

ANALYSIS OF THE IMPACT OF ELECTRICITY THEFT ON NIGERIA'S GDP (1985 - 2016)

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Overview:

Electricity remains one of the basic infrastructure which serves as a major tool for industrialization, increase in aggregate investment, productivity and real Gross Domestic Product (GDP) which have come to be widely accepted as part of the indicators of growth in any economy as well as improvement in the quality of life (Ekpo, 2010).

The main demand of the Nigerian populace is access to electricity, but often their hopes are dashed by persistent power outages, caused by outrageous gap or imbalance in electricity (Iwayemi, 1991), which can be said to be as a result of the huge Aggregate Technical, Commercial & Collection losses in the country's power sector. Technical losses are associated with electricity generation and transmission while non-technical losses are attributed to losses from inability of Distribution Companies (DISCOs) to receive full payment or monetary value in return for the power supplied. Losses during generation can be technically accounted for, just as much as Distribution losses. In several countries, distribution losses have been reported to be over 30% but a much more substantial quantity of overall or aggregate losses proves the significant involvement of Non-Technical Losses (NTL) in electricity distribution.

Generally, NTL are mostly as a result of external factors to the power system. Electricity theft constitutes a major chunk of the NTL. As detrimental as power theft is to the power sector, especially in terms of revenue generated by DISCOs, it becomes more dreadful to know that it can only be reduced significantly and not completely eliminated. (T.B. Smith, 2004) The sale of electricity is the main form of revenue for a power distribution utility but not all purchased energy from generators is sold to final consumers of electricity. Non-technical losses from distribution has a major impact on company revenue because of the energy that is not billed. (Arango, Deccache, Bonatto, Arango, & Pamplona, 2016).

Major forms of electricity theft include bypassing (illegal tapping of electricity from the feeder), tampering with the energy meter, and physical methods to evade payment. Electricity theft therefore, can be regarded as the use of electricity from a utility company without a contract or valid obligation to alter its measurement (T.B. Smith, 2004).

Globally, losses from power theft in 2015 was about US\$89.3 Billion, with India leading the way with as high as \$16.2 Billion in losses, followed by Brazil (\$10.5 Billion) and Russia (\$5.1 Billion)

Estimates has it that utilities globally lose above \$25 Billion per year as a result of power theft. Utilities in India for instance lose around \$4.5 Billion every year to this menace tagged electricity theft and a percentage recovery as low as 10% of total non-technical losses would be enough to save about 83, 000 GWh of electricity, annually. (Pyasi & Verma, May, 2008). In many countries power theft is an issue of open discussion – even in the most efficient (such as in the USA) and moderately efficient (Malaysia) systems. Even though electricity theft in any utility jurisdiction of North America is not more than a couple percent, statistics revealed that up to \$6 billion of electricity is pirated in the U.S., which would put electricity high on the list, as the third most stolen item, after credit card data and automobiles.

In Nigeria, reports have it that about 40 percent of generated electricity gets lost to theft, as so many users of the commodity do not pay for it, due to the perception that it is a public good and not a tradable commodity, hence, attempting to bore a hole in the pockets of investors in the Nigerian power sector, and not just distribution companies.

Overtime, it has been established that a higher rate of electricity consumption, especially when it is stable and readily available for commercial and industrial activities creates a smooth sail for improving a nation's productivity in terms of the production or supply of goods and services. As earlier stated, Nigeria's distribution losses amount to about 40 per cent of the overall generated capacity, majorly attributed to electricity theft and resulting in the dwindling of revenue of DISCOs and investors. Hence, the need to carry out an assessment that juxtaposes such a level of loss arising from non-technical activities such as power theft or illegal connections with one of the nation's indicator of productivity – the Gross Domestic Product (GDP); considering how vital it is to portraying the economic vibrance or status of a country.

Methodology of Research

The Ordinary Least Squares (OLS) method is to be employed in carrying out this research. The dependent variable is Gross Domestic Product while independent variables would be both electricity loss recorded in terms of revenue (Commercial & Collection losses), as well as power loss recorded from electricity transmission and distribution, that is aggregate technical losses.

Expected Result

Business-wise, electricity theft results in economic losses to the Utility. It is debatable that large utilities providing essential services give poor service and over-charge to realise excess profit. Based on this, some theft might not drastically affect their operations and profitability but the consequences of theft in the worst-case are still very much more important to the viability of the services provided. The combined Losses (including non-payment of bills) in some systems have severe impacts resulting in Utilities operating at a loss, resulting in continuous increase of electricity tariff. On a macroeconomic level, the increase in NTL does not reduce productivity in terms of GDP, as distributed power is still being consumed anyway – irrespective of DISCOs receiving payments or not. However, this culture of corruption continues to plague Utilities, making it difficult for them to deliver reliable services which is the justification for many customers who engage in electricity theft. Simply put, you could say electricity consumers are shooting themselves in the leg.

Conclusion

Overtime, it has been established that a higher rate of electricity consumption, especially when it is stable and readily available for commercial and industrial activities creates a smooth sail for improving a nation's productivity in terms of the production or supply of goods and services. Nigeria's distribution losses amount to about 40 per cent of the overall generated capacity, majorly attributed to electricity theft and resulting in the dwindling of revenue of DISCOs and investors.

This evidence points to the increasing levels of power theft and the financial losses for the Distribution Systems which play huge roles in the financial chaos most Utilities find themselves in. Investment in improving the System and adding additional capacity cannot be undertaken, as loans and payments cannot be met translating to increased electricity tariff for the consumers of electricity.

Again, electricity theft might not reach total elimination but can be reduced and kept in check only by the strong and assertive action of Power Sector Organization.

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