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**DOES PRIVATIZATION INCREASE FIRM PERFORMANCE IN NIGERIA?: AN  
EMPIRICAL INVESTIGATION**

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## **Abstract**

The public enterprises have generally failed to provide the social and economic development sought by the post-independence era in African countries, hence privatization has been central to policy making in the recent times. This paper offers insight into the validity of the efficacy of privatization by investigating not only whether privatization has improved financial (profitability) performance of firms but also whether such improvement has impact on the operational efficiency of privatized firms for the period 1990-2001 in Nigeria. Using a panel data for a sample of 20 privatized firms obtained from the Nigerian Stock Exchange and Securities and Exchange Commission, the result shows an increase in all the profitability ratios after privatization. However, only the return on assets and return on sales are significant in explaining the difference between pre- and post-privatization performance of firms in Nigeria. The result of the operational efficiency shows a significant increase in the mean (median) values of sale efficiency and income efficiency. Interestingly, while output (real sales) and employee income of firm significantly increase after privatization, the number of employees decreases insignificantly after privatization. The paper concludes that privatization in Nigeria has worked in the sense that it improves the financial and operational efficiency performance of firms.

**KEYWORDS:** Privatization, Firm performance, Operational Efficiency, Profitability, Nigerian Stock Exchange

## **1.0 Introduction**

Prior to independence Nigeria operated an economic system with a combination of public and private ownership of enterprises to provide social and economic service to the general public. Most of the large-scale enterprises were owned by public (government) while private enterprises were largely small and medium. By and large, the outcomes of these enterprises particularly the public enterprises were not satisfactory and palpably insufficient to provide the needed changes or development in Nigeria. According to Central Bank of Nigeria (2003) the expectations of public utilities as the fulcrum of economic growth and development has diminished considerably as this became the drain pipes for public funds and instruments for exerting much pressure on government expenditures and for exacerbating fiscal deficits. Most of public enterprises in Nigeria as noted by Jerome (2008) were poorly conceived and economically inefficient, hence they have accumulated huge financial losses and absorbed a dis-appropriate share of domestic credit. This echoes that the previous public ownership of enterprises were no longer optimal and that some of the activities carried out in the public sector may be effectively managed and controlled by the private sector. Many countries in Latin America and South-East Asia that were at the same level of development with Nigeria in 1960s have since overtaken the country and achieved respectable levels of development (NPC, 2004).

Like other developing countries, Nigeria had to adopt an elaborate programme of privatization and commercialization in 1988, as an integral part of the Structural Adjustment Programme (SAP) which started in 1986. The core objective of the programme as identified in Udejaja (2006) was to resolve fiscal imbalance in the light of the inflationary impact of excessive budget deficits of which the public enterprises constituted a major cause. It was also envisaged that

a careful planned privatization programme would be an effective strategy for improving operational efficiency, broadening share ownership and tax base, attracting more foreign investment and reducing the role of the state in areas where the private sector has the capability to operate more efficiently (Megginson *et al.* 1994; Udejaja, 2000).

Empirical evidence on privatization has gained currency around the world especially in Europe. In Nigeria, little studies have been conducted on whether privatization has led to a significant improvement of firm performance but these studies have produced mixed results. This study makes its contribution by evaluating comprehensively not only whether privatization has improved financial (profitability) performance of firms but also whether such improvement affects the operational efficiency. To achieve this objective, the paper has been structured into the following sections. Section two which follows the introduction deals with the theoretical framework and literature review. Section three exposes the method used in the analysis. Section four discusses the empirical results while section five concludes the paper.

## **2.0 Theoretical Framework and Literature Review**

The recent history of privatization started in the early 1980s when USA Ronald Reagan and United Kingdom Margaret Thatcher started privatizing State-Owned Enterprises on a wide scale. After the collapse of communist political system in the late 1980s, many transition economies also launched comprehensive privatization programme. Privatization is now a world-wide phenomenon that forms an important element of the increasing use of markets to allocate resources. The theory that underpins privatization is rested on the neo-liberal theory that emphasizes on the incentives and constraints that the market provides to promote efficiency within the firm. The theory sees public sector as constituting a big barrier to economic development in recent times. It therefore advocates

increased reliance on market economy through effective privatization of existing public enterprises, deregulation of domestic industries and markets as well as liberalization of trade.

As Udejaja (2006) argued, the validity of the assumption of public ownership is questionable based on the experiences of the developing countries. There is a perception that public enterprises do not behave in a cost-minimizing manner for a variety of reasons. Unlike private enterprises, public ones do not have a clear-cut profit objective and in the absence of the profit motive, there may be no incentive to minimize costs (Domberger and Piggot, 1986). Another problem of public enterprises is their openness to manipulation by politicians who may set non-commercial objectives for the enterprises in pursuit of their political agendas. Such political interference can be extremely counter-productive and as such lead to gross inefficiency. However, empirical evidence from the work of Craig (2002) and Jerome (2008) revealed that privatization could lead to job losses. Craig (2002) indicated that many African countries had voiced opposition to privatization and thus put pressure on governments to rethink the policy on the grounds that privatization has perpetrated high unemployment and as such was imposed and micromanaged by foreign investors without sufficient attention to requisite policy or regulatory frameworks and with minimal involvement of Africans. In a research on privatization in Africa, Nellis (2005) revealed that Africans believe that privatization programme has added greatly to unemployment and thus poverty and inequality at a time when job opportunities are declining drastically, increased the incidence of corruption and benefited the rich, foreign, the agile and political well-connected at the expense of the poor.

Galal, et al. (1994) in their empirical investigation of the welfare consequences of privatization in Chile, Malaysia, Mexico and United Kingdom based on a sample size of 12 firms found that the employment levels were either maintained or even increased slightly in the average privatized firms. Similarly, Megginson, et al. (1994) compared the pre and post-privatization

financial and operating performance of about 61 firms that experienced full or partial privatization through public share offerings from 32 industries in 18 countries between 1961 and 1990, using several indicators like profitability, sales level, operating efficiency, capital investment, leverage ratios and dividend payout figure. The study found strong performance improvements without sacrificing employment security. Most of the firms experienced upsurge in real sales, profitability, capital investment spending, operating efficiency and labour force after privatization.

Several studies have been carried out in the developing countries where the economies have been characterized by low per capita incomes, highly distorted markets, and relatively weak institutional capabilities. However, the results seem to be quite mixed. Bhaskar and Khan (1995) carried out an empirical study of 62 privatized mills in the Bangladesh Jute Industry in the early 1980s. The conclusion from this study was that privatization had reduced employment without a statistically significant fall in output. The study equally revealed that there had been a change in the composition of the workforce, without more casual workers employed and large job losses amongst white-collar staff. On the other hand, Hachette and Luders (1993) in the study of Chilean experience of privatization examined specifically the impact of privatization on efficiency, employment, government, revenue and expenditure, the capital market, savings and investments and covering about 550 SOEs. The results was in totality a success as privatization stimulated the private sector to improve efficiency, opened new investment opportunities and created new responsibilities for the private sector.

Loc, et al. (2005) examined the impact of Vietnamese privatization programme launched in 1993 by comparing the pre- and post-privatization financial and operating performance of 121 former SOEs. The findings showed significant increases in profitability, sales revenue, efficiency, employee income, employment and a decline in leverage.

In Nigeria, Jeromy (2002) appraised the post-privatization performance of four firms in Nigeria using some indicators of performance such as profitability, operating efficiency, capital investment and employment. He used DEA to assess the change in performance and the level of technical efficiency in the sampled firms. The findings showed significant improvement in performance based on the indicators employed.

In more recent time, Jerome (2008) appraised the post-privatization performance of some enterprises in Nigeria using the indicators such as profitability, production efficiency, employment, capital investment, output, prices and taxes. The study measures the change in any given indicator of performance by comparing its average value five years before and five years after privatization. The result showed significant increases in these indicators.

Elias (2001) investigated the performance of firms in Nigeria and the results showed a mixed performance on profitability, using three ratios of Return on sale, (ROS), Return on asset (ROA) and Return on equity (ROE). For example, two companies: Aba textile and Royal Exchange Assurance recorded improvements on the three ratios. Return on sale equally recorded some negative changes after privatization of some of the companies. For instance, ROS for UNIC insurance fell from 14 percent before privatization to 7 percent after privatization. For Okomu oil and four mills, it fell from 19 percent to 17.6 percent, 4.8 percent to 3.6 percent respectively. Similarly, Udejaja (2006) offered insights into the validity of the efficiency argument of privatization by evaluating the productivity performance of seven fully privatized firms in Nigeria using the Data Envelopment Analysis (DEA). The results were so mixed; however, the dominant picture was that privatization was associated with relatively high efficiency in terms of resource usage, under both constant and variable returns to scale. There was also marked variations in the total factor productivity growth before and after privatization across the firms.



Usman and Musa (2013) examined the main determinants of post-privatization performance of firms, using a sample size of 20 privatized enterprises from Nigerian Stock Exchange. The Ordinary Least Square regression results showed that foreign shareholding, institutional shareholding, leverage are the major determinants of post-privatization in Nigeria. Government shareholding and top management restructuring are rather inimical to the success of privatization process.

### **3.0 Methodology**

To evaluate the impact of privatization on the performance of firms in Nigeria, several studies have compared the mean (median) of pre- and post-privatization performance and used independent t-test procedure to determine whether the mean (median) values of the measures of firm performance differ significantly in pre-privatization and the post-privatization period (Megginson et al 1994; Boubakri and Cosset, 1998; Sanda and Dantama, 2008; Jeromy, 2008, Elias, 2001). To employ this method, little modifications are made to guarantee non-spurious results. First, the profitability indicator is measured using gross profit against net income. This is to capture the effect of heterogeneity in financing policies of the firms in the sample. Furthermore, statistically speaking, the Wilcoxon signed-rank test is more powerful in detecting the existence of significant differences than t-test when the sample is not normally distributed (Berenson, et al. 1998). Therefore, both t-test and Wilcoxon signed-rank test are used to determine the significant difference in the pre- and post-privatization performance of firms.

The data for the study is generated from the Nigerian Stock Exchange Fact Book (various issues) 2006 and the Annual Reports and Statement of Accounts of firms that underwent share-issue privatization between 1990 and 2001 obtained from Securities and Exchange Commission Annual Report and Accounts (Various issues) 2008. A non-probability sampling technique in the form of

availability sampling is employed (i.e firms with the required information are selected). To select a firm in our sample, it must be listed on the Nigerian Stock Exchange with complete data for the period covered in this study. The annual performance measures are obtained three years before privatization and three years after privatization. Thus, a total number of twenty firms are used for this study. (See Appendix).

**Table 1: Performance measures: Definitions and Expected changes**

<b>Performance measures</b>	<b>Definitions</b>	<b>Expected changes</b>
<b>1. Profitability</b>		
(i) Return on Assets	*Gross profit divided by total Assets	Increase
(ii) Return on Sales	*Gross profit divided by total Sales	Increase
(iii) Return on Equity	*Gross profit divided by equity	Increase
<b>2. Operational Efficiency</b>		
(i) Sales efficiency	Real Sales divided by number of employee	Increase
(ii) Income efficiency	*Gross income divided by number of employee	Increase
<b>3. Output (real sales)</b>	Nominal sales/price index	Increase
<b>4. Employment</b>	Number of employees	Decrease
<b>5. Employee income</b>	Annual income per employee	Increase

Adapted from the work of Loc., et al. (2005) and \*improved.

#### 4.0 Empirical Results and Discussions

**Table 2: Independent T-Test and Wilcoxon Test on performance measures**

Performance measure	Mean (Median) Before Privatization	Mean(Median) After Privatization	T-Test for sig. change	Wilcoxon test for change in median
<b>(i) Profitability</b>				
- Return on Assets	0.344 (0.253)	0.643 (0.472)	2.235**	2.012**
- Return on Sales	0.492 (0.372)	0.824 (0.676)	1.286**	1.676**
- Return on Equity	0.043 (0.021)	0.083 (0.034)	0.162	0.342
<b>(ii) Operational Efficiency</b>				
- Sale Efficiency	0.031 (0.012)	0.086 (0.033)	1.563**	1.424**
- Income Efficiency	0.112 (0.128)	0.321 (0.241)	2.373**	2.127**
<b>(iii) Output (real sales)</b>				
	0.034 (0.023)	0.093 (0.043)	2.235***	3.321***
<b>(iv) Employment</b>				
	0.057 (0.214)	0.037 (0.045)	0.833	0.237
<b>(v) Employment income</b>				
	0.032 (0.015)	0.064 (0.062)	1.223*	2.214**

Significant at 1% (\*\*\*), 5% (\*\*), 10% (\*)

#### Profitability

Profitability as earlier stated is one of the important indicators of firm performance. It is measured using three ratios. Our result shows an increase in all the profitability ratios after privatization. Specifically, the mean (median) value of return on assets increases from 0.344 (0.253) to 0.643 (0.472), return on sales increases from 0.492 (0.372) to 0.824 (0.676) and return on equity increases from 0.043 (0.021) to 0.083 (0.034). However, only the mean (median) values of return on assets and return on sales are significant at 5% level in explaining the difference between pre- and post-privatization performance of firms in Nigeria. This result strongly echoes the findings of Sanda and Dantama (2008) and Jeromy (2008) that privatization in Nigeria has a positive effect on the profitability of the firms.

## **Operational Efficiency**

The result of operational efficiency as a measure of firm performance has been split into two: The sale efficiency and the income efficiency. The result from both operational efficiency measures reveals a significant increase of post-privatization performance of firm at 5% level. For instance, the mean (median) value increases from 0.031 (0.012) before privatization to 0.086 (0.033) after privatization, while income efficiency increases from 0.112 (0.128) before privatization to 0.321 (0.241) after privatization. This result affirms the conclusions of Jeromy (2008), and Udeaja (2008). However, Elias (2001) indicates that the improvement in efficiency is very relative. In other words, privatized firms use their resources relatively better than before privatization.

On the issues of output (real sales), employment and employees' income after privatization, the results from Table 3 show a significant difference between output (real sales) and employees' income before privatization and after privatization at one percent and five percent levels. This implies that output and employee income of privatized firms increased after privatization. The results concurs with the finding of Megginson et al (1994) and Elias (2001) that privatization leads to increase in output and the earning of workers in the firms. As regards to employment, the result shows that the number of employees decreased after privatization but this decrease is insignificant in Nigeria as claimed by Craig (2002) and Nellis (2005).

## **5.0 Conclusion and Recommendations**

The objective of this study was to investigate the impact of privatization on the performance of firms in Nigeria. Methodology of Megginson, Nash and Randenborgh (1994) was used and the results showed that all the mean (median) values of profitability ratios increased after privatization. However, only return on equity was not significant in explaining the difference between pre- and

post-privatization performance of firms in Nigeria. For efficiency measures, the results showed a significant increase in the mean (median) values of sale and income efficiencies. The result also revealed that output (real sales) and employee income significantly increased after privatization but surprisingly, the number of employees decreased after privatization was insignificant. In conclusion, our empirical results have suggested that privatization in Nigeria has worked in the sense of improving the financial and operational performance of firms. However, government should ensure that suitable environment continues to be created to attract more foreign and domestic investments in the privatized firms. More, government and its managers should ensure that the process of share-issue privatization should be transparent as possible. If it not, the process can be grossly counter-productive.

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**Appendix: List of Nigerian listed firms used as sample in the study**

<b>S/No</b>	<b>Name</b>	<b>privatization Year</b>
i.	<i>West African Providence Insurance Coy Plc</i>	1990
ii.	<i>Nigeria Yeast and Alcohol Manufacturing Ind. Plc</i>	1990
iii.	<i>Nigeria Sugar Company Ltd.</i>	1990
iv	<i>Law Union &amp; Rock Insurance Coy Plc</i>	1990
v.	<i>NEM insurance Coy Plc</i>	1990
vi.	<i>Okomu Oil Pam Coy Plc</i>	1990
vii.	<i>National Salt of Nigeria Coy Plc</i>	1991
viii.	<i>First Bank of Nig Plc</i>	1992
ix.	<i>Union Bank of Nigeria Plc</i>	1993
x.	<i>United Bank for African Plc</i>	1993
xi.	<i>International Merchant Bank Plc</i>	2001
xii.	<i>NAL Merchant Bank Plc</i>	2001
xiii.	<i>CONOIL Plc</i>	2001
xiv.	<i>Unipetrol Nig Plc</i>	2001
xv.	<i>West African Portland Cement Coy Plc</i>	2001
xvi.	<i>Benue Cement Coy Plc</i>	2001
xvii.	<i>Ashaka Cement Coy Plc</i>	2001
xiii.	<i>Cement Company of Northern Nig Plc</i>	2001
xix.	<i>African Petroleum Plc</i>	2001
xx.	<i>FSB International Bank Plc</i>	2001



