5-13-U7-2496

IMPACT OF FISCAL POLICY ON THE PERFORMANCE OF THE NIGERIAN STOCK EXCHANGE (1980–2012)

MR. EYO EYO[1]

ABSTRACT

The study empirically examines the impact of the Nigerian fiscal policy on the performance of the Nigeria stock exchange. The objectives were to determine the effect of government revenue, government expenditure and government borrowing on market capitalization (a proxy for Nigeria stock exchange performance). The study employed the ordinary least square of multiple regression technique to analyse the data derived from the Central Bank of Nigeria (CBN) statistical bulletin and attempted to establish the relationship between fiscal policy indicators and stock market performance. The study demonstrated that government revenue and government expenditure had a significant impact on market capitalization in Nigeria. Furthermore, the study also demonstrated that government borrowing had no impact on the performance of the Nigerian stock exchange. The study recommended that fiscal policy should give priority attention to capital and public investments by giving them a higher proportion in gross government expenditure, thereby creating more jobs and enhancing the quality of public spending and the attainment of sustainable growth and development. This would, in turn, foster more investments in the stock market and results in more economic growth, for the stock market is a barometer of economic performance.

Key words: fiscal policy, stock market, economic growth

INTRODUCTION

The stock market is very important in any economy because it acts as a transmission mechanism facilitating the mobilization and the channelling of savings to individual and institutional investors. Basically, this implies the transfer of surplus from economic units to deficit units, ensuring the effective and efficient allocation of scarce financial resources and creating an avenue for investors to participate in the economy.

Agarwal (1997) and Akpan (1998) posits that the stock exchange is a market where those who wish to buy and sell shares, stocks, bonds, debentures and other securities can do so only through its members (stock brokers). The impact of the stock market on the economy as a whole comes primarily through two channels. The first is that movements in stock price influences aggregate consumption through the wealth channel. The second is when stock price movements affect the cost of financing business.

The Nigerian stock exchange (NSE) was growing steadily prior to the global recession as in 2006; the growth rate of the NSE all share index in Nigeria was seen at 73.56% and this made it one of the best performing stock exchanges in Africa (CBN, 2012).

The positive effects of fiscal policy on economic activity and its emergence as one of the most important instruments for economic policy has been observed in several countries (Ezirim, Muoghalu, Elike and Amuzie, 2010), and the effects it has on financial assets cannot be overemphasized. Various governments during the recent past recession intervened in stabilizing their economy and their actions have been seen to be a vital instrument for macroeconomic management and a rewarding stabilizing factor.

[1] Mr. Eyo Eyo, Lecturer II, University of Calabar.

The problem and the objectives

It was noticed in the Nigerian economy, prior to the recession, that the NSE was one of the best performing financial markets in the continent country; however, during the recession, as might be expected, the market performance dropped sharply. Several efforts were made by the government, with the use of several instruments, to stabilize the economy, as was done in other counties. However, the performance of the NSE is still not at its optimal level despite several reforms. Moreover, empirical studies on how fiscal policy and the stock market interacts are sparse, which poses a challenge for Nigeria, as a developing economy, to effectively consider and evaluate the importance of the stock market. Thus, the current study has as its objective to investigate the pivotal activities of the Nigerian government by evaluating and determining the effect and impact of government's revenues, expenditure and borrowing on market capitalization.

To achieve the objective of the study, the paper will answer the following main research question: does fiscal policy and stock market have any impact on the growth of the Nigeria economy?

The following hypotheses are formulated to reach the objectives set above.

Ho_1: *There is no significant relationship between government revenue and market capitalisation;*

Ho_2: *There is no significant relationship between government expenditure and market capitalisation;*

Ho_3: *There is no significant relationship between government borrowing and market capitalisation.*

The study will primarily focus on the impact of fiscal policy on the performance of the NSE covering a period from 1980 to 2012. The scope of the study is focused on the NSE due to the recent swings witnessed in the performance of the stock market after the recession, which has led to loss of income for investors.

Theoretical framework

Fiscal policy is undoubtedly one of the most important tools used by governments to achieve macroeconomic stability in most developing countries, such as Nigeria (Babalola and Adegbite, 2001). Therefore, the attempt to evaluate the impact of fiscal policy on the performance of the NSE dates back to years of research by prominent economists such as Blanchard (1981), Shah (1984), Razin (1987), Afonso and Sousa (2011) and Hsing (2013).

Keynesian theory

Fiscal policy is based on the theories of a British economist, John Maynard Keynes. It is also known as "Keynesian economics" – the theory that the government can influence macroeconomic productivity levels by increasing or decreasing tax levels and public spending. This influence, in turn, curbs inflation, increases employment and maintains a healthy level of money-making (Laopodis, 2010).

Classical theory

The classical theory holds that cyclical swings in employment and economic output would be modest and self-adjusting. It also holds that if aggregate demand in the economy fell, the resulting weakness in the production and jobs would precipitate a decline in prices and wages; this would induce employers to make capital investment and employ more people, stimulating employment and restoring economic growth. The depth and severity of the Great Depression, however, severely tested this hypothesis (Babusidze, 2004).

The Laffer Curve

The Laffer Curve theory argues that when tax rates rise, total tax revenue grows at first but only at a diminishing rate. The Laffer Curve has been used as a justification for cutting taxes

on income and wealth based on the argument that improved incentives to work and to create wealth will broaden the base of tax-paying businesses and individuals and also reduce the incentive to avoid and evade paying tax (Razin, 1987).

Of these theories, the Keynesian theory is preferable because it looks or considers the state of an economy as a whole; it stabilises the economy and influences macroeconomic productivity, which is concerned with the capital market that has to do with the stock exchange.

Conceptualizing fiscal policy

The term fiscal policy has conventionally been associated with the use of taxation and public expenditure to influence the level of economic activities. The implementation of fiscal policy is essentially routed through the government's budget. The budget is therefore more than simply a plan to administer the government sector; it reflects and shapes a country's economic life. In fact, the most important aspect of a public budget is its use as a tool in the management of a nation's economy (Akpan, 1998).

Fiscal policy deals with the deliberate actions of the government in spending and levying taxes with a view to influencing macro-economic variables in a desired direction. This includes sustainable economic growth, high employment creation and low inflation (Darrat, 1988). Thus, fiscal policy aims at stabilizing the economy; it increases government spending or reduces taxes to pull the economy out of a recession, while it reduces spending or increases taxes to slow a boom down (Dornbusch and Fischer, 1990) and Maysami (2000).

Fiscal policy involves the use of government spending, taxation and borrowing to influence the pattern of economic activities, and the level and growth of aggregate demand, output and employment. Fiscal policy entails government management of the economy through the manipulation of its income and spending power in order to achieve certain desired objectives, including economic growth (Laopodis, 2009; Medee and Nembee, 2011). In countries with shallow financial systems, monetary policy is the reverse side of the coin of fiscal policy and can only play an accommodative role. In such low-income countries, the government security market is underdeveloped and central banks do not hold sufficient amounts of tangible securities; they also lack suitable and adequate control instruments – the factors that induce fiscal dominance. Where fiscal dominance applies, the country's economic policy is only as good as its fiscal policy, and an institutionalised central bank's independence may not necessarily bring about an independent monetary and fiscal policy (Oyejide, 2003).

Fiscal policy and economic growth

Fiscal policy is the use of government spending and taxation to influence the economy. Government typically uses fiscal policy to promote strong and sustainable growth and to reduce poverty. The prominence of fiscal policy as a policy tool has waxed and waned. Before 1930, the approach of limited government or *laissez-faire* prevailed, which led to policymakers pushing governments to play a more proactive role in the economy (Laopodis, 2010).

When policy makers seek to influence the economy, they have two main tools at their disposal: monetary policy; and fiscal policy. Government influences the economy by changing the level and types of taxes, the extent and composition of spending, and the degree and form of borrowing (Anyanwu, 1997).

Fiscal policy that increases aggregate demand directly through an increase in government spending is typically called "expansionary" or "loose". In contrast, fiscal policy is often considered "contractionary" or "tight" if it reduces demand via lower spending. Besides providing goods and services like public safety or primary education, the objectives of fiscal policy in the economy vary. In the short term, government may focus on macro-economic stabilization; for example, expanding spending or cutting taxes to stimulate an ailing economy, or slashing spending or raising taxes to combat rising inflation or to help reduce external vulnerabilities.

In the long term, the aim may be to foster sustainable growth or to reduce poverty with actions on the supply side and to improve infrastructure or education. Policy makers might aim to better align fiscal policy with broader macroeconomic development by moderating pro-cyclical spending.

Empirical review

In recent years, people have become aware of fiscal policy and its impact on the economy and its performance. By practising fiscal policy, the government decides how much to spend, what to spend, where to spend, what to spend for and how to finance its spending (Tavares and Valkanov, 2011). Levine (1991) describes fiscal policy as a change in federal taxes and purchases that are intended to achieve macroeconomic policy objectives.

In Malaysia, income tax is the major tax revenue used to improve the growth prospects of the country; Malaysia has been experiencing a fiscal deficit over the years which has affected its aggregate demand, government capital formation and labour incentives. Thus, only fiscal tools can be used to spur its economic growth by increasing government expenditure or cutting taxes (Maysami, 2000).

Erdem and Erdem (2008) infer that in Turkey taxation policy has a direct and obvious impact on stock markets. In 2000 and 2007, taxation revenue went very high when stock markets peaked and the tax ration was fairly low but the overall weighting in fiscal revenue was not high. In China, the stock market is generally recognised as a money-making tool by speculative investors.

In analysing Kenya's stock market performance, Olweny and Kimani (2011) used time series data spanning from 1996 to 2010 to reveal that inflation has a negative effect on the stock market; hence, the stock market is not a perfect hedge against inflation. This was done by employing a causality test approach.

As this discussion suggests, the interaction between fiscal policy and stock market is an important activity that should be assessed in an economy. This is in line with the theoretical submission of the Keynesian economics that a policy mix of fiscal policy and monetary policy is best in achieving macro-economic objectives.

Methodology

Using both exploratory and descriptive designs for this study covering the period 1980–2012, the data was obtained from sources such as the CBN statistical bulletin, articles, publications, and economic journals employing the desk survey method of data collection.

The Ordinary Least Squares regression analysis was employed to analyse the data, since it exhibits the characteristics of the best linear unbiased estimator. It was also expected to have a minimum variance. The choice of this estimation procedure is considered suitable, because of its advantages over other estimation methods. In addition, this technique of analysis satisfies the Gauss-Markov least squares criterion (Wonnacott and Wonnacot, 1970).

The secondary data was processed using E-view for Windows econometric packages. The E-view is preferred because it enables the serial correlation in the data to be corrected.

Model specification

In an attempt to measure the phenomenon to be analysed, we specify a model that captures the relationship between market capitalization and various expressions of fiscal policies:

Algebraically,

$$\text{MKT CAP} = f(\text{GOVR, GOVEX, GOVB})$$

Economically,

$$\text{Mkt cap} = bo + b_1\,\text{GOVR} + b_2\,\text{GOVEX} + b_3 + e$$

Where:
Mkt cap = Market Capitalization
GOVR = Government Revenue
GOVEX = Government Expenditure
GOVB = Government Borrowing
bo = Intercept
b_1 - b_3 are the regression coefficients, and
e = Error term

DATA PRESENTATION: PRESENTATION OF NIGERIA'S MACROECONOMIC DATA ON FISCAL POLICY

YEAR	MKT CAP	GOVREV	GOVEXP	GOVB
1980	4.9	15,233.5	10,163.4	8,231.5
1981	5.0	13,290.5	6,567.0	11,195.5
1982	5.0	11,433.7	6,417.2	15,010.5
1983	5.7	10,508.7	4,885.7	2,224.3
1984	5.5	11,253.3	4,100.1	25,675.0
1985	6.6	15,050.4	5,464.7	27,952.0
1986	6.8	16,223.7	12,595.8	28,438.7
1987	8.2	22,018.7	25,380.6	36,789.1
1988	10	27,749.5	27,596.7	47,029.6
1989	12.8	41,028.3	53,870.4	47,049.6
1990	16.3	60,268.2	98,102.4	84,093.1
1991	23.1	66,584.4	100,991.6	116,193.7
1992	31.2	92,797.4	190,453.2	177,961.7
1993	47.5	1,91228.9	192,769.4	273,836.4
1994	66.3	1,60893.2	201,910.8	407,582.7
1995	180.4	2,48768.1	459,987.3	477,733.9
1996	285.8	3,37217.6	523,597	419,975.6
1997	281.9	4,28215.2	582,811.1	509,751.2
1998	262.6	4,87113.4	463,608.8	560,830.2
1999	300	947,690	949,187.9	794,806.6
2000	472.3	701,059.4	1,906160	898,253.9
2001	662.5	1,018026	2,231600	1,016,974
2002	764.9	1,018156	1,731838	1,166,001
2003	1,359.3	1,225966	2,575096	1,257,120
2004	2,112.5	1,426200	3,920500	1,297,765
2005	2,900.1	1,822100	5,547500	1,275,077
2006	5,121	1,938003	5,965102	2,082,007
2007	13,294.6	2,450897	5,715600	2,941,813
2008	9,563	3,240820	7,866590	2,320,310
2009	7,030.8	3,452991	4,844592	3,228,030
2010	9,918.2	4,194218	7,803672	4,501,822
2011	9,672.6	3,823605	6,074132	3,889,926
2012	9,795.4	4,008911	6,688902	4,220,874

SOURCE: CBN STATISTICAL BULLETIN, 2012

ANALYSIS OF DATA

The regression result on the impact of fiscal policy on the performance of the NSE (1980–2012) has been analysed below.

Table 4.2 (Regression results

Dependent variable LMKT CAP

VARIABLE	COEFFICIENT	STD ERROR	E-START	PROBABILITY
C	3.884712	1.741727	2.230380**	0.0414
GOVREV	0.790327	0.184500	4.283621*	0.0007
GOVEXP	0.901935	0.312836	2.883091*	0.0103
GOVB	0.039413	0.032569	-1.210106	0.2450

R^2 0.960655

R^2 ad,) = 0.944917

SER = 0.346492

DW = 1.954803

F-STAT = 61.04096

Significant at 1% level, *** significant at 5% level.

The regression result is analysed using economic *a priori* criteria, statistical criteria and economic criteria.

Economic *a priori*

The regression shows that the statement is significant as expected government revenue is a significant coefficient. This conforms to economic theory; it indicates that an increase in revenue by one percent leads to a 0.790327 percent increase in market capitalisation.

The next policy variable, government expenditure, also revealed a positive coefficient. Hence, the result suggests that a one percent rise in government expenditure leads to a 0.901935 percent increase in market capitalisation.

Government borrowing came out with negative coefficient. As such, a one percent rise in government borrowing generates a decrease in market capitalisation of -0.039413. As expected, a lot of activities take place in fiscal policy. This could be seen, for example, in the data presented in table 4.1, where government borrowing increased from 8,231 in 1980 to 4,220,874 in 2012.

Statistical criteria

From the estimated equation, t-value calculated using two tailed tests show that government revenue and government expenditure are statistically significant at a one percent level of significance, and that the t-value statistic for government borrowing is statistically not significant.

The ($R^2 = 0.960655$) is very good and the Adjusted ($R^2 = 0.944917$) is also very good. It implies that 94% of their total systematic variation in the model is explained by the explanatory variables, which implies that the model is good. As an addendum, an increase in all the explanatory variables will increase market capitalization (*ceteris paribus*).

The F-statistic 61.04096) is a good fit at one percent level. This conforms that the model has high predictive power.

The calculated f-statistic of 61.04096 is higher than the table value. It is concluded that the entire model is significant.

Economic criteria

From the results, the D.W statistics (1.954803) shows that there is a positive autocorrelation among variables entered in the model.

Test of hypotheses and the decision rule

In order to test the hypothesis already stated in Calabar one, the following decision rule can be specified.

The decision rule is to reject the null hypothesis if the t-calculated is > t- table.

Hypothesis 1			**33-4**	
Results			29	
t	-	Calculated for GOVREV	=	4.283621
t	-	Critical at 29 df 0.01	=	2.756

Based on these results and the decision rule, an alternate hypothesis is upheld. It is concluded that there is a significant relationship between government revenue and market capitalisation.

Hypothesis 2

Results

t	-	Calculated for GOVEXP	=	2.883091
t	-	Critical at 29 df 0.01	=	2.756

Based on these results and the decision rule, the null hypothesis is rejected and the alternate hypothesis is upheld. It is concluded that there is a significant relationship between government expenditure and market capitalisation.

Hypothesis 3

Results

t	-	Calculated for GOVB	=	1.210106
t	-	Critical at 29 df	=	2.462

Based on these results and decision rule, the null hypothesis is upheld and the alternate hypothesis is rejected. It is concluded that there is no significant relationship between government borrowing and market capitalization.

DISCUSSION OF FINDINGS

Based on the analysis of the results, it is shown that government revenue, expenditure and government borrowing were incorporated into the model to ascertain how these pivotal activities of the Nigerian government representing fiscal policy affect the stock market in Nigeria.

The findings demonstrated that government revenue had a significant relationship on market capitalisation. The government revenue variable led to the growth and development of capital market. Furthermore, government was a determinant of growth and a one percent increase on government revenue led to an increase in market capitalisation, all things being equal.

The findings also demonstrated that government expenditure had a positive impact on the growth and development of the market. Government spending affected the performance of the stock market, which implies that government expenditure positively affected the development stock market in the period under study.

Government borrowing had a negative effect on the growth and development of the stock market. This result conforms to the economic theory which states that a decrease in an explanatory variable leads to a decrease in a dependent variable, whereas an increase in an explanatory variable leads to a rise in a dependent variable.

Based on the analysis, the findings lead to a conclusion that a significant relationship exists between government revenue, government expenditure and market capitalisation. However, no significant relationship exists between government borrowing and stock market performance.

CONCLUSION

This study was a theoretical investigation of the impact of fiscal policy on the performance of the NSE. The achievements of the objectives of a stock market through the NSE through fiscal policy of borrowing in Nigeria is a mirage.

The empirical results show that market capitalisation and all its components representing the performance of the NSE are related to the fiscal policy of government revenue and expenditure but are not related to government borrowing. To this end, the stock market, which has been noted as occupying a prominent place in Nigeria's economic development, needs to be affected by the total component of fiscal policy as a tool in general economic management.

RECOMMENDATIONS

In view of the above findings, the following recommendations can be made:

1. Fiscal policy should give priority attention to capital and public investments by making them a higher proportion in gross government expenditure, and thereby creating more jobs and enhancing the quality of public spending and the attainment of sustainable growth and development.
2. Government fiscal policy should refocus and redirect government expenditure towards production of goods and services so as to enhance economic growth.
3. The government should ensure that policy inconsistency is minimized and policy reversals are properly checked for both short and long run effects on the economy.
4. There is a need to bring the stock market window to more towns and cities in Nigeria to promote greater enhagement and enhanced growth.
5. The stock market should be the forefront of ensuring financial integrity in order to minimize the potential effects of the risk of contagion as well as to reduce systematic risk.
6. Borrowings ought to be strategic in order to affect the market positively; the ripple effect of this in the economy cannot be over emphasized.

REFERENCES

Afonso, A. and Sousa, R. M. (2012) The macroeconomic effects of fiscal policy. *Applied Economics*, 44, 4439–4454.

Agarwal, R. N. (1997) Inflow of foreign portfolio investment in developing countries. A study of determinants of macroeconomic impact. *The Indian Review,* 32(2), 219–230.

Akpan, I. O. (1998) Stock market development and Nigeria economic growth. *Nigeria Financial Review,* 17(2), 6–15.

Anyanwu, J. C. (1997) *Nigeria Public Finance*. Onistha: Joanee Educational Publishers Ltd.

Babalola, J. A. and Adegbite, M. A. (2001) The performance of the Nigerian Capital market since deregulation in 1986. *Central Bank of Nigeria Economic and Financial Review*, 39(1), 1–20.

Babusidze, W. A. (2004) *The critical assessment of the empirical evidence on the imperfection of capital markets*. Economic Department: Central European University.

Blanchard, O. J. (1981) Output, the stock market and interest rates. *American Economic Review,* 71, 132–43.

CBN (2012) Central Bank of Nigeria Statistical Bulletin.

Darrat, A. (1988) On fiscal policy and the stock market. *Journal of Money, Credit and Banking,* 20, 353–363.

Dornbusch, R. and Fischer, S. (1990) *Macroeconomics*. 5th ed., New York: McGraw-Hill Publishing Company.

Erdem, C. and Erdem, M. S. (2008) Turkish banking efficiency and its relation to stock performance. *Applied Economics Letters,* 15(3), 207–211.

Ezirim, C. B., Muohgalu, M. I., Elike, U. and Amuzie, A. E. (2010) Public expenditure growth, inflation and cointegration: evidence from Nigeria. *International Journal of Business and Behavioural Sciences Research,* 1(1), 1–14.

Hsing, Y. (2013) Effects of fiscal policy and monetary policy on the stock market in Poland. [Online]. *Economies,* 1, 19–25. Available from: http://dx.doi.org/10.3390/economies 1030019 [Accessed 25 April 2016]

Laopodis, N. (2010) Dynamic linkages between monetary policy and the stock market. *Review of Quantitative Finance and Accounting,* 35, 271–293.

Laopodis, N. T. (2009) Fiscal policy and stock market efficiency: evidence for the United States. *The Quarterly Review of Economics and Finance,* 49(2), 633–650.

Levine, R. (1991) Stock markets, growth, and tax policy. *The Journal of Finance*, 46, 1445–1459.

Maysami, R. C. (2000) A vector error correction model of the Singapore stock market. *International Review of Economics and Finance,* 9(1), 79–96.

Medee, P. N and Nembee, S. G. (2011) Econometric Analysis of the impact of fiscal policy variables on Nigeria's economic growth (1970–2009). *International Journal of Economic Development Research and Investment,* 2(1), 171–183.

Olweny, T. O. and Kimani, D. (2011) Stock market performance and economic growth: Empirical Evidence from Kenya using Causality Test Approach. *Advances in Management and Applied Economics*, 1(3), 153–196.

Oyejide, T.A. (2003) Trade Reform for Economic Growth and Poverty Reduction. Washington, D.C**:** Development Outreach, The World Bank.

Razin, A. (1987) Fiscal policies and the stock markets: international dimensions. National Bureau of Economic Research: Working Paper Series, No. 2389.

Shah, A. (1984) Crowding out, capital accumulation, the stock market, and money-financed fiscal policy. *Journal of Money, Credit, and Banking,* 16, 461–473.

Tavares, J., and Valkanov, R. (2003) Fiscal policy and asset returns. [Online]. Available from: https://ai2-s2-pdfs.s3.amazonaws.com/c5b1/ca6b3f0369634ce567d1fbf23c6c5a101b2f.pdf [Accessed 15 December 2016].

Wonnacott, R.J. and Wonnacott, T. H. *(*1970) *Econometrics*. New York: Wiley.