

PRIVATIZATION OF PUBLIC ENTERPRISES AND ECONOMIC GROWTH IN NIGERIA

IYABO M. OKEDINA

Department of Economics,
Babcock University, Ilishan-Remo,
Ogun State, Nigeria

And

TOLUWALOPE E. BADA

Department of Economics,
Babcock University, Ilishan-Remo,
Ogun State, Nigeria

Abstract

This study examined privatization of public enterprises and its impact on economic growth using secondary data from 1995 to 2021. The data used were obtained from Central Bank of Nigeria Statistical Bulletin and World Development Indicators. The data used for this study were Total Privatization Proceeds, Domestic Private Investment, Domestic Credit to Private Sector and Real Gross Domestic Product

The study used descriptive statistics, the Augmented Dickey Fuller test, and the Phillip-Perron tests to determine the stationarity level of the variables, trend analysis, and the Bounds cointegration test to test for the long run relationship between the variables. The Auto-Regressive Distribution Lag (ARDL) was used to detect the variables' short and long run relationships. The serial correlation test, heteroscedasticity test, Ramsey RESET test, and normality tests were used to confirm the robustness and validity of the ARDL result.

The results of the test concluded that the variables had a long run and a short run relationship. According to the results, the short-run ARDL model shows that all the explanatory variables have positive coefficients in their present period but negative at lag period. The Jarque-Bera Normality Test revealed that the variables are normal. The study recommended that the government could consider providing more incentives, such as tax breaks or lower interest rates, to commercial banks to encourage them to increase lending to the private sector.

Key word: Economic Growth, Public Enterprises, Privatization.

Introduction

Privatization can be referred to as the transfer of ownership and control of public enterprises from the state to the private sector. It can be seen as a process of reorganizing the economy and operations and moving of the public assets from the public sector to the private sector. One of the method for raising money for the government is through the privatization of state-owned businesses. While some studies opposed privatization in order to raise money to cover their deficits rather than choosing to do so in order to promote economic growth, some other researches support privatization as a global economic reform that encourages effective resource management for the nation's economic progress. Privatization has been found as one of the key components of the structural reform and globalization strategy in many economies. Therefore, several developing and transition economies have embarked on extensive

privatization programs in the last one and a half decade as a means of accelerating economic growth, and macroeconomic stability is attained.

The idea that the private sector, not the governmental sector, should drive economic growth is also becoming more widely recognized. While trade, investment, social advancement, and human development are among the many sources that can fuel growth, privatization is also expected to have significant effects on economic growth (Estrin & Pelletier, 2018). One method for raising money for the government is through the privatization of state-owned businesses. Privatization has become a potent instrument for restructuring the public sector and promoting economic development. This study, therefore, aimed at measuring the impact of privatization on economic growth, capturing the direct impact of privatization on economic growth of Nigeria, and a detail analysis of the pattern of privatization on economic growth of Nigeria.

Conceptual Review

Economic Growth

Concept of Economic Growth

Several authors have defined economic growth in the past with all tending towards the raise in the economic activities of a nation. Beginning with Dewett (2005), economic growth can be referred to as a raise in the net national product over of a country over a specific time period. Also, economic growth can be defined as the gradual rise in the economy's productive capacity through time, resulting in higher levels of national output and income (Todaro and Smith, 2005). According to Olopade and Olopade (2010), economic growth entails a rise in economic activity. Economic growth may also be described as the increase in the market value of an economy's goods and services over time, expressed as a percentage rise in real gross domestic output (GDP) (International Monetary Fund, 2012). Economic growth, according to Jhigan (2002), is the process by which a country's actual per capita income expands over time. It can also be simply defined as an economy's potential to create the commodities and services required to improve the well-being of citizens in increasing numbers and diversity over time. It is the gradual rise in the economy's productive capacity through time that leads to an increase in national income (Anyanwu & Oaikhenan, 1995).

Economic growth is, therefore, an increase in capital that flows into a nation over a long period of time, geared towards the provision of diverse economic products and services for the nation's citizens. So, the focus of economic growth is primarily long run realization of economic prospects of a nation. Hence, economic growth can be achieved through the efficient use of available resources and the expansion of a country's production capacity, promoting income redistribution between the population and society. Economic growth is a necessary component of long-term development. Improvements in infrastructure, health, housing, education, and agricultural productivity all contribute to a higher standard of living for a country nationals.

Privatization of Public Enterprises

Public enterprises, often referred to as state-owned enterprises, are organizations that are owned or operated by the federal, state, or local governments. Government develops, finance, manage, and have influence over these organizations. They can be found in all economic sectors, including those involving education, service provision, power generation, and communications, among others. Water Corporation, Nigeria Port Authority, Nigerian National Petroleum Company (NNPC), Power Holding Company of Nigeria (PHCN), and Federal Radio

Corporation (FRCN) are a few examples of public enterprises. The provision of basic services and the justification of the ruling government are the main objectives of public companies (Omoleke, 2011).

However, public enterprises have a variety of drawbacks, such as subpar performance, fraud, poor management, and reckless behavior on the part of the workforce. For instance, poor management, arising from inefficiency and ineffectiveness in utilization of assets and resources, have made it challenging for public enterprises to offer the services they were originally established to provide over time (Omoleke, 2011) prompting the government to privatize some of those public firms by selling them to the private sector.

Privatization is the process of transferring ownership, assets, or businesses from the public to the private sphere. The corporation or business is no longer owned by the government. Privatization is another name for the process by which a publicly traded corporation is taken over by a small group of individuals. Government companies are transformed into private companies in two ways:

- By the government giving up control and administration of businesses in the public sector.
- By direct sales to the public of businesses in the industry.

The Nigerian Privatization Programme

Nigeria has one of the largest public enterprise sectors in sub-Saharan Africa, notwithstanding the privatization process which has reduced both its size and significance. Nigeria was unable to realize its full potential for prosperity because of its massive public enterprise sector, which is rife with corruption and incompetence. A significant source of fiscal issues and a restraint on growth has been public enterprise deficits (World Bank, 1995). These activities of state firms gained increasing attention and underwent deeper investigation during the economic slump that started in 1981 as a result of the drop of oil prices, concentrating on their poor performance and the burden they place on government finances. Due to their insufficient financial returns, triggered the concern of government towards privatization.

Objectives of the Privatization Programme in Nigeria

The primary goal of the privatization programme is to make the private sector the leading engine of growth of the Nigeria economy under the administration of President Olusegun Obasanjo. Generally, the programme has four objectives:

- a) To achieve higher allocation and productive efficiency, leading to faster economic growth and development;
- b) To strengthen the role of the private sector in the economy through job creation and economic development; acquire new knowledge, skills and technology and expose Nigeria to international competition;
- c) To raise funds for financing socially-oriented programs in such areas as poverty eradication, health, education and infrastructure; and
- d) To free resources for use in sectors important to all Nigerians, such as education, health, housing, transportation, and other infrastructure development initiative.

Theoretical Framework

This study is hinged on the theory of property rights.

Theory of Property Rights

Theory of property rights recently formulated by Grossman, Hart and Moore (Grossman and Hart (1986), Hart and Moore (1990), Hart (1995)) The theory states that the rights of individuals to the use of resources is supported by the force of etiquette, social custom, and formal legally enacted laws supported by the state's power of violence or punishment. Investment is required for growth, which is the economic basis for securing property rights. However, investors will not make investments if there is a risk of expropriation by the government or other parties.

Since property owners have the legal right to bar others from using a good or asset; property rights are synonymous with private property or ownership rights in this context. Property rights influence economic growth through efficiency and security channels. Property rights suggest that the private sector, enterprises, or individuals can use assets transferred to them productively through their investments and efforts, thereby promoting economic growth.

This theory is relevant to this study and underpins this research by creating strong individual incentives, as a significant factor in the pursuit for long term growth. By creating strong incentives, property rights will lead to an increase in investment since people are certain and secure about the ownership of their property. Furthermore, individuals gain an access to credit since they can use their formal titles as a collateral for loans, ultimately leading to an increase in investment. Finally, property rights give people an incentive to pursue long-term rather than short term economic goals.

When we speak on property rights and privatization in economic terms, as many other economic ideas, this one was also discussed in Adam Smith's work. He writes on privatization in his *An Inquiry into the Nature and Causes of the Wealth of Nations*. As soon as the land of any country has all become private property, the landlords, like all other men, love to reap where they never sowed, and demand a rent even for its natural produce.

Empirical Review

Several studies previously carried out on privatization of public enterprises and its impact on economic growth showing divergent results. For instance, Awoyemi and Aiyegbusi (2022) investigated the impact of private sector development on the Nigeria's economy. The bounds cointegration test was used to examine the long-term relationship between privatization and GDP growth. The long- and short-term connections between private sector development and GDP growth were studied using an Auto-Regressive Distributed Lag (ARDL) model. As a result, economic growth was found to be highly influenced by gross capital formation and market capitalization of domestic listed enterprises as a share of GDP, according to the ARDL estimates in the short term. In addition, the periods after privatization increase growth by about 0.23% in the short run and by 3.87% in the long run, at a 1% significance level. At a 1% significance level, gross capital formation and market capitalization of domestic listed enterprises as a share of GDP positively affected economic growth in the long term. This led to the conclusion that private sector development positively influences Nigerian economic growth in both the long- and short-term. This study recommends policy changes such as raising domestic investment and promoting privatization, capital market development, and financial institution development. This will stimulate private sector development and have a favorable impact on economic growth.

The study of Bajira (2021) examined how privatization of socially owned enterprises affects economic growth, entailing an empirical test using a panel effects regression analysis on a sample of 571 state owned enterprises. The findings of the study demonstrated that privatization at the aggregate level does boost economic growth. The methods used to privatize are not a determining factor and the effects of privatization vary according to the method used. It was noted that the sale of state-owned enterprises or parts thereof in the first decade of privatization has been quite selective, lack of developments effects and faced with serious obstacles to privatization funds being directly invested in the economy.

Assa and Calderon (2020) explored privatization of healthcare. Controlling for per capita income, health inequality and several other control variables, it was found that that a 10% increase in private health expenditure relates to a 4.3% increase in Covid-19 cases and a 4.9% increase in Covid-19 related mortality. Globalization also has a small positive effect on Covid-19 prevalence, while higher hospital capacity (in beds per 1,000 people) is significant in lowering Covid-19 mortality. The findings suggest caution regarding policies which privatize healthcare systems in order to boost efficiency or growth in the short-run, as these reduce countries' long-term preparedness for dealing with pandemics.

Jointly, Reddy, Teshome and Ashenafi. (2019) conducted a study on whether privatization has long run or short run significant impact on economic growth of Ethiopia by considering real GDP growth as a proxy for economic growth and privatization proceeds as to the measure of the magnitude of privatization using time series data starting from 1994 to 2016. Autoregressive Distributed Lag (ARDL) method was used to characterize long run and the short run relationship between real GDP growth and independent variables. The empirical results revealed that both privatization and foreign direct investment due to privatization are found to have a positive impact on economic growth and statically significant at 1 per cent and 5 per cent respectively in the long run as well as in the short run. While, inflation and government consumption proxy to corruption affects economic growth negatively in the long run. The findings of this study concluded that economic growth can be improved significantly when the privatization policy accompanied with other structural change are implemented and the government should strive to strengthen privatization policies together with other policies.

The study of Saaondo Simon (2019) explored the impacts of privatization on the Nigerian economy an assessment of Power holding company of Nigeria in Benue state. The study adopted the Neoliberalism theory of political economy as a theoretical framework for the study. Data were collected both from primary and secondary sources using descriptive statistics method to analyze the data. The study found out privatization has a positive impact on Nigerian economy through the broken down of the power monopoly in the power sector by luring new investors into generation of power, transmission of power and distribution of power. The study recommended that government should diversify the power sector not just selling of shares in the power sector but by opening up of other energy source such as biomass, solar energy, wind vine energy, nuclear energy and geothermal energy.

Oyediran, Ijaiya and Lawal. (2017) examined the impact of privatization on Nigerian economic growth. The study adopted *ex-post facto* research design in examining the effect of privatization on the Nigerian economy from 1980 - 2014. Data were collected from secondary sources through the Central Bank of Nigeria and National Bureau of Statistics, and were analyzed and tested using the multiple regression analysis. Result emanating from this study

revealed that the combinations of capital expenditure (CAPEXP), investment (INV) and inflation rate (INF) significantly impacted on the GDP. The study therefore recommends effective regulatory framework, observation of transparency, accountability and due process in the implementation of the privatization Programme, as well as judicious utilization of privatization proceeds.

Sobir Shukuorov (2016) investigated the macroeconomic gains from privatization during the transition period in Uzbekistan. The choice of the country was due to its stable macroeconomics performance beginning from 1996 onwards, and author's related work experience at The State Committee of the Republic of Uzbekistan for Privatization. Based on the macroeconomic empirical literature on growth, the standard model of gross domestic product growth with other transition-specific variables was used to investigate the impact of privatization on economic growth. In so doing, it was found that economic growth was significantly influenced by investment (more importantly investment to the education), and employment growth.

Jumare Haruna (2013) analyzed the effects of privatization of public enterprises in Nigeria from 2006 to 2010. The study considered the parameters of visible trade, the rate of exchange of the naira to the dollar, the market value of stocks, the quality of products and the rate of unemployment as yardsticks for assessment. The work depended largely on secondary data generated by the Central Bank of Nigeria (CBN), the National Bureau of Statistics and some National Dailies. The study revealed that over two decades old privatization of public enterprises in Nigeria [since 1988] had significant positive effects on the economy and the polity in the first place; but the effects could not withstand the challenging global economic meltdown that swept across the globe especially in the year 2008 and 2009. The study showed that the gains made initially were reduced to insignificance and the social cost of living was raised as a result of the high record of failed businesses. The study concluded by recommending extreme discipline, productive paranoia and empirical creativity as the solution for withstanding the uncertainties that lie in the way of businesses.

Muhammad Zahir (2013) centered on the effects of privatization on economic growth of Pakistan and on the other macroeconomic indicators. The data was gathered from various sources, for the time period of 1992 to 2008. Descriptive Statistics, and Correlation Matrix were used for the analysis. The major limitation was insufficient authentic statistics available on the revenue obtained by the sale of SOEs in Pakistan. The study found that there was consistent gradual rise, over the period of time, in the rate of GDP/Economic Growth, while drifts of privatization remained unsteady.

Ifionu (2013) investigated the impact of privatization on economic growth in Nigeria. Error correlation model (ECM) was used to analyze the data. The study discovered that privatization has not impacted positively on economic growth in Nigeria, and this was blamed on a lot of factors like political instability and inadequacy of the past policies to achieve good result. It was recommended that it will be highly necessary to create a supportive enabling environment if we must achieve growth.

Methodology

In this section, the outlines of the methodology used in conducting the study are briefly treated. This includes data collection which is predominantly secondary, techniques employed for the analysis of the data and the research design for easy interpretation.

Research Design

The research design used in this study was ex-post facto design. This research made use of secondary data which was sourced from Central Bank Statistical Bulletin (2021) and World Development Indicators (2021). For the model, it consist of Total proceeds from privatization as a percentage of GDP(TPP), Domestic credit to private sector (DCPS), and Domestic private investment (DPI) which are the independent variables while economic growth is the dependent variable. The proxy for privatization is Total proceeds from privatization as a percentage of GDP (TPP) and the proxy for economic growth is Real Gross Domestic Product (RGDP). The data period spans from 1995 to 2021, which is a period of twenty-seven years.

Model Specification

The model adopted for the purpose of this study was from the work of Oyediran, Ijaiya & Lawal (2017). The only change made to the model was the inclusion of Total Privatization Proceeds and Domestic Credit to Private Sector. Total Privatization Proceeds and Domestic Credit to Private Sector was included to fill the gap in the study so that upcoming researchers will be able to understand the impact of Total Privatization Proceeds and Domestic Credit to Private Sector on economic growth in Nigeria from 1995 to 2021. This model is formulated based on the research objective and hypotheses that were specified in the first chapter of this study. The functional and underlying econometric model of the relationship are specified below.

The model is functionally represented as:

$$RGDP = f(DPI, DCPS, TPP) \dots\dots\dots (1)$$

The econometric model is written as:

$$RGDP = \alpha_0 + \alpha_1 DPI + \alpha_2 DCPS + \alpha_3 TPP + \mu \dots\dots\dots (2)$$

Where:

RGDP = Real gross domestic product (proxy for economic growth).

TPP = Total proceeds from privatization (proxy for privatization)

DCPS = Domestic credit to private sector

DPI = Domestic private investment

α_0 = Intercept of the regression model.

α_{1-4} = Coefficient of parameter estimates of the explanatory variables.

μ = the disturbance of stochastic error term

Estimation Technique

The data was analyzed using the multiple linear regression method. The estimation technique adopted was based on unit root test. Ordinary least square (OLS) method would be used if all the variables are stationary at levels; Johansen cointegration Model would be used if all the variables are stationary at first difference while ARDL would be used if some variables are stationary at levels and some at first difference.

Data Analysis and Discussion of Findings

The data analysis, discussion of the results, inferences, and relevant recommendation are all presented in this chapter. The study's conclusions and suggestions translate into answering the research's questions. This study focuses on the following variables; Domestic private investment, Domestic credit to private sector (% of GDP), and Total Privatization Proceeds with which E-views software was used to perform the analysis.

Data Presentation

The data for Domestic private investment (DPI), Domestic credit to private sector (% of GDP (DCPS), Total privatization proceeds (TPP), Real Gross Domestic Product (RGDP) for the period 1995-2021 were used for the study. The empirical analysis is done with the Econometrics Views 13 (E-views) analytical software, which is used to estimate the model, and the results are presented in the subsequent sections.

Descriptive Analysis

The descriptive analysis and summary of the statistics of the variables are presented in Table 4.1 below.

Table 4.1: Descriptive Statistics

	RGDP	DPI	DCPS	TPP
Mean	47810.71	24.06591	11.02240	19.48400
Median	46802.76	24.62523	10.60000	0.000000
Maximum	72094.09	40.55340	19.63000	372.4000
Minimum	21881.56	14.16873	6.510000	0.000000
Std. Dev.	18370.44	8.577083	3.375418	74.94531
Skewness	-0.035638	0.507287	0.944242	4.441617
Kurtosis	1.455730	2.054316	3.457979	21.35609
Jarque-Bera	2.489428	2.003832	3.933453	433.1852
Probability	0.288023	0.367175	0.139914	0.000000
Sum	1195268.	601.6478	275.5600	487.1000
Sum Sq. Dev.	8.10E+09	1765.592	273.4427	134803.2

Source: Author's computation (2023) using E-views 13

From Table 4.1, the real GDP (RGDP) has a mean value of N47,810.71, with a N18370.44 standard deviation over the sample period, suggesting that the real GDP was averaged N47,810.71, despite its volatility of N18,370.44 which was below the average value. The mean value depicted that despite the fluctuations experienced, the country could still amass an average real GDP of more than the fluctuations experienced during the study period.

The minimum value of N21,881.56 and maximum value of N72,094.09 indicated that Nigeria has different levels of real GDP, connoting that Nigeria has a high level of real GDP over time. It also has a low level of real GDP at some other times. Furthermore, through the skewness and kurtosis, it was shown that rGDP was negatively skewed to the left, depicting a long-left tail, while its kurtosis was platykurtic ($1.45 < 3$). The probability value (p-value) of the Jacque-Bera statistics was 0.288, showing that the series was normally distributed during the study period.

The domestic private investment (DPI) has a mean value of N24.066, depicting that on average, during the 25 years periods studied, Nigeria's domestic private investment was N24.066, while the standard deviation of N8.577 displayed that the volatility in domestic private investment was still manageable, as it clustered around the average value, suggesting that the domestic private investment is less prone to change over time.

The maximum value of N40.553 indicated that the domestic private investment was higher over time; it also has a low level, as depicted by the minimum values of N6.510 at some other times. Meanwhile, the DPI skewness was 0.507, showing that DPI was positively skewed to the right, portraying a long-right tail. At the same time, its peakedness was platykurtic ($2.054 < 3$), showing that DPI extreme values characteristics are not similar to that of the normal distribution. The probability value (p -value) of the Jacque-Bera statistics was 0.367, indicating that the series was normally distributed during the study period at a 0.05 significant threshold.

The domestic credit to private sector (DCPS) has a mean value of N11.022, depicting that on average, during the periods under study, DCPS was N11.022, while the fluctuation in DCPS recognising deviation from this average value measured via the standard deviation was N3.375, suggesting that DCPS volatility was still manageable, as it clustered around the average value, expressing it was less susceptible to change over time. The maximum value of N19.630 indicated that the domestic credit to private sector has a higher value over time; it also has a low level, as depicted by the minimum values of N6.510 at some other times. Meanwhile, DCPS skewness was 0.944, representing that DCPS was positively skewed to the right, portraying a long-right tail. At the same time, its peak (kurtosis) was mesokurtic ($3.458 = 3$), showing that DCPS extreme values characteristics are similar to that of the normal distribution. The probability value (p -value) of the Jacque-Bera statistics was 0.140, indicating that the series was normally distributed during the study period at a 0.05 significant threshold.

The total proceeds from privatization (TPP) series has a mean value of N19.484 and a standard deviation of N74.945, pointing out that, on average, their value proceeds from privatization is N19.484. In contrast, the dispersion in the TPP over the 25 years of studies from the mean value was N74.945, depicting the volatility level in the TPP clustered tightly around the mean value, suggesting that it is less susceptible to change over time. The minimum value of N0.00 and maximum value of N372.400 indicated that Nigeria's government proceeds from privatization were higher over time; it also has a low level, as depicted by the minimum values at some other times. Meanwhile, the skewness for TPP was 4.442, describing that TPP was positively skewed to the right, portraying a long-right tail. At the same time, its peak was leptokurtic ($21.35 > 3$), showing that the TPP series concentrated towards the mean, with occasional extreme outliers that caused the concentration. The probability value (p -value) of the Jacque-Bera statistics was 0.000 showing that the series was not normally distributed during the study period.

Test of Hypothesis

Hypothesis: There is no significant impact of privatization of public enterprises on economic growth on economic growth of Nigeria.

To verify the hypothesis, three proxies of privarization (domestic credit to private sector, domestic private investment, and total privatization proceeds) were regressed on the real gross domestic product. The results are as indicated in the table below.

ARDL Regression Analysis Results**Table 4.2: Long run auto regressive distributed lag**

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	14.6826	1.2417	11.8248	0.0000
$\ln DPI_t$	0.2257	0.0865	2.6104	0.0130
$DCPS_t$	0.1381	0.0667	2.0713	0.0508
TPP_t	0.5666	0.1166	1.9371	0.1720

Table 4.3: Short run auto regressive distributed lag

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	1.6740	0.3294	5.0821	0.0002
$\Delta \ln rGDP_{t-1}$	-0.2283	0.1210	-1.8868	0.0731
$\Delta \ln DPI_t$	0.0146	0.0041	3.5352	0.0020
ΔTPP_t	0.0002	0.0000	2.8432	0.0130
ΔTPP_{t-1}	-0.0002	0.0000	-2.5645	0.0225
$\Delta DCPS_t$	0.0060	0.0025	2.4166	0.0299
$\Delta DCPS_{t-1}$	-0.0061	0.0025	-2.3847	0.0318
$ECT(-1)$	-0.1140	0.0231	-4.9376	0.0002

Source: Author's computation (2023) using E-views 13

Diagnosis tests

$$R^2 = 0.6340 \quad \bar{R}^2 = 0.5263 \quad DW = 1.1703$$

$$X_{LM}^2 = 4.4190[0.1098] \quad X_{BGP}^2 = 3.0421[0.9317] \quad X_{JB}^2 = 0.70867[0.7016] \quad X_{RS}^2 = 0.1694[0.6850]$$

$$F - statistic = 5.8890[0.0025] \quad STABILITY=CUSUMSQ$$

ARDL Bound Test

$$F - statistic = 17.4425 [I(0) = 2.79, I(1) = 3.67 @ 5\%]$$

Source: Author's computation (2023) using E-Views 13

Notes: SE: standard error, DW: Durbin Watson statistics. $X_{LM}^2, X_{BGP}^2, X_{RS}^2, X_{JB}^2$ represent LM test for serial correlation, Breusch-Pagan Godfrey test for heteroscedasticity, Ramsey rest test for model specification and Jarque-Bera normality test, respectively. $I(0)$ and $I(1)$ represent lower and upper bound, respectively. [] indicate respective probability values, ECT; Error correction term.

Evaluation of Estimated Short-Run ARDL Model

The estimated short equation is presented as:

$$\begin{aligned} \ln rGDP_t = & 1.6740 - 0.2283 \ln rGDP_{t-1} + 0.0146 \Delta \ln DPI_t + 0.0002 \Delta TPP_t - 0.0002 \Delta TPP_{t-1} \\ & + 0.006 \Delta DCPS_t - 0.0016 \Delta DCPS_{t-1} - 0.114 ECT_{t-1} \end{aligned} \quad (4.1)$$

Estimated (4.1) shows the short-run ARDL model. It was reported as explicit from Table 4.1 and the estimated model (4.1) that the estimates are positive for all the explanatory

variables in their present period but negative at lag period. The estimated elasticities of $\ln DPI_t$ about $\ln rGDP_t$ is 0.015, indicating that *ceteris paribus*, a 1% expansion in domestic private investment ($\ln DPI_t$), is projected to increase real GDP ($\ln rGDP_t$) by 0.015%.

Furthermore, the estimated coefficient of total privatization proceed (TPP_t) pertaining to $\ln rGDP_t$ was 0.0002, portraying that all things being equal, a 0.02 per cent increase in real GDP was a result of a Naira increase in TPP_t for the current year, whereas, *ceteris paribus*, the one Naira decrease in TPP in the previous year gave a 0.02% increase in current year real GDP. Finally, from the estimated model (4.1), Meanwhile, the current period estimated coefficient for domestic credit to private sector ($\Delta DCPS_t$) portrayed a 0.006 value, signaling that *ceteris paribus*, a Naira increase in $\Delta DCPS_t$ will bring about a 0.6 per cent increase in the real GDP ($\ln rGDP_t$). It could be ascertained that the immediate year value of domestic credit to private sector ($\Delta DCPS_{t-1}$) exhibited a negative relationship with the current year real GDP, as a Naira decrease in $\Delta DCPS_{t-1}$ contributed a 0.61% increase to the current year real GDP, all things being equal.

A test should be carried out for cointegration among domestic private investment ($\ln DPI_t$), total privatization proceed (TPP_t), domestic credit to private sector ($DCPS_t$) and real GDP ($\ln rGDP_t$). One form of this test is to compare the computed F-statistic with the upper critical value tabulated by Pesaran et al. (2001). Following this procedure, the ARDL bound test estimated F-statistic was 17.443 and the 5% upper critical value is 3.67. Hence, the hypothesis of long-run cointegration among variables is firmly accepted, leading to the interpretation of the long-run coefficient estimates in the estimated model (4.2)

Evaluation of Estimated Long-Run ARDL Model

The estimated long equation is presented as:

$$\ln rGDP_t = 14.683 + 0.226 \ln DPI_t + 0.138 DCPS_t + 0.567 TPP_t + \varepsilon_t \quad (4.2)$$

The long-run findings also reveal that positive estimates for $\ln DPI_t$ as it was in the short run. The elasticity of $\ln DPI_t$ pertaining to $\ln rGDP_t$ in the long run is 0.226, indicating that *ceteris paribus*, a 1% rise (decrease) in $\ln DPI_t$ is expected to increase (decrease) $\ln rGDP_t$ by 0.226%. Furthermore, it was unraveled in the study that the $DCPS_t$ depicted a positive nexus with $\ln rGDP_t$, as displayed in the short run. The estimate of $DCPS_t$ pertaining to $\ln rGDP_t$ is 0.138, indicating that *ceteris paribus*, and a Naira increase in $DCPS_t$ is expected to increase $\ln rGDP_t$ by 13.8%. In the same vein, as TPP_t further exhibit a positive association with $\ln rGDP_t$ as displayed in the short run, as domestic credit to private sector ($DCPS_t$) increase by a Naira, it leads to a 56.7% increase in $\ln rGDP_t$, *ceteris paribus*.

The coefficient of ECT (-0.1140) is negative and statistically significant at the 5% level ($0.000 < 0.05$) and elaborates how speedily variables converge to equilibrium, indicating domestic private investment ($\ln DPI_t$), domestic credit to private sector ($DCPS_t$) and total privatization proceeds (TPP_t) speedy adjust back to equilibrium at about 11.4 per cent annually in Nigeria.

The value of F-statistics is 5.8890 and the p-value is 0.002 which implies that the joint effect of the explanatory variables – domestic private investment, domestic credit to private sector and total privatization proceeds –on economic growth (rGDP) is statistically significant. Hence the main objective of the study is achieved by rejecting the null hypothesis. For the Coefficient of Determination (R^2), further findings from Table 4.1 established from the estimates include the goodness of fit of the model conformed with the adjusted R^2 ($\bar{R}^2 = 0.5263$), which is the evidence of dependent variable (real GDP) variations explained by the independent variables ($\ln DPI_t, DCPS_t$ and TPP_t) by 52.63 per cent. The remaining 47.37% variations in the dependent variable are explained by other factors not present in the model but captured with the error term (ε_t) in the model.

Post-Estimation Tests

Post-estimation techniques are used to ensure that a model's robustness and integrity are confirmed. This is used to see if the estimated coefficients' signs are consistent with the apriori expectations or not. The normality test, stability test Breusch-Godfrey Serial Correlation LM Test, linearity test and heteroskedasticity test will be carried out.

Table 4.4: Summary of Post Estimation test

Post Estimation Tests	Tests Conducted	F-Statistics	Probability of F-Statistics	Test Results
Test for Heteroskedasticity	Breusch-Pagan-Godfrey Test	0.266750	0.9668	There is no heteroskedasticity
Test for Linearity	Ramsey RESET Test	0.70874	0.7016	There is linearity
Test for Normality	Histogram Normality Test	0.487986	0.701	There is normality
Test for Auto-Correlation	Breusch-Godfrey Serial Correlation LM Test	1.426938	0.2780	There is no auto correlation

Source: Author's computation (2023) using E-views 13

The post-estimation tests were carried out to evaluate the model. The post estimation tests carried out in the course of study was the Breusch Pagan heteroscedasticity test that showed the variables in the model was not heteroscedastic; meaning they do not have an equal spread, the Breusch-Godfrey serial correlation test that showed that the variables were not auto-correlated, the Ramsey-Reset test showed the variables were linear. The histogram

normality test also revealed that there was normality. The CUSUM stability test revealed that the model was stable.

Discussion of Findings

The test of hypothesis indicated that privatization through its proxies has a significant effect on economic growth of Nigeria. This position aligns with the postulation of Awoyemi and Aiyegbusi (2022); Bajira (2021); Assa and Calderon (2020); Saaondo Simon (2019); Reddy, Teshome and Ashenafi (2019); Udoka and Anyingang (2012); Shahraki (2011); Saeed Moshiri (2010); and Boubakri (2009) among other similar studies.

On the contrary, the findings of the study did not align with the provision of some studies which include Muhammad Zahir (2013); Ifionu (2013); and Adams and Mengistu (2008) while the outcome of the study of Rahbar (2012) showed mixed results in various regions of Mexico.

There could be several reasons for inconsistencies or divergences in findings among different studies. One possible reason is the differences in the research design and methodology used by the researchers. For example, different studies may use different data sources, sample sizes, and statistical techniques, which can lead to different results. Another reason could be the differences in the context and time period of the studies. Privatization policies may have different effects in different countries or regions, depending on factors such as the level of economic development, political stability, and regulatory environment. Moreover, the impact of privatization may vary over time, as the effects may not be immediate and can take several years to manifest.

Furthermore, the definition of privatization itself can differ among studies, which can lead to different conclusions. Some studies may focus on the sale of state-owned enterprises to private investors, while others may include other forms of privatization, such as public-private partnerships or contracting out of public services. Finally, there may be other factors that affect the relationship between privatization and economic growth, such as the quality of governance, the level of competition, and the distribution of benefits and costs of privatization. These factors may not be captured by the studies or may be difficult to measure, leading to inconsistencies or divergences in findings.

Summary of Findings, Conclusion, Recommendation

This section focuses on the summary, conclusions and recommendations of this research study. The main objective of this research work was to examine privatization of public enterprises and its impact on economic growth.

Summary of Findings

For the period 1995 to 2021, this study looked at privatization of public enterprises and its impact on economic growth. Data was sourced from World Development Indicators (2021) and Central Bank of Nigeria Statistical Bulletin (2021). The proxy for privatization used were domestic credit to private sector, domestic private investment, and total privatization proceeds. Also, the proxy used for Economic growth was Real Gross Domestic Product (RGDP).

The study found that 52.63 per cent of changes in economic growth was as a result of privatization variables leaving the rest 47.37% variations to other factors not present in the

model but captured with the error term (ε_t) in the model. The results of the hypothesis test showed that privatization of public enterprises had a significant impact on real GDP.

The study employed Auto Regressive Distributed Lag to carry out its estimation. The Augmented Dickey-Fuller unit root test and Phillips Perron unit root test revealed that all the variables were stationary at the first difference. The ideal lag length was determined using the Akaike Information Criterion (AIC), the Schwarz Information Criterion, and the Hannan-Quinn Information Criterion. The bound test was implemented in order to show the long run relationship with the variables and the test result showed that there was a statistically significant relationship among the variables to have a long run relationship, (that is, all the variables were co-integrated).

The post-estimation tests were carried out to evaluate the model. The post estimation tests carried out in the course of study was the Breusch Pagan heteroscedasticity test showed the variables in the model was not heteroscedastic; meaning they do not have an equal spread, the Breusch-Godfrey serial correlation test that showed that the variables were not auto-correlated, the Ramsey-Reset test showed the variables were linear. The histogram normality test also revealed that there was normality. The CUSUM stability test revealed that the model was stable.

Conclusion

According to the study, it has been confirmed that privatization plays a crucial role in impacting Nigeria's real Gross Domestic Product (GDP). The research indicated that policymakers must concentrate on increasing credit access to the private sector, as this can enhance the overall performance of the economy. Moreover, the study revealed that even though the total proceeds from privatization had a positive effect on the economy, it was not statistically significant.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. The government could consider providing more incentives, such as tax breaks or lower interest rates, to private sectors especially banks to encourage them to increase lending to the private sector. This would increase access to credit for businesses, thereby promoting their growth and expansion, which in turn would stimulate economic growth.
2. Improving the regulatory framework for the private sector would enhance investor confidence and attract more investments. The government should focus on creating a more transparent and predictable business environment, with clear rules and regulations, efficient dispute resolution mechanisms, and effective enforcement of contracts. This would help to reduce the perceived risks associated with investing in Nigeria, and encourage both domestic and foreign investors to explore business opportunities in the country.
3. The government should continue its efforts to privatize state-owned enterprises, as this has the potential to improve the efficiency and productivity of these enterprises, and ultimately enhance the overall performance of the economy. However, the privatization process should be conducted in a transparent and fair manner, with appropriate safeguards in place to prevent asset stripping and other forms of abuse. The proceeds

from privatization could be channeled towards financing public infrastructure and social services, which would further support economic growth and development.

4. The government must set aside sufficient funds in the form of borrowing or other forms of privatization that allow the local residents to take part in the privatization process in order to increase the contribution of domestic private investment.

References

- Adams, S., & Mengistu, B. (2008). Privatization, Governance and Economic Development in Developing Countries. *Journal of Developing Societies*, 24(4), 415–438. <https://econpapers.repec.org/RePEc:sae:jodeso:v:24:y:2008:i:4:p:415-438>
- Altiparmakov, N., & Nedeljković, M. (2016). Does pension privatization increase economic growth? Evidence from Latin America and Eastern Europe. *Journal of Pension Economics and Finance*, 17(1), 46–84. <https://doi.org/10.1017/s1474747216000160>
- Aminu, I., & Peterside, Z. B. (2014). The Impact of Privatization of Power Sector in Nigeria: A Political Economy Approach. *Mediterranean Journal of Social Sciences*. <https://doi.org/10.5901/mjss.2014.v5n26p111>
- Antras, P. (2013). Grossman-Hart (1986) Goes Global: Incomplete Contracts, Property Rights, and the International Organization of Production. *Journal of Law, Economics, and Organization*, 30(suppl 1), i118–i175. <https://doi.org/10.1093/jleo/ews023>
- Anyanwu, J.C., Oyefusi, S.A., Oaikhenan, H. & Dimowo, F.A. (1997). *Structure of the Nigerian Economy (1960-1997)*. JOANEE Educational Pub. Ltd., Onitsha. - References - Scientific Research Publishing. (n.d.). www.scirp.org. Retrieved November 27, 2022, from <https://www.scirp.org/reference/ReferencesPapers.aspx?ReferenceID=2517783>
- Assa, J., & Calderon, C. (2020, June 1). *Privatization and Pandemic: A Cross-Country Analysis of COVID-19 Rates and Health-Care Financing Structures*. Ideas.repec.org. <https://ideas.repec.org/p/new/wpaper/2008.html>
- Awoyemi, B., Awoyemi, J., & Aiyegbusi, O. (2022). What role does private sector development play in Nigeria's economic growth? *Problems and Perspectives in Management*, 20(4), 332–343. [https://doi.org/10.21511/ppm.20\(4\).2022.25](https://doi.org/10.21511/ppm.20(4).2022.25)
- Bajra, U. Q., Krasniqi, A., & Podvorica, A. (2021). Privatization of socially owned enterprises, the methods used and the impact on economic growth: empirical evidence from Kosovo. *Economic Research-Ekonomska Istraživanja*, 1–18. <https://doi.org/10.1080/1331677x.2021.1893201>
- Barnett, S. A. (2000, July 1). *Evidence on the Fiscal and Macroeconomic Impact of Privatization*. Papers.ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=879900
- Bennett, J., Estrin, S., & Urga, G. (2007). Methods of privatization and economic growth in transition economies. *The Economics of Transition*, 15(4), 661–683. <https://doi.org/10.1111/j.1468-0351.2007.00300.x>
- Boubakri, N., Smaoui, H., & Zammiti, M. (2009). Privatization Dynamics and Economic Growth. *Undefined*. <https://api.semanticscholar.org/CorpusID:166350419>

- Cook, P., & Uchida, Y. (2003). Privatization and economic growth in developing countries. *Journal of Development Studies*, 39(6), 121–154. <https://doi.org/10.1080/00220380312331293607>
- Devarajan, S., Swaroop, V., & Zou, H. (1996). The composition of public expenditure and economic growth. *Journal of Monetary Economics*, 37(2), 313–344. [https://doi.org/10.1016/s0304-3932\(96\)90039-2](https://doi.org/10.1016/s0304-3932(96)90039-2)
- Eni, N., Okpo, E., & Ebong, V. (n.d.). Power Sector Reform and Economic Development of Nigeria: Case of Port Harcourt Electricity Distribution Company in Akwa Ibom and Cross River States. *IIARD International Journal of Economics and Business Management E-ISSN*, 7(2), 2021. Retrieved November 27, 2022, from <https://www.iiardjournals.org/get/IJEBM/VOL.%207%20NO.%202%202021/POWER%20SECTOR%20REFORM%20AND%20ECONOMIC.pdf>
- Filipovic, A. (2005). Impact of Privatization on Economic Growth. *Undergraduate Economic Review*, 2(1). <https://digitalcommons.iwu.edu/uer/vol2/iss1/7>
- Ifionu, E., & Ogbuagu, A. (2013a). Privatization and Economic Performance: Evidence from Nigeria (1990–2010). *African Research Review*, 7(2). <https://doi.org/10.4314/afrrv.v7i2.2>
- Ifionu, E., & Ogbuagu, A. (2013b). Privatization and Economic Performance: Evidence from Nigeria (1990–2010). *African Research Review*, 7(2). <https://doi.org/10.4314/afrrv.v7i2.2>
- Ilugbusi, S. B., Akindejoye, J. A., Ajala, R. B., & Ogundele, A. (2020). Financial Liberalization and Economic Growth in Nigeria (1986-2018). *International Journal of Innovative Science and Research Technology*, 5(4), 1–9. <http://eprints.abuad.edu.ng/id/eprint/778>
- Impact of Privatization On Pakistan Economy | PDF | Privatization | Foreign Direct Investment.* (n.d.). Scribd. Retrieved November 27, 2022, from <https://www.scribd.com/doc/16912894/Impact-of...>
- Jesiah, S., & Meenakshi. (2008, February 24). *Privatization and Economic Growth in the Least Developed Economies: Empirical Evidences from Ethiopia*. Papers.ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1097045
- Jhigan, M.L. (2002). *Macro Economics Theory*. Vrinda Publishers, New Delhi. - References - *Scientific Research Publishing*. (n.d.). [Www.scirp.org](http://www.scirp.org). Retrieved November 27, 2022, from <https://www.scirp.org/reference/ReferencesPapers.aspx?ReferenceID=2179195>
- Katsoulakos, Y., & Likoyanni, E. (2003). Fiscal and Other Macroeconomic Effects of Privatization. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.363900>
- Khan, F., Zhang, J., Usman, M., Badulescu, A., & Sial, M. (2019). Ownership Reduction in State-Owned Enterprises and Corporate Social Responsibility: Perspective from Secondary Privatization in China. *Sustainability*, 11(4), 1008. <https://doi.org/10.3390/su11041008>

- McKenzie, M. (2008). Privatization and economic growth in Australia: the shorthand of a long process. *Applied Economics*, 40(15), 1953–1967. <https://econpapers.repec.org/RePEc:taf:applec:v:40:y:2008:i:15:p:1953-1967>
- Moshiri, S., & Abdou, A. (2010, October 20). *Privatization, Regulation, and Economic Growth in Developing Countries: An Empirical Analysis*. Papers.ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1695274
- Ogbuagu, R. (n.d.). *PUBLIC SECTOR REFORMS AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL VIEW*. Retrieved November 27, 2022, from <http://globalacademicgroup.com/journals/the%20nigerian%20academic%20forum/Regina%20Anuli%20Ogbuagu%205.pdf>
- Olopade, B. C., & Olopade, D. (2010, May 29). *The Impact of Government Expenditure on Economic Growth and Development in Developing Countries: Nigeria as a Case Study*. Ideas.repec.org. <https://ideas.repec.org/p/ekd/002596/259600123.html>
- Oremade, T. (1986). Petroleum profits tax in Nigeria. In *The Open Library*. Evans Bros. (Nigeria Publishers) Ltd. https://openlibrary.org/books/OL2239018M/Petroleum_profits_tax_in_Nigeria
- Oyediran, L. S., Ijaiya, M. A., & Lawal, A. A. (2017). Effect of Privatization on Economic Growth of Nigeria: 1980-2014 in Retrospect. *Research Journal of Finance and Accounting*, 8(17), 15. <https://iiste.org/Journals/index.php/RJFA/article/view/38587>
- Privatization and Firm Performance: An Empirical Study of Selected Privatized Firms in Nigeria | Mediterranean Journal of Social Sciences. (2020). www.richtmann.org. <https://www.richtmann.org/journal/index.php/mjss/article/view/11380>
- Privatization Impact on Economic Growth in Ethiopia: ARDL Approach. (2019). *European Journal of Business and Management*. <https://doi.org/10.7176/ejbm/11-4-03>
- Rahbar, F., Sargolzaei, M., Ahmadi, R., & Ahmadi, M. (2012). Investigating the Effects of Privatization on the Economic Growth in Developing Countries: A Fixed Effects Approach. *Journal of Economics and Sustainable Development*, 3(4), 61. <https://www.iiste.org/Journals/index.php/JEDS/article/view/1476>
- Rahman, R. (2020). The Privatization of Health Care System in Saudi Arabia. *Health Services Insights*, 13(1), 117863292093449. <https://doi.org/10.1177/1178632920934497>
- Shukurov, S., Maitah, M., & Smutka, L. (2016). The Impact of Privatization on Economic Growth: The Case of Uzbekistan. *International Journal of Economics and Financial Issues*, 6(3), 948–957. <https://ideas.repec.org/a/eco/journ1/2016-03-17.html>
- The Investigation of Relationship between Privatization and Economic Growth in Iran* JavadShahraki, MosayebPahlavani, KamranBarghandan. (n.d.). 1library.net. Retrieved November 27, 2022, from <https://1library.net/document/q5180w3y>
- Tian, X. (2001). Privatization and economic performance: evidence from Chinese provinces. *Economic Systems*, 25(1), 65–77. [https://doi.org/10.1016/s0939-3625\(01\)00007-3](https://doi.org/10.1016/s0939-3625(01)00007-3)

- Todaro, M.P. & Smith, S.C. (2005). *Economic Development. 8th Edition, Pearson Education.* -
References - Scientific Research Publishing. (n.d.). *Www.scirp.org.* Retrieved November
27, 2022, from
<https://www.scirp.org/reference/ReferencesPapers.aspx?ReferenceID=2097804>
- Yusuf, M., Malarvizhi, C. A., & Khin, A. (2013, December 22). *Trade Liberalization Economic
Growth and Poverty Reduction in Nigeria.* *Papers.ssrn.com.*
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=23711