

Mobile Telecom (GSM): Its Impacts on Household Income Generating Capacity and Business Expansion in Selected States in Southwest Nigeria

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Abstract: The study examined the impacts of mobile telecommunication on the Nigerian economy and also examined the growth implication in terms of income generating capacities of households, provision of employment as regards to business expansion in three states in south west Nigeria; namely Oyo, Osun and Ekiti. Primary data was used for the study. One hundred and fifty (150) Questionnaire was administered to generate information and Multi-stage stratified random sampling procedure was also used in selecting the respondents from different zones in the survey area. Data collected from was analyzed using econometric technique. In the econometric technique used, two models were specified and Ordinary Least Square method (OLS) and multiple regression analysis were used in estimating the factors that impacted on mobile telecommunications as stated in the objectives of the study. However, the findings revealed that there are several ways telecoms have impacted on the economy of the individual household. Firstly, it has impacted on the transaction cost by reducing the cost of transportation and information gathering on their daily business. Secondly, it has also increase their market access and reduced distribution cost which invariably affected the service provider cost. Lastly it leads to reduction in poverty level and incidence through increase in income generating capacity and business expansion of households. Also, the study revealed how GSM has enabled Nigerians to transact their businesses easily resulting in higher productivity; improved living standard; boosted economic capacity and stimulate the economy to achieve the desired macroeconomic policy targets.

Key words: Mobile Telecommunication • Income generation • Business Expansion and Employment

INTRODUCTION

The development of more infrastructural base in the telecoms industry, especially the emergence of mobile telecom is currently playing a significant role in the growth of the Nigerian economy. The GSM has contributed in many ways to the growth of the Nigerian economy especially in the areas of employment generation, Foreign Direct Investment and private investment. According to Balogun [1] Tella, Amaghionyeodiwi and Adesoye [2] emergence of GSM facilities promote economic development as it provides easy and effective communication needed to stimulate and promote trade between Nigerian and its foreign partners in the world. In fact, GSM has emerged as an integral and essential part of the culture and life of Nigerians. As it plays a significant role in communicating

government programmes; encourages investment which in the long-run; promotes employment opportunities for small and medium businesses, dealerships, retailer- ships and value added services within the GSM market.

According Soyinka [3] and Adebayo [4] mobile phone has empowered the poor by opening up veritable windows of wealth generation for them to get out of the scourge of poverty. Household income and national productivity has also been enhanced as travel time and associated risks have been reduced, business communications have improved and the rural-urban divide has narrowed down because the rural dweller can get in touch with the urban cities without boarding a vehicle. Also, social and family relationships and security situations have also been significantly enhanced. Basically, there are three major strands of views on the links between telecommunication and economic

development (transformation). The first strand considers the implication of telecom development on foreign direct investment. The main contribution of this study was in determining the role of telecom in reducing transaction cost, increasing TFP (total factor productivity) of the private sector and diffusion of new technologies which will remedy the problem of the developing countries and then led to economic growth, [5]. The second strand of studies examines the impact of telecom on overall macroeconomic performance by examining the effect of telecom development on economic growth, income generation of government and fiscal performance, [6]. The last strand of studies is devoted to the examination of the impact of telecom development on rural development and poverty reduction. While a substantial number of studies have been written on the first two strands, little attention has been paid to the third strand. Not only that the bulk of the studies has not been carried out in sub-Sahara African countries, but rather, in Asia and Latin America countries. Although, much of these studies found a significant link between telecom development and economic development in most of the countries studied, this is as a result of the fact that these countries shared some similar developmental challenges. The differences in the economic reality and institutions make direct policy inferences from such studies of little relevant in the case of a country like Nigeria. Another major concern about the existing studies is the use of the aggregate data; no attention was paid on the impact of telecom development on household economic decisions. The telecoms have positive aggregate impact but the effect might have not been evenly distributed among the different strata of the economy.

The pertinent research issue that emanates from the forgoing is that how the development in the telecom industry has impacted on the household income and job creation have not been well explored in the literature. There are several ways telecoms have impacted on the economy of the individual household. One, it has impacted on the transaction cost by reducing the cost of transportation and information gathering on their daily business. Two, it has also increase their market access and reduce distribution cost which will invariably affect the service provider cost. It impact on their income generating capacity and business expansion. Lastly it leads to reduction in poverty level and incidence. It is in view of the above that a convincing demonstration of the impact of Mobile telecommunication on economic development is required. The main objective of this study is to examine the impacts of mobile telecommunication (GSM) on the development of Nigerian Economy.

The Objectives Are To:

- Determine ways and how mobile telecom (GSM) has impacts on household income generating capacity level in the selected states in Southwest Nigeria
- Examine the impacts of telecommunication (GSM) on business expansion in the selected states in Southwest Nigeria

Empirical Literature : Early economic theorists such as Adam Smith [7] and John Stuart Mill [8] recognized the importance of communication as the main mechanism for two parties to conduct business. Since the publication of the Jipp curve [9], researchers have repeatedly observed a positive relationship between telecommunications and economic growth. The nature of this association and in particular the manner in which it can be positively manipulated to produce or improve development objectives in developing countries, continues to be the focus of an expanding body of literature. In the late 1970s, the role of telecommunications in economic development was examined and some positive results were discovered. Since lots of empirical studies addressed the returns to public infrastructure investments in the late 1980s, researchers began to pay attention to investment in telecommunication (Ding and Haynes 2004).

Several studies have been aimed at providing empirical findings that support the notion of a linkage between telecommunication expansion and economic growth. One of the earliest studies on the impact of telecommunications on growth is that of Andrew Hardy [11]. Using data from over 50 developed and 45 developing nations from 1960 to 1973, he regressed GDP per capita on lagged telephones per capita and the number of (lagged) radios. He concluded that telephone per capita does have a significant impact on GDP, whereas the spread of radio does not. A more complete analysis of the telecommunication and economic growth relationship is provided by Norton [12]. Using data from 47 countries for the period 1957-1977, he estimated the effect of the average stock of telephones between 1957 and 1977 on the mean annual growth rate, controlling for the stock of telephones in 1957 and a number of macroeconomic variables. Norton found out that the telecommunication variable is positive and significant and concluded that the existence of telecommunications infrastructure reduces transaction costs and increase business expansion capacity since output rises “when the infrastructure is present”. Norton’s findings have been confirmed by later studies [12-15]. Although, there are criticisms concerning

the magnitude of the impact presented by Norton, on the fact that the estimated effect of telecoms he presented is considered to be unreasonably high.

The research by Bayes [16], discovered that half of all telephone calls involved economic purposes such as discussing employment opportunities, prices of commodities, land transactions, remittances and other business items. Bayes also noted that, the average prices of agricultural commodities were higher in villages with phones than in villages without phones. Leff [17], argues that telecoms lower the cost of acquiring and transmitting information, which will result in a quantitative and qualitative increase of information supply. This creates new markets and makes already active markets more efficient. In particular, household and the agricultural sector in developing countries is said to benefit from increased flow of information. However, Leff does not provide any empirical evidence to confirm his theory that telecoms has a positive effect on economic growth. Rather Leff argues that firms can also have more physically dispersed activity with increased telecom services (for instance, it encourage telecommuting of their employees) and enjoy economy of scale and scope.

Recent international studies carried out by El Khoury and Soovides [18], using cross – country empirical models to estimate the impact of telecoms services on economic growth in developing countries. This was possible because there is the availability of large data on a number of countries which captures the impact of openness policies in telecoms sector on economic growth. The empirical evidence offers support for the positive impact of telecoms openness on economic growth using 23 countries below a threshold level of GDP. The study carried out by Narayana – Ranganathan [19], are in contrast to studies, such as, Sridhar and Sridhar [13] which mainly used penetration indicators (e.g. teledensity of mainline telephones) to estimate impact of telecom on economic growth in developing countries. The majority of the empirical studies used a single equation model and provided some evidence that telecommunication investment has effects on growth. Without examining the reverse causality and the risk of overstating the impact of telecommunication on economic growth. Likewise, Madden and Savage [13], ran a test for precedence between growth and telecommunication. They found out that there existed mutual precedence between growth and telecom, although, the evidence of telecom preceding growth is stronger than evidence of the reversed case. Roller and Waverman [14], were the first to use simultaneous approach to incorporate both effects in the economic model in order to validate the hypothesis of

reverse causality. They use panel data and a simultaneous equation model that endogenizes the demand for investment in telecommunications infrastructure to investigate the relationship between telecommunications investment and economic growth in developing countries. While estimating the model with a variety of nonlinear estimators, they find out that telephone penetration rate has strong positive effect on income growth while the demand for telephone infrastructure is dependent on income and telephone price. They estimate own-price and income elasticities far in excess of unity suggesting that telephone demand in developing countries is highly price and income elastic, a result that is quite different from the results of most researchers.

As Jha and Majumdar [20]1999), noted for developing countries, where penetration rates of telephones are extremely low, catching up with developed countries in terms of telecom infrastructure has meant investment in wireless and mobile systems local loops, bypassing investment in fixed lines. This is especially so because mobile networks are a quick and inexpensive way for developing green field projects. Overall, the literatures estimate that one percent growth in telecommunication services generates three percent growth in the economy [21]. Chatterjee [22], pointed out that income patterns decide the disposable income level that is, purchasing power for telecommunication services and in turn the growth of services.

MATERIALS AND METHODS

The method of data collection is of the primary type, involving a field survey. A structured one hundred and fifty (150) questionnaire that captured the economic variables of the study was administered in the selected States (i.e. Oyo, Osun and Ekiti), in the southwest Nigeria. Information such as their operating environment (internal and external), their general perception of GSM were sought in the questionnaire. This kind of information could not be sourced from published documents alone since it is a fact finding study. This, therefore, prompted the use of specially designed questionnaire to obtain the information from the respondents. The questionnaire was designed in such a way as to get responses and analyses easily. The selected states are Oyo, Osun and Ekiti States. The selected states are found to be a good representative of the majority of south west Nigeria in terms of population dynamic and access to GSM services. The tool used in this study was: multiple regression models. The aim of the regression analysis is to obtain and test for significance of the parameters of the regressors in the

models. This aim can best be achieved using OLS method which yields unbiased, consistent and efficient estimates. Such result lends itself to easy and clear interpretation. The two models used for the study are the Household income model and the business expansion model.

Model Specification: The study adopted and modified the Keller model [23]. The generalized form of the model is:

$$Y = b_0 + b_1x_1 + b_2x_2 + \dots + b_kx_k + e \quad (1)$$

Where Y is the dependent variable, x_1, x_2, \dots, x_k are the independent variables, b_0, b_1, \dots, b_k are the coefficients and e is the error term. The stochastic (error) term, e, takes care of all other factors not accounted for by the independent variables. The normality assumption on the error term requires the following:

Household Income Generating Capacity Model: Following Howells and Bain (2000), Rode Peter and Winter (1999), the empirical relationships between household income generating capacity and GSM is specified as follows:

$$Y_{jj} = \alpha_{0j} + \alpha_{1j} \text{NETEFF}_{jj} + \alpha_{2j} \text{RHS}_{jj} + \alpha_{3j} \text{HHA}_{jj} + \alpha_{4j} \text{HHO}_{jj} + \alpha_{5j} \text{ACF}_{jj} + \alpha_{6j} \text{CWEL}_{jj} + \alpha_{7j} \text{NSR}_{jj} + \alpha_{8j} \text{EDUC}_{jj} + \alpha_{9j} \text{CONT}_{jj} + \alpha_{10j} \text{SEX}_{jj} + \alpha_{11j} \text{SCA}_{jj} + \alpha_{12j} \text{ABI}_{jj} + e_j$$

$$\alpha_{1j}, \alpha_{2j}, \alpha_{4j}, \alpha_{5j}, \alpha_{6j}, \alpha_{8j}, \alpha_{12j} > 0$$

$$\alpha_{3j}, \alpha_{9j}, \alpha_{11j} < 0$$

$$\alpha_{7j}, \alpha_{10j} = \pm \quad (2)$$

Where,

- Y_{jj} = Amount of household income generated by respondents in 2011 (Naira)
- NETEFF = Network has effect on income generated in 2011 (Yes = 1, No = 0)
- RHS = Savings of the respondent in 2011 (Naira)
- HHA = Age of the respondent (Years)
- HHO = Enterprise of the respondent (GSM = 1, non GSM = 0)
- ACF = Access to credit facility provided by telecom dealers (Yes = 1, No = 0)
- CWEL = Children's Welfare (Yes = 1, No = 0)
- NSR = Number of spouse of respondent
- EDUC = Educational attainment of respondents (years of formal education)
- CONT = Contingency need (Yes = 1, No = 0)
- SEX = Gender of the respondent (male = 1, female = 0)
- SCA = Expenses on socio-cultural activities (Naira)

- ABI = Amount of business investment in the year 2010 (Naira)
- e = Error term (with mean, zero and constant variance)
- α_0 = the intercept term
- α_{ij} = The coefficients of the explanatory variables (i = 1,2...12)
- j = 0

Business Expansion Model: The business expansion model in this study is expressed as follows:

$$\text{TELEBIZE}_{jj} = \beta_0 + \beta_1 \text{NRS}_{jj} + \beta_2 \text{HHA}_{jj} + \beta_3 \text{NEMPL}_{jj} + \beta_4 \text{EMPLBFGSM}_{jj} + \beta_5 \text{CWEL}_{jj} + \beta_6 \text{ABI}_{jj} + \beta_7 \text{EDUC}_{jj} + \beta_8 \text{GSMPOVS}_{jj} + \beta_9 \text{CONT}_{jj} + \beta_{10} \text{DWLTH}_{jj} + \beta_{11} \text{SEX}_{jj} + \beta_{12} \text{SCA}_{jj} + e_j$$

$$\beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_{10}, > 0$$

$$\beta_9, \beta_{12}, < 0$$

$$\beta_{1j}, \beta_{2j}, \beta_{11j}, = \pm \quad (3)$$

Where,

- TELEBIXE = Business expansion through GSM employment by respondent in 2011
- NSR = Number of spouse of respondents
- HHA = Age of the respondent (Years)
- NEMPL = Years not employed b4 GSM: (a) less than 2yrs () (b) above 2yrs ()
- EMPLGSM = Employed b4 GSM (Yes = 1, No = 0)
- CWEL = Children's Welfare (Yes = 1, No = 0)
- ABI = Amount of business investment in the year 2011 (Naira)
- EDUC = Educational attainment of respondents (years of formal education)
- GSMPOVS = GSM is an poverty alleviation strategy (Yes = 1, No= 0)
- CONT = Contingency need (Yes = 1, No = 0)
- DWLTH = Desire for wealth (Yes = 1, No = 0)
- SEX = Gender of the respondent (male = 1, female = 0)
- SCA = Expenses on socio cultural activities (Naira)
- e = Error term (with mean, zero and constant variance)
- β_0 = The intercept term
- β_{ij} = the coefficients of the explanatory variables (i = 1,2...12)
- j = 0

RESULTS AND DISCUSSION

In order to achieve the objectives of the study, two models were specified in the methodology. These models

Table 1.1: Summary of Regression on the Household Income model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.381	0.765	0.917	0.947
Sum of Squares	Df	Mean Square	F	Sig. F
41.91	13	3.224	3.593	.000 ^a
68.19	76	0.897		
110.1	89			

Variable	Coefficients α	Standard Error S.E	t-stat	Prob.
(Constant	2.783)	1.433	1.942	0.056
Age of respondents (HHA)	-0.223	0.151	-1.482	0.143
Gender (SEX)	-0.354	0.226	-1.562	0.123
Types of Marriage (NSR)	-0.365	0.406	-0.901	0.371
Types of Occupation (HHO)	-0.149	0.358	-0.415	0.679
Level of Education(EDUC)	-0.209	0.166	-1.264	0.21
Investment in GSM (ABI)	0.414	0.09	4.587	0.000
Savings from income (RHS)	0.021	0.488	0.043	0.966
Network effect on income (NETEF)	-0.480	0.39	-1.229	0.223
Income used for contingences (CONT)	0.267	0.383	0.697	0.488
Income used for child's welfare (CWEL)	0.154	0.292	0.529	0.599
Income used for social activities (SCA)	0.495	0.308	1.606	0.112
Credit facilities(ACF)	0.353	0.231	1.530	0.13

R² = 0.765
 F- value 3.593 Sig. F. (0.000)
 Std. Error 0.947

Source: Data analysis, 2011.

Table 1.2: Summary of Regression on Business expansion model

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.361	0.719	0.908	0.392
Model	Sum of Squares	Df	Mean Square
Regression	7.569	12	0.631
	4.105	.000 ^a	
Residual	7.528	49	0.154
Total	15.097	61]	

Variable	Coefficients B	Standard Error S.E.	t – stat	Prob.
(Constant	-0.214)	0.66	-0.323	0.748
Age of respondents (HHA)	0.045	0.09	0.507	0.615
Gender (SEX)	0.003	0.112	0.029	0.977
Types of Marriage(NSR)	0.332	0.221	1.498	0.14
Level of Education (EDUC)	0.054	0.088	0.614	0.542
Investment in GSM (ABI)	0.028	0.043	0.65	0.519
Income used for contingences(CONT)	-0.424	0.176	-2.41	0.02
Income used for child's welfare (CWEL)	0.195	0.142	1.371	0.177
Income used for social activities (SCA)	0.118	0.177	0.670	0.506
Not Employed bf GSM (NEMPL)	0.603	0.129	4.682	0.000
Duration of unemployed bf GSM	0.264	0.105	2.507	0.016
In GSM business due prestige (PREST)	0.125	-0.115	1.086	0.283
Is GSM poverty alleviation program (GSMPOVS)	-0.321	0.147	-2.178	0.034

R² = 0.719
 F-value 4.105(0.000) Sig. F
 Std. Error 0.392

Source: Data analysis, 2011.

are the household income and business expansion. The results were presented in Tables 1.1 and 1.2 for income model, business expansion model respectively.

Discussions on Household Income Generating Capacity Model:

Table 1.1 presents the result of analysis of the household income model. The model showed that 76 percent of the variations in the GSM operators' income were explained by the independent variables included in the model and the remaining 24 percent are for factors not included in the model. This is shown by the size of the R^2 which is 0.765. Whether this proportion is significant or not is judged by the size of the F-statistics. The F-statistic measured the significance of this variation. Based on the statistic reported in the table 4.8a, the F-statistics is 3.593 (0.000). Given the probability value reported in the parenthesis (0.000), it implies that the F-statistic was significant at 1 percent critical value, implying that the model was of good fit. The Durbin Watson and other general parameters that were reported in the regression model may not apply in this case of cross sectional data. This is because the data were collected at a point in time not over a period of time. In such circumstances the Durbin Watson could not be computed and the issue of serial correlation may become a non issue and therefore they are not reported.

Twelve variables were included and reported in the model. Using the criteria discussed above, the first variable in the model is the age of the respondents of GSM operators. The value of the coefficient of this variable is -0.223 with the standard error and t-statistic in parenthesis (0.151, -1.482). The sign of the coefficient as expected is not statistically significant. From the descriptive analysis done earlier, it was observed that there were younger people in the GSM business than the older people. Since these young people are in their most productive and active age, they were more aggressive and desperate to make ends meet. They have a lot of expectations to meet and they are eager to prosecute the business more aggressively. But as the age increases, these agilities and aggressions reduced and the levels of income generated fell. However, the statistical insignificance of the variable implied that age is not a crucial factor in the determination of the level of income generated by the GSM operators in Nigeria. The sex of the respondent (co-efficient -0.354, t-value -1.562) also has similar pattern with age. The sign of the coefficient is also statistically insignificant. This implies that sex is not a significant determinant of the income generated from the GSM business. This is in line with a *prior* expectation.

GSM business can neither be a male nor a female dominated enterprise. This suggests that despite the cultural setting of our case study, gender is not important issues in GSM business in Ilorin, Nigeria. Type of marriage (coefficient -0.365 and t-value -0.901) and type of occupation with -0.149(-0.415) were also statistically insignificant on income generation. Level of education with -0.209(-1.264) and network effects on income with -0.480 (-1.229) with sign being negative and statistically insignificant.

A general observation about all these socio-demographic variables in this model is that they were all negative and statistically insignificant in influencing the level of household income generated. It implies that sociological and non economic factors might not be crucial in explaining the level of income of GSM operators in Nigeria. Of most important variable in the model is the investment variable. This variable represents the amount of money invested in the GSM business. The relationship between this variable and income generated showed the extent in which the investment in GSM business has boosted respondents' income and invariably increased the standard of living of the operators. The coefficient on the Investment in GSM is 0.414(4.587) and it is statistically significant and conforms to a *prior* expectation with a positive sign and the value is very high in magnitude. It implied that income generated by the operators responded positively to increase in investment in GSM. Specifically, a percent increase in investment on GSM would translate to more than 41.4 percent increase in the income of the operators. By ordinary economic intuition, it is theoretically expected that increase in investment would increase the size of the business and if the economic fundamentals in the business are right then it will result in higher income. Most of the GSM operators are into the business to generate income. The more they invest the more they are likely to have higher income. This implies that adequate and increased investment by GSM dealers will help increase their productivity, improve their living standard through increase in wealth or reduce the rate of unemployment.

The variables that measured how the income is utilized had positive signs, but they were not statistically significant. For example, income used for contingencies [0.267(0.697)], income used for children welfare [0.154(0.529)] and income used for social activities [0.495(1.606)] have positive signs. The positive relationship between these variables and income generated shows that consumption induced the operators to work more. The consumption spending could be interpreted as a measure of standard of living.

DISCUSSIONS

Table 1.2 presents the estimates of the business expansion model. The coefficient of determination R^2 , which measured the proportion of changes in the dependent variable that is explained jointly by the independent variables, was 0.71 and the remaining 0.29 is explained by other factors outside the model. This implied that a unit change in all the independent variables could bring about 71 percent changes in the dependent variable (Business expansion). This therefore reinforces the fact that the model is of good fit. Four variables were significant in this model. These include the income used for contingencies, unemployment before GSM, duration of unemployment and GSM as poverty alleviation strategy. Two of the variables; unemployment before GSM (0.603) and duration of unemployment before GSM (0.264) had positive coefficients and are statistically as they confirm to *a priori* expectations. The remaining two; Income used for contingencies (-0.424) and GSM as poverty alleviation strategy (-0.321) had negative coefficients and are statistically as they confirm to *a priori* expectations.

The positive value of the coefficient of unemployment before GSM variable (0.603) implied that GSM has increased employment in the study area by 60 per cent. Duration of unemployment is also significant and positive [0.0264(2.507)]. This implies that those who were unemployed for longer period constituted the bulk of GSM operators in the study area. The positive sign also indicated that the urge to get out of poverty due to unemployment drives many people to GSM business. Therefore, GSM has substantially created jobs and impacted positively on income and standard of living of people in south west Nigeria.

The coefficient of poverty alleviation variable which is -0.321(-2.178) showed that business expansion, that is, employment and poverty level were inversely related. This suggested that the more people participate in GSM business the less the poverty level. Therefore GSM could be considered to be an important strategy for reducing the prevalence of poverty in Nigeria and reducing the rate of unemployment through business expansion.

Summary of Findings:

- It was found that the bulk of GSM business operators (77%) were located within the state capitals of the sampled states (i.e Ibadan, Oshogbo and Ado-Ekiti metropolis in South Western States of Nigeria);
- The GSM business was found to be the main occupation of the respondents' as well as the main source of their income and livelihood;
- The GSM operators were found to be educated with larger proportion being graduates of higher institutions;
- The most commonly used Network within the survey areas is MTN, Globalcom and Zain network followed closely;
- Most of the GSM operators had over N20,000 investment in their retail GSM phone business;
- Most of the operators generated a gross income of not less than N40,000 per month;
- Most of the GSM operators were unemployed for more than 2 years before starting the GSM business;
- The bulk of the GSM operators claimed that GSM business had reduced production cost of doing business in terms of travelling and transaction cost;
- Investment in GSM was found to have positive and significant effect on household income and business expansion. This implies that significant investment in GSM has impacted positively on Nigeria economy using the Oyo, Osun and Ekiti states as a micro mirror of the Nigerian economy;

CONCLUSION

The licensing of digital mobile operators in 1999 was perhaps the most successful and applauded licensing process in the history of public sector deregulations in Nigeria. It was certainly the most visible transparent licensing and deregulation process. Both the successful participants and the failed bidders accepted the process as largely free of government manipulation and interaction. The successful bidders are now in full operation and licensed to deliver services, under stringent roll out obligations. The companies have set about the business of delivering an aggregate of over five million telephone lines over the next five years in addition to the existing 60 million mobile (GSM) lines.

The Nigerian economy is predicted to have naturally gained from emerging into information technology age. Meanwhile, a licensing process universally adjudges to have been rare display of transparency, openness and non – intervention, has turned the fortunes of the country around and consequently raises investor's confidence in the Nigerian market and economy. Likewise, the country and the case study south west Nigeria has also benefited in the aspect of employment generation through business expansion thereby yielded one of the objectives of the study. Other benefits of GSM according to this study are

reduction in transportation costs; reduced transaction and production cost; increased business efficiency; attraction of foreign funds; increased internet services and a host of other benefits. The country's area of receiving its economy would be attained only if the nations established and sustained those systems and processes that serve to assure the investors community that business rules are clear and ascertainable and that corruption is well within confinable limits.

Recommendations: From the findings and conclusions presented above, the following recommendations were made to the management of the regulatory body of mobile GSM in Nigeria; that is, the Nigerian Communication Commission (NCC), the GSM operators in Nigeria (both public and private) and, the Federal Government of Nigeria. The government should expand Tele-density and directly make telephone communications cheap and accessible. To achieve this goal, more licenses should be given to GSM operators in order to allow for healthy competition among the GSM operators. This will lead to improved quality of services, quality of product and consequently increased employment creation in the country.

According to most of the sellers and users interviewed in Oyo, Osun and Ekiti states in Nigeria, the greatest worry and drawback that GSM bears are the cost of maintenance. Most of them argued that the call charges are too expensive and as a result of this the GSM operators should try to find a lasting solution to the issues of exorbitant call charges. Therefore, there is need for the Federal government to provide the necessary telephone infrastructure (particularly power supply) to the GSM operators in order for them to deliver efficient services and to be able to reduce their call charges. Since the licensed operators claimed that high cost of maintenance, irregular power supply and tariffs are some of the factors responsible for the high cost of making GSM calls.

Moreover, the Nigerian Communication Commission should put a check on the pricing structure of the GSM companies, create a regulatory environment for the supply of telecommunication services and facilities and the promotion of fair competition and efficient market conduct for all partakers. Also, the NCC should establish technical norms and promote the development of Nigeria telecommunications capabilities, industries and skills. In addition, the NCC should ensure that the interests of the consumer of telecommunication services are protected by promoting competitive pricing of such services and

combating the abuse of market power. Also, NCC should mediate between operators, carriers and not to charge for services not rendered to consumers.

The success of a very effective telecommunication requires a very efficient and honest administration on the part of the government and on the part of the GSM operators. Finally, the NCC should also ensure that consumers are given value for money and misleading adverts by the Nigerian GSM operators should be stop as this does not conform to international practices.

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