Deregulation of the Nigerian Power Sector on Performance: A Review

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Abstract

This paper reviewed literature on the impact of deregulation of the Nigerian power sector on performance. As observed from this study, the impact of deregulation of the Nigeria power sector has been frosty to say the least. However, the increase in numbers and size of generating, distribution and transmission companies and its attendant ability to improved power generation is presently not been felt. Deregulation was observed to have the potential to increase power supply in Nigeria. It is believed that when all the power stations granted licence by NERC becomes fully operational, power generation and distribution in Nigeria will improve. Just like the communication and oil sectors which have been fully deregulated, the competition which deregulation brings to the sector will assist in improving power sector performance in Nigeria. Thus, deregulation is necessary for improved performance of the Nigerian power sector.

Keywords: Deregulation, Performance, Power Sector
JEL CODE: L00

1.0 Introduction

An examination of world economies shows that during the 1980s, there was a deliberate attempt by policy makers to move towards reliance on market forces and competition after a long period of interventionist policies. The aim of these policies was basically to increase the flexibility of economies, to improve resource allocation and, ultimately, to enhance growth (Pera, u.d). This new attitude towards reliance on market forces and competition can also be as a result of the inability of government interventionist policies followed in most countries during the 1970s to cope with the shocks and sharp changes which characterised the decade.

Nigeria was not left out in these new move, thus in 1986, though indirectly, the government of Nigeria adopted the structural adjustment programmes and effectively in 1st January 1987 the policy took effect. The main aim of the policy was to liberalize and commercialize the Nigerian economy to attract foreign investment into the economy. Although, it is inconclusive whether the policy had been a success, it must be noted here that the policy has made Nigerian policy makers to appreciate the need for deregulation. To further above Kalejaiye Adebayo and Lawal (2013) reaffirmed that the economic
principles of deregulation and privatization were first introduced in Nigeria in the 1980s through the policy of structural adjustment programme (SAP) and since then, government monopolies had disappeared in many industries and over 85 public enterprises (PES) in mining, education, health, agriculture, transportation and telecommunication were transferred, either fully or partially to private owners (Kalejaiye Adebayo and Lawal, 2013).


The journey to unbundling of the Nigerian power sector has been long and the Nigerian Electricity Power Authority (NEPA) lost its monopoly over the operation of the Nigerian power sector in 1998 (Adoghe, Odigwe and Igbinovia, 2009) when the National Council on Privatisation empowered a 23-member Electric Sector Reforms Implementation Committees (ERIC) to develop guidelines to promote the policy goals of total liberalization, competition and private sector led growth of electricity sector. The effect of the committee culminated in the signing of into law on 11th March, 2005 by the President and Commander-in Chief of the Federal Republic of Nigeria. The Act in 2005 gives legal backing to the reform activities, which is, restructuring and eventual privatization Nigeria Electricity Power Authority (Adoghe, Odigwe and Igbinovia, 2009). Since then several other policies have been put in place by government to strengthen the sector with a view to total deregulation of the sector for enhanced productivity. The reforms in the power sector basically were to deregulation, commercialization, and ensure a free market economy for the sector (Campos and Esfahani, 1996). It is aimed at improving the overall efficiency through restructuring, private sector participation and competition, which is a major driver of the nation’s economy, through improved customer satisfaction and reduced tariff.

Given the importance of power generation in Nigeria, it is therefore necessary that the sector is given adequate attention. No wonder, Okoro and Chikuni (2007) posited that constant power supply is the hallmark of a developed economy. It implies that any nation whose energy need is epileptic in supply, prolongs her development and risks losing potential investors. This has been the Nigerian story and they have not regular power supply and all activities linked to electricity have been in comatose. It is therefore against the forgoing that this paper examines the deregulation of the Nigerian power sector for enhanced performance. The subsequent sections of this paper are divided further into four sections. In the next section, the paper examines the concept of deregulation. In section three, the paper traces the history of the Nigerian power sector. In section four, the explored the impact of deregulation on performance of the sector while in section five the paper concluded and recommended.

2.0 The Concept of Deregulation
Deregulation can be described as a phenomenon wherein governments signal their intention to leave the market economy to the market forces and not stifle it and constrain it with myriad laws, rules, and regulations. According to Kuyae (2012), the notorieties of deregulation because of the need to liberalise the economy for enabling market forces shape effectiveness and reduce inefficiencies in the markets
has generated a lot of definitions for the term. Abhankar and Khaparde (2005) were of the view that
deregulation is restructuring of the rules and economic incentives that government set up to control and
drive the particular sector.

Godwin and Dagogo (2015) was of the view that deregulation of a country’s economy could be
conceptualized as privatization, divestiture, and marketization of the economy. In essence no
government but private participation in the country’s economic activities. This is in order to ensure
competitive economic system devoid of monopoly and allow price mechanism of demand and supply’s
principle of economy to prevail. Also, Ahmed (1993) view deregulation of an economy entails
according greater weight to the private sector as the prime mover of the economies opposed to the
emphasis s on the dominance of public sector. To achieve this objective, greater role is assigned to
market factors as against the use of pervasive administrative controls. This is aimed at stabilizing and
fundamentally restructuring the economy and places it on a durable and suitable growth path.

It has been argued that deregulation has becomes a necessary policy by the government when it
becomes important for certain utilities handled by government to be handed over to private investment
like the Nigerian energy sector. The purpose of the deregulation policies highlights the advantages in a
capitalist economy like Nigeria; however, this grandiose economic concept is not without its downside
of exploitation. The implementation of the policy of deregulation and its economics has ramifications

In Nigeria, according to Godwin and Dagogo (2015) the deregulation of Nigerian economy was
the main thrust of the Structural Adjustment Programme (SAP) introduced in the country in 1986
under the leadership of General Ibrahim Babandiga (1958-1993). Prior to that period the Nigerian
economy according to them was almost a command one with wide range of government control. The
government of Nigeria at the introduction of the de
regulation policy was thought to be the final
solution to the economic crisis faced by the country prior to 1986. Although the programme was
suspended, subsequent governments from General Abacha’s to Buhari has continued with policy. Such
that sectors in the power, communication and oil sectors are almost deregulated.

Ise Olorunkanmi (2014) posited that attempts by successive Nigerian governments at
industrialization and rapid economic growth have been hampered by energy infrastructure deficit gap.
It was against the forgoing that he suggested that the privatization of the power sector is aimed at
tackling the myriads of problems in the sector. The problem as opined by him are limited access to
power, inadequate generation and usage of power capacity, overlapping/conflicting roles and
responsibilities between government and holding companies etc.

There have been many reasons which have been advocated that have led to the deregulation of
the Nigerian power sector. On force that has led to the deregulation of power was the change in
generation economics of scale that occurs with the sector. According to Abhankar and Khaparde
(2005) traditionally, electricity utility systems evolved with the Central station concepts because of the
significant economy of scale in power generation. It is there argued that deregulation of the power
sector that is deem successful is when the outcome of deregulating leads to greater competition in the
industry. Also, deregulation that results in significantly greater convenience and diversity of choice for
both individual and users as well as the stability and integrity of that sector largely been maintained.

3.0 History of the Nigerian Power Sector
According to Niger power review (1985) and Okoro and Chikuni (2007), the history of electricity
production in Nigeria dates back to 1896 when electricity was first produced in Lagos. This was
according to them fifteen years after its introduction in England. The total capacity of the generators
used then was 60KW. In other words, the maximum demand in 1896 was less than 60 kW. The Nigeria
Electricity Supply Company (NESCO) commenced operations as an electric utility company in Nigeria
in 1929 with the construction of a hydroelectric power station at Kurra, near Jos (Onochie, Egware and
Eyakwanor, 2015).
However, in 1946, the Nigerian government electricity undertaking was established under the jurisdiction of the public works department (PWD) to take over the responsibility of electricity supply in Lagos State. The Electricity Corporation of Nigeria (ECN) was established in 1951, while the first 132KV line was constructed in 1962, linking Ijora Power Station to Ibadan Power Station. However, there was another body known as the Niger Dams Authority (NDA), which was established by an act of parliament. The Authority was responsible for the construction and maintenance of dams and other works on the River Niger and elsewhere, generating electricity by means of water power, improving navigation and promoting fish brines and irrigation (Manafa, 1995). The electricity produced by NDA was sold to ECN for distribution and sales at utility voltages.

Also, Niger Power Review (1985) stated was of the view that in April 1972, the operation of ECN and NDA were merged in a new organization known as the National Electric Power Authority (NEPA). Since ECN was mainly responsible for distribution and sales and the NDA created to build and run generating stations and transmission lines. The reason advocated by government for the merged was firstly to vest of the production and the distribution of electricity power supply throughout the country in one organization which would assume responsibility for the financial obligations, secondly the integration of the ECN and NDA should result in the more effective utilization of the human, financial and other resources available to the electricity supply industry throughout the country.

As submitted by Okoro and Madueme (2004) since the inception of NEPA, the authority expands annually in order to meet the ever-increasing demand. Unfortunately, majority of Nigerians have no access to electricity and the supply to those provided is not regular. It is against the lack of electricity that the federal government embarked on aggressive power sector reforms with the intention of resuscitating NEPA and making it more efficient, effective and responsive to the yawning of the teeming populace. NEPA as a result of unbundling and the power reform process was renamed Power holding Company of Nigeria (PHCN) in 2005.

However, achieving the desire power supply was not attained with the new Power Holding Company of Nigeria (PHCN). Thus, the process of unbundling the sector was initiated through the signing into law in March 2005 the Power Sector Reform Bill into law which was aimed at enabling private companies to participate in electricity generation, transmission, and distribution. Table 1 presents the six installed capacities of the Gen-Cos.

<table>
<thead>
<tr>
<th>S/n</th>
<th>Generation Company</th>
<th>Plant type</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Afam Power Plc (1-V)</td>
<td>Thermal</td>
<td>987.2</td>
</tr>
<tr>
<td>2</td>
<td>Egbin Power Plc</td>
<td>Thermal</td>
<td>1320</td>
</tr>
<tr>
<td>3</td>
<td>Kaniji/Jebba Hydro Electric Plc</td>
<td>Hydro</td>
<td>1330</td>
</tr>
<tr>
<td>4</td>
<td>Sapele Power Plc</td>
<td>Thermal</td>
<td>1020</td>
</tr>
<tr>
<td>5</td>
<td>Shiroro Hydro Electric Plc</td>
<td>Hydro</td>
<td>600</td>
</tr>
<tr>
<td>6</td>
<td>Ughelli Power Plc</td>
<td>Thermal</td>
<td>924</td>
</tr>
</tbody>
</table>

Source: Nigerian Electricity Regulatory Commission

Though the six generation companies were unbundled under the Obasanjo regime, however under the Yar’adua administration, the privatization programme was suspended. However, in 2010 President Jonathan created the Presidential Action Committee on Power (PACP) which was aimed at removing “red-tape”, achieve policy consistency and cut-through bureaucracy indecision making (Nnaji 2011). A Presidential Task Force on Power (PTFP) was created for day-to-day planning, developing and driving forward the Reform Plan for the Nigerian Power sector which was the Electric Power Sector Reform Act (EPSRA) enacted in 2005. The essence of the Act was to drive the reform processes as follows; transfer NEPA’s assets to PHCN and subsequent unbundling into: A transmission company, TCN, 6 generating companies, GenCos, 11 distribution companies, DisCos, NELMCO to take over PHCN stranded assets and liabilities, establish a bulk trader of power as a
broker between power producers and DisCos, establish an independent sector regulator: (Nigeria Electricity Regulatory Commission (NERC) charged with the responsibility of tariffs regulation and monitoring of the quality of services of the PHCN, provide for a consumer assistance fund, develop competitive electricity market, licensing of IPPs and ring-fence distribution companies and establish a rural electrification agency, (REA). Table 2 presents the profile of electricity infrastructure in Nigeria pre-1999 and post 1999.

Table 2: Profile of Electricity Infrastructure in Nigeria

<table>
<thead>
<tr>
<th>Generation</th>
<th>Pre 1999</th>
<th>Post 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal</td>
<td>4058MW</td>
<td>5010MW</td>
</tr>
<tr>
<td>Hydro</td>
<td>1990MW</td>
<td>1900MW</td>
</tr>
<tr>
<td>Installed Capacity</td>
<td>5996MW</td>
<td>6910MW</td>
</tr>
<tr>
<td>Available Capacity</td>
<td>1500MW</td>
<td>4451MW</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmission</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>330KVA line</td>
<td>4800KM</td>
<td>4889.2KM</td>
</tr>
<tr>
<td>132KVA line</td>
<td>6100KM</td>
<td>6264.06KM</td>
</tr>
<tr>
<td>Transformer Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>330/132KV</td>
<td>5618MVA</td>
<td>6098MVA</td>
</tr>
<tr>
<td>132/33KV</td>
<td>6230MVA</td>
<td>7805MVA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distribution</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>33kv lines</td>
<td>37,173km</td>
<td>48,409.62KM</td>
</tr>
<tr>
<td>11kv lines</td>
<td>29,055km</td>
<td>32,581.49KM</td>
</tr>
<tr>
<td>415v lines</td>
<td>70,799km</td>
<td>126,032.79KM</td>
</tr>
<tr>
<td>Transformer capacity</td>
<td>8,342.56MVA</td>
<td>12,219MVA</td>
</tr>
</tbody>
</table>

Source: Oluseyi, Akinbulire and Awosope (2012)

Presently, there are 11 electricity distribution companies (discos) in Nigeria. The coverage areas of the 11 companies are indicated in table 3 below:

Table 3: Key Information of the 11 Discos in Nigeria

<table>
<thead>
<tr>
<th>S/N</th>
<th>DISCOS</th>
<th>Percentages Load Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abuja Distribution Company</td>
<td>11.50%</td>
</tr>
<tr>
<td>2</td>
<td>Benin distribution company</td>
<td>9%</td>
</tr>
<tr>
<td>3</td>
<td>Eko Distribution Company</td>
<td>11%</td>
</tr>
<tr>
<td>4</td>
<td>Enugu Distribution Company</td>
<td>9%</td>
</tr>
<tr>
<td>5</td>
<td>Ibadan Distribution Company</td>
<td>13%</td>
</tr>
<tr>
<td>6</td>
<td>Ikeja Distribution Company</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Jos Distribution Company</td>
<td>5.50%</td>
</tr>
<tr>
<td>8</td>
<td>Kaduna Distribution Company</td>
<td>8%</td>
</tr>
<tr>
<td>9</td>
<td>Kano Distribution Company</td>
<td>8%</td>
</tr>
<tr>
<td>10</td>
<td>Port Harcourt Distribution Company</td>
<td>6.50%</td>
</tr>
<tr>
<td>11</td>
<td>Yola Distribution Company</td>
<td>11.50%</td>
</tr>
</tbody>
</table>


However, due to the reforms in the sector, there are now several power plants owned and managed by the private sector. Although there are Independent Power Producers (IPPs) existing in Nigeria prior to the privatisation process, the Nigerian Electricity Regulatory Commission (NERC) has recently issued about 70 licenses to Independent Power Producers in order to improve the power situation in the country (Onochie, Egware and Eyakwanor (2015). Given the above, the next section of this paper examines the impact of deregulation on performance of the Nigerian power based on empirical literature.
4.0 Impact of Deregulation on Performance of the Nigerian Power Sector

The future deregulation of the power sector is expected to enhance the performance of the Nigerian economy. Thus, the privatisation should result in decisions being taken based on technical and commercial merit divorced from political considerations. They have been literature that examined the impact of power sector on performance. Among such works is Okoro and Chikuni (2007) looks at the overall power sector reforms as well as evaluates the opportunities and challenges there from; while advocating introduction of a demand side management (DSM) program by Power Holding Company of Nigeria (PHCN) as a way of reducing energy consumption among customers with emphasis on energy conservation, energy efficiency and load management. The study highlighted the on-going federal government of Nigeria power sector reform programme. The study envisaged that the reform programme will usher in a competitive energy market, break the monopoly enjoyed by NEPA and increase the rate of technology development as well as provide jobs for both technical and non-technical graduates. However, for the programme to bring about the above positive changes, the following recommendations should not be glossed over. Thus, the study recommended that government should ensure level playing fields for the independent power producers and other genuine investors in the power business.

Adoghe, Odigwe and Igbinovia (2009) examined the power sector reforms, effects on electric power supply reliability and stability in Nigeria. The methodology adopted was to review the power sector before and after the reform, effects of the reform on electricity supply, reliability and the expected impact of the proposed models on the Nation’s economy. They argued that the major problems affecting the model been pursued especially in a developing country like Nigeria were also examined. The study opined that if all identified problems militating against NEPA meeting the energy demand of the country is met by the reformed energy sector, in no distant time Nigeria can boast of an Electric Power Industry (EPI) that can meet the needs of its citizen in the 21st century and place the nation as one of the industrialised country in the world.

Wara, Abayomi-Alli, Umo, Oghogho and Odikayor (2009) examined the various reforms carried out in the Nigerian power sector between the year 1999 and 2007 and its impact on the life of the average citizens. Efforts in the study were made to review relevant literatures, questionnaires were administered and forty-nine responses were received and the result was analyzed through the use of simple percentages and correlation coefficient. The product moment result was negative implying a perfect correlation in the negative direction meaning that deregulations and reforms are not improving the power sector of Nigeria yet. The study recommended that the government should continue the rehabilitation of the various power systems in a guided manner to allow a core Nigerian investor, consider alternative sources of energy like solar, tide, biomass and wind.

Stankov (2010) analyzed the influence of credit, labour and product market deregulation policies on economic growth in more than 70 economies over a period of 30 years while addressing both the issues of reform measurement and its endogeneity. Specifically, the study combined the difference-in-difference strategy with an approach to the endogeneity of the reform timing. The study found that that deregulation contributed to the per capita GDP levels of the early reformers relatively more than to the ones of the late reformers. Also, the study found that accelerating credit market reforms leads to a large growth acceleration effect for the late reformers, which points to large dynamic welfare gains from deregulation which suggests that a large-scale credit market re-regulation in the aftermath of the Great Recession is a misguided approach to deal with the consequences of the financial crisis.

Isola (2012) examined the challenges and prospects of power sector reform in Nigeria by employing a purely descriptive analysis. The focus of exposition is on the market structure, market design and supply gap in the electricity generation within the context of power reform. The study adopted oligopolistic game theory based models of Cournot, Bertrand and supply function equilibrium to explain the complex interest groups in Nigeria energy sector and relate them to experiences in other countries. The study concludes with a number of suggestions that can move the power sector forward from its lacklustre performance of the years.
Isa and Brown (2014) discussed the impact of privatization of Power sector in Nigeria. Using the political economy approach, it argues that the privatization of the Power sector in Nigeria is based on capitalist values, ideology, orientation and assumption. The assumption of free market presupposes that the market operates in a competitive environment. This is not however true in the real-life situation as power sector privatization in Nigeria has only succeeded in entrusting the collective wealth of the people in the hands of few elites, retrenchment of workers, high electricity bills without commensurate services among other negative impacts. It therefore recommends that there is need for a level playing field for more competent investors to come into the industry. Also, the regulatory body need to check the excesses of the new Distribution companies by regulating tariffs and quality services. This will go a long way in improving the situation.

Anyaka (2014) were of the view that electricity as a vital tool in national development is receiving increasing attention from various regimes of Government in the third world countries particularly Nigeria. Obviously, there is great deal of potentials for investors in the country; this is the idea behind the reform in the industry. The recent total deregulation in Nigerian power sector industry is veritable pointer to this argument. This unavoidable fact has led to the proffered solutions herein stated in this work for other developing economy. On this note, the success of privatization in the telecommunication industry in Nigeria has informed the recent implementation of restructuring of the electric power sector in the country. They study thus concluded that a lot of benefits to achieve from electricity deregulated power sector if the stake holders can give it the necessary impetus that it requires to take off. Deregulation therefore will improve service and help to improve economy of any developing nation that takes part in it thereby, encouraging investors, even though the price may be high initially but with Government subsidy during this period then the investors would have faith in deregulation in the third world emerging economy.

Gatugel (2015) compared power sector reforms and performance in India and Nigeria and posited that both countries are experiencing rapid economic and population growth which eventually led to massive increase in demand of power. This has put so much stress on the two countries’ power sectors making their governments to implement policies and reforms aimed at tackling the challenges. India was able to transform its power sector with the enactment of the Electricity Act 2003. The Electricity Act has succeeded in opening the generation and the distribution sectors for private sector participation. This eventually led to massive increase in the country’s generation and transmission capacities which ultimately placed India as the third biggest producer of electricity in the world in 2014. Nigeria which started its reform in 2005 with the adoption of the Electric Power Sector Reform Act 2005 is still experiencing enormous challenges in its power sector. The study thus examined the policies and reforms implemented in the two countries and compared their overall performance in terms of capacity and efficiency. The study concluded that the electricity act opened the generation and the distribution sectors for private sector participation. The mega power policy and the renewable energy policies like the feed-in tariffs according to him contributed immensely to the growth and development of the Indian power sector. The country’s generation capacity was about 100 GW in 2002 which rapidly rose to about 237 GW in 2014. Although its transmission sector is also witnessing remarkable improvements with the adoption of higher transmission voltages up to 765 kV, still its transmission and distribution losses are among the highest in the world. The country has been taking drastic measures to curb the inefficiencies in the in its power sector by promoting renewable energy generation and energy efficiency policies and laws like the “perform, achieve and trade” mechanism.

5.0 Conclusion and Recommendation
The effect from deregulation on performance as well as improving the living standards and or the growth of that sector varies across economies and across the timing of the deregulation reforms. As observed from this study, the impact of deregulation of the Nigeria power sector has been frosty to say the least. However, the increased in number of generating, distribution and transmission companies in Nigeria though not presently been felt has the potential to increase power supply in Nigeria. It is
believed that when all the power stations granted licence by NERC becomes fully operational, power generation and distribution in Nigeria will improve. Just like the communication and oil sectors which have been fully deregulated, the competition which deregulation brings to the sector will assist in improving power sector performance in Nigeria. Thus, Deregulation is necessary for improved performance of the Nigerian power sector.

References


