

**PUBLIC ELECTRICITY PROVISION AND PERFORMANCE OF
MANUFACTURING FIRMS IN NIGERIA**

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**PUBLIC ELECTRICITY PROVISION AND PERFORMANCE OF
MANUFACTURING FIRMS IN NIGERIA**

**Research project paper submitted to the College of Business, Utara University
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master of economics**

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ABSTRACT

This study examined how public electricity power provision affects the performance of manufacturing firms in Nigeria. The study applied regression analysis using ordinary least square (OLS) techniques; the features of the electricity market in Nigeria were also analyzed. One strong outcome of the study is that the growth of manufacturing firms in Nigeria is positively and significantly influenced by electricity power supply. We showed that when public power sector in Nigeria is privatized, as a strategy for restructuring electricity market, competition in the sector will tend to prevail coupled with efficiently supply of power, leading to manufacturing firms reaching their required demand for electricity in the production process and hence promote their level of output.

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CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 Introduction

2 Electricity plays an essential role in modern life, bringing benefits and progress in various sectors, including transportation, manufacturing, mining and communication sectors. Electric power is vital for economic growth and quality of life not only because it fosters the productivity of capital, labour and other factors of production, but also that increased consumption of energy, particularly commercial energy like electricity signifies high economic status of a country (S Adebola 2011). These facts have attracted a substantial

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The public infrastructure particularly electricity can be provided more efficiently by the government, the government needs to channel more resources toward the efficient delivery of such services. By addressing poor infrastructure and deficient public services, the government will be able to boost private investment in productive capital.

Since it has been found in our study that infrastructures such as electricity is related to manufacturing growth, increasing the supply of electricity in a nation where they are desperately in need of such product like Nigeria will have a positive influence on their manufacturing and economic growth in general. Increasing power supply should also involve optimal production and utilization.

Improvement in the public sector's performance

A substantial share of firms' investment is attributable to providing inefficient complementary capital for alternatives to deficient and poor public power supply. Although macroeconomic stability is necessary for sustainable improvement in the private sector, macroeconomic policy reforms need to be accompanied by an improvement in public power sector performance to achieve sustained growth and private productive investment.

Government should also try to attain efficient pricing of public power infrastructures:

When electricity prices are too high, then there is abuse of resource by the customers who can't afford it and this might reduce consumption especially that of the low income class of people and small scale manufacturers. This therefore, necessitated the need for the government to set a price that is moderately affordable.

REFERENCES

Adelegan, O. J. (2011). Infrastructure deficiencies and investment in manufacturing firms in Nigeria 3(9), 542-552

Alejandro, C., Pablo, C. & Octavio, G.(2008). The Impact of Infrastructure on Mexican Manufacturing Growth,

Adeola, A. (2005). Analysis of the cost of infrastructure failures in a developing economy: The case of the electricity sector in Nigeria AERC Research Paper 148

Adeola, F. A. & Olumuyiwa, B. (1999). Alaba Energy use and productivity performance in the Nigerian manufacturing sector

Alex, A. & Sik, L. (1996). The Benefits of Alternative Power Tariffs for Nigeria and Indonesia. Policy research working paper 1606

Ahmed, A. M. (2011). The challenges of Textile and Manufacturing Industries in Kano Metropolis *South East European Journal of Economics and Business* 12, 6

Emeka, E. O. (2008). Development Crisis of Power Supply and Implications for Industrial Sector in Nigeria *Stud Tribes Tribals*, 6(2), 83-92

Gbadebo, O. O. & Chinedu, O.(2009). Does energy consumption contribute to the economic performance? 3(9), 542-552,

Isola, W.A. (2002). Market structure in the restructuring of the Nigerian electricity industry. *Journal of energy and development* 34, 2

Nausheen, H. A. (1999). Inefficiencies in Public Electricity Provision and Impacts on Firms in Karachi's Manufacturing Sector. *The Pakistan Development Review* 38, 2 167—185

Olorunfemi, S. (2008). Infrastructural services and manufacturing growth in Nigeria: A dynamic analysis *African Economic and Business Review* 6, 2

Peter, C. (2002). Measuring willingness to pay for electricity. ERD Technical Note Series No.3, economic and research department.

Paul, L. J. (1997). Restructuring, competition and regulatory reform in US electricity sector. *The Journal of economic perspective* .11, (3), 119-138.

Rasheed, O. A. (2010). Productivity in the Nigerian Manufacturing Sub-Sector: An Error Correction Model (ECM)

Ran, S. K & Horn, A. (1999). Regulation policies concerning natural monopolies in developing and transition economies DESA Discussion Paper No. 8

Shirly & Walsh (2003). an empirical note: Privatization Transaction and Macro economy in Developing Countries

Solarin S. A. (2011). Electricity Consumption and Economic Growth: Trivariate investigation in Botswana with Capital Formation. *Journal of Energy Economics and Policy* Vol. 1, No. 2,

Taiwo A, (2006). Restructuring of the Nigerian electricity industry: A partial equilibrium analysis

Udo, N., Ekpo, C., Chuku, A. & Ekpeno L. E. (2011), the Dynamics of Electricity Demand and Consumption in Nigeria: Application of the Bounds Testing Approach

UNIDO .(2009). Energy infrastructure and industrial development. A research and statistics branch, working paper 12.

