

# **Effects of telecommunication environment on the socio-economic structure of parts of Akwa Ibom State, Nigeria**

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**ABSTRACT** - Although installation of telecommunication facilities remains an engineering problem, their utilization is determined by the socio-economics of a locality. Data collected from seven telecommunication exchange areas were used to evaluate the effects of these services on the economic and social development of Akwa Ibom State, Nigeria. Certain factors of the human environment e.g. vandalism of the cable systems, untrained personnel, non availability of operational vehicles and spare parts contributed to the non-effectiveness of NITEL in providing telecommunication services. Nevertheless, a significant relationship ( $r=0.01$ ;  $p<0.001$ ) was established between the availability of telecommunication services and contribution to the socio-economic development of Akwa Ibom State. The higher the number of employment/income generating establishments, the higher the demand and the number of facilities installed. Invariable, the utilization of telecommunication services can be used as an index of socio-economic development. The implications of these findings are discussed.

## **INTRODUCTION**

The importance of telecommunications in human existence has evolved to an inseparable state, particularly with the continued development in electronic technology. Efficient and reliable means of communication is vital to good government and rapid economic expansion (Aggrey 1990). Nigeria, like most developing countries of the world, did not embrace the technology of telecommunications until about three decades ago, although the historical development of telecommunications dates back to 1851. At independence, in 1960, there were only a few thousand telephone lines serving the entire country. Two decades after independence, Nigeria's national telephone network capacity had about 200,00 lines, an indication that the oil boom era of the 1970's did not exert any impact on the development of telecommunication infrastructure. Until 1989, all the exchanges and



### *Effects of telecommunication*

transmission facilities in the country were the analogue system (Bassey 1984). But digital exchanges are now providing services, especially with the provision of Digital International gateways in Lagos and Enugu, in addition to the older ones at Lanlate and Kujama.

The telecommunications environment, how friendly it is, borders on the design and analysis of an economical and functional telecommunications network within an area. In Akwa Ibom State, as in other parts of the country, combinations of microwave links, coaxial cable and exchange installations techniques are employed to provide adequate distribution network covering all the important areas of the state. The main aim of this paper is to investigate the telecommunications environment in Akwa Ibom State, with a view to understanding its effect on the socio-economic development of the area. This may help in formulating comprehensive policies which will help to internalise the themes of communication for the development of Akwa Ibom State and Nigeria in general.

- (a) The basic research question is: is the spatial distribution of modern telecommunication services related to the perceived socio-economic development of Akwa Ibom State?
- (b) The basic research hypothesis is: There is no relationship between the spatial distribution of telecommunication services and the socio-economic development of the study area.

### **The Study Area**

Akwa Ibom State was created on the 23rd September, 1987 (Decree NO.24 of 1987) as the 21st State of the Federal Republic of Nigeria. The State is made up of 31 Local Government Areas, with Uyo as the capital. Much of the commercial and industrial activities are located in the urban centres. The state capital is provided with an automatic telephone exchange. This facility is also available at Itu, Ikot Abasi, Abak, Ikot Ekpene, Etinan and Eket which are Local Government Area Headquarters. The exchanges are linked through microwave and coaxial cable network.

### **Methodology**

In addition to evaluating the contribution of telecommunication services to socio-economic growth, assessability of the services to people was also studied. The measuring instrument was a structured questionnaire, augmented by interviews personal observations and literature review. The questionnaire was classified into sections depending on the information demanded from the respondents. Interviews were used to validate some responses on the respondents on the questionnaire.



Seven areas were chosen for sampling on the basis of availability of telecommunication facilities viz: Uyo, Eket, Ikot Ekpene, Etinan, Itu, Ikot Abasi and Abak exchange areas. Randomly, a population of 280 subscribers comprising businessmen, civil servants, professionals, etc were interviewed for the study. The reasons for choosing these classes of subscribers were:

- (a) Having been exposed to telecommunication facilities they could evaluate efficiency;
- (b) The subscribers have by now got used to problems associated with telecommunications services;
- (c) They are also conscious of the changes taking place now in telecommunication companies as compared to past performances.

### **General Discussion**

**General:** Telecommunication involve communication over distance between people who are far away from each other. The range of telecommunications services include telephone, telex, facsimile (fax), telegraphs, data links, voice cast, cellular mobile radio telephone, radio, satellite communications, IMMARSAT, cablegrams, lease circuits and real live TV broadcast (Etukudo 1982). The growing need for telecommunication services in Akwa Ibom State makes it clear that the distributions of these services should be given a more national consideration.

The most serious challenge facing NITEL in Akwa Ibom State is that of providing efficient services to meet the needs of the telecommunication users. That is the distribution of the services must be spatially efficient. At the moment, information about telecommunication services are generally lacking and where available are little understood. In short there is "telecom illiteracy". The provision of services suffer from inadequate trained personnel.

In the past, telecommunication services used copper wire for long distance subscribers and the analogue exchange systems. But now microwave (radio link) and cable for short distances have taken over, which makes the job easier and perhaps more reliable. Erricson (1990) has attributed the problem of distribution due to many factors among which are:

- i) The design capacities of the exchange and cable network;
- (ii) Non-provision of alternative routes of network links and low industrial base of the area
- (iii) Inadequate trained personnel to man the systems and shortage of telecommunication spares
- (v) Functional and operation vehicles.

The socio-economic applicability of telecommunication hinges much on whether the above problems of distribution can be removed. Hence investments should aim at



- (a) rehabilitation of cable networks
- (b) construction of more microwave stations
- (c) location of more telephone and telex exchanges in many urban centres
- (d) personnel training and
- (e) public enlightenment.

### **The Case of Akwa Ibom State**

The provision and maintenance of an efficient telecommunication environment in Akwa Ibom State is anchored on seven exchanges as shown in Table 1.

**Table 1: Distribution of telecommunications (telephone) services in Akwa Ibom State.**

Area	Ultimate Capacity	Initial capacity	Unstalled Capacity
Uyo	10,000	5,000	2,788
Eket	3,500	1,000	546
Abak	2,500	500	424
Itu	500	68	30
Ikot Ekpene	3,500	800	780
Etinan	1,000	200	144
Ikot Abasi	1,000	200	104
<b>Total</b>	<b>2200</b>	<b>7,768</b>	<b>4,816</b>

Source: NITEL Plc. Uyo 1996.

The exchange capacity shows that Uyo has 5000 lines, with 10.000 ultimate capacity (Table 1), Abak ultimate line contains 2500 although 500 lines are currently being utilized. At Etinan, the installed capacity is 144 with 1000 ultimate. The rapid growth in population and increased business activities have caused the demand for telecommunication services to outstrip the supply in the state. The demand for telecommunication services shows marked increases particularly in the 1990's as shown in Table 2. This trend is expected to continue as the business sector expands.

To augment the existing telephone services, telex, facsimile, PABX/PBX services has been provided (Table 3). In telex operations, there were 25 telex lines in 1992 connected by mean fVFI - FTAN and TDM equipments homing into the nearby Calabar telex exchange. Telex facilities are provided at Eket, Ikot Ekpene and Abak. Customer service centre and business office



**Table 2: Yearly increase in installation of telephone from 1987 - 1992**

Areas	Years					
	1987	1988	1989	1990	1991	1992
Uyo	200(66.7%)	300(65.1%)	360(57.17%)	380(52.8%)	500(54.1%)	1048(58.9%)
Eket	20(6.7%)	31(6.7%)	60(9.5%)	90(11.5%)	130(14.1%)	215(12.1)
Abak	30(10%)	70(15.2%)	80(12.7%)	40(5.6%)	80(8.7%)	124(6.9%)
Ikot Ekpene	50(16.6%)	60(13%)	100(15.9%)	130(18.1%)	155(16.8%)	285(16%)
Ikot Abasi	-(0%)	-(0%)	10(1.6%)	18(2.4%)	24(2.4%)	52(2.9%)
Etinan	-(0%)	-(0%)	20(3.2%)	60(8.3%)	30(3.2%)	34(1.9%)
Itu	-(0%)	-(0%)	-(0%)	2(0.3%)	6(0.7%)	22(1.3%)
<b>Total</b>	<b>300</b>	<b>461</b>	<b>630</b>	<b>720</b>	<b>925</b>	<b>1780</b>

Source; Field Work

**Table 3: Distribution density of telecommunication services in Akwa Ibom State 1987 - 1992**

Services	Uyo	Eket	Abak	Itu	Ikot Ekpene	Ikot Abasi	Etinan
Telephone	2788	546	424	30	780	104	144
Telex	22	1	1	-	-	-	-
PABX/PBX	25	2	-	-	-	1	-
FAX	4	1	-	-	-	-	-
IDD	10	2	-	-	-	2	-

Source: NITEL Plc.

operate in Uyo and other exchange areas. Uyo has two telephone and telex call offices, in addition to International Direct Dialling (IDD) circuits from Lagos, with 16 extensions from the IDD board. International telex services and facsimiles are also available.

Two hundred and seventy (270) copies of the questionnaire were retrieved and used to evaluate the contribution of telecommunication services to the socio-economic development of Akwa Ibom State, from the consumers perspective. Eighty two percent of the respondents were males while 18% were females. The age structure of respondents showed that 7% were of age 51 - 60 years. 63% were of age 31 - 50 while 30% were of age 21-30 years. Telecommunication facility is therefore patronised by the economically active population. All subscribers were literate, the least (9%) having acquired primary education. The subscribers were mostly businessmen (44%) while those classified as traders constituted 30%, civil servants 90% and 17% were farmers/associated professionals. With the increasing pace of industrialization



and increase in traffic volumes in many area, effective and reliable communication system reduces human movement during business hours. This enhances individual and corporate productivity.

The randomly sampled socio-economic establishment were banks, police stations, supermarkets, business centres, hospitals, government secretariats, industrial establishments, etc. Each establishment was recorded on a present/absence basis then summed to obtain the total for each of the sampled areas. This means that the establishments were given equal weight. Functional telecommunication services were listed and a Pearson's correlation coefficient obtained between the two sets of data (Table 4).

A correlation coefficient of 0.91 was obtained which indicates a strong positive relationship between the spatial distribution of telecommunication services and the socio-economic growth of Akwa Ibom State.

**Table 4: Socio-economic establishments and Telecommunication facilities in the areas under study**

Area	Socio-economic Establishments	Telecommunication Facilities
Abak	8	2
Eket	14	8
Etinan	7	2
Ikot Abasi	9	3
Ikot Ekpene	11	7
Itu	5	2
Uyo	15	7

Using a Students t-test, the coefficient  $Y = 0.91$  gave a value of 4.93, indicating a 0.01 or 1% level of significance. Hence the earlier stated hypothesis that no significant relationship existed between socio-economic development and availability of telecommunication facility was rejected. In other words increase in telecommunication facilities increases the tempo of business activities in an area.

## CONCLUSION

The importance of telecommunication in the overall development of a community and a country in general cannot be overemphasized (Bello 1990). Telephone, telex, facsimile (fax) and services are known to the world over

for their catalytic effect in facilitating business and other transactions. They reduce costs and enhance operational efficiency of enterprises and organizations within a country (Steward 1984). These statements are equally applicable to Akwa Ibom State.

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