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Economic stabilisation and performance in West Africa: The role of fiscal and monetary policy

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A G D I Working Paper

WP/19/097

Economic Stabilisation and Performance in West Africa: The Role of Fiscal and Monetary Policy ¹

Forthcoming in Dynamics of Fiscal and Monetary Policies in ECOWAS Countries

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Research Department

Economic Stabilisation and Performance in West Africa: The Role of Fiscal and Monetary Policy**Ekundayo P. Mesagan & Ismaila A. Yusuf**

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Abstract

The study examines the impact of fiscal and monetary policy on economic performance and stabilisation in Nigeria, Gambia, and Ghana between 1980 and 2017. In the study, the real gross domestic product and the exchange rate are used to proxy economic performance and economic stabilisation respectively while fiscal policy is captured with deficit finance and government expenditure. Also, the broad money supply and monetary policy rate are used as proxies of monetary policy. The study obtains country-specific results using the fully modified ordinary least squares technique and findings show that monetary policy has insignificant effect on economic performance in Nigeria and the Gambia, but has significant impact in Ghana while fiscal policy significantly enhances economic performance in Nigeria and Gambia, but is insignificant in Ghana. Result also confirms that monetary policy significantly drives economic stabilisation in Nigeria and the Gambia, but insignificantly in Ghana while fiscal policy has insignificant impact on economic stabilisation in Ghana and Gambia, but significant in Nigeria. Thus, we conclude that fiscal policy is relatively more important in stimulating economic performance in Nigeria and Gambia while monetary policy is relatively more important in determining economic performance in Ghana. For economic stabilisation, both fiscal and monetary policies are important in Nigeria, both are ineffective in Ghana, while monetary policy is more important in the Gambia. The study recommends further reductions in monetary policy rate to put less pressure on the exchange rate and stabilise the various economies.

Keywords: Fiscal Policy; Monetary Policy; Deficit Finance; Economic Performance.

JEL Classification: E52, E62, E63, H62, F31, F43

1. Introduction

Apex Banks often target an inflation or interest rate to ensure price stability and steer the economy in the desired direction. According to Udude (2014), monetary policy is a technique of economic management to bring about sustainable growth in a country. Since monetary policy is a veritable tool for influencing macroeconomic objectives like economic growth, price stability, balance of payment equilibrium, and employment creation, it becomes an important tool of economic management. In West Africa, monetary policy instruments like the monetary policy rate sets the tone for monetary policy direction. In the view of Isola and Mesagan (2018), monetary policy encompasses the measures designed to regulate the value, supply, and cost of money in consonance with the expected level of economic activities. Moreover, regarding fiscal expansion, government often uses taxation reduction. It can also promote growth by directly getting involved in productive activities through public corporations (Asongu, 2013; Chowdhury & Afzal, 2015). To this end, government usually increase funding to such corporations, through an expansionary budget to boost productivity. Again, another fiscal tool that government uses is through increasing their public debt, especially when the economy's potentials to generate enough revenues from taxation is restricted such as during recessions (Nagayasu, 2003; Cochrane, 2005; Eregha & Mesagan, 2019). Thus, fiscal policy is a manipulative instrument that government uses to achieve desired macroeconomic objectives. It is also a deliberate exercise to stimulate the economy in a desired direction (Ndiyo & Udah, 2003; Cochrane, 2005; Eregha *et al.*, 2015; Mesagan *et al.*, 2019).

In Nigeria, monetary policy has been used since the apex bank was saddled with the responsibility of formulating and implementing monetary policies by the Central Bank Act of 1958. This role has facilitated the emergence of active money market where treasury bills, a financial instrument used for Open Market Operations and raising debt for government has grown in volume and value becoming a prominent earning asset for investors and source of balancing liquidity in the market (Ndiyo and Udah, 2003; Mesagan, Alimi, & Yusuf, 2018). Over the years, the major goals of monetary policy have often been the two later objectives. Thus, inflation targeting and exchange rate policy have dominated CBN's monetary policy focus based on assumption that these are essential tools of achieving macroeconomic stability (Ajayi & Atanda, 2012; Mesagan & Nwachukwu, 2018). Uncertainty seems to be problem at every part of the monetary policy process and there is yet no set of policy and procedures that policy makers

can use to deal with all situations that may arise (Falade & Folorunso, 2015; Omojolaibi *et al.*, 2016; Mesagan & Adenuga, 2019). Indeed, the central bank spends a great deal of time and effort in researching into the various ways to deal with different kinds of situation. Hence, dealing with exchange rate depreciation can help to stabilise the economy as the country is able to remain productively competitive with the rest of the world. For instance, exchange rate appreciation can help local firms to acquire the needed inputs for production, makes it possible acquire the required technical know-how, and stabilise the domestic price level. When the exchange rate situation improves, price stability is guaranteed, inflation tendencies are brought low and overall economic stability improves.

Moreover, owing to the periodic macroeconomic fluctuation in West Africa that has triggered employment instability and rising inflation rates occasioned by the fall in the global prices of crude oil and gold between 2013 and 2016, the government has had to mediate in economic management through fiscal policy. Such policies emanate to provide economic stabilisation through increasing government fiscal spending. For instance, to take Nigeria out of recession, the government has continuously embarked on budget deficits since the country's oil receipts fell sharply from 2013 up to date (AFDB³, 2018). According to statistical evidence from the AFDB, when measured as a ratio of the GDP, deficit finance in Nigeria was 2.33%, 2.13%, 3.48%, 3.93%, and 5.29% for 2013, 2014, 2015, 2016 and 2017 respectively. Meanwhile, the story is also similar in Ghana as the deficit finance is 12%, 10.94%, 5.37%, 8.85%, and 5.09% for 2013, 2014, 2015, 2016 and 2017 respectively. Whereas that in Gambia is 5.59%, 3.84%, 5.31%, 6.51%, and 5.39% for 2013, 2014, 2015, 2016 and 2017 respectively. The decision by these countries to use budget deficits to augment whatever policies emanating from their apex banks is because economic decisions cannot be left solely to the market forces of demand and supply. Thus, while fiscal policy is often being used as economic stabilisation measure, monetary and exchange rate policies are used to counteract the problems identified by the central banks (Mesagan & Shobande, 2016). For instance, a decrease or increase in taxes and government expenditure, which constitute the spectrum of fiscal policy requires monetary policies instruments to bring out a good performance and stabilisation in an economy because none of this policy singularly can cure all the problems facing an economy (Ndiyo & Udah, 2003).

³African Development Bank

Therefore, having established that the market mechanism and monetary policy cannot be solely relied upon to stimulate the economy in the desired direction except the fiscal policy plays a complementary role, it means that appropriate policy mix is needed. The fiscal policy thrust used in complementing monetary policy to manipulate the economy desirably depends on the set objectives at any point in time. As identified earlier for Nigeria, Ghana, and Gambia, government's involvement in the economy through fiscal actions also involves managing the receipt and expenditure sides of its budget to achieve certain objectives. The reality however is that there are often wastages, misappropriation of public funds, lack of political will, nepotism, and high level of politicising of government spending. These have often reduced the supposed impact of such fiscal actions on the economy. To this end, it becomes vital to analyse the relative effectiveness of both fiscal and monetary policies in promoting the stabilisation and performance of countries in West Africa. Specifically, the study analyses the effect of fiscal and monetary policy on economic stabilisation. It examines the impact of fiscal and monetary policy on economic performance. Also, based on the significance of the fiscal and monetary policy instruments, the relative effectiveness of each on economic stabilisation and performance is determined. The focus of this paper is on the West African region because of the common quest to promote economic stabilisation and development. Again, the three countries selected are major players in the West African Monetary Zone (WAMZ), which main aim is to promote a common currency and fast-track economic integration among members. Obviously, assessing the role of fiscal and monetary policy in Nigeria, Gambia, and Ghana will help to contribute meaningfully to the discussion in WAMZ and assists in deepening policy formulation regarding economic stabilisation and performance promotion in the region. Therefore, the motivation for the current study.

2. Literature Review

The role of fiscal and monetary policy on growth and stabilisation in West Africa is very critical in the current period and some scholarly works have been conducted in this realm. For studies focusing on monetary policy and growth, Gaiotti and Generale (2002) focused on Italy and found that the effects of monetary policy transmitted through the financial indicators enhanced growth of Italian firms. Mwega (2011) examined the situation in Kenya between 1998 and 2007 and confirmed that monetary reforms promoted more baking competition and growth in the country. Udude (2014) extended the study to Nigeria between 1981 and 2012 using money supply,

interest rate, exchange rate and liquidity. Results showed that only exchange rate exerted significant impact on growth while other variables did not. Thereby concluding that monetary policy insignificantly enhanced growth. Similarly, Mesagan and Shobande (2016) extended and observed that the Nigerian central bank has a significant role to play in promoting economic growth. Again, Dori (2016) confirmed that central bank's policies in Nigeria increased the productivity of the real sector economic growth and employment while Koivu (2016) extended the discussion to transition countries and results confirmed that the financial sector strongly determined economic growth in the selected countries.

Regarding the discussion on the effect of fiscal policy on economic growth, Easterly and Rebelo (1993) used cross sectional data and found a strong association between the development level and the fiscal structure. For instance, less developed countries relied heavily on international trade taxes, while developed nations relied more on income taxes. Also, fiscal policy was influenced by the scale of the economy, and transport and communication funding are strongly correlated with growth, while taxation effects were difficult to pinpoint. De La Fuente (1997) focused on 21 OECD countries from 1965 to 1995 and did not find support for the fiscal policy-led growth hypothesis. Also, it confirmed that public expenditures crowded-out private investment in the panel of countries. Ghali and Al-Shamsi (1997) focused on the United Arab Emirates between 1973 and 1995 and findings confirmed that government expenditure unidirectionally caused economic growth. Dar-Atui and Amirkhalkhali (2002) confirmed that fiscal policy is a major determinant of economic growth while Adam and Bevan (2005) found a deficit threshold of 1.5% of GDP in 45 selected less developed countries. Omitogun and Ayinla (2007) beamed searchlight on Nigeria and found that fiscal policy is ineffective in promoting sustainable growth. It also confirmed that governmental bottlenecks, corruption and weak policy implementations hampered fiscal policy effectiveness in the country.

Moreover, Mansouri (2008) analysed the relative effectiveness of fiscal policy in Morocco, Egypt, and Tunisia between the early 1970s and 2002. Empirical findings showed that 1% increase in fiscal spending increased the real GDP by 1.15% in Tunisia, 1.26% in Morocco, and 0.56% in Egypt. Abdullah *et al* (2009) also found that the size of government expenditure is critical in driving economic performance while Enache (2009) focused on Romania between 1992 and 2013 and found that fiscal policy enhanced positive but insignificant effect on

economic growth. Oseni and Babatunde (2012) investigated the fiscal policy variables that contributed to growth in Nigeria between 1981 and 2010. Productive and unproductive expenditure, fiscal deficit, distortionary taxes, non-distortionary taxes, and the GDP real growth rate were used in the study. Results confirmed that productive expenditure, fiscal deficit, and distortionary taxes positively impacts growth. Again, Audu (2012) revealed the existence of a significant causal nexus between growth and the other explanatory variables. It also found a significant causal nexus between exports, fiscal policy and growth in Nigeria. Like Oseni and Babatunde (2012), as well as, Audu (2012), Wosewei (2013) confirmed that fiscal deficits did not significantly affect the country's macro-economy while bidirectional causality was found between government deficit and economic growth. This was also corroborated by Agu *et al.*(2015), which found that government fiscal spending positively enhanced growth in Nigeria. Dinca and Dinca (2013) extended the study to the European Union between 2001 and 2011 and results confirmed that growth rate is positively determined by fiscal pressure, private sector investment, labour productivity and economic openness. Adeline *et al* (2014) found that total government expenditures increased with government revenue and that positive correlation existed between government fiscal spending and economic growth. In a recent study by Ugwuanyi and Ugwunta (2017) on Sub-Saharan Africa (SSA), results revealed that government productive and unproductive expenditures, and distortionary and non-distortionary taxes significantly affected growth while budget balances positively but insignificantly impacted growth.

For studies examining the relative effects of fiscal and monetary policy on growth, Khosravi and Karimi (2010) focused on Iran using the ARDL approach to cointegration between 1960 and 2006. Findings suggested the existence of long-run relationship between economic growth, fiscal policy and monetary policy. Furthermore, it found monetary policy has a negative impact on growth fiscal policy has a positive and significant impact on growth. Abata *et al* (2012) focused on Nigeria findings showed the existence of a mild long-run equilibrium relationship between growth and fiscal policy. Chowdhury & Afzal (2015) focused on the effect of fiscal and monetary policy on the Bangladesh economy. Focusing on the period of 1980 to 2012, results confirmed that both fiscal and monetary policies are equally effective in simulating economic growth in Bangladesh. Sen and Kaya (2015) focused on the Turkish economy from the period of 1st quarter 2001 to 4th quarter 2014. Findings suggested that both monetary and fiscal policies

significantly enhanced growth. However, monetary policy is more effective than fiscal policy. Specifically, interest rate was confirmed as the most important monetary policy instrument while budget deficit is confirmed as the most essential fiscal policy instrument. Lastly, Falade and Folorunso (2015) found that fiscal and monetary policies are complementary in promoting growth in Nigeria between 1970 and 2013.

It is evident from the reviewed articles that the role of fiscal and monetary policy in driving economic growth cannot be over-emphasised. However, because previously related studies have mostly examined the effect of either fiscal or monetary policy on growth rather than their relative effectiveness, this study fills a gap by examining relative impact of both on stabilisation and performance. Moreover, a few studies like Khosravi and Karimi (2010), Abata *et al* (2012), Chowdhury and Afzal (2015), Sen and Kaya (2015), and Falade and Folorunso (2015) have made efforts to fill this noticeable gap by analysing the relative effects of both fiscal and monetary policies on growth, but they neglected economic stabilisation in their discussions. However, while their efforts to analyse economic growth or performance is nice, the inability to consider economic stabilisation inhibits the practical applicability of the studies. This is because economic instability is very common in West Africa owing to their dependence on primary exports, which are often demand inelastic in the global market. Thus, omitting such creates a serious gap that this present study fills.

3. The Situation in the Selected West African Countries

In this section, we provide the background of the role of fiscal and monetary policy on stabilisation and performance of the economy in West Africa in Table 1.

Table 1: Deficit Finance, Monetary Policy Rate, Economic Stability and Performance in WA

| Country | Deficit Finance (% of GDP) | | Monetary Policy Rate (%) | | Exchange Rate (Local Currency/USD) | | Real GDP Growth Rate (%) | |
|----------------|-------------------------------|------|-----------------------------|------|--|-------|--------------------------------|------|
| | 2015 | 2017 | 2015 | 2017 | 2015 | 2017 | 2015 | 2017 |
| <i>Nigeria</i> | -3.5 | -5.1 | 11.0 | 14.0 | 192.4 | 305.3 | 2.7 | 0.7 |
| <i>Gambia</i> | -8.1 | -3.9 | 23.0 | 15.0 | 42.5 | 46.0 | 4.3 | 3.5 |
| <i>Ghana</i> | -5.8 | -6.7 | 25.5 | 17 | 3.7 | 4.4 | 3.8 | 8.5 |

Source: Authors' Compilation from the African Statistical Yearbook (AFDB, 2018) and the Central Banks of the selected countries.

In Table 1, regarding deficit finance as a ratio of GDP, evidence suggests that Gambia recorded the highest of 8.1% in 2015 but recorded the lowest in 2017. Again, Nigeria's deficit finance rose from 3.5% in 2015 to 5.1% in 2017 while that of Ghana also increased from 5.8% to 6.7% between 2015 and 2017. The implication is that deficit financing dropped in Gambia between 2015 and 2017 while those of Nigeria and Ghana increased over the period. However, in terms of the responses of each country's monetary sector, the monetary policy rate increased in Nigeria and Gambia between 2015 and 2017 while it reduced in Ghana from 25.5% in 2015 to 17% in 2017. For both Nigeria and Ghana, deficit finance trend is expected because of the economic recession over the period as both nations were able to raise the ratio of deficit finance to the GDP. In fact, the three countries embarked on fiscal expansion between 2015 and 2017. Although, Gambia reduced its level of deficit in 2017, both Ghana and Nigeria increased theirs to boost economic performance. The response of the Apex bank in Nigeria is contractionary as the Central Bank of Nigeria (CBN) increased the MPR to mop-up the effect of fiscal expansion and encourage the inflow of foreign capital into the economy. Considering the impact on economic performance, GDP declined in Nigeria from 2.7% in 2015 to just 0.7% in 2017, while economic stability also worsened as the naira depreciated against 1 US dollar from 192.4 in 2015 to 305.3 in 2017. Similarly, Gambia's economic performance dropped from 4.3% in 2015 to 3.5% in 2017 while economic stability also worsened, but lesser than that of Nigeria, as the Dalasi depreciated against 1 US dollar from 42.5 in 2015 to 46.0 in 2017. However, Ghana's

output growth increased from 3.8% in 2015 to 8.5% in 2017, but economic stability worsened as the Ghanaian Cedi depreciated against 1 US dollar from 3.7 in 2015 to 4.4 in 2017.

Table 2: Government Spending, Money Supply, Economic Stability and Performance in WA

| Country | Government Expenditure (% of GDP) | | Broad Money Supply Growth Rate (%) | | Exchange Rate (Local Currency/USD) | | Real GDP Growth Rate (%) | |
|----------------|-----------------------------------|------|------------------------------------|------|------------------------------------|-------|--------------------------|------|
| | 2015 | 2017 | 2015 | 2017 | 2015 | 2017 | 2015 | 2017 |
| <i>Nigeria</i> | 11.1 | 10.8 | 5.9 | 14.6 | 192.4 | 305.3 | 2.7 | 0.7 |
| <i>Gambia</i> | 29.7 | 34.3 | -0.9 | 11.4 | 42.5 | 46.0 | 4.3 | 3.5 |
| <i>Ghana</i> | 29.2 | 26.7 | 23.3 | 22.7 | 3.7 | 4.4 | 3.8 | 8.5 |

Source: Authors' Compilation from the African Statistical Yearbook (AFDB, 2018) and the Central Banks of the selected countries.

In Table 2, regarding government expenditure as a ratio of GDP, evidence suggests that Gambia recorded the highest of 29.7% in 2015 and 34.3% in 2017. For Nigeria and Ghana, the story is slightly different as government spending fell from 11.1% in 2015 to 10.8% in 2017 in Nigeria while that in Ghana also fell from 29.2% in 2015 to 26.7% in 2017. The implication is that while government spending increased in Gambia, it reduced in Ghana and Nigeria between 2015 and 2017. Regarding the response from the monetary sector, Money supply rate increased in Nigeria from 5.9% to 14.6% between 2015 and 2017 to cushion the short fall in government spending. The money supply rate also increased in Gambia but dropped slightly in Ghana between 2015 and 2017. This means that as fiscal contraction took place in Nigeria due to the fall in government expenditure, monetary expansion was used to offset its effect on the economy. In Gambia, fiscal expansion brought about by increased government spending was complement with monetary expansion too. However, in Ghana, the fiscal contraction caused by the fall in government spending was also accompanied by monetary contraction in the rate of money supply too. The fiscal and monetary responses of the three countries via government expenditure and money supply respectively have implications for economic performance and stability as discussed in Table 1.

4. Research Methodology

The focus of this study is on the role of fiscal and monetary policy on performance and stabilisation of countries in West Africa between 1980 and 2017. Following Okunronmu (1993), Akinlo and Odusola (2003), and Isola and Mesagan (2018) we specify the empirical model between the dependent and independent variables as:

$$Y_t = \alpha_0 + \lambda_1 GXP_t + \lambda_2 MPR_t + \lambda_3 CT_t + \varepsilon_t \quad (1)$$

In the equation (1), Y is represents both economic stabilisation and performance. While economic stabilisation is captured with the exchange rate (EXR), economic performance is proxied with the real GDP per capita (RGDP). GXP is total government expenditure to capture fiscal policy while MPR is monetary policy rate and it is a proxy for monetary policy. Again, CT represents the control variables, t represents the time series, α_0 is the intercept term, λ_1, λ_2 are the coefficients of government expenditure and monetary policy rate respectively, while ' ε ' is the disturbance term.

4.1 Model Specification

Hence, Following Okunronmu (1993), Akinlo and Odusola (2003), and Isola and Mesagan (2018), and in line with the specific objectives, equation (1) is augmented to accommodate other indicators in equation (2) as:

$$Y_t = \alpha_0 + \lambda_1 GXP_t + \lambda_2 MPR_t + \lambda_3 DFIN_t + \lambda_4 BMS_t + \lambda_5 TAX_t + \lambda_6 CPS_t + \varepsilon_t \quad (2)$$

In equation (2), $DFIN$ is deficit finance, BMS is broad money supply, TAX represents taxation, and CPS is the amount of commercial banks credit to the private sector. Both government expenditure and deficit finance are used as proxies for fiscal policy while both monetary policy rate and the broad money supply are used as monetary policy indicators. Meanwhile, both taxation and credit to the private sector are used as control variables. Parameters like $\lambda_3, \lambda_4, \lambda_5$, and λ_6 are the coefficients of deficit finance, broad money supply, taxation, and credit to the private sector respectively. The other variables and parameters remained as earlier explained.

4.2 Estimation Technique

In this scientific enquiry, only data from secondary sources are used. All the data are sourced from the World Bank's World Development Indicators (WDI, 2019) while deficit finance is

sourced from the African Development Bank's African Statistical Year Book (AFDB, 2018). Deficit finance is the difference between government fiscal spending and fiscal revenue. Data on monetary policy rates are sourced from each country's central bank. MPR in Nigeria is sourced from (⁴CBN, 2019), that for Ghana is sourced from (⁵BOG, 2019), while that for Gambia is sourced from (⁶CBG, 2019). For a robust analysis of the individual country data, the Fully Modified OLS (FMOLS) is employed as the estimation technique. We use the FMOLS because it helps to generate the country-specific results needed in this study. According to Pedroni (2000), the advantage of the FMOLS over the traditional Ordinary Least Squares estimation technique is that it corrects for serial correlation and endogeneity in the long-run models. The selected West African countries include Nigeria, Gambia and Ghana. They are selected because they are major players in the West African Monetary Zone and exhibit similar features since they are all English-Speaking West African Nations. Further justification for selecting these countries have been given in the introduction section.

5. Empirical Result

5.1 Interpretation of Findings

The result of the unit root tests for the three countries are presented in Tables 3a and 3b. In Table 3a, the unit root test result at level is presented while that of the first difference is presented in Table 3b. The result in Table 3a shows that at level, none of the variable is stationary at 5% level of significance. However, Table 3b indicates that all the series are stationary at first difference at 5% significance level. We therefore reject the null hypotheses of “*no stationary*” at first difference for Nigeria, Gambia and Ghana.

⁴ Central Bank of Nigeria

⁵ Bank of Ghana

⁶ Central Bank of the Gambia

Table 3a: Stationarity Test Results at Level

| Variables | ADF Tau Statistics | | | Status |
|-------------|--------------------|-----------------|-----------------|----------------|
| | Nigeria | Gambia | Ghana | |
| DFIN | -0.0271[-2.221] | -1.0364[-3.102] | -2.8946[-4.122] | Not Stationary |
| GXP | -0.1364[-4.203] | -0.3724[-2.815] | -0.3741[-2.014] | Not Stationary |
| MPR | -0.0732[-2.816] | -1.0033[-3.810] | -2.0173[-4.001] | Not Stationary |
| BMS | -1.6201[-4.203] | -0.1037[-2.911] | -0.0374[-2.003] | Not Stationary |
| EXR | -0.0027[-2.901] | -1.0036[-3.521] | -0.0264[-2.313] | Not Stationary |
| RGDP | -0.0021[-1.300] | -0.2852[-3.821] | -1.0364[-3.807] | Not Stationary |
| CPS | -1.0364[-4.918] | -2.0573[-5.801] | -1.0465[-4.900] | Not Stationary |
| TAX | -0.2913[-2.021] | -0.4634[-3.908] | -0.0602[-3.008] | Not Stationary |

Note: Mackinnon critical values at 5% are shown in parenthesis.

Table 3b: Stationarity Test Results at First Difference

| Variables | ADF Tau Statistics | | | Order of Integration |
|-------------|--------------------|------------------|------------------|----------------------|
| | Nigeria | Gambia | Ghana | |
| DFIN | -7.2741[-2.244]* | -6.3324[-3.113]* | -7.0421[-4.195]* | Stationary |
| GXP | -8.8274[-4.273]* | -5.2185[-2.874]* | -4.0265[-2.063]* | Stationary |
| MPR | -7.8274[-2.864]* | -6.9642[-3.846]* | -9.0374[-4.002]* | Stationary |
| BMS | -6.9463[-4.294]* | -5.0375[-2.956]* | -5.9364[-2.084]* | Stationary |
| EXR | -6.0642[-2.937]* | -6.2645[-3.527]* | -5.9353[-2.373]* | Stationary |
| RGDP | -4.3947[-1.383]* | -8.0374[-3.836]* | -6.3843[-3.836]* | Stationary |
| CPS | -6.9421[-4.963]* | -9.5323[-5.832]* | -7.6243[-4.926]* | Stationary |
| TAX | -8.0423[-2.037]* | -6.0263[-3.945]* | -6.5921[-3.047]* | Stationary |

*Note: Mackinnon critical values are shown in parenthesis. * signifies 5% significance level.*

The Johansen cointegration test is presented in Table 4. For both Nigeria and Ghana, the trace and Maximum-eigenvalue tests indicate that there is 1 co-integrating equation at 5% significance level. However, for Gambia, both trace and Maximum-eigenvalue tests show that there are 3 co-integrating equations at 5% significance level. Summarily, the cointegration result indicates that there is long-run relationship between fiscal policy, monetary policy as well as economic performance and stabilisation in the three West African countries.

Table 4: Johansen Cointegration Test

| Hypothesized No. of CE(s) | Nigeria | | Gambia | | Ghana | |
|------------------------------|------------------|----------------------|------------------|----------------------|------------------|----------------------|
| | Trace Test@5% | Max-Eigen Test@5% | Trace Test@5% | Max-Eigen Test@5% | Trace Test@5% | Max-Eigen Test@5% |
| None * | 95.1736* | 58.4218* | 102.582* | 54.8319* | 88.1573* | 51.7392* |
| At most 1 | 49.0812 | 39.8633 | 89.9584* | 50.1729* | 49.8573 | 34.9672 |
| At most 2 | 33.9474 | 24.9413 | 72.0757* | 46.7128* | 33.6913 | 28.7574 |
| At most 3 | 19.0354 | 18.3284 | 41.8757 | 24.8193 | 28.0863 | 22.7502 |
| At most 4 | 12.8534 | 15.0437 | 32.8974 | 20.8747 | 19.4729 | 16.4774 |
| At most 5 | 8.62837 | 11.5374 | 20.2174 | 13.7461 | 11.8576 | 11.9624 |
| At most 6 | 5.32745 | 7.75247 | 9.74731 | 7.91283 | 8.03024 | 7.92729 |
| At most 7 | 1.93544 | 3.97152 | 3.00182 | 2.93648 | 4.61479 | 3.16893 |

Note:* denotes rejection of the hypothesis at the 0.05 level; **MacKinnon-Haug-Michelis (1999) p-values

From Table 5, we find that deficit finance has a negative but significant effect on the real GDP and the exchange rate in Nigeria, while government expenditure has a positive and significant effect on both indicators. This means that as government continues to budget for deficit, it negatively affects the performance of the Nigerian economy but improves the country's economic stabilisation by making the exchange rate to appreciate. However, government fiscal spending has a positive and significant impact on both the real GDP and exchange rate in Nigeria. It means that increases in fiscal spending improves Nigeria's economic performance and causes destabilisation in the country. The taxation result also indicates that 1% increases in tax revenue brings about 14% decreases to economic performance and 63% increases to economic stabilisation in Nigeria. It thus follows that taxation retards economic performance but improves economic stabilisation by producing exchange rate appreciation. Regarding the monetary indicators, evidence from Table 5 suggests that both monetary policy rate and the credit to the private sector have positive but insignificant effects on the real GDP but positive and significant impacts on the exchange rate in Nigeria. This means that while monetary policy rate and private sector credit improve economic performance, both worsen economic stabilisation by causing exchange rate depreciation. Lastly, the broad money supply has a positive but insignificant impact on the real GDP but a negative and insignificant effect on the stabilisation. That is, money supply improves both economic performance and stabilisation by improving appreciation of the naira. In terms of statistical significance of the fiscal policy indicators in Nigeria, government expenditure is significant at 1% and 5% respectively in the real GDP and exchange

rate model while fiscal deficit and tax are insignificant in the real GDP model but significant in the exchange rate model at 5% respectively. For monetary policy indicators, none is significant in the real GDP model for Nigeria but they are all significant at various levels in the stabilisation model.

Table 5: FMOLS Results

| Countries | Variables | Performance | Stabilisation |
|----------------|-------------|-------------|---------------|
| <i>Nigeria</i> | <i>C</i> | 12.104*** | 22.537 |
| | <i>DFIN</i> | -0.0246* | -1.7354** |
| | <i>GXP</i> | 0.0623*** | 0.8364** |
| | <i>MPR</i> | 0.0045 | 0.9047*** |
| | <i>BMS</i> | 0.0161 | -0.1331* |
| | <i>CPS</i> | 0.0060 | 0.3173* |
| | <i>TAX</i> | -0.1468* | -0.6323** |
| <i>Gambia</i> | <i>C</i> | 1.9919*** | 1.1248 |
| | <i>DFIN</i> | 0.0016** | 0.0963 |
| | <i>GXP</i> | 0.0011* | 0.0531 |
| | <i>MPR</i> | 0.0192 | 0.3672* |
| | <i>BMS</i> | 0.1373 | 0.2164*** |
| | <i>CPS</i> | 0.0247 | -0.2174*** |
| | <i>TAX</i> | 0.3523* | -0.0327 |
| <i>Ghana</i> | <i>C</i> | 7.5735*** | 0.2404 |
| | <i>DFIN</i> | -0.0029 | -0.0707 |
| | <i>GXP</i> | 0.0083 | 0.0021 |
| | <i>MPR</i> | 0.0048** | 0.0041 |
| | <i>BMS</i> | 0.0131* | -0.0239 |
| | <i>CPS</i> | 0.0466*** | 0.0875** |
| | <i>TAX</i> | 0.0062* | 0.0151** |

*Note: *, **, *** Stand for 10%, 5%, 1% significance level, respectively*

Moreover, regarding the Gambian result, Table 5 shows that deficit finance and government expenditure have positive effect on both the real GDP and exchange rate. Meanwhile taxation revenue has a positive impact on the real GDP but exert a negative effect on the exchange rate. The intuition is that all the fiscal policy indicators positively enhance economic performance in Gambia. However, when their effects are considered on economic stabilisation, Table 5 suggests that both deficit finance and government expenditure distort economic stabilisation as they both lead to exchange rate depreciation while tax revenue causes exchange rate appreciation thereby strengthening economic stabilisation in Gambia. In terms of statistical significance, deficit

finance, government expenditure, and taxation are significant in the real GDP model at 5%, 10% and 10% respectively. However, all the fiscal policy variables have insignificant effect in influencing economic stabilisation in Gambia. Regarding the monetary indicators, Table 5 confirms that monetary policy rate, the credit to the private sector, and broad money supply have positive effects on the real GDP. Again, increases in the private sector credit improves economic stabilisation by reducing the exchange rate while both MPR and BMS suggests otherwise. In terms of statistical significance, money supply, CPS, and MPR are insignificant in the real GDP model. Interestingly, all the monetary policy variables significantly drive economic stabilisation in Gambia while the fiscal policies are insignificant. The intuition is that both the fiscal and monetary policy variables positively enhance economic performance in Gambia but inversely affect economic stabilisation except for taxation and CPS.

Lastly, for the Ghanaian result, Table 5 confirms that deficit finance has a negative effect on the real GDP and the exchange rate, while government expenditure has a positive effect on both indicators. This result is like that obtained in Nigeria and it implies that government fiscal deficit negatively affects economic performance and positively enhance economic stabilisation in both Ghana and Nigeria it causes exchange rate appreciation. Table 5 also shows that government expenditure has a positive impact on both the real GDP and exchange rate in Ghana meaning that although increases in fiscal spending improves economic performance in Ghana, it also causes economic instability by causing exchange rate depreciation. The taxation result also indicates that 1% increases in tax revenue brings about 0.6% increases to performance and 1.5% increases to exchange rate appreciation in Nigeria. It thus follows that taxation improves the Ghanaian economic performance and economic stabilisation. Regarding the monetary indicators, evidence from Table 5 suggests that monetary policy rate and the credit to the private sector have positive effects on the real GDP and exchange rate, while the broad money supply also has a positive effect on the real GDP but negatively affects the exchange rate. This means that while monetary policy rate, money supply and private sector credit improve economic performance, both MPR and CPS worsen economic stabilisation by causing exchange rate depreciation except for the BMS. This is also like the Nigerian and Gambian results, which confirm that all the monetary policy indicators positively enhance economic performance. In terms of statistical significance of the fiscal policy indicators in Ghana, only taxation is significant at 10% while all the monetary policy indicators are significant at various levels. In the exchange rate model, none of the major

indicators are significant except private sector credit and taxation. This result has far reaching implications suggesting that monetary policy drives economic performance more than fiscal policy while only private sector credit and government taxation significantly determine stabilisation in Ghana.

5.2 Discussion of Findings

The result of this empirical enquiry confirms that deficit finance has a negative effect on economic performance in Nigeria and Ghana while it positively impacts that of Gambia. The intuition is that the use of budget deficits in Nigeria and Ghana is inimical to economic performance. This might be caused by the composition of such deficits. For instance, when the ratio of domestic debts exceeds a certain limit in the composition of fiscal deficits, the investment of the private sector is crowded-out, production falls, consumption drops, more people lose their jobs and the overall economic activity shrinks (see De La Fuente, 1997). In the 2018 Nigerian budget, deficit finance amounted to N1.93 Trillion with 52% coming from foreign sources and 48% coming from domestic borrowing part of which came from sales of Federal government assets. The 48% domestic borrowing has severe implications for domestic investment if sales of government assets do not take up a large chunk of the proportion. Hence, this finding attests to the fact that deficit finance in Gambia boosts output growth and it is supported by the fact that Gambia was able to reduce its deficit finance from 8.1% in 2015 to 3.9% in 2017 more than those of Nigeria and Ghana. Evidence presented in Table 1 suggests that Nigeria and Ghana increased their deficits from 3.5% and 5.8% in 2015 to 5.1% and 6.7% in 2017 respectively. Interestingly, economic stabilisation improves in both Nigeria and Ghana with increases in deficit finance while it worsens in Gambia. This is expected given the result of the real GDP because as deficits increases, income in the Gambia increases, aggregate expenditure increases and more income becomes available for importation. This puts more pressure on the US dollar against the Gambian Dalasi and the exchange rate depreciates. However, the reverse exists in Nigeria and Ghana where deficit finance lowers income and boosts economic stabilisation.

The government expenditure result shows that it has positive impact on economic performance and stabilisation in the three countries. The result on economic performance is in consonance with those of Agu *et al.* (2015) and Dinca and Dinca (2013). The implication is that while

government spending improves performance in the selected West African countries, it hinders economic stabilisation too. The reason is that as government spending provides expansionary effect on the economy by boosting output and income, improvement in aggregate expenditure puts pressure on foreign currency thereby leading to local currency depreciation. Regarding the monetary policy indicators, result shows that monetary policy rates of the various apex banks positively enhance economic stabilisation and performance. Also, money supply has positive impact on economic performance in Nigeria, Ghana, and Gambia while it only positively impacts stabilisation in Gambia. Intuitively, it means that both monetary policy rate and money supply enhance economic performance in West Africa. However, in terms of economic stabilisation, higher monetary policy rates cause destabilisation to West African economies by causing depreciation to the exchange rate. The reason is not far-fetched because higher bank rate is a form of monetary contraction which negatively affects the real sector output. As domestic production drops, aggregate demand necessitated by fiscal expansion provides further stimulus for increased import bills. This further weakens the local currency against the US dollars and deepens economic stabilisation crisis in West Africa. For instance, to ensure economic stabilisation and bring down inflationary pressures, the Monetary Policy Committee (MPC) of the apex bank in Nigeria reduced the monetary policy rate by 50 basis points from 14.0% to 13.50% in March 2019 (CBN, 2019). The MPC in Ghana reduced its monetary policy rate by 100 basis points from 17.0% to a five-year low rate of 16.0% in January 2019 (BOG, 2019). Also, in March 2019, the APC of the apex bank in the Gambia reduced the country's MPC by 100 basis points from 13.5% to 12.5% (CBG, 2019). Lastly, money supply positively impacts the exchange rate in the Gambia, but has negative effect on exchange rate in Nigeria and Ghana. The interpretation is that money supply in Nigeria and Ghana improves economic stability. It thus means that both West African nations can use the money supply counter the negative effect of monetary policy rate on economic stabilisation.

The significance of these indicators suggests that using both MPR and BMS, monetary policy is insignificant in stimulating economic performance in Nigeria and the Gambia, but it is significant in stimulating Ghanaian's economic performance. The Nigerian and Gambian result is at variance with Gaiotti and Generale (2002) for Italy, Udude (2014), Mesagan and Shobande (2016) and Dori (2016) for Nigeria, but in tune with Koivu (2016) for transition countries. However, regarding economic stabilisation in the three countries, monetary policy significantly

determines economic stabilisation in the Gambia and Nigeria while it is not significant in the Ghanaian model. Moreover, using deficit finance and government expenditure as indicators of fiscal policy, evidence from this study confirms that fiscal policy significantly determines economic performance in Nigeria and Gambia while its impact in Ghana is not significant. The result for Ghana is in consonance with those of Omitogun and Ayinla (2007), Oseni and Babatunde (2012), Audu (2012), and Wosewei (2013) that fiscal policy is insignificant in Nigeria. The findings for Nigeria and Gambia are in tune with those of Dar-Atui and Amirkhalkhali (2002), Abdullah *et al* (2009), as well as, Mansouri (2008) for Tunisia, Morocco, and Egypt. Again, fiscal policy has insignificant effect on economic stabilisation in both Gambia and Ghana while its effect in Nigeria is significant. Therefore, fiscal policy is relatively more important in stimulating economic performance in Nigeria and Gambia while monetary policy is relatively more important in determining performance in Ghana. The Ghanaian result is at variance with Khosravi and Karimi (2010) but it is in tune with Sen and Kaya (2015). Regarding economic stabilisation, both fiscal and monetary policies are important in Nigeria, both are ineffective in Ghana, while monetary policy is more important in the Gambia. The Nigerian result is in tune with Falade and Folorunso (2015) and Chowdhury & Afzal (2015), which confirmed that both are complementary.

Table 6: Diagnostic Tests for the Real GDP Model

| Countries | R ² | F-Statistic | ARCH LM [P-Value] | Normality [P-Value] |
|----------------|----------------|-------------|-------------------|---------------------|
| <i>Nigeria</i> | 0.9201 | 973.6** | 1.89 [0.2007] | 2.02 [0.5316] |
| <i>Gambia</i> | 0.8428 | 1934.3*** | 3.04 [0.3163] | 1.38 [0.4032] |
| <i>Ghana</i> | 0.7965 | 1004.8*** | 0.91 [0.1624] | 1.09 [0.7311] |

*Note: **, *** Stand for 5%, 1% significance level, respectively*

To determine the suitability of the estimated models, we present Tables 6 and 7. We present the suitability of the real GDP model in Table 6 and that of the exchange rate model in Table 7. The *F*-statistics in both tables exhibit that the explanatory variables are jointly statistically significant in explaining changes in the dependent variables. Also, the R² values suggest that the various

models are a good fit as they explain a large proportion of changes in the dependent variables across the three countries.

Table 7: Diagnostic Tests for the Exchange Rate Model

| Countries | R ² | F-Statistic | ARCH LM [P-Value] | Normality [P-Value] |
|----------------|----------------|-------------|-------------------|---------------------|
| <i>Nigeria</i> | 0.9117 | 1965.2*** | 0.36 [0.3208] | 2.05 [0.3338] |
| <i>Gambia</i> | 0.7935 | 815.5** | 0.37 [0.5428] | 1.52 [0.2172] |
| <i>Ghana</i> | 0.8064 | 2017.8*** | 1.96 [0.4017] | 3.51 [0.5921] |

*Note: **, *** Stand for 5%, 1% significance level, respectively*

Moreover, evidence from Table 6 and Table 7 confirm that the various models are homoscedastic as exhibited by the *Arch-LM* tests, which are not significant at 5% level of significance. Also, the results of the normality tests show that the models are multivariate normally distributed because they are not significant at 5% critical level. With this result, it means that the various models are not spurious and are appropriate for policy prescription in Nigeria, Gambia, and Ghana.

6. Conclusion and Policy Recommendation

From 1980 to 2017, this study analysed the role of fiscal and monetary policy in economic performance and stabilisation in West Africa focusing on countries like Nigeria, Gambia, and Ghana. The three countries are selected in this study because they are major players in the West African Monetary Zone whose aim is to integrate economically. Thus, variables like the real GDP and exchange rate are used to proxy economic performance and economic stabilisation respectively while fiscal policy is captured with deficit finance and government expenditure. Again, monetary policy is captured with the broad money supply and monetary policy rate while taxation and credit to the private sector are used as control variables. Bearing in mind the different features of the three West African nations, we obtain country-specific results using the fully modified OLS technique. For the specific objectives, the result confirmed that deficit finance negatively affected economic performance in Nigeria and Ghana while it positively impacted that of Gambia. Economic stabilisation improved in both Nigeria and Ghana with

increase in deficit finance while it worsened in the Gambia. Hence, monetary policy was found to be insignificant in stimulating economic performance in Nigeria and the Gambia, but significant in Ghana. Lastly, fiscal policy exerted significant impact on economic performance in Nigeria and Gambia insignificant in Ghana. Similarly, monetary policy was found to be significant in stimulating economic stabilisation in Nigeria and the Gambia, but insignificant in Ghana while fiscal policy exerted insignificant impact on economic stabilisation in Ghana and Gambia, but significant in Nigeria.

Thus, we conclude that fiscal policy is relatively more important in stimulating economic performance in Nigeria and Gambia while monetary policy is relatively more important in determining economic performance in Ghana. For economic stabilisation, we confirmed that both fiscal and monetary policies are important in Nigeria, both are ineffective in Ghana, while monetary policy is more important in the Gambia. To this end, it becomes crucial for Nigeria and Ghana to consider a more balanced budgeting approach since deficit financing hampers their output growth. If this is difficult, an alternative is for both countries to lower the proportion of domestic debt in their debt portfolio, since they still operate within the debt sustainability threshold of 30% of GDP, to ensure that the private sector investment is not crowded-out. This will help both countries to reverse the negative effect of deficit finance on economic performance. Having confirmed that monetary policy rate hampered economic stabilisation across the three selected West African nations, it means that reducing the MPR in West Africa will help to promote economic stabilisation. This seems to have been taken seriously by these countries as the MPC in the various countries recently lowered their MPR to counter inflationary pressures and guarantee price stability. However, the MPR is still relatively very high in these countries. For instance, Gambia operates the least at 12.50%, followed by Nigeria at 13.50%, and then Ghana with MPR of 17.0%. While the efforts of the various monetary authorities should be commended, we suggest further reductions to put less pressure on the exchange rate and stabilise the various economies.

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