agents to guard telecommunication installations.

Recommendations

Given the enormous security challenges confronting the nation as a result of the adoption of modern information and communication technology ICT, there is need for closer collaboration between Nigerian Communication Commission and the nation's security agencies like State Security Services, Nigeria Police Force, and Economic and Financial Crime Commission in the fight against the use of information and communication technologies in the perpetration of such crimes like kidnapping, cyber crime and insurgency. On establishment of the commission, government did not envisage that the adoption of ICT would engender this level of security challenges as are being witnessed and hence did not include security as one of the oversight functions of the commission. It is therefore recommended that government should review the Act establishing the commission by calling for closer collaboration between the commission and the security agencies and make security to be one of the cardinal regulatory functions of the commission. The fight against the use of GSM in the perpetration of crime cannot be effective without a comprehensive record of all the subscribers of the different networks operating in the country.

Therefore, the commission should build a data base of all the subscribers of all the GSM operators and then establish an exchange system that would be linked with the networks of the operators. Such exchange system should be exclusively run by the commission specifically to monitor the use of GSM. This will not only check the reckless and careless sales of simcards but will also check the use of GSM phones in the perpetration of crime. It is therefore recommended that NCC should intensify effort to conclude the simcard registration exercise which is still ongoing.

The increased tempo of business in the telecommunication sector has positively affected the nation's economy in terms of increased contribution to the GDP, attraction of both local and direct foreign investment and provision of employment to the teeming unemployed youths. In order to sustain these positive contributions, the Nigeria Communication Commission should come up with security strategies to guard against the vandalization of telecommunication infrastructure. The Boko Haram insurgency is currently destroying the telecommunication installations in the northern parts of the country and this is adversely affecting the revenue accruing to the federal government. It is therefore recommended that NCC should collaborate with the security agencies like Nigeria Army, Nigeria Police Force and Civil Defence Corpse to mount serious security check over the telecommunication installations in the country just like the petroleum pipelines.

In order to sustain the accelerated economic development achieved as a result of the adoption of modern ICT, the federal government through the regulatory activities of NCC should encourage and monitor direct foreign investment in the sector to ensure that investors operate according to stipulated guideline and also ensure that sizeable portion of employment in such investments are reserved for Nigerians. The GSM operators should also be strictly monitored to check the unwholesome practices by the service providers and also ensure improved quality of service to the subscribers.

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