

TELECOMMUNICATIONS AS A VEHICLE FOR SOCIO-ECONOMIC DEVELOPMENT PRESENTED BY ENGR. ERNEST C. A. NDUKWE (OFR)

INTRODUCTION

I consider it a great honour to be invited by this eminent body to speak on the role of telecommunications as a vehicle for socio-economic development.

The overarching aim of this year's conference is to analyse the impact the non oil sector can play in the development of the Nigerian economy. The Nigerian economy for most of her sovereignty has been driven by gains made in the oil and gas sector. While Nigeria has clearly made great gains thanks to her abundance of oil, it is clear that oil is a non renewable resource and in order to ensure effective industrialised development, Nigeria must look away from her oil sector and consider the growth and gains that can be culled in her other sectors.

The Telecommunications growth and explosion is a clear indication that there is much gain to be had outside the oil industry. In year 2007, thanks to the telecommunications boom in Nigeria, the percentage share of Nigeria's GDP from telecommunications rose to 1.77. This gain is however miniscule compared to the gains yet to be had as NCC pursues the introduction of new technologies, additional competition and FDI into the market.

INFORMATION AS A PATHWAY TO DEVELOPMENT

Development suggests an improvement in the lives of the citizenry through improved access and standards in education, incomes, skills acquisition, human development, technology, spending power and employment. One of the most recognized means of socio-economic development is through telecommunications. Economies which lacked access to modern

telecommunications systems were traditionally weak players in the global market, as was the situation in sub-Saharan Africa where barriers such as underdeveloped urban and rural infrastructure, constraints of human capability, limited teledensity, limited backbone infrastructure and high costs of telephony services were obstacles to the development of ICT.

DEVELOPMENTS IN COMMUNICATIONS

From the early ages where communication took place through talking drums, horns, flags and lamps, developments in the telecommunications industry have seen the use of telegraphs, radio, television, fixed telephones, mobile telephones and in more recent times, the internet. Nigeria as a nation has also seen a gradual shift in its telecommunications industry. Telegraphs occupied most of business transactions in the 1970s and early 1980s. Fixed telephones then played a vital role in the 1980s and 1990s. Since year 2000, thanks to the efforts of the Nigerian Communication Commission, Nigeria has seen a revolution and explosion in its mobile telephony industry.

TELECOMMUNICATIONS AS A VEHICLE FOR DEVELOPMENT

Access to ICT increasingly determines access to wealth and income, thereby, improving the quality of life for all. In the renowned work by Leonard Waverman, Meloria Meschi, Melvyn entitled, *The Impact of Telecoms on Economic Growth in Developing Countries*, he shows how better communications support higher income and higher income allows more people to use communications networks. Following their methodological research of 38 developing countries, they concluded that differences in the penetration and diffusion of mobile telephony results in the differences in growth rates between developing countries.

Two reports published by the World Bank¹ and The World Economic Forum² underline the fact that a nation's economic development depends on its overall progress in the ICTs sector. The World Bank's study also found that companies that use ICT grow faster, are more productive and more profitable than those that do not. Investment in telecoms generates a growth dividend because the spread of telecommunications reduces costs of interaction, expands market boundaries, and enormously expands information flows. Indeed, the work by Roeller and Waverman (2001) suggests that in the OECD, the spread of modern fixed-line telecoms networks alone was responsible for one third of output growth between 1970 and 1990. Hence, the development of the telecommunications infrastructure and industry, delivers deliver societal services which enhance education, health, agriculture, government expenditure on social services, and so on. In developing economies, the telecommunications gains have come through the mobile telephony industry. Access to fixed lines in the developed world was a slow and expensive process. France, with 8 fixed line telephones per 100 population (the 'penetration rate') in 1970, doubled by 1976, and reached 30 main lines per 100 population in 1980. In the developing world, because of the lack of basic infrastructure and basic backbone infrastructure needed for fixed lines, mobile phones which are lower in cost are rolled out quicker than fixed lines. In 1995, Morocco had 4 fixed lines per 100 inhabitants after many years of slow investment, and zero mobile phones per 100 inhabitants. In 2003, only eight years later, the mobile phone penetration rate in Morocco was 24, while fixed line penetration had stagnated at its 1995 level. Similarly in Nigeria, teledensity increased from 0.73% in 2001 to 29.98% in 2007. This period saw an exponential increase in mobile telephony use from 266,461 active lines in 2001 to 41,975,275 in 2007³.

¹ Information and Communication for Development Report, 2006

² Global Information Technology Report, 2005-2006

³ As at March 2008, the number of active lines total 45,899,711

This tremendous growth rate in Telecommunications network is now making it possible for Nigeria and other developing countries to participate as active players in the world economy. A recent report by the International Telecommunications Union (ITU⁴) revealed that with the increase of mobile phones in Africa from about 15 million in 2000 to over 160 million by the end of 2006, telecommunications has reduced global digital divide. By 1997, 75% of the world's population – the world's poor - accounted for only 5% of the world's Internet users. By year 2005, they accounted for an impressive 30% of all Internet users.

A recent study⁵ carried out by the Nigerian Communications Commission revealed that the advent the mobile phone (GSM) in Nigeria has a positive relationship on economic growth. The study shows that a 1% increase in mobile telecommunication demand in Nigeria generates about 0.14% growth in the economy. With an impressive 655% increase in mobile telecommunications demand in Nigeria between 2001 and 2007⁶, the attendant economic growth rate has resulted in Nigeria witnessing great socio-economic development in key areas such as:

- Provision of Telecommunications infrastructure
- Development of SMEs
- ICT and Rural Development
- Development of policy framework
- Human capacity development
- Technology Development

⁴ World Information Society report 2007: Beyond WSIS. Available at www.itu.int/osg/spu/publications/worldinformationsociety/2007/report.html

⁵ Socioeconomic Impact of Mobile Telecommunications in Nigeria (2007)

⁶ In 2001, the total connected lines in Nigeria were 866,782. By year end 2007, that figure jumped to 57,687,544.

Provision of Telecoms Infrastructure

Tailored national strategies on infrastructure development foster economic growth and reduce poverty. Maintaining the development of infrastructure requires appropriate power supply, low-cost networks and technologies, equipment and expertise as well as assistance from donors, suppliers and support services. With constant improvement in technology and as the Commission actively welcomes new entrants in the Nigerian telecommunications market, this builds competition which drives better services, infrastructure development and ultimately increases the number and quality of services offered.

Development of Small and Medium Scale Enterprises (SMEs)

With the inclusion of internet services, calling cards and other services in the Class License, the industry now boasts of an increased number of SMEs thanks to their participation in various service deliveries in the telecommunications sector. This growth in SMEs translates to an increase in revenue for the corporations, their families, the government through taxes, apart from their being employers of labour.

ICT and Rural Development

The lack of networks and access in many villages has resulted in low incomes, which have hindered the progress of ICT development and infrastructure rollout. However, as 80% of Nigerians live in rural areas, it has become essential to bring ICT to them. The benefits for these communities include easy communication amongst rural areas with poor transportation, easier access to trading and other business information, access to medical care, emergency help and remote diagnosis, better access to educational tools and distance learning education, easier access

to government and government initiatives, general sense of security, reduction in the need for rural to urban migration and enhanced productivity linked to better access to communication.

Human Capacity Building and Development

Human capacity development occurs through the use of ICTs in schools curricula, informal and institutional training. In order to develop trained ICT professionals and ensure sustainability in the sector, NCC has partnered with several universities to offer post graduate courses in ICT, being part of an effort to bridge the existing digital divide. This will invariably lead to skilled personnel who are able to operate in the service provision, software development and equipment production in the telecommunications industry in Nigeria. The Commission has also initiated a project called Digital Bridge Institute. This is the establishment of a Telecommunication training Institute focused on human resource development, workforce capacity building, telecommunications research and development, hands on engineering and technical training programs for professionals and practitioners in the telecommunications and IT industry, targeted at all cadres of people in both the public and private domains. With many thousands employed in the telecommunications sector in Nigeria, and many on the production line and in managerial positions, and yet many more in training, Nigeria is set to have an industrial revolution.

Development of Policy Framework

Policy skills and regulatory frameworks are required for effective regulation and efficiency in the telecoms sector, as well as facilitate conditions that would foster an improved economy. NCC has made great strides in the development of regulatory framework for the

telecommunications industry in Nigeria. Indeed, its continuous insistence on quality and fair competition, with redress by consumers and operators to dispute resolution has resulted in a promulgation of laws which hitherto did not exist in Nigeria.

NCC AND THE DRIVE TOWARDS SOCIO-ECONOMIC DEVELOPMENT IN NIGERIA

The Commission is committed to doubling the current teledensity in the next five years, thereby improving the attendant socio-economic standards of Nigerians and of the nation. To that end, the Commission has put in place various projects to help ensure full ICT penetration in Nigeria. These projects include:

- **Universal Service Provision Fund (USPF)**

With part of its mandate in the Communications Act 2003 to make telecommunications accessible to all Nigerians, the Commission collaborated with the Ministry of Communications to establish the Universal Service Provision Fund in line with the Act. Amongst its projects to date are ICT Connectivity to Schools under the Schools Access Programme Initiative, provision of Community Communication centres and the provision of BTS Site in un-served and underserved areas of Nigeria.

- **State Accelerated Broadband Initiative (SABI PROJECT)**

The SABI project encourages the private sector to build and run broadband infrastructures with government support and incentives. In phase one, they are to be deployed in all state capitals and some selected major commercial cities in Nigeria. In phase 2, the deployment will take place in underserved urban and un-served rural areas.

- **Wire Nigeria (WiN Project)**

The WiN project is a project created to enhance backbone connectivity in Nigeria through fibre, by designing a network with rings around the nation to provide transmission infrastructure and connectivity. The project will supplement the wireless infrastructure with fibre-optic transmission and facilitate the transmission of large volumes of data.

THE NIGERIAN CASE: PROSPECTS AND CHALLENGES

Our *mandate* as regulators of the Nigeria Communications sector requires us to drive telecom sector reform by;

1. Promoting market liberalization;
2. Licensing of competitive operators;
3. Introducing and maintaining transparent regulatory processes;
4. Attract investment;
5. Protecting new entrants from dominant operators;
6. Protecting consumer rights and interests;
7. Encouraging new and advanced services.

One of the most far reaching achievements of Nigeria in the past seven years is the revolution in the telecommunications sector. In line with the provision of the National Telecommunications Policy (2000), the telecommunications industry has vigorously pursued policies and exploited all avenues to attract fresh investments and encouraged the rapid improvement and expansion of the telecommunications network. The telecommunications sector *reform has brought about:*

1. Improvement in investment climate
2. Increase in number of market players
3. Unprecedented growth in the network
4. Substantial improvement in access to telecom facilities
5. Empowerment of the Nigerian citizens

6. Respect from International Community
7. Employment creation
8. Economic stimulus

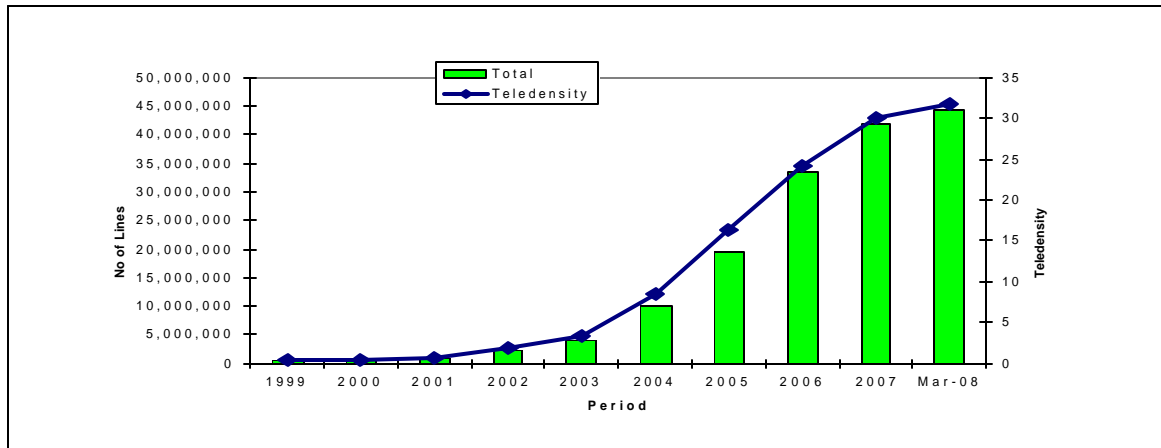


Figure 2: Trend of Teledensity and Subscriber growth

Key amongst the successes includes:

- **Coverage and Access Provision** - By year 2007, all the 36 states and the federal capital territory have been covered by GSM-based mobile operators and CDMA based wireless operators. The 'umbrella kiosk' operators and telecenters also provide access to many who would otherwise, not own telephones.
- **Employment Generation** - Over 12,000 people are directly employed by the GSM operators alone. An additional 3,000,000 indirect employment opportunities have been created through the operation of franchise and retail outlets for access, SIM & recharge cards, and mobile phone shops. There has also been opportunities for Nigeria workers to serve as expatriates to other countries resulting in foreign input to GDP.

- **Private Investment in Telecoms Sector** - Private investment rose from 50 million US Dollar in the year 1999 to about US\$11.50 Billion at the end of 2007.
- **Sectoral Contribution to the Economy** - The Communication sector during the period actively contributed to Gross Domestic Product (GDP). The percentage share of GDP⁷ from telecommunications rose from 0.06 in 1999 to 1.77 in 2006 at 1990 basic prices.

Prospects in the Nigerian Telecoms Sector

Due to the phenomenal growth in telecommunications, Nigeria has been described as one of the world's fastest growing telecommunications markets in Africa. These achievements can be attributed largely to the foresight by government and the enabling and conducive environment with respect to government policies and regulatory regime. To herald the next phase of the nation's ICT policy, emphasis shall have to be placed on "ICT for economic growth policy." Such a policy instrument must be able to foster the improvement of the following key elements:

1. Continued increase in teledensity and seamless intra-regional interconnection and roaming services;
2. Further injection of foreign direct investment into the country;
3. Stimulation of the release and activation of ICT-driven entrepreneurs;
4. Creation of thousands of ICT-related jobs in the public and private sectors;
5. Emergence of new professional industry related fields, e.g., Software and Network Engineering, Telecom Engineers, ICT professionals and experts;

⁷ Percent Contribution of the Telecommunication Sector to Gross Domestic Product (1999-2006). Source: NBS National Accounts of Nigeria (1981-2006)

6. Cascading effect of the income earned from newly created ICT-related jobs into other specialized businesses;
7. Emergence of new economic opportunities within the West African sub-region ;
8. Increased government revenue from income tax and import duties;

Challenges

- Inadequate telecom infrastructure, despite gains of the recent past;
- Disparity in Telecom Facilities between urban and rural areas;
- Shortage of long term investment Capital;
- Skill shortages;
- Reducing the OPEX and CAPEX levels, which are currently considered too high for a developing country market;
- Evolving and implementing appropriate incentives to drive service penetration to the remote and rural areas;
- Stimulating investment in infrastructure development.

Problems External to Operators

- Inadequate power supply leading to high cost of maintenance on generators and fueling;
- Vandalisation by restive youths in some parts of the country;
- Security issues – Need to increase security of equipment.

CONCLUSION

It is clear that the Nigerian economy has experienced tremendous growth thanks to the strides made by the government in the telecommunications sector. The socio-economic climate of Nigeria has changed - The common man has access to basic telephony and telephony infrastructures which did not exist 10 years ago.

The economy is booming, small businesses are prospering and the ICT age in Nigeria has come to stay. However in spite of the apparent gains depicted above, there is still a lot more to be done in the telecoms industry in order for Nigeria and the Nigerian populace to derive the full benefits of ICT. While all the achievements to date are praiseworthy, when compared to other developed economies, Nigeria is still sadly lagging behind.

Sustained economic growth and socio-economic development require long term economy gains usually only derived from growth in a nation's energy and telecommunications sectors. If the telecommunications sector can do it, so can others. My prayer as a true Nigerian is that Nigeria learns from the successes had, following the liberalisation in the telecommunications sector. Industries, manufacturing, telecommunications and the information sectors are the hallmarks of a growing and thriving economy. Nigeria has the potential to be all it has long said it can be. It is up to us, you and I, the ordinary man on the street, the business tycoon, the foreign investor, the executive and legislative arms of all the three tiers of government to work together for the emergence of a new developed Nigeria where our children and grand children will compete with the developed worlds in the roll out and servicing of global technologies.

Once again, I thank you for inviting me and I know my paper, 'Telecommunications as a vehicle or socio-economic development', will have emboldened Nigerians to greater heights in all its industries.