

ASSESSING THE ECONOMIC IMPLICATION OF ENERGY INSECURITY IN NIGERIA

Fubara Susan Amiesa, Emerald Energy Institute, University of Port Harcourt, +2348063741593, susanfubara@gmail.com
Omowumi Iledare, Emerald Energy Institute, University of Port Harcourt, +2348169209627, wumi.iledare@uniport.edu.ng
Onyije Israel, Emerald Energy Institute, University of Port Harcourt, +2347035587892, ijonyije247@gmail.com

Overview

Energy is central to the economic and social development in any nation. Therefore, energy security is an issue of global concern. The concept of energy security is multidimensional and it cuts across political, environmental, economic and technological dimensions. The economic dimension of this concept deals with pricing and macroeconomic impact of energy insecurity. IEA (2011), defined energy security as an uninterrupted availability of energy sources at an affordable price. This implies that energy security is anchored to availability, affordability and sustainability. Energy availability is dependent on private or public investment and well-articulated public policy that attracts investors while affordability is tailored to the structure of the energy market and regulation imposed on pricing. The availability and affordability of energy tends to increase energy consumption and with the rapid rise in population growth, a sustainable access to energy must be ensured. Hence, the sustainability dimension entails the regulation of energy resources exploitation and consumption, to ensure that energy resource is also preserved for the future generation.

Energy security is delineated into a risk timeframe of long-term and short term. The Long-term energy security is associated with investment in energy security that will aid economic development and sustain environmental needs in the long-run. The short-term energy security focuses on the availability and affordability of energy. This risk stresses the definition of energy security by APERC, 2007; Krut et al., 2009 which defines energy security as the availability (geological), accessibility (geopolitical), affordability (economic) and acceptability (environment and social) with concerns related to long-term depletion of fossil fuel reserves and environmental aspect of energy security. IEA (2011) noted that the lack of energy security has been linked to negative economic and social impacts such as price volatility and unavailability of energy.

Bohi and Toman (1996), echoes that energy insecurity is the loss of economic welfare that may occur because of changes in energy price or availability of energy. This implies that energy insecurity has a ripple effect on the economy of any nation. Literature reviewed have reported that energy security was primarily associated with oil supply. This is because oil was a prominent energy resource with supply disruption and price volatility issue. Nevertheless, while oil supply remains a major issue, studies are beginning to address the security issue of other energy resource as oil supply alone limits the energy security issue of a nation. Energy insecurity issue is an epidemic that hinders economic growth and development of a nation.

The Nigeria's energy security issue cuts across supply disruption, availability and affordability of electricity, crude oil price volatility and energy sustainability issue. The energy insecurity in Nigeria is unwarranted as the nation is blessed with enormous energy resources. Nevertheless, the issue of energy insecurity continuously impact on the citizen's welfare through increase in the poverty level, unemployment, low foreign direct investment etc. The effect of energy insecurity has been reported to have a ripple effect on the economy as all sectors of economy appears to be a direct or an indirect end-user of energy. It is against this background that this study aims to assess the economic impact of energy insecurity in Nigeria as it relates to volatile oil price dynamics and erratic electricity supply in Nigeria.

Methods

This study employed the use of qualitative and descriptive statistics. The qualitative method involved the review of literature and interview response of small-scale business owners. The descriptive statistic in form of graphs and charts, were used to show the trends of the impact of energy insecurity on some macroeconomic indicator. The macroeconomic indicators considered includes exchange rate, consumer-price index, employment level, business activities and government revenues-state and federal.

Results

The result from our study shows that energy insecurity has a direct and negative impact on all sectors of the economy. The trends of economic activities in some state of the country with high energy insecurity was on the decline as reflected in the state's internally generated revenue. The erratic electricity supply was observed to have affect the cost of doing business in the country as small and large scale business are forced to generate their electricity through the purchase of generating set. The purchase of generating set was shown to have increased the cost of production which results in the increase of the per unit cost of end-user commodities.

The crude oil price volatility was also shown, to have a negative impact on the exchange rate and nation's GDP. The trend in the consumer price index which measures inflation as it affects consumption, was reported to be on an increase. The exchange rate increased from an average of 158 Naira to 1 Dollar in 2014, to 192 Naira to 1 Dollar in 2015. The consumer price index trend was also on the increase. The decline in crude oil price was shown to have increased the rate of unemployment as most oil companies retrenched some of their staff to cut cost.

Conclusions

In this paper, we assessed the impacts of energy insecurity on Nigeria relative to decline in crude oil price and electricity supply disruption. We discovered that the decline in crude oil price and electricity supply disruption have a negative economic impact on the nation's GDP, internally generated revenue by states, business activities, rate of employment, exchange rate and the consumer price index. Nigeria's low economic activity due to energy insecurity stems from the country's over dependence on revenue from crude oil and its mono-product economy nature. Thus, it is in the interest of this study that we recommend that government design energy policy that creates cushion against volatile energy price. The erratic electricity supply attributed to inefficient technology, poor maintenance of energy system and pipeline vandalism, it is our recommendation that the nation adopts the use of efficient energy technology in line with international best practices. Other sources of energy should be utilized to expand the nation's energy mix and generate electricity using energy resources available in the rural areas for citizens with poor or no access to electricity.

References

- Andre, M., Begt, J., Lars, N., (2014), "Assessing Energy Security: An Overview of Commonly Used Methodologies", Elsevier- Energy 73. 1-14. <http://dx.doi.org/10.1016/j.energy.2014.06.073>
- APERC, (2007), A Quest For Energy Security in the 21st Century: Resources and Constraints. Asia Pacific Research Centre: Energy Security, Tokyo
- Bohi, Douglas. R., Toma, Michael. A., (1996), "The Economics of Energy Security", Norwell, MA: Kluwer AcademicElsevier- Energy 73. 1-14. <http://dx.doi.org/10.1016/j.energy.2014.06.073>
- Eme, E., Steve, O., Ukoha, U., (2010), "Development Challenges in the Niger Delta: Proceedings of a Round Table on the Report of the Technical Committee on the Niger Delta", IPS Monograph No. 7.
- Idahosa, O., (2011), "Energy Security in the Gulf of Guinea and the Challenges of the Powers", J.Soc.Sci 27 (3): 187- 191
- Kruyt, B., D. P. Van Vuuren, H.J.M. De Vries, And H. Groenenberg. (2009), Indicators for Energy Security. Energy Policy, 37 (6), Pp.2166 - 2181.
- Olasupo, O., (2013), "The Consequences of Militancy in Nigeria's Niger Delta Region", JORIND 11 (2). ISSN 4596-8303.