

## **Social and Economic Impact of Global System Mobile (GSM) Network on the Nigerian Society 1999-2010**

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### **Abstract**

*The development of Telecommunication industry in Nigeria has had a chequered history of neglect since the colonial period. For over forty years, the Nigerian Telecommunications Limited-NITEL grappled with the challenges associated with improvement of communication industry in Nigeria. Within ten years of the introduction of the Global System Mobile (GSM) Network, the industry recorded an unprecedented revolution which had multi polar effects on other sectors of the society and its economy. This study examined the evolution of the GSM in Nigeria and its socio-economic impacts on the Nigerian society between 1999 and 2010. It argued that while the introduction of the GSM Network has generated undue stress for Nigerians and the Nigerian Government, It has made positive and tremendous impacts on the socio-economic development and the quality of life in Nigeria in general. This, it further argued, would not have been possible without the involvement of the private sector initiatives*

## Introduction

Between 1960 and 1990, Nigeria just like many other developing countries embraced the notion that telecom services would be provided at the lowest cost and more effectively and efficiently managed by the government.<sup>1</sup> The industry was nationalized and it operated as a monopoly known as Nigeria Telecommunications Limited (NITEL). By 1990s, however, it was obvious that NITEL could not effectively provide telecom services to all Nigerians both home and abroad. The service of the Nigerian State-owned telecom provider was popular for its epileptic service and the management of the body was not near efficiency. With population of over 100 million in 1999, Nigeria had about half a million telephone lines which translated to about 0.4 telephone density per 100 people. Potential customers faced long waiting periods before being provided with telephone line. Meanwhile, many households and firms with existing telephone lines had to wait for weeks, months or even years before being provided with a technician to fix their lines. The story, however, became a different one within the first decade of the 21st century. The privatization of the communication sector by the Nigerian government and the issuance of the Global System for Mobile (GSM) license to two private companies - MTN Nigeria and ECONET Wireless began a process that ushered in a new era in the Nigerian communication industry.<sup>2</sup> This study is set to examine the nature of this revolution in the communication sector and how it impacted on the Nigerian socio-economic development within its first decade of existence.

## History of the Telecommunication Industry in Nigeria

The Colonial Welfare and Development Plan (CWDP) launched by the British Colonial Government in 1945 appeared to be the first conscious effort to improve infrastructure for Nigerians. Unfortunately, the plan was dismissed by the nationalists following its poor records of achievements.<sup>3</sup> By 1953, only 20% of 5million Nigerian children (7-14 years) were in school.<sup>4</sup> Similarly, about 1 million out of 50million Nigerians were in few cities with infrastructure. By 1948, about 53 hospitals were in the cities. This implies that the bulk of the Nigerian population in rural areas remained without access to basic infrastructure. A major problem with CWDP was poor financing. For example, of the 45million pounds promised by Britain, only 9million was received by the treasury.<sup>5</sup>

Following the Nigerian independence, infrastructure development received more attention than before. Niger Dam, Niger Bridge, the Nigerian Airways, universities and some other infrastructures were constructed before the civil war, an evidence of Tafewa Balewa's

commitment to capital expenditure. The oil boom of the 1970s reflected in the whopping sum budgeted for development plans.<sup>6</sup> Consequently, many more bridges, roads, flyovers, national theatre, Stadia, refineries, Electricity Corporation and many other infrastructures became features of Nigeria. Unfortunately, the decline in oil prizes of the 1980s, political instability, unbridle corruption, poor capital investment, increasing population growth, absence of private sector initiative and participation affected already established infrastructures and the pace of infrastructure development in the country. For example the budget for capital expenditure declined from the 1980s. The four years of President Shehu Shagari, had 60.82% of its total expenditure as capital investment. This declined to 41.60% during the two years of General Buhari, and further 35.7% in the eight years of General Babangida.<sup>7</sup> Although there was increase in budgeted amount for capital expenditure to the tune of 59.17\$ during the time of General Abacha, that was grossly inadequate to reshape the decayed state of infrastructure in the country. General Abubakar's 52.55% capital expenditure budget was actually spent on recurrent services by his successor. All these point to the fact that infrastructure development has not received the desired attention in Nigeria. It is within this framework that the state of telecom industry in Nigeria before 1999 will be appreciated.

Telecommunication facilities were first established in Nigeria in 1886 when the first telegraphic submarine cable was laid by the British firm - Cable and Wireless Limited.<sup>8</sup> Nigeria's telecom sector remained a subsidiary of the British firm even after independence. In 1960, Nigeria with population of 40 million had about 18,724 telephone lines.<sup>9</sup> This translates to teledensity of 0.5 per 1000 people. Between 1960 and 1985, the Department of Posts and Telecommunications (P&T) was responsible for communication services within the country while the Nigerian External Telecommunication (NET) Limited was responsible for international communication services. The NET services were provided by the Cables and Wireless of the United Kingdom during that period. Nigeria acquired 51% of NET in 1962 but took over, complete ownership of the NET in 1972.<sup>10</sup> In December 1984, the P&T was split into Post and Telecommunications divisions. The telecom division merged with NET to form Nigeria Telecommunications Limited (NITEL). NITEL officially commenced business on 1st January, 1985. It formed an autonomous public limited liability company under the Company Decree of 1968. All the exchanges were analogue. The teledensity was 1 telephone per 440 people as at the end of 1985.<sup>11</sup> This was very low compared to 1 telephone line per 100 people recommended by International Telecommunication Union (ITU). One major

challenge which NITEL faced from its inception was inadequate financing and bureaucratic red-tape. Consequently, the sector could not maintain the necessary infrastructure needed for efficiency and effectiveness.<sup>12</sup> For example, there was always long waiting periods for subscribers. According to Afeihkena, the number of waiting applicants nationwide was over 500,000, as at the end of 1991.<sup>13</sup> Even companies and households with existing phone lines faced problems of long dial tone delays, very low call completion rates, high and inefficient billings, and generally poor service. In 1992, a regulatory body - Nigeria Communications Commission (NCC) was established to oversee the activities of the industry. The NCC was entrusted with the responsibility of approving standards as well as licensing and regulation of operators and service providers.<sup>14</sup> Even with the commission, the telecom industry kept gasping for air of survival until the nation's forth republic.

### **The Evolution of the GSM Network**

The transition of government from military regime to civilian rule in 1999 pioneered a great revolution in Nigeria's public infrastructural services. The telecommunication sector was one of those sectors that benefited greatly from the democratic leadership in Nigeria. This led to a new phase of 'telecommunication revolution' in Nigeria. Based on the determination of the Nigerian Government headed by President Olusegun Obasanjo to give room to private investors in the sector, the NCC organized on the 9th February 2001, the globally lauded and successful Global System for Mobile (GSM) auction. Consequently, GSM licenses were issued to MTN Nigeria, ECONET Wireless and MTel (the mobile sector of NITEL which was created in 1996). In 2002, Globacom also received Second National Carrier (SNC) license which goes together with GSM license. The goal for SNC was to break monopoly of NITEL on fixed line. <sup>15</sup> This completed the quartet number of pioneer competing firms in the industry. These operators were given five year grace period to establish. With its attractiveness, many other private firms tried to enter the Nigerian telecom market. In 2007 for example, the Emerging Markets Telecommunication Services (EMTS), trading as Etisalat, secured the Unified Access License which includes mobile license and spectrum in the GSM 1800 and 900 MHz bands.

The telecommunication industry in Nigeria consists of mobile cellular operators and fixed line operators. The mobile cellular operators consist of GSM operators and the Code Division Multiple Access (CDMA) operators. The GSM operators' issue Subscriber Identity Module "SIM" cards to their customers. The SIM cards can be used in any mobile phones

that can accept SIM card. The CDMA mobile operators issue mobile phones that are already coded by the telecom provider to be used only specifically with telecom provider. The CDMA phone may have in-built SIM card or number that is coded specific for the phone and for that operator. The phone cannot be used with another telecom provider. As at the end of 2010, the GSM market control about 92% of the market share (see fig 1). The five players in the GSM market during the period under review were: MTN Nigeria, Globacom (Glo), Airtel, Etisalat and MTel. The CDMA operators in Nigeria were Starcomms Limited, Visafone Limited, and Reliance Telecoms (ZOOM). As at the end of 2010, the CDMA operators control about 7% of the market share (see fig 1). The fixed- line operators had then many private companies that took the advantage of fixed wireless. Meanwhile, Globacom launched GLo1 submarine cable in 2005 (Globacom website). The Glo1, as it is called, aimed at connecting all West African Countries. Figure 1 illustrates the market share for GSM operators which control more than 90% of the industry.



Source: Adapted from Nigeria Communications Commission (NCC) website

MTN Nigeria led the industry with 47.6% market share. It was the first telecom provider to complete first call on May 16, 2001 (MTN Nigeria). Globacom was the second largest GSM provider in the market with 24.17% market share. Airtel faced a number of administrative and management problem since its formation. The name and ownership changed over these years as Econet Wireless, Vmobile, Celtel, Zain and Airtel. However, it still maintained its customers to the tune of 19.50%. The private operators in the market introduced enhanced digital technologies that brought about better telecom service. The mobile cellular operators all provided services based on 2G, 2.5G, 3G, 3.5G with Airtel

getting ready to launch a 4G as at the end of the period of this review. Figure 2:Telephone penetration rate per 100 of population (1 999 - 2010)

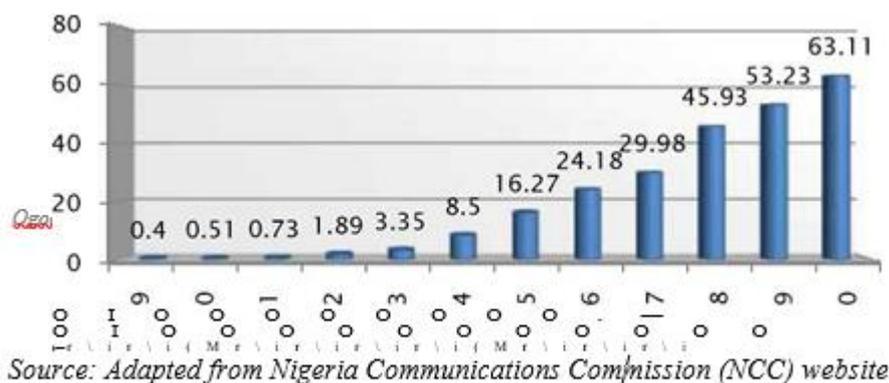
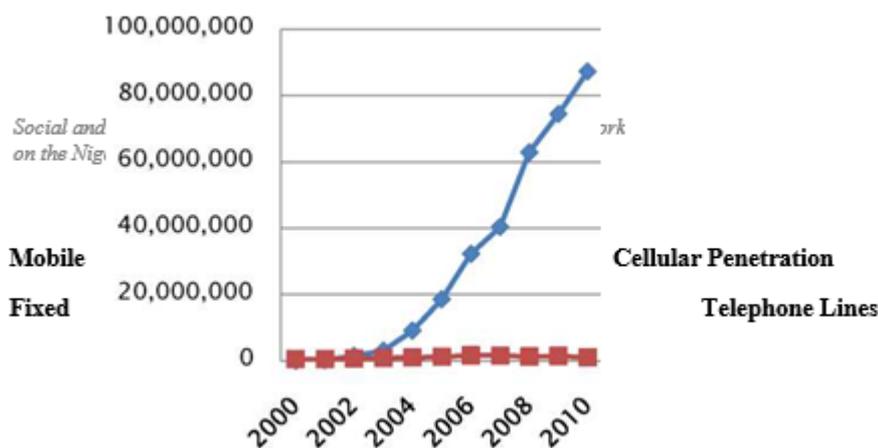


Figure 2 above illustrates the penetration rate of telecom in Nigeria. The teledensity increased from 0.4 per 100 people in 1999 to 63.11 per 100 people. This is above 1 per 100 persons required by ITU for developing countries. The teledensity growth rate was above 100% in 2002 and 2004. The mobile service was the driving force for the growth in the industry. The great transformation in the industry can be seen in Figure 3. Starting from 2002, the mobile subscribers overshoot that of fixed line making telecommunication services available to Nigerians. This significant growth started just a year after the private operators entered the industry in 2001.

Figure 3: Telephone Subscription in Nigeria (2000-2010)



Source: Adapted from Nigeria Communications Commission (NCC) website

At the end of 2010, the mobile cellular subscribers reached 87 million (more than half of the population of Nigeria), but the fixed line still remained at one million, (less than 1/10th



## Socio-economic Impacts of the GSM

The impact of the GSM was not felt in the communication sector alone. Other sectors of the economy and social life in general received tremendous boost following the revolution in the industry. One of the major beneficiaries from the growth of telecoms infrastructure in Nigeria is the finance sector. The electronic banking in Nigeria wouldn't have been feasible if not for the contribution of the revolution in the telecom sector. The use of Automated Teller Machines (ATM) services, e-payments, international credit and debit card facilities in Nigeria was made possible by the GSM services available. Bank customers receive instant alert messages on their phones after each transaction with their banks. For instance, the Public servants and some private employees no longer queue up in banks simply to check if their salary has been paid. Instead, they stay at their homes or place of work and receive "alert" on their cell phones for the salary payment. This shows that the growth of the telecoms sector has contributed to improved transactions in the Nigerian financial Markets. Furthermore, many commercial banks have benefited from the "quantum of transactions catalyzed by the telecoms sector".<sup>17</sup> Some banks are also involved in one loan syndication or the other. These have helped to boost the financial sector in Nigeria.

There is no doubt that telecom industry created hundreds of thousands of employment for skilled and unskilled workers in Nigeria during the period under review. As at 1999, NITEL and its subsidiaries could only create about 5,000 jobs. By 2004, the telecom industry could boast of 42 000 direct and indirect job creation.<sup>18</sup> By 2010, the telecom industry has created over 18,000 career jobs in addition to hundreds of thousands of indirect jobs.<sup>19</sup> The indirect jobs include legal advisers, real estate agents, marketers, security agents and the ubiquitous "umbrella-stands" operators. From personal observation, within distance of 3 kilometres in any major city, there must be an "umbrella-stand" operator that sells recharge-cards and/or SIM packs for different telecom operators. In its ten years of operation for instance, MTN through its rural telephone project provided materials used in phone calls to about 4 500 beneficiaries in 28 states in Nigeria (MTN Nigeria). Although it could be argued that increased employment opportunities have no direct impact on infrastructure development, but as Dedrick and Kegels have shown, there is a relationship between economic growth/improved standard of living and infrastructure development.<sup>20</sup> If facilities provided as a result of revolution in telecom industry could improve the standard of living of Nigerians through direct and indirect employment, then it could be argued that telecom industry has impacted on the infrastructure development.

Other sectors of the economy also benefitted from the growth of the telecom industry. The sale of Frequency Spectrums, contributed more than N300 billion to the government and part of this was allocated to the development of infrastructures in other sectors of the economy. 21 Table 3 illustrates the contribution of telecommunication to Nigeria's economy, between 1999 and 2009, as a percentage of GDP and the Private investments made by the operators.

**Table 3:** Contribution of telecommunications to the Economy

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Contribution to GDP</b>	0.06%	0.11%	0.62%	0.85%	1.06%	1.27%	1.53%	1.91%	2.39%	2.90%	3.66%
<b>Private Investment (U.S.\$million)</b>	\$50	\$150	\$1200	\$2,100	\$4000	\$6080	\$7500	\$8500	\$11500	\$12500	\$18000

**Source:** Nigeria Communications Commission (NCC) and CBN Annual Report and Statement of Accounts 2000

The contribution of telecoms industry to GDP increased from 0.06% in 1999 to approximately 4% in 2009. This is a significant increase compared to growth in the other sectors. The contribution of the Agricultural sector has diminished over the years.<sup>22</sup> Private investment made by the telecom industry equally increased from \$50million in 1999 to \$18billion at the end of 2009. By 2010, investment in the telecom sector ranks second only to that in the oil industry.<sup>23</sup> This includes foreign direct investment. According to 2010 report from Pyramid Research, the annual revenue from mobile services in African countries was between 2% and 7% of their Nominal GDP; that of Nigeria was close to 4%.<sup>24</sup> "Telecom revolution" did not only create wealth, It, also, contributed, either directly and indirectly, to improve the standard of living for Nigerians. The Corporate Social Responsibilities (CSR) offered by these operators affects various sectors such as the education and health sectors, community and village groups. For example, through the MTN Foundation Rural Housing Project in partnership with Habitat for Humanity International (HHI), 100 low-income earners were provided with 100 houses of 2 bedrooms, a living room, toilet/shower, kitchen, electricity, good running water and sanitation facilities at New Karu, Nasarawa State.

The introduction of GSM greatly improved the security outfit in Nigeria. Anti-crime agents were easily reached in robbery attack using mobile phones. Security agents like the police, soldiers, vigilante groups and members of Civil Defence Corp received sophisticated phones and other equipment through which they combat crime and maintain law and order. For instance, some phones can tape-record conversations, others, when programmed, can

dictate the particular place where a call is coming from. All these boasted the activities of intelligence units at various levels in Nigeria. In addition, GSM provided facilities through which issues relating to governance in Nigeria and beyond and other societal problems were publicly discussed. Critical issues like constitutional amendment, electoral act amendment, terrorist attacks, and assessment of political leaders were all done with discussions and public enlightenment on televisions and radios. Such discussions were enriched by individual contributions through phone calls and text messages using phones like blackberry, Ipad, Iphone and so on.

Despite all these positive contributions, the introduction of GSM has equally impacted negatively on Nigerians and Nigeria. With the rapid growth of the GSM service, the erstwhile government owned monopoly Telecommunication Company - NITEL was neglected. NITEL could not compete effectively with the private-owned entrants in the telecoms market. As part of the reforms by President Obasanjo's administration, the government decided to privatise NITEL. The Bureau for Public Enterprise (BPE) which is the agency in-charge of the privatization of government owned companies in Nigeria attempted to privatize the company for more than five times within the last decade without success.<sup>25</sup> As at the end of 2010, NITEL was yet to be privatized and all the properties of the company were deserted. All investments made by government and individuals in the company have not been recovered. The government still owns huge arrears in wages and pensions to the workers and retirees from this company. About 5,000 workers that were employed by NITEL were being owed arrears of wages. Similar challenges affect the pensioners whose five-year buy-out pension plan has been in limbo .<sup>26</sup>

According to the World Health Organization, the use of cell phone has been classified as "possibly carcinogenic to humans". In other words, radiation from cell phone can possibly cause cancer. The world body has found some evidence of increase in eye diseases and acoustic neuroma brain cancer for cell phone users. This call for alarm because ITU report confirmed that the number of people that use cell phones in Africa far outpaced the number that have access to fixed-lines.<sup>27</sup> It has been shown from this study that the growth of the telecoms industry in Nigeria is driven by the GSM (cell phones) market and GSM contributes to about 92% of phone usage in Nigeria. Furthermore, some scientists have explained that cell phones in an area of weak signal will emit more radiation in trying to connect to towers.<sup>28</sup> Most rural areas in Nigeria has weak signal before 2010. Even the major cities

experienced much congestion making phone users to shout on top of their voices as they made calls with cell phones. This equally increases the risk of cancer. Some cell phone manufacturers warn their users to keep the cell phones some distance away from their body to minimize the radiation on the body. The Apple iPhones for safety manual advises users to “keep iPhone 15 millimeters away from the body when using the device for voice calls or for wireless data service.” The BlackBerry Bold advises users to “keep the BlackBerry device at least 25 millimeters from their body when the BlackBerry device is transmitting.” Although some manufacturers have enclosed this warning in their manual, available evidence showed that less than 10% of the GSM users adhere to this instruction.

The use of cell phone equally promoted some social vices among Nigerians. For example, users of GSM engage in all sorts of lies under the protection of Handsets. Husbands and wives, teachers and students, employees and employers, business partners, traders and customers are all involved in various forms of deceit made possible by the mobile phone. For example, a number of marriages, courtships and engagements suffered due to cases of infidelity arising from the use of handset by a husband or wife, fiance or fiancée to deceive each other. Furthermore, the advent of cell-phones promoted theft. To use expensive phones and maintain them, some Nigerian youth took to stealing. Unlike before, when items lost in places of worship were returned for claims, Pastor Ademola of the Redeemed Church of God, Okposi in Eboyi state noted that lost phones in the church were rarely recovered by the owners<sup>29</sup> The use of cell phones equally encouraged cheating in examinations. A study conducted by Asikwo showed that the rate of exam malpractice increased in River State between 2004 and 2011. Among the explanations for such development was the use of mobile phones by students. In university of Benin, reports sent to examination Misconduct Panels between 2006 and 2010 were, to a marked degree, cases of students caught in the exam halls cheating with their phones.<sup>30</sup>

Finally, just as the revolution in the telecom industry improved the security outfit; it is pertinent to know that criminals and fraud stars do possess cell phones. Such sophistication enhanced their activities during the period under review. For instance, about 34 banks were robbed between 2007 and 2008 in the south-eastern Nigeria.<sup>31</sup> Information and networking that enhanced their operations in some of these banks were obtained through the GSM network. In some cases, an agent was sent to the bank in disguise from where he or she linked up to the group outside. It was to forestall such development that most banks, beginning from

2007, forbade customers from making calls inside the banking halls<sup>32</sup>. Some went as far as banning customers from entering the banking hall with phones. In addition, threats of assassination and intimidation increased with the introduction of GSM. Heads of institutions and legal practitioner were threatened more than before during the period under review. According to Oniukwu, between 2005 and 2009, police command in Owerri received more than 47 reports of assassination threat most of which came as text messages through phone<sup>33</sup>.

The ugliest part of this trend is the use of phone to rub Nigerian of their hard earned money. Though already in existence before the introduction of the GSM, the rate at which Nigerian youth engaged in fraud especially cybercrime and kidnapping increased substantially during the period under review. GSM network witnessed the emergence of “Yahoo Boys” in Nigeria.<sup>34</sup> With sophisticated phones, this group of boys, in several occasion, disguised themselves as business men, contractors, employers, bankers extracting huge amount of money from vulnerable Nigerians. Indeed, a good number of Nigerians have lost billions of Naira to these fraudsters. Though more common after 2010, the first decade of the introduction of GSM network equally ushered in a new trend in Kidnapping in Nigeria. Before this period, kidnapping was a rare phenomenon in Nigeria. Kidnapped persons were mainly used for rituals. By the end of the first decade of the Twenty-First century, a new brand of kidnappers who demand ransom for the release of the kidnapped person had emerged. Their targets are usually prominent and rich people or parents and relatives of rich persons. In some cases, the ransom demanded ran to the tone of 100 million naira. Where demand failed to come, the kidnapped are rough-handled or killed as in the case of the owner of God is Good Motors. Indeed, some prominent Nigerians have lost their lives to this phenomenon. The new trend in kidnapping, particularly the demand for ransom, could not have been successfully carried out without the use of mobile phones.

## Conclusions

Until the introduction of the Global System Mobile Network through the private sector initiative, telecom industry as a government controlled sector has had a chequered history of neglect in Nigeria. Within ten years of the involvement of the private sector, a great revolution occurred in the industry to the extent that it became the largest and fastest growing industry in Africa, and one of the ten fastest growing industry in the world. Their negative impact notwithstanding, this revolution has not only changed the course of telecom infrastructure in the country, it also impacted positively on the socio-economic development

and living conditions of the Nigerian population. This clearly points to the indispensability of the private sector in the development of any nation. If Nigeria is to attain the millennium development goal, the private sector initiative and participation must play a key role in various sectors of the economy.

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