

Research Article

Energy Sector and Business Development of a Developing Economy: Evidence From Nigeria

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A B S T R A C T

This paper focuses on energy sector and Business Growth of a developing economy with particular reference to Nigeria. Fundamental problem inherent here has resulted in the use of obsolete technological equipment, low installed capacity, poor power generation, depreciation of equipment, ineffective regulatory framework and water and gas constraints amongst others. These constraints impact greatly on energy generation and supply thereby affecting survival of business and their performance. The Ordinary Least Square technique (OLS) was adopted in the methodology. The result reveals significant linkage between energy supply and business development. This study therefore advocates the use of improved equipment and improvement of Energy supply rate so as to foster economic and business growth. A negation of this paralyses the survival of business organizations.

Keywords: Aniza Energy Sector, Least Square Techniques, Business Development

Introduction

One of the fundamental variables and or fulcrum upon which business development of a nation revolves has been the energy sector. Despite this, the Nigerian energy sector has been a subject of public dispute in view of the prevailing constraints. Thus, the problem of energy supply in Nigeria has been continuous and relapsing. Different governments in Nigeria from military to civilian administration have embarked on energy restructuring programme as a means of addressing energy problems in the country. These efforts resulted in a bundle of failures and misfortunes despite huge capital expenditure budgeted and released to the sector by government. The Energy sector has shown very low capacity. Similarly, the extent of transmission and distribution capacity are currently inadequate, inefficient and below the expectation of the Nigerian citizens. The energy sector is characterized by a number of other constraints particularly low power

generation, inadequate transmission and distribution. Similarly, low local content in technological and human resource input remains a major problem of the sector. The increase in gas production necessary to supply the planned gas power stations and develop other gas-based industries and petrochemicals are yet to be stabilized. High rate of insecurity in the country, most especially in the Niger Delta, poses a reasonable threat to this subsector and business development. This explains the postulate of rationality as opined by Hawod (2004) that energy sector gaps have hindered the business development of Nigeria. For the effective sustenance of nationally balanced and improved economic and social well-being of the people, successive state government and agencies have established various public utility ventures such as independent power plants in their domain. This could have been an exclusive preserve of private sector. The prevailing economic crunch in the country has however necessitated the review of

government's involvement in these parastatals. In essence, the unique historical background of the developing nations has necessitated the government's extensive intervention in most of the economy, particularly, Energy Sector.

The inadequacy of the energy supply to effectively meet the demand for power consumption in Nigeria has been yet another greatest problem. Energy generation capacity has been abysmally low; this has been run as a vertically integrated company saddled with the responsibilities such as generation, transmission, distribution and sale of electricity to customers. The rapid growth rate makes it difficult for the installed capacity to cope with the requirement of both residential and industrial consumers. Another constraint has been energy supply outages in the manufacturing and industrial sectors resulting in energy crisis.

The inability of the energy sector to effectively and efficiently meet the demand for energy consumption in the country has its genesis from these problems which among others include but are not restricted to poor generation capacity relative to installed capacity, inadequate supply, old technological power plant, fluctuation in water levels powering the hydro plants, vandalization of existing power infrastructure, gas supply constraint, inadequate maintenance of equipment coupled with transmission, distribution capacity that are constantly inadequate ; in wheeling and distributing generated power with high transmission losses equally constitute problems. The inability of businesses to access the needed energy supplies for business development constitute an impediment to business expansion and survival in Nigeria.

The industrial/ manufacturing sectors and residential quarters experience frequent energy outages. This reveals the inability of the energy sector to meet the energy needs of the Nigerian people and the business communities, hence restructuring programme was introduced in order to ensure regular energy supply and improve business development of the overall economy. When viewed from analytical perspective, the other problems include inadequate energy generation capacity, insufficient transmission and distribution, high technical losses, ineffective regulatory, maintenance and repair issues, gas constraint, water constraint, high frequency and line constraint.

As a result of these constraints, there have been cases of breakdown of energy equipment and frustrating experiences in the transmission system. This necessitates the application of rationing and suppressed demand services thereby leading to low and inadequate availability of electricity for consumption. In this circumstance energy sector in Nigeria has experienced supply crisis which subsequently impacts on industrial growth, socio-economic activities as well as business development indicators.

Energy sector having a significant relationship with all the business indicators such as manufacturing output, labour, industrial production, technology, import and export variable and inability to satisfy the needs of the individuals as it relate to business development, facilitate industrialization of Nigeria are resolved, Nigerian people and researchers would continue express concern on the causes of the delays on the anticipation positive result of the restructure on energy sector.

This study in its six sections focuses on fundamental problems of energy sector in relation to business development in section one which is the introduction. Section two captures Energy Sector and Business development in Nigeria in relation to industrialization. Empirical Review of Related literature forms the foundation of section three while section four concentrates on the methodological issues. Section five discussed the implications of low energy generation growth and survival. The paper terminates with advocacy and concluding remarks in section six.

Energy Sector and Business Development in Relation to Industrialization

The supply of energy becomes very essential for communication, internet, running of factories, hospitals, industrialization, and business development of energy as a supporting variable. For Nigeria to meet up with their development plans of industrialization boosting the nation's energy supply becomes a desideratum geared at driving the business development in the country. Nigeria is blessed with industries, sea ports, oil deposit and oil companies as well as other types of businesses supply is considered essential and of course key element to modern industrialization in the country.

Nigeria is blessed with industries, sea ports, oil deposit and oil companies as well as other types of business and energy supply is considered essential and of course key element to modern industrialization in the country. Business activities are driven by power in all ramifications. Industrialization which is associated with the transformation of a society from an agriculturally based society to that of the manufacturing of goods and services can only be sustained through satisfactory power supply. Nigerian Energy regulatory (NERC) scored the eleven (11) distribution companies (Discos) and other generation companies (Gencos) low, mostly for their poor data submission. Abdullah, (2016) maintained that the discos underperformed as their average of 55 percent.

Aggregate Technical Commercial and Collection (AT & C) losses was unacceptable. Customers metering level had fluctuated from 46 percent to about 44 percent. This could be due to wrong data submission to NERC, variation in the number of customers and meter installation statistics. The

Generation companies (Gencos) had their electricity output reduced from 70 percent earlier in 2005 to less than 65 percent with more stranded (unused) power. Thus, there is a need to improve the performance in the sector by ensuring that the licensees live up to their expected responsibilities. Eleven (11) electricity distribution companies that were owed commitment of metering about 1,640,411 customers have not been able to meet up between January and October 2016. Their inability to make substantial progress as regarding metering their customer is attributed to high foreign exchange rate, and the present day tariff they have not are not cost reflective as they are being regulated.

To meet the vision 2020, Government has set a generating target of 40,000MW. To attain this projected increase in capacity requires large investments. This may be beyond the resources available to Government. In view of this, private sector participation is deemed essential to achieve this growth. Government is therefore encouraging international oil companies (IOCs) operating in the country to embark on independent power projects (IPPs), as part of the reform. The IPPs shall not only boost electricity supply but also will provide necessary infrastructural support for economic growth and guarantee additional revenue for the participating IOCs.

Empirical Discourse

Energy infrastructure and consumption have a positive linkage with productivity, business development and economic growth (Rud, 2012). Adenikinju (2005) maintained that energy plays a critical role in economic development. Similarly, Isaksson (2010) opined that output per capita, and energy infrastructure are co-integrated and causation runs in two directions, but concludes from analysis of cross-country data that energy infrastructure is significant a factor that explains differences in business and industrial development among different nations of the globe.

Olaniyan (2010) in his study on the impact of the energy reforms on economic growth using Gambia and Burkina Faso as a center of focus for the periods of 1970 to 2005 and using Granger causality tests and co*- integration analysis came up with result that energy reform does not cause economic growth of Gambian and Burkina Faso. This is against apriori expectation and regional partnership viewed prominent to increase access to cheaper energy sources.

Subair and Oke (2008) examined the relationship between energy supply and economic development and they categorized the relationship into four on the basis of population and land space thereby making comparison with small countries with adequate energy supply and big countries with insufficient energy supply such as Nigeria. The result revealed that the need for Nigeria and some

African countries to generate adequate energy for business development to blossom. This is because energy supply is an input to production. It affects output, profitability, employment and ultimately the level income.

In similar vein, Kaseke et al. (2013) examined the relationship between energy consumption and Gross Domestic Product (GDP) which found bi-directional causality and uni-directional causality in both directions, in different countries. Numerous developing country-specific studies support the conclusion that energy supply enhances productivity. Using 1970-2000 panel data for South Africa, and a range of nineteen infrastructure measures, Fedderke and Bogetic (2006) opined that energy generation is positively related to labour productivity and total factor productivity growth in South African economies. Reasoning from the same direction, Wolak (2003) in his research on "Designing competitive Wholesale Electricity Markets for Latin American Countries" used the outcome from the Electricity Supply Industry restructuring in the United States, Europe and Austria and New Zealand to identify the major challenges facing electricity market design processes.

Again, Fisher, Guitierrez and Sera (2003) popularized that the implications of economy of Chile on efficiency of business in an economy and the privatization of the electricity sector between 1985 and 1989. From then, the proceeds and installed capacities were 4016MW and 10045MW respectively. The result of the research revealed unit cost of production declined, labour productivity increased, implying that during privatization business becomes profitable. The study indicated also that energy reforms helped to improve efficiency of business and social being of the people of Chile.

Thus on the impact of power disruption in relation to productivity of the manufacturing sector in Nigeria, Moyo (2012) articulated that power outage variables are associated with low and severe implications on productivity. The analysis revealed that power outages have a negative effect on productivity in small firms but an insignificant effect in large firms, perhaps as result of generator ownership patterns. The closure of 820 manufacturing companies in Nigeria between 2000 and 2008, and of a further 834 in 2009 alone as orchestrated by manufacturing of Nigeria (MAN) was associated with the high costs of infrastructure (Akuru et al, 2011). In this connection, World Bank Enterprise Survey data bases which include data on total sales and costs were analyzed to determine the extent to which firms with different characteristics have higher unit costs when exposed to outages.

The analysis undertaken for this study revealed that while inadequate supply of electricity affects SMEs overall costs generally it does not affect the unit cost of production contrary to Apriori expectation. This explains why small and medium Enterprises (SMEs) use generators during

power outages despite their higher cost of electricity. This is consistent with the articulations of Cissokho et al. (2013) for SMEs in Senegal.

Erbaykal (2008) focused his study on the effects of oil and electricity on economic growth under power reform in Turkey for the periods 1970-2008- a duration of 38 years' time series data was applied and the findings what both oil and electricity had positive effect on economic growth of Turkey.

The power reform was unique as demonstrated by Hulten Bennathan and Srinivasan (2005) on the implications of the Indian power reforms on manufacturing sector for the period 1972 to 1993. Focus was to measure power generating capacity using fixed effects estimator. The finding was that the existing system has removed bottlenecks in governance implying that the effects of reform were greater in a relatively underdeveloped networking system.

The power sector Reform of India enunciated inadequate inter-regional transmission links. Ageing sub-transmission and distribution network resulting in energy cuts and failures. This moves in concert with the fact that viable energy reforms contribute substantially to the all-round growth of Indian economy.

Again, Mallick (2007) embarked on intellectual enquiry in respect of economic growth of India from 1970 to 2005. Using Vector Auto Regression (VAR) technique, it was discovered that coal consumption had a positive implication on economic growth and business development while natural gas and power consumption have a negative influence on economic growth in India contrary to apriori expectation.

Unique in its own nature, Baro (2004), Noriega and Fontenla (2005) in their model for the Mexico reforms on the power sector revealed an interesting picture. The outcome of the Mexico reform was positive for two years and it was permanent for a period of about twenty (20) years supporting the fact that manifestation comes only after a long time. As opined by Boreinstein, Bushnell and Wolak (2002) a measuring market inefficiencies in California's effort in restructuring wholesale electricity market revealed that the basic cause of the California's three large load serving entities purchased 100 percent of their total energy and ancillary service requirements from day-ahead and shorter horizon spot markets. This led to making unilateral profit maximizing mark up of price above the marginal cost of producing electricity. For a peculiar Nigerian contemporary situation, Jamasb (2004) in his study of the impact of energy sector reform with particular reference to privatization of energy supply in Nigeria discovered that the reform led to capacity utilization and lower prices. Equally, the unbundling of the energy sector impacted positively on the economic efficiency and business performance of Nigeria after using

the standard structure-conduct-performance model to test the implication of the market structure.

Newbery and Politt (2006) examined the benefits of reforming the central Electricity Generation Board and its productivity for the period 1989 to 1996. The study is anchored on an insight comparing the post privatization performance of the England and Wales Central Electricity Generation Board's (CEGB) assets and the net impact of privatization.

By extension the situation in Steiner (2001) whose study focused on the efficiency and prices in Nigeria measured by capacity utilization rate and the margin of energy generation in Nigeria revealed that restructuring and private ownership is expected to improve efficiency, liberalize regulation, lower industrial and residential prices. Further evidence using panel data from 1987 to 1996 revealed that both unbundling and private ownership of generation and transmissions were significantly correlated.

An examination of the market structure in the Generation of the Nigerian Electricity Industry exposed the fact that countries that adopted privatization had higher and improved efficiency than the countries that are not privatization.

This subsequently moves at par with the articulation of Penrose (2003) in his study who argued that energy sector reform had induced and encouraged competition, thereby enhancing Business Development vis-à-vis economic growth and efficiently in the resource utilization.

This is through the application of the best model for analyzing energy sector reform which is oligopoly model. Further evidence in respect of energy sector and business development as opined by Ndebbio (2006) was that the level of energy production, consumption and supply determines whether a nation is industrialized or developed and he maintained that any nation's energy consumption per-capita in kilowatt hours is proportional to its state of industrialization. Thus Nigeria energy consumption performance is very poor compared to some Sub-Saharan African countries. This explains why Nigeria and other African countries should work assiduously in all fronts to generate more power based on historical antecedents. It is clear that the failures of Nigerian energy supply source to provide the nation with stable power supply has elicited lots of public disquiet and debates. Power reform has positive effect on the power generation and economic growth of the Turkey and other nationalities as corroborated by Jamasb (2004), (Steiner), 2001; Barros (2004) on power sector reform which revealed that the reform has strong effect on the economic growth as well as business development of nations.

Nigerian power reform, as opined by Ukong (2009) on

power consumption in Nigeria, using a simple regression analysis, maintained that there is a positive relationship between power consumption and industrialization which is important for accelerated growth and performance of economy. Reasoning in same direction, Shuyun and Donghua, 2011; Ma et al. 2011), maintain that energy consumption is a necessity for economic growth in that energy is viewed as a direct input in the production process and also Energy is an indirect input that complements labour and capital inputs. Thus there exist a bi-directional or feedback relationship between energy consumption, economic growth and business development.

Put differently from the point of view of Tumsia, Chebbi and Boujelbene (2009) for the period of 1971 to 2009 and using Multivariate Co-intergration methodology with the combined results of Casualty analysis and impulse response functions do not assume that energy and Business product (GDP) are neutral with respect to each other in Tunisia but rather indicates a bidirectional causality between GDP and energy consumption in the long run. This implies that Tunisia is an energy dependent economic nation.

Oldularo and Okonkwo (2009) in testing the case of Tunisia for the period 1974-2011 has been unique in testing linkages between energy consumption and economic growth using the Johansen co integration technique. The empirical result reveals that there exists bidirectional causal relationship between energy consumption and economic growth in relation to business development in the long run. There exist a linkage between energy consumption and sustainable economic growth in Tunisia. This supports the situation in Greece as opined by Tsani (2010) examined the casual relationship between energy consumption (both at aggregated and disaggregated levels) and economic growth business development for Greece for the period 1960-2016 and using Toda and Yamamoto technique. The findings equally suggest unidirectional relationship between energy consumption and real GDP at aggregate levels while bidirectional relationship with exception of transport energy consumption at disaggregated levels. In the case of India using time series data for the period 1971-2006 through the application of ARDL model, Toda and Yamamoto multivariate model, their findings indicate the evidence of bidirectional Granger causality between energy consumption and CO² emissions in the long run but neutral relationship between energy consumption and economic growth and business development.

Pradhan (2010) with the use of time series data from China for the period of 1970 to 2007 while applying production function and causality approach discovered that there exists causality from economic growth to energy consumption with infrastructure and transport as additional ng different variables which also reports unidirectional

causality. Using different methodology and different time period for China. Shunyun and Donghua (2011) examined the causality between energy consumption and economic growth (1985 to 2007) within a multivariate framework by applying fully modified OLS, the results indicate the presence of bidirectional relationship and economic growth which contradicts the findings of Pradhan (2010). In same vein, Viahinic-Dizdarevic and Zikovic (2010) adopted Error Correction Model (ECM) to investigate the role of energy consumption on economic growth of Croatia. This was for the period of 1993 to 2006 and their results support unidirectional hypothesis that economic growth is adjudged a pre-requisite to the growth of petroleum consumption. Thus, electricity consumption results in business development, economic growth and greater performance of the economy.

In a study of the implications of electrification reform on productivity, it was discovered that they are closely associated with direct and indirect use of energy as an input. The consumption of energy has been one of the fundamental indicators of the level of development of any nation. Thus, energy reform induces growth in consumption policy of countries. Developed countries use more energy per unit of economic output and far more energy per capita than developing countries. This signifies adoption of increasingly more efficient technologies for energy production and utilization as well as changes in the nature as well as composition of economic activities. A shift in the composition of energy use when considered reveals that energy use and the level of economic activity are found to have a symbiotic linkage and so the prospect of large reduction in the energy consumption for economic activity appears restricted. Thus, the accelerated demand leads to scarcity of energy and increasing cost have severe implications for business development and economic growth. This viviparous and increasing element of energy explains the need to increase the supply of energy and proffer alternative energy sources and energy conservation methodology.

Stylized Facts: Energy and Business Growth

Business Growth equation: The equation ascertains the implications of low energy generation relative to installed capacity on Business Growth.

$GDP = f(ENES, MANU, INDP, IMP, EXP, CAPU, EXCHR, BOP)$

Econometrically we have

$GDP = b_0 + b_1 ENES + b_2 LMANU + b_3 LINDP + b_4 LIMP + b_5 LEXP + b_6 CAPU + b_7 LEXCHR + b_8 LBOP$

Where

Et = error term/ disturbance or stochastic term

LGDP	=	Log of economic Growth
LMANU	=	Log of Manufacturing
LINDP	=	Log of Industrial Production
LIMP	=	Log of Import
LEXP	=	Log of Export
LCAPU	=	Log of Capacity Utilization
LEXCHR	=	Log of Bop

Methodological Issues and Related Statistics

The control variables in these study areas as contained in the Equation stated below. This model provides an examination of the implication of Energy Sector on Business Development provide by Gross Domestic product. Gross Domestic Product is the total market value of all final goods and services produced within a nation's geographic borders over a period of time. A boost in manufacturing production offers

YEAR	Manufacturing 1990-100	GDP	INDP	IMPT	EXPT	CAPU	BOP	EXCHR
1990	100.0	1536.9	40.3	45717.9	105886	130.6	16458.2	131
1991	100.3	1617.2	42.0	89488.2	121535	138.6	5959.5	131
1992	112.2	1653.4	38.1	143151.2	205612	136.2	-65271.8	131
1993	89.3	1655.8	37.2	155629.4	218770	131.7	-95271.8	131
1994	88.5	1772.5	30.4	162788.5	206059	129.2	-42623.3	131
1995	83.7	1810.1	29.3	755127.7	950661	128.8	-195316.3	131
1996	85.1	1854.2	32.5	562626.6	1309543	132.5	53152.0	131
1997	85.0	1839.8	30.4	845716.6	1241663	140.6	1076.3	131
1998	81.7	1724.9	32.4	837418.7	751859	133.9	-220675.1	131
1999	84.5	1859.8	34.6	862515.7	1188960	129.1	-32664.3	131
2000	84.8	1738.3	36.1	985022.4	1945723	138.9	314139.2	131
2001	84.5	1689.9	42.7	1358180.3	186794	144.1	24738.7	131
2002	89.8	2237.3	54.9	1512695.3	1744178	145.2	-563483.9	131
2003	90.3	6180.0	56.5	2080235.3	3087886	147.0	-162298.4	130
2004	89.4	2763.6	55.7	1987045.3	4602782	151.2	1124157.2	133
2005	89.4	2779.3	54.8	2800856.3	7246535	158.8	-1473537.1	130
2006	88.1	3907.6	53.3	3108519.3	7324681	152.3	-2406340.6	128.29
2007	89.0	3150.2	54.6	3911952.6	8309758	154.1	-2379064.66	121
2008	88.8	3279.0	54.2	5238195.2	10114738	155.1	-4314504.58	127
2009	88.6	3445.6	54.0	5116459.7	8402151	153.8	-3927487.97	150.85
2010	88.8	3291.6	54.3	7614656.2	11542024	154.3	-2470728.58	150.85
2011	88.8	3338.8	54.2	10235174.2	14240232	154.4	-1099997.48	155.71
2012	88.7	3358.7	54.2	9109032.5	15002868	154.2	-1242324.17	157.31
2013	88.8	3329.7	54.2	9672103.4	14621550	154.3	-117116083	157.9
2014	88.7	3342.4	54.2	9390568	14812209	154.3	-1206742.5	157.6
2015	88.7	3343.6	54.2	9531336	14716880	154.3	59161412.8	157.8
2016	88.7	3343.0	54.2	9460951.5	14764544.3	154.3	-30184077.7	157.7
2017	88.7	3343.3	54.2	9496143.8	8090712.2	154.3	-31089745.3	157.8

A careful perusal of the stylized fact regarding Energy supply and Business growth of Nigeria for period 1990 to 2017 reveals the pattern and trend of Business Growth in Nigeria. This embraces energy supply, that is, megawatt per hour, Rate of capacity utilization, rate of import, export, industrial production and exchange rate as they relate to manufacturing subsector for the year 1990 to 2017. These variables and indicators remain at different levels for the years as reflected in the stylized facts scheduled below.

prospects of a growing availability of manufactured products and increased employment. Industrial production measures the physical volume of output of a nation's manufacturing sector including factories; it is a key economic indicator in macro-economic analysis. Hence, electricity supply is an instrument of industrialization. Import is goods/services brought into a jurisdiction, especially across a national border, from an external source for purpose of trade. Export refers to selling goods and services produced in the home country and exported at a particular point in time to another country. Capacity utilization is the extent to which the productive capacity of a plant, firm or country is being used in generation of goods and services. The capacity utilization of electricity power plants in Nigeria has been very low that most rural communities are not connected to the national grid system and therefore lack the electricity-based infrastructures that would empower the establishment of social and industrial amenities. Exchange rate is basically the rate in which one currency is exchanged for another. It measures the price of one currency in terms of another currency. Balance of Payments (BOP) is the record of all economic transactions between the residents of the country and the rest of the world in a particular period over a quarter of a year or more commonly over a year.

The result reveals an interesting picture, in that the coefficient of the constant term is 24.0821 and it's statistically significant at better than 0.01 percent. This shows that energy generation is relative to installed capacity thereby increasing business growth in the emerging economy.

When energy generation is regressed in Gross Domestic Product (GDP) the estimated coefficient carries a positive sign and it is statistically not significant. This is indeed at variance with apriori expectation. The coefficient of MANU is positively signed and it is fairly significant, implying that the increase in energy generation and supply contributes to increase in business growth.

The coefficient of Industrial production also carries a positive sign and is statistically significant, which implies that Industrial Production facilitated by energy generation relative to installed capacity lead to improvement on business growth.

The coefficients of Import and Export in relation to business development of Nigeria are statistically significant, except Import which is against apriori expectation; this implies that business development, facilitated by satisfactory energy supply encourages export of goods and service which subsequently result in better business growth situation in the country.

Similarly, the coefficient of Capacity Utilization (CAPU) and real Exchange Rate are positively signed and are both statistically significant at 0.4 percent and 0.5 percent

respectively. This demonstrates the implications of energy sub-sector to business development and subsequent business growth of the country.

When Gross Domestic Product (GDP) is regressed with Balance of Payment (BOP), the coefficient of the constant term is positive and is statistically significant at 0.02 percent, implying that the energy subsector facilitates business development which in turn results in improved business growth. The Durbin-Watson equation is 2.13692 and it is greater than the Adjusted R-Square (R^2) of 0.811783 signifying that there is no case for auto-correlation in the model.

The second objective reveals that energy supply has implications on business growth meaningfully when regressed on Gross Domestic Product (GDP), the coefficient estimate carries a positive sign and it is statistically not significant and it was at variance with apriori expectation. It also implies that the increase in business development in relation to energy supply contributes to enhanced business growth. The coefficient of the industrial production facilitated by energy supply leads to improvement in business growth. It was in agreement with Kaseke et al. (2013).

The coefficients of IMPORT and EXPORT in relation to business growth are statistically significant, except Import which is against apriori expectation; this implies that business development, facilitated by satisfactory energy supply encourages Export of goods and services which subsequently result in better business growth situation. To this end, it is expedient to suggest that efforts should be made to improve the nation's export and this could be done as follows:

- Strict regulation of foreign good.
- Need to ensure effective and efficient energy supply by providing infrastructure that would drive businesses through formulation of relevant policies in this regard.
- Similarly, the coefficient of Capacity utilization (CAPU) and real exchange rate are positively signed and both are statistically significant at 0.4 percent and 0.5 percent respectively. This demonstrates the contributions of energy sub-sector to business development and subsequent business growth. Wherever Gross Domestic Product is regressed with Balance of Payment (BOP), the coefficient of the positive and statistically significant at 0.02 percent implying that the energy subsector facilitates business development and the argument becomes that if export is encouraged, it will enhance the BOP and ultimately the nation's GDP. It is also related to some of authors assertions like Akinola (2008), Watts (2001) and Sarbeshi (2008)

Conclusion

A study on Energy Sector and business development of

developing economy such as Nigeria is fundamental as no business organization can perform without significant and sustained energy supply. This establishes a linkage between the variables of Energy Sector and Business Growth. The econometric model (equation) becomes fundamental the predictive power in the model and the implications thereof are examined. Government of developing nations are urged to foster, improve and create the energy supply so as to ensure greater productivity in the business sector thereby substantively contributing to economic growth of the nation.

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