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Government Reserve and Economic Growth: Evidence from Nigeria

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Abstract:

This work evaluated the relationship between government reserve and economic growth in Nigeria from 1981 to 2016. The study adopted domestic reserve and GDP growth as measures of government reserves and economic growth respectively, and the empirical analysis was based on simple regression. The result shows that there is significant relationship between domestic reserves and inflation rate.

Keywords: Domestic reserves, economic growth

1. Introduction

The reason why countries hold government reserves varied. According to Adams (2002, p.185), reserves are the financial assets standing to the credit of the country at a point in time to meet day –to-day running of government and for financing balance of payment disequilibrium and maintaining competitive exchange rate level capable of achieving macroeconomic objectives. According to the IMF's Balance of Payments and International Investment Position Manual (BPM6) and CBN (2017a, p.21), reserve assets simply refers to external assets that are readily available to and managed by monetary authorities for satisfying balance of payments financing needs, for intervention in exchange markets to affect the currency exchange rate, and for other related purposes.

Nwosa (2017, p.1), opined that external reserve acts: as a monetary policy instrument; as a liquidity buffer in case of an international financial market crash; as an instrument of easing the vulnerability to external factors and boosting the stability and confidence in financial markets during periods of financial crisis. The return on domestic reserve is generally much higher than return on foreign reserves for the developing and emerging economies (Mansur, 2013). Afast-growing foreign reserve build-up makes difficult monetary management for the central bank. In spite of the associated cost of accumulating foreign reserves, most countries (Nigeria inclusive) of the world have accumulated reserves (both foreign and domestic reserves) and such accumulation in the past years resulted to a great concern among scholars, development planners as well as commentators on the effect of such government reserves on the growth of Nigerian economy.

Considering Nigeria, the data collected from the Central bank of Nigeria Statistical bulletin 2017 edition unfolded that in the past years, the situation of foreign reserves has been full of ups and downs. For example, the volume of external reserve aggregated to N45,853.3 billion in 1981, it had an upward push to N328,121.2 Billion in 2017.

The impact this accumulation of foreign reserve may have on economic growth has therefore been a subject of academic discuss among researchers and policy analyst on whom studies have been conducted especially in the developed countries and some developing countries (Chen, 2013; Green & Torgerson, 2007; Shameen & Moon, 2005). The few studies on external reserve in Nigeria (such as Abiola and Adebayo (2013), Alasan and sahib (2011)) did not consider the effect of external reserve on economic growth. Abiola and Adebayo (2013) only focused on the channelling of external reserve in Nigeria into alternative investment outlets while Alasan and Shaib (2011) worked on external reserve and management of the growth of the economy in Nigeria.

Following the rise of oil prices in 1999, which lead to unprecedented accumulation in the level of reserves from USD4.98 billion in May 1999, to USD59.37 billion as at March 28, 2007 (CBN, 2008). In the month of march, 2015, there was a decline in foreign reserves of about, 13.4 per cent or \$4.628 billion. This was caused by is based reduction in forex inflow into the country used by the decrease in crude oil prices. This reduction aroused chain reaction which poses a threat to Nigeria's macroeconomic stability. The reduction in oil revenue which also resulted to low have led to the dwindling of foreign exchange reserves.

These scenarios forced a shift in monetary and fiscal policy to cater for be the unforeseen situation. So many studies looked at the relationship between foreign reserve and economic growth in Nigeria, however there is none to my knowledge that focused in domestic reserve and inflation in Nigeria. It is on this backdrop that this study seeks to feel this gap. In the light of the above that this study seeks to close this gap by examining the effect of government reserve on economic growth in Nigeria from 1981 to 2016.

The aim of this study is to evaluate empirically the relationship between government (domestic) reserve and economic growth in Nigeria from 1981 to 2016. Essentially, the specific purpose of this study is:

The remainder of this study has the following structure. Section 2 focuses on literature review. Section 3 contains the empirical strategy. Section 4 focuses on empirical analysis while section 5 summarises and concludes the study.

2. Literature Review

2.1. Conceptual Review

2.1.1. Government Reserves

According to Adams (2002, p.185), reserves are the financial assets standing to the credit of the country at a point in time. According to CBN (2017b, p.269), reserves as a savings account serves as a shock absorber against unforeseen economic downward drop. The spending of reserves could be when expenditure is seen to be more than revenues. According to Adams (2002), the two types of government reserves are external reserves and domestic reserves. For the purpose of this study, the researcher applied domestic reserves as the proxy for government reserves.

2.1.1.1. Domestic Reserves

Domestic reserves can also be called internal reserves or retained revenue, which mean the balance standing to the credit of federal government as shown in consolidated revenue fund (CRF) (Adams, 2002; Ojeaburu, 2018, p.83). Ojeaburu (2018) stated that consolidated revenue fund (CRF) is also called general fund: These are funds meant to finance the general administration or services of federal government. CRF can also be a statutory fund to finance annual budget and other statutory expenditure of the Federal Government Nigeria.

Reem (2009) opined that fiscal policy is a tool through which the government controls its level of spending as to put the economy of the nation under control. Fiscal policy of government as an economic tool assists in the management of domestic reserves and the general objective fiscal policy is to ensure stabilization of the economy (Nwosa, 2017). Fiscal policy uses government taxes, expenditure, and borrowings to determine aggregate demand in the economy.

However, there is still contention on whether monetary policy is superior to fiscal policy. While the British economist John Maynard Keynes called Keynesians consider fiscal policy as more potent than monetary policy since governments can influence macroeconomic productivity levels by increasing or decreasing tax levels and public spending, the monetarists championed by Milton hold a contrary viewpoint (Folawewo & Oshinubi, 2006). The policy is used in consortium with monetary policy to direct a country's economic goals (Reem, 2009).

Olawunmi and Ayinla (2007) studied fiscal policy contribution to achieve a good growth of the economy in Nigeria. The adoption of growth model in the estimation of ordinary least square (OLS) method was sourced. The finding was that fiscal policy has not been much significant as it concerns promoting sustainable economic growth in Nigeria. Ogbale, Amadi, and Essi (2011) studied fiscal policy and its impact on economic growth in Nigeria (1970-2006). The outcome showed there is a difference in the effectiveness of fiscal policy in stimulating economic growth during and after the regulation period. Adeoye (2006) analyzed the impact of fiscal policy on economic growth in Nigeria in 1970 to 2002. The result revealed that public investment negatively related with output growth meaning that public expenditure has a crowding out effect on private investment.

2.1.1.2. Economic Growth

Olamade (1999) defined economic growth as long-term sustainable growth in the economy. According to Wikipedia, economic growth is viewed as the expansion or increase in the inflation-adjusted market value of the goods and services produced by an economy within a defined period. Conventionally, it is measured as the percentage rate of addition in real gross domestic product, or real GDP. The "rate of economic growth" refers to the geometric annual rate of growth in GDP between the first and the last year over a period of time. This growth rate is the trend in the average level of GDP over the period, which ignores the fluctuations in the GDP around this trend.

The basic neoclassical growth framework of Solow (1956) and Ramsey (1928) has long served as a benchmark organizing framework for understanding the facts of growth. The nonrivalry of ideas, emphasized by Romer (1990), helps us understand how sustained exponential growth occurs endogenously. I review this contribution and some of the extensive research it sparked in Jones (2005). The decline in the relative price of equipment and the rise in the college wage premium are looked at together in Krusell et al. (2000).

3. Empirical Review

On the contrary, Kevin, Roland and Sashana (2013) conducted a study on the Macroeconomic effects of foreign exchange reserves using balanced panel data of 13 countries and the sample period of 32 years ranging from 1980 to 2012. The study revealed external reserves have a statistically significant negative impact on consumption and debt maturity and a positive impact on exports and economic growth.

Nwafor and Okoye (2017) investigated external reserve on economic growth in Nigeria. Two hypotheses were tested with data spanning from 2004 to 2015 using Ordinary Least Squares (OLS) regression technique. Findings however revealed that external reserve has no positive significant impact on economic growth in Nigeria within the period under review and that external reserves have no positive significant influence on exchange rate in Nigeria.

Akinwunmi and Adekoya (2014) examined external reserves management and its effects on Nigeria economic growth from 1985 to 2013. They used secondary data sourced and were subjected to Durbin Watson auto-correlation test, for reliability of the data sourced and diagnostic tests such as unit root test (Augmented Dickey Fuller) and Johansen co-integration test, for the stationary and non-stationary of the data and long run relationship between the dependent and

independent variables and multiple regression were used to test for the relationship between the explainable variables and external reserves management in Nigeria. The study reveals external reserve as essential to the economy of Nigeria and must be kept at acceptable level so as to achieve its aim. Therefore, the study concludes that, external reserves management has a positive significant relationship with foreign direct investment, economic growth and monetary policy rate but has negative relationship with inflation and exchange rate.

Herve (2016) investigated the relationships between foreign exchange reserves and inflation for four West African countries namely Cote d'Ivoire, Senegal, Ghana and Nigeria. The result shows that rise in foreign exchange reserves leads to increase the rate of inflation. The study suggested that governments of these countries mentioned above should pay more attention to foreign exchange system management by enlarging open market operations. Therefore, it becomes necessary for these countries to minimize the negative effect of the foreign exchange reserves.

Ifurueze (2014) examined the effect of external reserve on economic growth in developing country like Nigeria. The data was collected from CBN statistical bulletin, 2012 edition. The data ranged between 1970 to 2009. The statistical tool used for the analysis was regression analysis which was adopted to determine the effect of external reserve aggregation on Nigeria economy. The findings indicated a significant relationship between level of economic growth and external reserve aggregation.

Umeora (2013) examined the relationship between foreign exchange reserves accumulation, exchange rate, inflation and gross domestic product (GDP) in Nigeria. The analysis of the data revealed that exchange rate and GDP have positive and significant relationship with foreign exchange reserves accumulation while inflation has negative and insignificant relationship with foreign exchange reserves. The study concluded that Nigeria is accumulating foreign exchange reserves because of her over reliance on imports but should be aware of the social cost implications of such action.

3. Methodology

3.1. Data

We use yearly time series data on government domestic reserves and GDP growth rate from 1981 to 2016. The data were collected from CBN statistical bulletin 2016 version. The empirical analysis is done in SPSS.

3.2. Specification of Model

Our empirical model can be specified as follows:

$$ECG_t = \beta_0 + \beta_1 DOR_t + \epsilon_t$$

Where ECG_t = economic growth at time t , DOR_t = government domestic reserves, β_0 = regression constant, β_1 = slope coefficient that captures the effect of government domestic reserve, ϵ_t = error term.

4. Data Analysis and Results

Table 1 shows the simple regression results for the relationship between government domestic reserves and economic growth.

Variable	Beta	p-value
Constant	1782.022	0.000
DOR	30.145	0.022
R-square	0.462	
Durbin-Watson	1.823	

Table 1: Regression Results for DOR and ECG

From Table 1, the beta coefficient of 30.14 indicates that GDP growth is positively relationship with domestic reserves while the p-value of 0.022 indicates that the effect of domestic reserve is statistically significant at 5% level. A small increase in domestic reserve would lead to a substantial increase in economic growth in Nigeria. The constant term also has a large positive value and is significant at zero percent level, implying that there would be a positive economic growth even when there is no explanatory factor in the model. The R-square is 0.462, indicating that the model is moderately fitted. Approximately 46% of the variance of economic growth are accounted for by changes in domestic reserve.

5. Conclusion

This paper investigated the impact of government reserves on economic growth in Nigeria for 1981 to 2016 using simple regression framework. The result shows that government reserves and economic growth are positively and significantly related.

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