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Notes to Contributors

Nigerian Journal of Management Studies (NJMS) is dedicated to the advancement of management research. It is a peer-reviewed journal publishing high quality, original manuscript concerned with business management, marketing, entrepreneurship, banking issues. The NJMS aims to serve business, finance and accounting, industrial relations, actuarial science, insurance and other related practitioners from the business community. Its focus is unique in its commitment to promoting academic debate on status quo. Papers examine emerging trends in business management and fast-changing concerns faced by corporations, governments, practitioners and regulators from a comprehensive range of areas.

Beyond the immediate crisis, economic policies, accounting and finance and business management practices affect the stability of major institutions and even national and international economies. These disciplines require ongoing investigation in order to alleviate the present crisis and help avert the next crisis. Therefore, these problems can only be addressed by researchers who are able to bridge discipline, theory and practice.

Subject Coverage

The primary theme of NJMS is to embrace all approaches to management science research. The journal also seeks the application of political economy and social theories to the explanation of business management practices and problems. Examples of topics include, but not limited to, the following: Accounting, corporate governance and financial crisis, corporate social responsibility, management control and accountability, performance measurement and management, explanations of management practices, human resources management, the role of industrial relations in conflict resolution, marketing of insurance product, risk management, bank and insurance fraud, international perspectives of capital investment decisions, interface between information technology and management practices, the development of SMEs in emerging and less developed economies, valuation of securities, emerging capital market, banking reform, basel accord and related issues, austerity versus growth, the euro crisis perspective, international finance, securitization and global economy, the role of regulators in facilitating transparency and accountability, the role of business management in the socio-political, economic development, critical review of public private partnership initiative in Nigeria,

The role of corruption, economic and financial crimes on development, accounting and finance in socio-economic development and poverty reduction, Islamic accounting, banking and finance, international business, logistic and supply, entrepreneurship.

Submission of papers

Papers, case studies, etc. in the areas covered by NJMS are invited for submission. Authors may wish to send an abstract of proposed papers in advance. Notes for intending authors can be found at <http://www.bus.unilag.edu.ng>. Authors of accepted papers will receive a PDF file of their published paper. Hard copies of journal issues may be purchased at a special price for authors. Authors are invited to submit their papers to

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Editorial

It is a privilege and a unique opportunity, as Editor of NJMS, to present this edition of the journal. This issue of the NJMS is motivated by the desire to bring together papers that reflect the richness of current research into management science, bearing in mind its recent development as an area of interest. NJMS is a veritable window of opportunities for management scholars. It is our hope that this contribution shall be a milestone in the history and development of management research and education in the Faculty of Business Administration, University of Lagos.

The current issue contains ten critically peer-reviewed scholarly papers with useful contribution to the advancement of management studies in Nigeria. The collection of papers demonstrates that there is much to be gained both in a theoretical and practical sense through continued in-depth management research. The papers published range from different disciplines such as accounting, business, finance, industrial relations and insurance. The Editorial Board has endeavored to ensure that the standards herein utilized meet and indeed surpass those of some other reputable journals worldwide. The diverse nature of articles from both internal and external contributors has added value to the current edition. We invite and in fact, would encourage scholarly research papers from our sister universities and from intellectuals internationally. Our reviewers are very tenacious and fearless in their judgments. There were many articles rejected outright while the majority of those appearing in this volume passed through extensive and painstaking efforts of both the reviewers and the authors themselves to reach this stage. We seize this opportunity to thank all our reviewers and our contributors for keeping to our philosophy and equally enjoin authors whose works have not succeeded in getting published not to relent.

We welcome your comments and constructive criticisms at all time so that we can improve on this output for subsequent editions. We hereby renew our promise of a regular and timely publication of papers sent to our journal after a successful blind review process.

The Editorial Board thanks the Faculty Management for the opportunity to serve in this capacity. We are particularly grateful for the immense support received from the Dean, Faculty of Business Administration, his continual persistence on actualizing the faculty mission of regular publication of its journal to promote scholarship, advance knowledge and for approving the funds for the publication of this issue.

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Telecommunication Infrastructure Response to Public Sector Reform in Nigeria

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ABSTRACT

For about two decades now Nigeria has been experiencing tremendous wave of reform on all fronts. These include some of the sectors of the economy that cater primarily for infrastructural development. Consequently, the Telecommunication sector of the Nigerian Economy has been experiencing some changes through economic liberalization policies that assumed the form of privatization through Divestiture and "Opening Up" (OU). Few empirical studies have been carried out to investigate how Nigeria's Telecommunications Infrastructure has responded to the reforms that have been going on in that sector. Nevertheless, the general perception liberalization of the sector paved way for explosive investment in that sector past decade and thereby exerting a tremendous impact on economic growth. Relying on descriptive statistics this paper reveals that Nigeria's Economic Reform Programmes have impacted greatly on growth of the telecommunication sector. This is adequately reflected in all growth indicator of telecommunication sector as well as in its contribution to the GDP of Nigeria.

Keywords: Telecommunication, Infrastructure, Economic Reform, Economic Growth, Nigeria

Introduction

The last decade, 2002 to 2012 represents a monumental departure from what used to be the way businesses were conducted and the way social, economic cultural and political endeavours were handled. This applies to Nigeria as it does to the rest of the world. Fundamental to this change, is the advancement in Information and Communications

Technology enabled by radical changes in economic operations – an off-shoot of ideological shift in production of goods and services. This has caused governments all over the world to initiate reforms of varying degrees and measures that primarily aim at market empowerment and in the process improve efficiency in production, distribution and entire market operations.

The great improvement in telecommunication infrastructure appears

transformational in impact on some economic indices including investment, income, employment, production and even distribution. This is the case notwithstanding that the sector has been dominated by foreign and local bourgeoisies after its deregulation, Chidozie, Lawal & Ajayi (2015). Essentially this derived from penetration of telecommunication services occasioned by considerable expansion and upgrading of networks, subscriber base and general telecommunication infrastructure consequent on liberalisation and privatisation of the telecommunication sector in 2001. Here, it becomes interesting to say that in 1999 Nigeria had just 400,000 fixed telephone lines and about 20,000 analogue wireless lines (Ndukwu 2008). The teledensity of the country was 0.4 lines per 100 inhabitants in the year 2000 whereas private sector

investment was a pantry sum of \$50 million by 1999 (see Ndukwu 2008).

Interestingly, the new era of Nigeria's Telecommunication industry coincided with the era of ideological shift in economic operations. Hitherto, the Nigerian economy was characterised by high regulatory regimes typical of an economy under the command and control of the state even though Nigerian economy was generally described as a mixed economy. The telecommunication sector like the power sector was also a sector reserved for an exclusive operation of the state, that is, the federal government had the exclusive jurisdiction of producing and distribution telecommunication services in the country. This way the shift from a state dominated economy to one where allocation of resources is determined by the efficacy of market system appears to have given leverage to enhanced 'quality' and 'quantity' of telecommunication services in Nigeria.

It is within this context that this paper explores the responses for the telecommunication sector to the ideological shift in the Nigerian economy. Thus, this study evaluates Nigeria's Economic Reform programmes especially with reference to the telecommunication sector. The essence of this is to make an assessment of how these reforms have affected various telecommunication variables as well as how the changes in the telecommunication variables have impacted on some socio-economic indicators.

2. Theoretical and Empirical Literature Review

Sources of economic growth are complex phenomena but economists have made serious attempts towards explaining the endogeneity and exogeneity of growth processes, (see Solowlaste, Baro & Sala-i-Martin 1992). Capital is broadly defined to include services of human capital, physical capital as well as positive spill overs (external good), industrial innovation and public policy constituting critical growth inputs. Given that all these apply to the

telecommunication sector as they do to other sectors, it becomes clear that expectations of positive correlation between telecommunication industry and the growth variables are well founded.

Telecommunication infrastructure has the potential of causing economic growth in three ways: (i) investing in telecommunication infrastructure does itself lead to growth because its products leads to increase in demand for goods and services used in their production, (ii) economic returns to telecommunication infrastructure investments exceed by far just the return in telecommunication investment itself. (iii) Telecommunication infrastructure reduces transaction costs; see (Lars-Handnel, Roller 1996, and Leff 1984). Thus as Hardy (1980) puts it, "if the telephone does have an impact on a nation's economy, it will be through the improvement of the capabilities of managers to communicate with each other rapidly over increased distances". Also see Okonjo-Iweala (2012a).

It might, however, be pertinent to point out that the advancement of telecommunication infrastructure alone cannot guarantee development or economic growth; the other socioeconomic infrastructure must be in place to complement the telecommunication sector. The transport system, electricity, water, finance, etc. must be advancing as well for gains from a transforming telecommunication sector to be maximised. In this context it could be pointed out that poor state of energy supply in general and electricity in particular as well as the dearth of financial infrastructure explain low production and low capacity utilisation in Nigeria's manufacturing sector. Thus (Bruinsma 1990) noted that telecommunication investment affects economic development the way other infrastructural investment do. This point has also been buttressed by Sridhar and Sridhar (2005) and Ogunsanya (2013).

These views are increasingly being supported by empirical evidence. For

instance, (Bar 2006) observed that telecommunication is the very instrument for economic and social development. Its diverse impacts on traditional, economic and social sectors provide valuable stimulus for economic growth and for social and economic development. Jorgenson (2001) study of the USA showed that investment in Information Technology (IT) contributed more than half of the recent increase in the US economic growth. His study was corroborated by Kraemer and Dedrick (2001) who using data from 43 countries upheld the view that the growth in IT investment is correlated with productivity growth. Hardy (1980) stands out as one of the first attempts at investigating the relationship between telecommunication infrastructure and economic growth. Using a time-lagged data, he discovered a bidirectional linkage between telephone penetration and economic growth. Sheriffdeen, Amaghionyeodiwe & Adesoye (2007) using a system of equations that endogenise economic growth and telecom penetration as well as telecom investment arrived at a conclusion that mainline and call phone penetration had significant effects on economic growth when the effects of capital and labour are controlled. Shiu and Lam (2008) however show that the relationship between telecommunication and economic growth depends on whether the country is a high-income nation or not. Their conclusion is that for high income countries the relationship is bi-directional whereas for low or mid income countries it is unidirectional, that is economic growth reinforces telecommunication development. Nevertheless, Nwaogwugwu (2016) revealed that development in telecommunication infrastructure impacts significantly on economic growth in Nigeria.

2.1 Public Sector Reform in Nigeria

The Public sector is a machinery of administration of the state through which it performs its functions of the nature of civil service or socioeconomic services.

The later is usually performed not by the "core" civil service but by the "enlarged" civil service, that is, public bureaucracy. The core civil service and Public Bureaucracy constitute the public sector. The public sector has a primary responsibility – to design and implement government policies and programmes. The relevance of public bureaucracy with respect to economic activities is traceable to the Keynesian ideological revolution that prescribed state intervention through increased consumption as the elixir of the great depression of the 1930s. See Keynes (1936).

The Nigerian public sector proved very incapable of discharging these obligations but was characterised by high level of inefficiency, disguised employment, and low productivity of factor inputs corruption, zero accountability, fiscal indiscipline and financial mismanagement. It was over bloated and overbearing. These reflected in a public sector that crippled the wheel of Administration in the country and made it impossible for the foundation for growth and development to be properly laid. Thus as (Alabi 2004) noted telecommunication is both dynamic and capital-intensive and has catalytic effects on the development of other sectors such as agriculture, health, tourism and education and thereby making its advancement in Nigeria really necessary. This gross inefficiency was automatically transmitted to the private sector which could not contribute up to its potential to the economy.

Hence, the Nigerian economy stagnated and virtually all the socio-economic variables were not only low but also volatile. As Okonjo-Iweala and Osafo-Kwaako (2001) put it, "..... Nigeria experienced a prolonged period of economic stagnation, rising poverty levels, and the decline of its public institutions. By most measures, human development indicators in Nigeria were comparable to that of other least developed countries while widespread corruption undermined the effectiveness of various public

expenditure programmes. Moreover, the lack of public investment in the previous decades meant that there were severe infrastructural bottlenecks that hindered private sector activities. This was the comprehensive economic reform programme which with Obasanjo administration introduced in 2003 through its National Economic Empowerment and Development Strategy (NEEDS) aimed at structural macroeconomic financial, fiscal and institutional reforms. Central to this reform programme was the idea of making the economy competitive through the free market ideology and in the process spur growth and development, FGN (2004).

- It was within this context that the telecommunication sector was liberalised or more specifically privatised by the process of opening up to private investment the sector that hitherto was an exclusive domain of operation of the federal government. The reasons behind the reform are many, Uniamikogbo (2006) and Adejumo (2008) and could be summarised thus,
- a) Low capital spending by the government and competition among numerous Departments and agencies including Public Enterprises made adequate funding of the telecommunication industry by the government impossible.
 - b) The need to attract foreign and domestic private capital into the sector to augment the effort of the state.
 - c) Compatibility with overall reform programme of the government of Nigeria based on free market ideology.
 - d) The need to increase the abysmally low teledensity in the country.
 - e) The desire to key into the wave of liberalisation of the sector globally in order to maximise

gains from information super highway and knowledge-imbedded growth and development.

2.2 Reform of Nigeria's Telecommunication Industry

The Reform in Nigeria's telecommunication industry was occasioned by the general economic reform embarked on by the country. Thus, once the government permitted commencement of a comprehensive reform in the country on the bases of free market ideology it became inevitable for the telecommunication sector to be affected like some other key sectors of the economy like; the financial services, real, external, agric and the core public sectors. This way one may have to look at the telecommunication reform as being incidental to the overall economic reform of the country.

Nevertheless, the reform in the telecommunication sector followed a model designed to ensure competition in the industry while freeing the sector from red tapism, bureaucratic bottlenecks and general inefficiency that characterise Nigeria's public enterprises. Hence, the exercise aimed at liberalising the sector through (a) institutional reform measures and (b) privatisation.

2.2 Institutional Reform

Institutional Reform of Nigeria telecommunication industry assumed these forms;

- (a) Establishment of Nigeria communication commission (NCC) in 1992. The NCC was thus mandated to create a healthy environment for the development of telecommunication infrastructure in the country while fostering a telecommunication industry growth model that incorporates participation of both private investment and private sector organisations.
- (b) Release of Nigeria telecommunication policy in the

year 2000. This document clearly articulates the intentions of government for the sector and the role which other stakeholder should play. The telecommunication policy also introduced competition in the sector by breaking government monopoly of the industry by permitting private sector organisation to produce and distribute telecommunication services, removal of restriction on foreign equity participation, proposal for reduction of import duties on telecommunication equipment from 25% to 5% and granting of a five year tax holidays to qualified investors.

- (c) The enactment of telecommunication Act 2003. This Act authorises the Nigerian Communication Commission (NCC) TO grant and renew communication licences, monitor and enforce compliance with licence terms and conditions, promote competition and approve tariffs of telecommunication companies, among other things.

Privatisation

As pointed out earlier, this model of reforms in Nigeria's telecommunication industry took the forms of opening up and divestiture

(a) Opening up

This is the model of privatisation that ensured collapse of the government monopoly in this sector. Thus, the telecommunication sector was opened to private sector organisations in an area that was an exclusive domain of the government.

(b) Divestiture

This model envisaged either selling off part of the government equity holding in Nitel and its subsidiaries to a level that is not greater than

49% or outright disposal of the entire government interest in the organisation. This model has not actually worked out with several problems that plague Nitel and its privatisation.

In spite of the outstanding performance of the telecommunication industry in Nigeria the sector continues to experience several problems as outlined by Sheriffdeen, Amaghionyeodiwe & Adesoye (2007). These problems include;

- Poor public electricity supply
- Insecurity of equipment and telecommunication infrastructure
- High import duty of 30% to 70%
- Anti-competitive and anti-trade practices like formation of cartels to impede the market
- Scanty domestic investment in the sector
- High operational costs
- High drop calls and consumer exploitation

3. Methodology Applied and Data

Given that the objective of this paper is to assess the response of the telecommunication sector to Nigeria's Economic Reform especially as it affects the telecom sector, the analysis here relies on descriptive statistics and not on regression or any form of systems equation that are deterministic of the impact of the telecom sector in economic growth. Hence, our analysis is based on ratio, percentages, growth rates, graphs, etc. For an assessment of the contribution of telecommunication sector to economic growth in Nigeria the entire period of 1960 – 2010 has been broken into decade wise phases for sub-periodic analysis. For the other variables, 2001 or 2007 will serve as

the base year depending on the availability of data.

This study is based on annual data sourced from the Statistical bulletin of Central Bank of Nigeria (CBN) and Nigerian Communication Commission (NCC). The author, however, derived some statistics from the original data as necessitated by the aim of this study.

4. Empirical Analysis

Our empirical survey on the contribution of the telecommunication sector to the GDP of Nigeria supports the view that the reform of the telecommunication sector has impacted positively to the economy. This view has been expressed by many writers including Ndukwu (2004 & 2008), Tella et al (2007), Okonjo-Iweala (2007) and Nwaogwugwu (2016).

Annual subscriber data of Nigeria's telecom industry is shown in table 1. From here, it is obvious that connectivity to telephone – mobile (GSM and CDMA) and Fixed (wired and wireless) has grown tremendously since the liberalisation of the telecommunication sector. The connected lines were 312,184 in 1999 and 329,179 in the year 2000. After liberalising the sector the figure jumped to 866,782 in 2001 and further to 33,858,022 in 2006. It was 124.8 million by December 2011. See table 1 below.

This has enabled a sharp increase in the teledensity of the country – from a mere

0.4 in 1999 to 0.73 in 2001. This rose to 24.18 in 2006 and further to 68.49 in 2011 without declining in any year, (see Column 3 of the table).

It is also interesting to note that the installed capacity of the sector 84,663,661 in 2007 to 173,631,441 in 2011, the relevance of this derives from the readiness of the sector to connect more people to its network bases and in the process further increase penetration of its services in the economy. Also see NCC (2014a). Onakoya (2013) also supports this fact.

This way, one can make a strong statement in the affirmation about the responsiveness of the telecommunication sector to Nigeria's economic reform programme in general and its telecommunication component in particular.

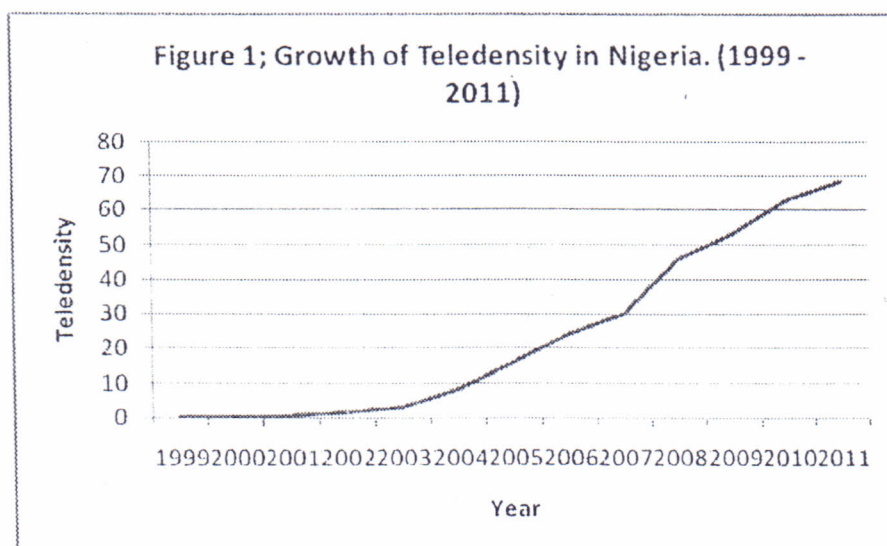
Table 2 shows the real GDP of Nigeria and its telecommunication component for some selected years. It is observed from column 3 of this table that the real telecom output rose from =N= 8.4 billion in 1960, to =N=207.46 billion in the year 2000. From there it jumped to =N=2,398.68 billion the next year (2001) – the year when the sector was liberalised and further to =N=19,159.16 billion in 2006 and reached its peak of =N=34,828.13 billion in 2010.

Table 1: Connected lines and Teledensity in Nigeria. (1999 – 2011)

YEAR	CONNECTED LINES	TELEDENSITY
1999	312184	0.4
2000	588374	0.4
2001	866,782	0.73
2002	2,271,050	1.89
2003	4,021,945	3.35
2004	10,201,728	8.5

2005	19,519,154	16.27
2006	33,858,022	24.18
2007	41,975,275	29.89
2008	64,296,117	45.93
2009	74,518,264	53.23
2010	111,822,964	63.11
2011	124,801,018	68.49

Source: Nigeria Communications Commission Performance Indicators (2012)



This implied a simple annual growth rate of 4.76% in 1961 which rose marginally with fluctuations to 6.10% in the year 2000. It skyrocketed sharply to 1056.21% in 2001. It is interesting to note that the growth rate here hovered around 34% in the decade 2001 to 2010 with the exception of the three years 2001, 2003 and 2004 when the figure was a bit erratic (see column 5 of the table under reference). This is a total departure from the growth rates between 1960 and 2000 when the figures were generally below 6%.

Again, a comparison of the growth rate output of the telecommunication sector with the GDP of the country shows that before 1990, the overall economy as reflected by the GDP grew faster than the telecommunication sector but from 1991 the entire picture changed. Between 1991 and the year 2001 the modest growth of the telecommunication sector was critically higher than the growth of the GDP and between 2001 and 2010 it grew by at least seven (07) times more than the real GDP reflecting its increased contribution to economic growth in the country.

Table 2; GDP AND TELECOMMUNICATION FOR SELECTED YEARS

YEAR	REAL GDP IN MILLION OF NAIRA	CONTRIBUTION OF TELECOM TO GDP IN MILLION OF NAIRA	GROWTH RATE OF REAL GDP	GROWTH RATE OF TELECOM SHARE IN REAL GDP	3 as % of 2
1	2	3	4	5	6
1960	2,489.00	8.40			0.34
1970	4,219.00	10.80	3.80	12.5	0.26
1971	4,715.50	13.80	11.76	27.7	0.29
1980	31,546.76	58.31	5.33	-0.66	0.18
1981	205,222.06	116.36	5.53	99.55	0.06
1990	267,549.99	137.26	13.02	1.99	0.05
1991	265,379.14	140.01	-0.81	2.00	0.06
2000	329,178.74	207.46	5.44	6.10	0.06
2001	356,994.26	2,398.68	8.45	1056.21	0.67
2002	433,203.51	2,983.07	2.35	24.36	0.69
2003	477,532.98	3,785.47	10.23	26.90	0.79
2004	527,576.04	6,015.91	10.48	58.92	1.14
2005	561,821.61	7,851.66	6.51	30.51	1.40
2006	595,821.61	10,567.90	6.03	34.59	1.77
2007	634,251.14	14,226.75	6.45	34.62	2.24
2008	672,202.55	19,159.16	5.98	34.66	2.85
2009	718,977.33	25,812.44	6.98	34.72	3.60
2010	718,525.70	34,828.13	7.87	34.92	4.50

Source: CBN Statistical Bulletin 2012

GDP = Gross Domestic Product

It is clear from the analysis above that the contribution of telecommunication sector to Nigeria's GDP supports the view that

the Reforms have had positive impact on the economy. Thus as observed by Ijewere, A.A. and E.C., Gbandi (2012) as

well as Okonjo-Iweala (2012b) privatisation of the telecommunication sector has contributed immensely to its growth since 2001. Table 3 shows the percentage share of the output of the telecomm industry in the real GDP of Nigeria. It sharply confirms our earlier observation. But it is interesting to note that on the average the share of telecom in the GDP of the country was just about 0.38% between 1960 and 1970. This figure declined to 0.23% between 1971 and 1980. It declined further to 0.06% between 1981 and 1990, and between 1991 and the year 2000. Again it suffices however, to note that in the last decade of our analysis (2001 to 2011) the figure

jumped to all time high of 1.79% and thereby supporting our earlier observation that the telecom sector has actually responded positively to the liberalisation measures of the state.

These descriptive statistical results of table 3 show an intra-period low variation in the observed mean share of the telecommunication sector. The exception here however is the decade 2001 to 2010 where all the measures of dispersion are relatively higher than the other periods. This was mainly as a result of the abnormally growth rate of 1056.21% recorded in 2001 when Global System of Mobile Communications (GSM) was introduced in the country.

Table 3: Dispersion around Average Percentage Share of the Contribution Of The Telecommunication Sector to Nigeria's GDP

Period/Dispersion Measures	Mean Share	Variance	Range
1960-1970	1.79	1.89	4.43
1971-1980	0.38	0.01	0.25
1981-1990	0.22	0.01	0.24
1991-2000	0.05	5.36	0.03
2001-2011	0.05	1.03	0.01

Source: Author's Computation

Conclusion

This study reviews Nigeria's Economic Reform programmes with special reference to the telecommunication sector. Using, descriptive statistics, issues relating telecommunication and some economic variables were analysed to determine whether or not the telecommunication sector is receptive of the government reform measures. The results show that Nigeria's telecom has been freed from the bottlenecks of bureaucracy which stagnated it over the years and this has been able to post reasonable growth in virtually all the indicators. This transformation has also been transmitted to

the real sector as reflected in the contribution of the sector to the GDP of the country which has grown steadily since 2001 (when the sector was liberalised) without showing any sign of stagnation. It has to be pointed out, however, that the growth of the telecommunications sector itself will be less than its potential given that the comprehensive reform embarked on by the government has not been carried out to its logical conclusion. This is particularly important with respect to removal of market impediment since this is central to the sector.

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