MONETARY POLICY AND ECONOMIC DEVELOPMENT: LESSONS FROM THE DEREGULATION POLICY IN NIGERIA

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Abstract

This paper examines the impact of monetary policy instruments on the economic development in Nigeria during the period 1980-2006.With the aid of the t-ratio, the study revealed that only two out of the six selected explanatory variables exert a significant impact on the level of economic development in Nigeria between the study periods (pre-and-post-deregulation). The study therefore, concludes that with the insignificant nature of most of the variables, policy formulation and implementation inconsistencies appear to hinder the full impact of monetary policy on the economy and therefore, should be critically watched.

Key words: Monetary Policy, Pre-deregulation, Post-deregulation, Policy Formulation, Policy Implementation.

Introduction

The monetary policy of any given country no doubt, goes a long way towards shaping both the direction and volume of credit in the economy. Therefore, the need for a sound and effective monetary policy can hardly be over emphasized. It will suffice to observe that various monetary authorities have continued to monitor the performance of their individual country monetary policy mainly because of the perceived role it plays in achieving sound economic development.

However, according to Jhingan (2007) as cited in Nwezeaku and Akujuobi (2010), for a proper monetary policy effect on the economy, the inclusion of some variables should be of vital importance. Beside this, of even more importance is the selection of such a variable that cuts across the entire banking industry both as a basis for generalization and acceptability of results of such a study. The asoning here is that since monetary policies are mainly transmitted through the banking system, any policy that lacks the necessary ingredients that affect most, if not all the banks, will most certainly fail to achieve the desired objectives. This therefore, is one of the pitfalls this paper intends to avoid in the Nigerian context. In line with the foregoing, this study focuses on the effectiveness of monetary policy on economic development of Nigeria between the pre-deregulated and post-deregulated eras. Moreso, the paper intends to draw up policy implications from the findings with some suggested recommendations.

Following this introduction, the remaining part of the paper is divided into three parts. While Part 2 covers the theoretical discussions and literature review, In Part 3 the impact of monetary policy on economic development is empirically investigated, with highlights of the findings. The paper ends in Part 4 with recommendations and conclusion.

Theoretical Discussions and Literature Review

Theoretical Discussions

Monetary Policy There are many definitions of monetary policy. Anyanwu (1993) defines it as measures designed to regulate and control the volume, cost, availability and direction of money and credit in an economy in order to achieve some specified macroeconomic policy objectives. Obioma (1998) defined it as "a measure designed to influence the availability, cost and direction of money and credit in pursuit of specified economic goals". It therefore basically deals with the control of the money stock in order to influence macroeconomic variables such as domestic prices, employment, balance of payment equilibrium and sustainable economic growth (Ogwuma, 1996).

A framework will be helpful for a proper exposition on monetary policy, it will constitute; its legislation, its objectives, its coordination with other policies, its formulation, its implementation and its instruments.

Legal Basis of Monetary Policy The authority to formulate and implement monetary policy is vested in the Central Bank of Nigeria (CBN) as outlined in the CBN Act of 1958 and subsequently amended in CBN decree No. *74* of 1991. These laws enjoin the CBN to promote monetary stability and a sound financial system in Nigeria under the overall guidance of the federal government.

The CBN is required to make proposals to the Head of State through the Ministry of Finance. The Head of State has the power to accept or amend the proposal, once he approves, the CBN is obligated to accept it through the Ministry of Finance and implement it (1997 Federal Budget Provisions).

Objectives of Monetary Policy According to Ogwuma (1996) some objectives of monetary policy are: prompting price stability, reducing pressures on the external sector, stabilizing the Naira exchange rate and stimulating economic growth. This is not exhaustive of the objectives of monetary policy. Some others are to moderate inflation rate, inducing increased financial savings, inducing investment and promoting employment.

Monetary Policy Formulation In formulating monetary policy, the CBN relies on the technique of financial programming. Its starting point is comprehensive review of the past current and anticipated economic problems, then projections are made, on money supply, GDP growth, inflation rates and balance of payment position.

For money supply for example, the economy's absorptive capacity for domestic credits given the permissible aggregate domestic credit is then allocated between the public and private sectors.

Monetary Policy Instruments/Tools These are variables that are under the control of the monetary authorities and have effect on the proximate targets. According to Jimoh (1944) the proximate targets are: interest rate, narrow money supply, (M1), broad money supply (M2), domestic credit and high powered money or monetary base. Monetary policy tools could be direct or indirect. The direct tools include: special deposits, aggregate, credit ceilings, deposit ceilings, exchange controls, restriction on the placement of public deposits and stabilization securities.

On the other hand, indirect tools include open market operations; cash reserve requirement, liquidity ratio, minimum rediscount rate, parity charges and selective credit policies.

A Review of Current Monetary and Credit Policy

The introduction of the Structural Adjustment Programme (SAP) in July 1986 has continued to shift line with the policy on deregulation. These include deregulation of interest rate and sectoral allocation of credits and the adoption of indirect approach to monetary control in the management of liquidity. Ibeabuchi (1992:27) as cited in Nwezeaku and Akujuobi (2010) has observed that the ultimate objective of these measures is the promotion of a free market-oriented economy in which available resources would be efficiently utilized for greater economy performance.

Following the period of Structural Adjustment Programme (1986-1988) Nigeria's economic policies have been characterized with series of changes, inconsistencies and reversals. These changes induced largely by the severity of the economic situation and political factors. According to Ojo (1996:18) the economy's performance declined progressively between 1990 and 1994 as a result of the policy actions and picked up in 1995 and has the prospects to do better in this democratic environment.

Under the SAP, interest rate was allowed to be market- determined. However in 1993, banks were to observe a maximum spread of five percentage points between their average cost of funds and their lending rate (CBN circular No. 27, 1993:7). In 1994, fixing of interest rates became operational being reintroduced in the 1994 budget. This had the effect of reversing the persistent increase in the rates in order to boost domestic investment. The CBN circular No.29 (1995:7) identified some of the causes of the high interest rates, which prevailed in 1993 and these include: - (i) The banking system's financing of the huge fiscal deficit resulting in the ñcrowding out" of the private sector in credit allocation, (ii) High rate of domestic inflation requiring compensating high normal interest rate, (iii) Technical insolvency of some banks resulting in distress borrowing and pervasive default in the money market and, (iv) Excessive borrowing for speculative purchases of foreign exchange.

However in 1999 interest rate policy was deregulated and the use of market-based techniques of monetary management was introduced. Stabilization securities were introduced in August 1990 and actively used until March 1993 for stabilizing the excess reserves in the banking system.

The issuance of stabilization securities discontinued on the introduction of open market operation (OMO) on 30th June, 1993 while the stock outstanding was retained mainly to serve as a fall back position for liquidity control. However in January 1995 new issues were allocated as a pre-emptive measure preparatory to take off of the Autonomous Foreign Exchange Market (AFEM) consistent with the transition to the use of market based instruments of monetary policy, the use of stabilization securities was phased out in 1996.

Open market operation is still been used as the major instrument for achieving monetary policy objective as well as supporting the attainment of macroeconomic stability including GDP growth and the sustenance of balance of payments viability.

Mandatory sectoral credit allocation was introduced in 1979 to ensure availability of credit to the productive sectors of the economy. During this period agriculture, manufacturing and more recently export and solid minerals were treated preferentially, with the percentage credit allocation to the first two sectors raised progressively. According to CBN circular No 30; (1996: 13) the policy seemed to have made some impact; its prolonged use has engendered distortions and inefficiencies and is not consistent with the principle of deregulating the financial sector. But still, it has not caused the phasing out of the system.

Monetary and Credit Policy Measures

After an appreciable economic performance in the early 1970's, the Nigerian economy experienced serious economic problems from late 1970's to mid 1980's. The country's balance of payments came under severe pressure and was in persistent deficit during the period. The governmentõs current expenditure expanded without an appreciable increase in revenue leading to widening fiscal deficits, which were largely, financed with bank credit with adverse consequences on the general price level. According to Ibeabuchi (1992; *29)* the inflation pressure was further aggravated by high demand for imports of both intermediate and consumer goods due to over- valuation of the Naira which made imports relatively cheaper than locally manufactured goods. Furthermore, the governmentõs continued involvement in the economy through subsidized interest rates, exchange and price controls seriously distorted and weakened the economy and this reduced the capacity of the economy in responding promptly and positively to external shocks.

In addressing the crisis, a number of policy measures were embarked upon by the government. In April 1982, the federal government introduced the economic stabilization measures, which dealt extensively on import restrictions as well as monetary and credit policies. Efforts were also made in successive years to reduce the public sector deficit through a reduction of recurrent expenditures and increase revenue. Also, existing exchange control measures were reinforced and made increasingly more stringent. From 1984, all imports were placed under specific import licensing. In October 1985, the government declared a fifteen-month economic emergency period during which specified proportion of workers salaries and companies' profits were to be compulsorily deducted and paid to government. However, the effectiveness of the measures were constrained by the continued decline in foreign exchange earnings, the over valuation of the Naira and other distortions and rigidities in the economy.

It was against this bleak and adverse economic background that the government adopted a comprehensive economic reform programme - the Structural Adjustment Programme (SAP) in July 1986 to restore domestic and external economic growth.

The banking system therefore has been an integral part of the structural reforms. Thus, over the years, with successive monetary policy measures, the government of the newly independent Nigeria nation, anxious to promote accelerated economic development, viewed the CBN as an instrument for mobilizing development-oriented finance.

Empirical Analysis of the Impact of Deregulated Monetary Policy on Economic Development in Nigeria

Data Presentation

The data for analysis are therefore presented below in Table1.

Table1: Pre-Deregulation Era Data for Money Supply Aggregate and the Money Market Instruments Consisting of Treasury Bills, Treasury Certificates, Certificate of Deposits, Commercial Papers and Bankers Acceptances, all in millions of Naira, 1986-1994.

	Money Supply (Y)	Treasury Bills X_1	Treasury Cert X_2	Cert of Deposits X_3	Comm. Papers X_4	Banker Acceptances X_5
1986	36,820	16,976	6,655	261.9	259.0	18
1987	46,926	25,226.0	6,664.1	1328.3	496	9
1988	57,326	35,476	6,795	38.4	1,861	669
1989	49,259	24,126	5,945	11.6	1,309.8	737.2
1990	57,675	25,476	34,215	3.6	1,743	953.4
1991	83,824	56,728.3	34,215	0	1,107	1,032
1992	15,970.3	103,327	35,241.4	537	1,575	127
1993	118,753.4	103,327	36,584.3	91	3372	1,858.2
1994	169,391.5	103,327	37,343	15.2	5253	4,660.2

Source: CBN Statistical Bulletin, CBN Annual Report and Accounts.

Table 2: Post-deregulation Era data for money supply aggregate and the money market instruments consisting of Treasury Bills, Treasury Certificates, Certificate of Deposits, Commercial Papers and Bankers Acceptances, all in millions of Naira, 1995-2006.

	(Y)	X_1	X_2	X_3	X_4	X_5
1995	201,414.5	103,324	23,596	48	10,035	8102
1996	227,464.4	103,327	0	105	8,023.7	12,199.9
1997	268,622.9	221,800.5	0	0	13,595.3	11,956.4
1998	318,576.0	221,801.5	0	0	72,522	17,473.9
1999	393,078.8	361,758.4	0	0	20,476.4	11,972
2000	637,731.1	465,535.8	0	0	19,003.0	31,775
2001	816,707.6	465,535.8	0	0	35,377.2	36,501.2
2002	946,253.4	584,535.8	0	0	37,144	42,622.1
2003	1,225,559.3	825,050.0	0	0	37,300	32,900
2004	1,330,657.8	871,577.0	0	0	88,830	41,620
2005	6,017,824.4	3,469,605	0	0	679,965	192,704
2006	5,939,066.9	3,631,978.4	0	0	742,925	268,801

Source: CBN Statistical Bulletin, various issues
CBN, Annual Report and Accounts, various years.

Test of Hypotheses

Hypotheses Testing Using Difference Between Two Means, T-test

As the study covers the period, 1986-2006, while adopting the t-test to test the difference between the two means of the pre- and post- deregulation periods as the statistical tool of analysis for this section. Hence, because of the nature of our report and central objective, the study period, 1986-2006, is divided into two sub-periods, from 1986-1994 and 1995-2006, as the Pre-deregulation and Post-deregulation periods respectively.

Model Specification

The variables for the study are hereunder denoted as follows:

PRE-MS	=	Level of Pre-deregulation money supply in year t;
POST-MS	=	Level of Post- deregulation money supply in year t;
PRET-TB	=	Level of Pre-deregulation treasury bill in year t;
POST-TB	=	Level of Post-deregulation treasury bill in year t;
PRE-TC	=	Level of Pre-deregulation treasury certificate in year t;
POST-TC	=	Level of Post-deregulation treasury certificate in year t;
PRE-CD	=	Level of Pre-deregulation certificate of deposit in year t;
POST-CD	=	Level of Post-deregulation certificate of deposit in year t;
PRE-CP	=	Level of Pre-deregulation commercial papers in year t;
POST-CP	=	Level of Post-deregulation commercial papers in year t;
PRE-BA	=	Level of Pre--deregulation bankersô acceptances in year t;
PRE-BA	=	Level of Post-deregulation bankersô acceptances in year t;

The difference between two means is the tool utilized to estimate the degree of difference in levels of the selected variables in the pre-deregulation and post-deregulation periods.

$$T ï \text{ Ratio} = \frac{\text{Mean}_A ï \text{ Mean}_B}{\text{Standard error of the difference between mean}_A \text{ and mean}_B}$$

mean_A and mean_B

Where,

$(n_A+n_B ï\ 2)$ = the degrees of freedom of the test

X_A = means of group A

X_B = mean of group B

S^2_A = variance of group A

S^2_B = variance of group B

n_A = number of observations (Pre-Deregulation)

n_B = number of observation (Post-Deregulation)

This hypothesis states as follows:

Ho_1: $U_A = U_B = O$: The introduction of deregulation has not significantly affected the level of performance of monetary policy instruments on economic development during the pre- and post-deregulation periods in Nigeria.

Ha_1: $U_A \neq U_B \neq o$: The introduction of deregulation has significantly affected the level of performance of monetary policy instruments on economic development during the pre- and post-deregulation periods in Nigeria.

TABLE 3: SUMMARY OF RESULTS OF THE INFLUENCE OF MONETARY POLICY INSTRUMENTS ON Economic Development During The Pre- And Post-

VARIABLE	X_1 MONEY SUPPLY, MS	X_2 TREASURY BILL, TB	X_2 TREASURY CERTIFICATE, TC	X_3 CERTIFICATE OF DEPOSIT, CD	X_4 COMMERCIAL PAPERS, CP	X_5 BANKERS' ACCEPTANCE, BA
T-statistic calculated	2.05	2.13	4.18	1.91	1.63	2.09
T-statistic Tabulated 1%	2.861	2.861	2.861	2.861	2.861	2.861
T-statistic Tabulated 5%	2.093	2.093 **	2.093 ***	2.093 NS	2.093 NS	2.093 NS
DECISION	Not Significant	Significant	Significant	Not Significant	Not Significant	Not Significant
Level of significance	NS	5%	1%	NS	NS	NS

Deregulation Periods In Nigeria.
NB: ***=Significant at 1%; ** =Significant at 5% ; NS= Not significant

Decision Rule

Since t-cal (4.18, 2.13) > t-tab (2.093) at 5% level of probability, we reject Ho and accept Ha to conclude that a significant difference exists in the level of performance of money market instruments both in terms of treasury certificates and treasury bills during the pre-and post-deregulation periods.

The results of Table 3 have been quite revealing with only the treasury bill and treasury certificate as monetary instruments proved significant .It then follows therefore that a significant difference exists in the performance of money instruments just in terms of only the treasury bills and treasury certificates between the two periods. However, while the highest contribution came through the treasury certificates, the least contribution come from the commercial papers.

The order of contribution is depicted as;

TC > TB > BA > MS > CD > CP
(4.18) (2.13) (2.09) (2.05) (1.91) (1.63)

Conclusion

This study investigated the impact of money market instruments on economic development in Nigeria under two marked periods of pre-deregulation and the post-deregulation eras to reveal the following findings;

1. That both treasury certificates and treasury bills exert significant effect on economic development during the pre-deregulation and post-deregulation eras in Nigeria.
2. The bankersô acceptances, money supply, Certificate of deposit and commercial papers exerted non-significant effect on economic development during the pre-deregulation and post-deregulation eras in Nigeria.

The findings above, have therefore informed the conclusion that
monetary policy instruments have contributed marginally to economic development during the pre-deregulation and post-deregulation eras in Nigeria.

Recommendations

On the basis of these findings and conclusions this study therefore, offers the following recommendations;

1. For a better manipulation of the aggregate money supply, more attention should be focused on the use of treasury certificates and treasury bills to achieve desired policy targets, followed by bankersô acceptances and certificates of deposit, in that order.
2. Also, with the perceived weak performance of both the commercial papers and certificates of deposit under the pre-and post-deregulation eras, there is need for the monetary authorities to watch closely the implementation of such instruments. This implementation lapses as suggested by this study obviously need to be monitored and bridged for a more vibrant monetary policy formulation in Nigeria.

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APPENDIX - COMPsUTER RESULT PRINT-OUTS

Hypothesis Test: Independent Groups

PRE-MS	POST-MS	
70,660.57778	1,526,913.09167	mean
47,087.67797	2,114,267.21328	std. dev.
9	12	n

19	df
-1,456,252.51389	difference (PRE-MS - POST-MS)
2,588,901,175,568.87000	pooled variance
709,505.07454	standard error of difference
0.00000	hypothesized difference
-2.05	t
.0271	p-value (one-tailed)

Hypothesis Test: Independent Groups

PRE-TB	POST-TB	
54,887.70000	943,819.10000	mean
37,992.99769	1,243,382.04799	std. dev.
9	12	n

19	df
-888,931.40000	difference (PRE-TB - POST-TB)
895,659,780,680.63700	pooled variance
417,320.10312	standard error of difference
0.00000	hypothesized difference
-2.13	t
.0232	p-value (one-tailed)

Hypothesis Test: Independent Groups

PRE-TC	POST-TC

22,628.64444	1,966.333	mean
15,321.20156	6,811.578	std. dev.
9	12	n

19	df
20,662.31111	difference (PRE-TC - POST-TC)
125,699,334.38889	pooled variance
4,943.83831	standard error of difference
0.00000	hypothesized difference
4.18	t
.0003	p-value (one-tailed)

Hypothesis Test: Independent Groups

PRE-CD	POST-CD	
254.1111	12.750	mean
440.2164	32.162	std. dev.
9	12	n

19	df
241.3611	difference (PRE-CD - POST-CD)
82,194.8294	pooled variance
126.4212	standard error of difference
0.0000	hypothesized difference
1.91	t
.0357	p-value (one-tailed)

Hypothesis Test: Independent Groups

PRE-CP	POST-CP	
1,886.20000	147,099.71667	mean
1,548.41678	265,078.55948	std. dev.
9	12	n

19	df
-145,213.51667	difference (PRE-CP - POST-CP)
40,681,697,390.51040	pooled variance
88,940.03625	standard error of difference
0.00000	hypothesized difference
-1.63	t
.0595	p-value (one-tailed)

Hypothesis Test: Independent Groups

PRE-BA	POST-BA	
1,118.22222	59,052.29167	mean
1,453.36408	82,749.40201	std. dev.
9	12	n

19	df
-57,934.06944	difference (PRE-BA - POST-BA)
3,965,210,368.74972	pooled variance
27,767.12314	standard error of difference
0.00000	hypothesized difference
-2.09	t
.0253	p-value (one-tailed)