Financial reforms, interest rate behaviour

and economic growth in Nigeria

Tomola M. Obamuyi[1] and Sola Olorunfemi[2]

Abstract

The paper examines the implications of financial reform and interest rate behaviour on economic growth in Nigeria. The cointegration and error correction model were used on time series data from 1970-2006. The results demonstrate that financial reform and interest rates have significant impact on economic growth in Nigeria. The results imply that the behaviour of interest rate is important for economic growth in view of the empirical nexus between interest rates and investment, and investment and growth. The study recommends that government must embark on growth enhancing financial reform and be sensitive to the behaviour of interest rates for overall economic growth in the country.

---

[1] Department of Banking and Finance, Adekunle Ajasin University, Akungba- Akoko, Ondo State, Nigeria, e-mail: tomolaobamuyi@yahoo.co.uk
[2] Department of Economics, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria

1 Introduction

Interest rate reform is one of the dimensions of financial liberalisation and has occupied a central position in the liberalisation process. The dimensions of financial liberalisation include interest rate reform, reduction of credit control, free entry into the banking sector, autonomy to the banking sector, private participation in banking and liberalisation of capital flows [12]. The Interest rate reform, a policy under financial sector liberalisation, was to achieve efficiency in the financial sector and engendering financial deepening. In Nigeria, financial sector reforms began with the deregulation of interest rates in August 1987, [9]. Prior to this period, the financial system operated under financial regulation, and interest rates were said to be repressed. According to McKinnon [11] and Shaw [16], financial repression arises mostly when a country imposes ceiling on deposit and lending nominal interest rates at a low level relative to inflation. The resulting low or negative interest rates discourage saving mobilisation and channelling of the mobilised savings through the financial system. This has a negative impact on the quantity and quality of investment and hence economic growth. Therefore, the expectation of interest rate reform was that it would encourage domestic savings and make loanable funds available in the banking institutions. But, the criticism has been that the "tunnel-like" structure of interest rate [13] in Nigeria is capable of discouraging savings and retarding growth in view of the empirical link between savings, investment and economic growth. The critical question, therefore, is whether real interest rates have any positive effect on economic growth in Nigeria.

The paper examines the implications of financial reform and interest rate behaviour on economic growth in Nigeria. This is because the behaviour of interest rates, to a large extent, determines the investment activities, and hence economic growth of a country. The paper is motivated by the shortage of empirical works on the effects of financial reforms and interest rates on the growth rate in Nigeria. The findings will assist the policy makers in designing

accommodating financial policies that will generate sizeable improvement in the activities of the private sector, which are considered critical for economic growth.

2 Literature Review

2.1 The Nigerian Banking System

After the adoption of the Structural Adjustment Programme (SAP) in 1986, and the implementation of the financial liberalisation policy of the government, the number of banks in the country increased from a low level of 40 in 1985 to a high level of 120 by the end of 1992, before declining to 89 in 1998. As part of the efforts to sanitise the banking sector, the Central Bank of Nigeria(CBN) mandated all licensed banks to increase the minimum paid up capital from N2 billion to N25 billion with effect from January 1, 2006. The consolidation exercise that resulted from the pronouncement brought the number of banks to 24 groups of banks in 2006.

Although, the consolidation exercise made the banks to be highly capitalised, people were surprised to hear the pronouncement of the newly appointed Governor of the Central Bank of Nigeria on 21 June, 2009, that all were not well with the Nigerian banks. The audit test by the Central bank of Nigeria of the 24 banks in August, 2009, revealed that only 14 banks were found to have adequate capital and liquidity to support the level of their current operations and future growth, while 2 banks were asked to re-capitalise before 30 June, 2010, and 8 banks were adjudged to be in grave situations. The Central Bank of Nigeria, citing the provisions of the Banks and Other Financial Institutions Act 2004 sacked the Executive Management of the 8 banks. The criteria employed for the special examination in all the banks were: Liquidity, capital adequacy, and corporate governance. The apex bank subsequently injected N620 billion (about US$4.03 billion) in the banks as liquidity support and long term loans. The action

of CBN implies that the banks have not complied with the laid down principles of good banking of ensuring that the banking system is safe, sound and stable.

2.2 The Needs for Reforms in the Financial System

The festering banking crises in Nigeria suggest that there is something wrong with the economic and monetary policy of the government. This has created space for the banks to prefer paying penalty rather than complying with economic policy. It is an indication that the policies of government have not been properly evaluated to create value for the banking system and the economy. For instance, the banking failures of late 1940s and early 1950s(banking boom and banking doom), and that of 1994-2000, led to the erosion of confidence in the banking system. Between 1994 and 2000, a total of 33 terminally distressed banks were liquidated (CBN, 2001). Also, with the consolidation exercise, the number of banks was reduced from 89 banks in 2004 to 24 groups of banks in 2006 in 2010. With 8 banks now adjudged to be in grave situations, the number of banks will likely reduce to 16 banks. The consequences of the scenario above are that: First, many people will be hostile to the banking business, and large amount of money kept outside the banking industry. This implies that monetary policy may not be effective in the economy. Second, the banker-customer relationship will be threatened as people would have lost confidence in the industry. Third, the distress in the financial sector will have a contagious effect on all other sectors of the economy, with the tendency of reducing the rate of economic growth. The simple questions are: What has happened to the various financial reforms of the government over the years? Does it imply that financial reforms failed in accomplishing the intended objectives? Or, is the problem with non-compliance on the part of financial institutions? Have the monetary authorities failed in their implementation duty and efforts?

As Schwartz (1985) and others in the monetary school argued, financial crises are caused by the failure of the authorities to respond correctly to financial distress and are aggravated by private sectors uncertainties about the correct policy responses. The monetary authorities in Nigeria seem to be confused about the implementation of economic policies. This is because there are warning signals before a bank becomes distressed. The Early Warning Model and the CAMEL (Capital adequacy, Asset quality, Management profile, Earnings quality and Liquidity) model should have shown the true position of the banks long ago for corrective measures to be taken. Meanwhile, some of the criteria usually employed to measure the performance of the banks have been compromised by the Central Bank of Nigeria. This can be seen in the pronouncement of the Governor the bank: "There were infractions. There were violations of the laws. That was not the basis for removing them. The basis was that they were in grave situations". This implies that non-compliance with policy may not be too important to the government. Additionally, these banks were unable to meet their maturing obligations without resorting to the CBN or the inter-bank market, yet the apex bank kept a silence while the situation was on. On the issue of corporate governance, Chow (2000) explained that the objectives of corporate governance are to ensure transparency, accountability, adequate disclosure and effectiveness of reporting systems. He asserted that the need for good corporate governance stems from what he termed the "expectation gap" problem, which arises when the behaviour of companies falls short of shareholders' and other stakeholders' expectations. The basic issue in contemporary management practices pertains to how much authority should be retained by managers and whether the managers will sincerely act in the best interest of the shareholders.

2.3 Interest Rate Reforms and Economic Growth in Nigeria

Interest rates policy in Nigeria is discussed along the dividing period of

pre-reform (1970-1986) and post-reform (1987-2006) periods. In order to compare the structure of interest rates between the sub-periods, the paper combined deposit rate, lending rate and minimum rediscount rate to see how the correlations among these three variables change as the interest rates reform process sets in (Figure 1).

The pre-reform period (1970-1986) is considered as a period of financial repression, and was characterised by a highly regulated monetary policy environment in which policies of directed credits, interest rate ceiling and restrictive monetary expansion were the rule rather than the exception [17]. Although, the interest rate policy instruments remained fixed, there were marginal increases. For instance, the deposit rate was increased from 3% in 1975 to 9.5% in 1986, while the lending rate rose from 9% to 12% within the same period.
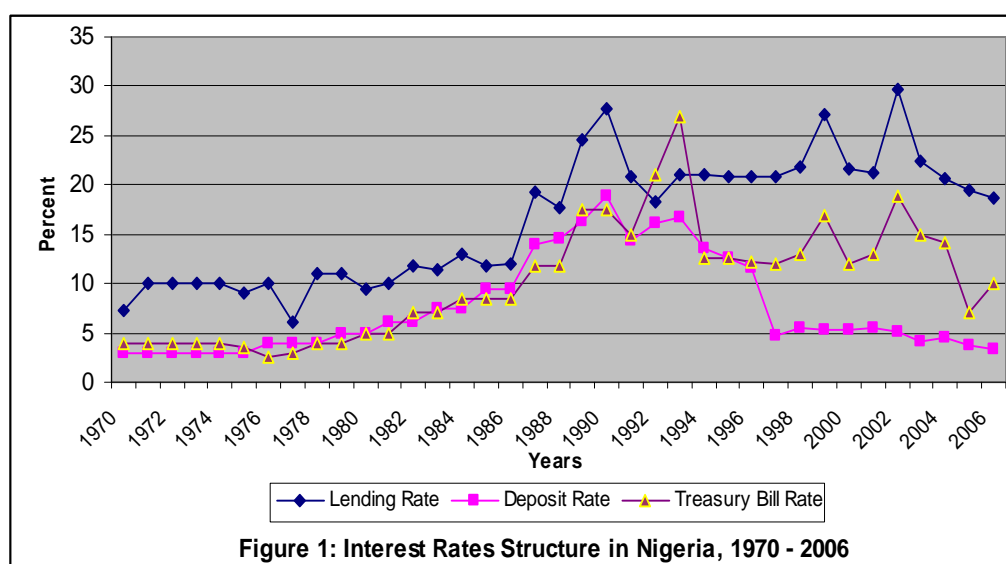

Figure 1: Interest Rates Structure in Nigeria, 1970 - 2006

For the reform period, deposit and lending rates were allowed to be determined by market forces and the interest rates actually increased as envisaged. For instance, the nominal deposit and lending rates rose from 9.5% and 12% in 1986 to 14% and 19.2% respectively in 1987, as a result of the interest rates reform in Nigeria. By 1990, the deposit and lending rates have risen to 18.8% and 27.7% respectively. The government intervened in 1991 and pegged the deposit

and lending rates at 14% and 21 % respectively. Unfortunately, between 1997 and 2006, the lending rate did not show a significant reduction, with an average of 22%, despite the declining trend in deposit rate, averaging 5%.

The implications of the "tunnel-like" structure of interest rates (see Figure 1) and the low deposit rates are that savings will likely be discouraged, and this will negatively affect funds mobilisation by the banks. This will in turn affect the amount of funds available for investment with retarded influence on economic growth. On the other hand, the high lending rate is detrimental to productive investment and hence economic growth. As Soyibo and Olayiwola [17] observe, borrowers with worthwhile investments may be discouraged from seeking loans and the quality of the mix of applicants could change adversely. Again, high lending interest rates could create moral hazard where loan seekers borrow to escape bankruptcy rather than invest or finance working capital. Generally, the behaviour of the interest rate structure is such that there is a wide spread margin between deposit and lending rates which may encourage speculative financial transactions.

**Figure 2 : Trend Analysis of Real GDP Growth Rates(1970-2006)**
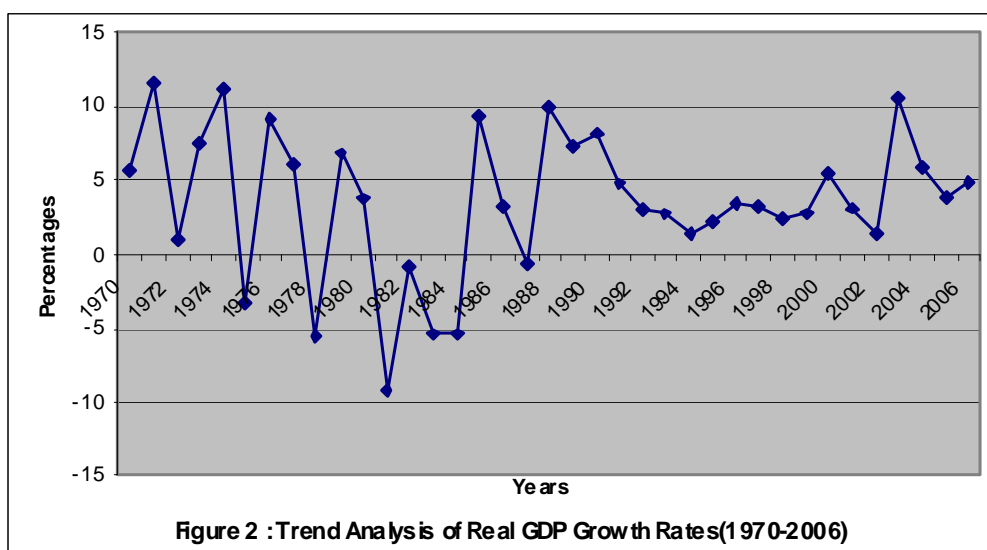
The performance of the real GDP growth rate in Nigerian for the pre- and post-reform periods is presented in Figure 2.

The real GDP growth rate which was 5.7% in 1970 increased to 11% in 1974, but became mostly negative during the pre-reform period, until 1985, when a positive real GDP growth rate of 9.4% was achieved.

Interestingly, Figure 3 shows that the introduction of interest rate reform in 1987 brought a positive change in real GDP growth rate to a peak of 10 % in 1988. With real GDP growth rate of 4.9% in 2006, the country requires an average annual GDP growth rate of 7% in order to meet the United Nations Millennium Development Goals (MDGs) of halving poverty by 2015 (AIAE, 2005).

Although, the GDP growth rate has been very low thereafter, it has maintained a positive stand since the introduction of interest rate reform. Thus, it is clear that implementing interest rates reform has contributed to economic growth in Nigeria.

Fig.3: Growth and Interest Rates policies in Nigeria, 1970 - 2006
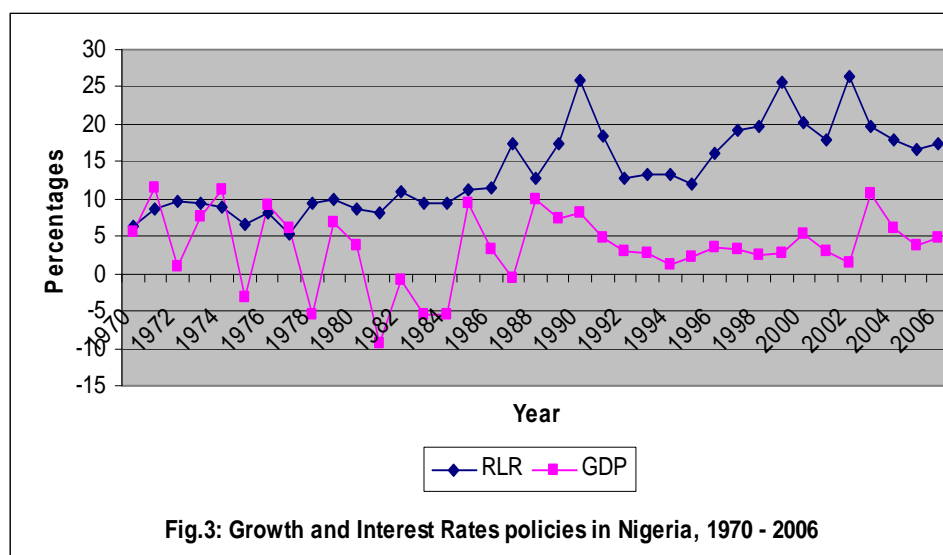
2.4 Theoretical and Empirical Models

The association between interest rates and economic growth as recognised in the literature on growth can be found in the neoclassical growth framework and

the McKinnon-Shaw hypothesis. For instance, McKinnon-Shaw [11] argued that financial repression – indiscriminate distortions of financial prices including interest rates – reduces real rate of growth. One of the basic arguments of McKinnon-Shaw model is an investment function that responds negatively to the effective real loan rate of interest and positively to the growth rate. McKinnon-Shaw school expects financial liberalisation to exert a positive effect on the rate of economic growth in both the short and medium runs. Albu [3] used two partial models to investigate the impact of investment on GDP growth rate and the relationship between interest rate and investment in the case of Romanian economy. The models are specified as:

$$r (\alpha) = a * \alpha + b$$

$$\alpha (I) = c / (d + i)$$

Where r = GDP growth rate, α = investment rate, i = interest rate, p = inflation, a, b, c, and d are parameters to be estimated. He found that the behaviour of the national economic system and the interest rate - investment – economic growth relationships tend to converge to those demonstrated in a normal market economy.

Oosterbaan et al [14] estimated the relationship between the annual rate of economic growth (YC) and the real rate of interest (RR) in equations of the basic form:

$$YC = \beta_0 + \beta_1(RR + \beta_2).(RR + \beta_2)$$

The study shows the effect of a rising real interest rate on growth, and claimed that growth is maximized when the real rate of interest lies within the normal range of say, -5 percent to +15 percent. De Gregorio and Guidotti (1995) cited in [14] suggest that the relationship between real interest rates and economic growth might resemble an inverted U-curve: Very low (and negative) real interest rates tend to cause financial disintermediation and hence to reduce growth. However, the World Bank reports, cited in [14] show a positive and significant cross-section relationship between average growth and real interest rates over the period 1965 to 1985.

3 Methodology

The study employs both descriptive and econometric analyses. The descriptive approach of trend analysis was used to determine the relationship between interest rates and economic growth. Following the neoclassical model, McKinnon-Shaw hypothesis and Albu's [3] specifications, the standard growth function of the relationship between economic growth and interest rates is modified and expanded to include the ratio of broad money to GDP (which captures the effect of financial deepening), domestic savings/GDP ratio and shift in financial policy from regulation to deregulation of interest. The model for this study is specified as:

$$Growth_t = \delta_0 + \delta_1 LedRate_t + \delta_2 DepRate_t + \delta_3 Finance_t + \delta_4 Inflation_t + \delta_5 Savings_t$$
$$+ \delta_6 Dummy_t + \varepsilon_t$$

where, Growth is real growth rate of gross domestic product, Ledrate is real lending interest rate, Deprate is real deposit interest rate, Inflation is inflation rate (measuring macroeconomic instability), Finance is ratio of broad money to GDP, M2/GDP (index of financial deepening), Savings is ratio of gross domestic savings to GDP and Dummy is the financial reforms variable used to capture the shift in financial policy from regulation to deregulation of interest rates in1987, ε is a white noise disturbance term and $\delta_1, \delta_2, \ldots \delta_6$ are parameters to be estimated. The *a priori* expectation is summarised as follows:

$$\delta_1 < 0, \ \delta_2 > 0, \ \delta_3 > 0, \ \delta_4 < 0, \ \delta_5 > 0, \delta_6 > 0.$$

Real deposit/lending rate is nominal deposit/lending rate adjusted for inflation (π): RDR/RLR = $(1 + r) - 1)/(1 + \pi)$. Inflation rate (π) is the annual rate of inflation.

Prior to estimation, the time series properties of all the variables were ascertained to avoid spurious regression, which results from the regression of two or more non-stationary time series data. This means that the time series have to be detrended before any sensible regression analysis can be performed. Granger and Newbold [7] had concluded that regression results of non-stationary series may,

most of the times, be 'spurious' to the extent that a relationship would be accepted as existing between two variables as measured by their coefficient of determination, R^2, when in actual fact no such relationship exists. In other words, time series analysis was carried out to examine the data for stationarity or non-stationarity problems, using Augmented Dickey-Fuller (ADF), which is an extension of Dickey-Fuller test (see [4, 5]). The next step was to establish whether the non-stationary variables were cointegrated. This was done by the Johansen test to confirm the existence of a long run equilibrium relationship between the variables. Having established cointegration, an Error Correction model is specified to present the short run dynamics while preserving the long run equilibrium relationship. The econometric analysis covered the period of 1970-2006. Data were obtained mainly from publications of the Central Bank of Nigeria, supplemented with data from other secondary sources.

4 Results and Discussion

In modelling the growth equation, the paper examined each series entering the model to determine whether it is stationary and its order of integration. The results of the Augmented Dickey-Fuller(ADF) unit root test (Table 1) show that only the *Growth* and *Inflation* variables were stationary at levels, while the other variables were stationary at first difference(integrated of order one).

Given the unit root properties of the variables, the study proceeded to establish whether or not there is a long-run cointegrating relationship among the variables by using the Johansen cointegrating test. The results reported for the trace and maximum eigenvalue statistics (Table 2) show that the null-hypothesis of no-cointegrating vector linking real GDP growth rate and it's economic determinants is rejected at the 5 per cent level of significance.

The trace test statistics reveal that there are, at most, three cointegrating relationships. The maximum eigenvalue statistic suggests, at most, two

cointegrating relationships among the real GDP growth rate and its economic determinants. Since the trace statistics takes into account all of the smallest eigenvalues, it possesses more power than the maximum eigenvalue statistic. Johansen and Juselius [10] cited in Owoye and Onafowora [15] recommend the use of trace statistics when there is a conflict between the two statistics.

Table 1: ADF Unit Root Test Results

Variables	At Levels	At First Difference	Order of integration
Growth	-5.197923	-	1(0)
LedRate	-2.270717	-6.283574	1(1)
DepRate	-1. 596011	-7.531699	1(1)
Finance	-1.937845	-7.446874	1(1)
Inflation	-3.144085	-	1(0)
Savings	-2.725329	-6.431129	1(1)
Dummy	-1.190238	-5.916080	1(1)
5% CV	-2.945842	-2.948404	

Growth is real growth rate of gross domestic product, Ledrate is real lending interest rate, Deprate is real deposit interest rate, Inflation is inflation rate (measuring macroeconomic instability), Finance is ratio of broad money to GDP, M2/GDP (index of financial deepening), Savings is ratio of gross domestic savings to GDP and Dummy is the financial reforms variable.

Table 2: Johansen Maximum Likelihood Cointegration Test Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	Max-Eigen Statistic	5 Percent Critical Value
None	0.768747	173.7153*	124.24	51.24847*	45.28
At most 1	0.723077	122.4668*	94.15	44.94058*	39.37
At most 2	0.598420	77.52625*	68.52	31.93222	33.46
At most 3	0.484810	45.59403	47.21	23.21272	27.07
At most 4	0.350732	22.38131	29.68	15.11683	20.97
At most 5	0.175042	7.264479	15.41	6.734785	14.07
At most 6	0.015020	0.529694	3.76	0.529694	3.76

Note: Trace statistic indicates 3 cointegrating equations at the 5% level
        Max-eigen value statistic indicates 2 cointegrating equations at the 5% level

The conclusion drawn from the results is that there exists a unique long run relationship between economic growth (Growth) and real lending interest rate (Ledrate), real deposit interest rate (Deprate), inflation rate (measuring

macroeconomic instability)(Inflation), ratio of broad money to GDP, M2/GDP (index of financial deepening)(Finance), ratio of gross domestic savings to GDP (Savings) and the financial reforms variable (Dummy). In the short run, deviations from this relationship could occur due to shocks to any of the variables. Therefore, Soyibo and Olayiwola [17] suggest that the short-run interactions and the adjustment to long-run equilibrium are important because of the policy implications. Thus, the vector error correction model (ECM) was applied to analyse the short-run dynamics.

Table 3: Estimates of the Error-Correction Model

Variable	Coefficient	t-statistic	t - probability
Constant	0.442222	0.603229	0.5512
D(LedRate)	-0.898968	-3.008745	0.0055*
D(DepRate)	1.194865	2.268558	0.0312*
D(Finance)	-0.415057	-1.864513	0.0728
D(Inflation)	-0.212303	-3.416348	0.0020*
D(Savings)	-0.299034	-2.040775	0.0508*
D(Dummy)	-3.180398	-0.640130	0.5273
ECT(-1)	-1.138859	-6.818580	0.0000*
Adj R^2	0.602720		
F –statistic	0.602720		
SSE	4.252345		
F-statistic	8.585588		
Prob(F-statistic)	0.000013		
Durbin-Watson stat	1.852488		

*indicates significant at 5% level
Growth   is real growth rate of gross domestic product, Ledrate is real lending interest rate, Deprate is real deposit interest rate, Inflation is inflation rate (measuring macroeconomic instability), Finance is ratio of broad money to GDP, M2/GDP (index of financial deepening), Savings is ratio of gross domestic savings to GDP and Dummy is the financial reforms variable.

The results of ECM regression (Table 3) show that the real lending rate variable has a significant effect on economic growth. This is because lower and stable interest rates create a lot of economic certainties that encourages investors to borrow and invest in productivity-improving projects. This result is consistent with existing empirical findings, [14]. However, such a relationship is

theoretically plausible, if there is link between total investments (public and private) and economic growth. Empirical evidence by Guseh and Oritsejafor [8] showns that investment has negative impact on economic growth in Nigeria, indicating that investment has not promoted economic growth. Further, Guseh and Oritsejafor [8] supported their findings with the following arguments: (1) most public sector infrastructure investments are not worthwhile (2) political and military elites implemented public projects that proved to be money-draining projects (3) government contracts were awarded at inflated prices by as much as three or four times their worth, and development projects were shoddily executed or completely abandoned after mobilisation fees had been paid (4) there was looting of public funds necessary for savings and investment (5) low per capita income in Nigeria making the household component of private domestic saving to be low and thus may not be a major source of investment (6) declining government savings (6) frequent regime changes, concomitant with policy uncertainties, leading to lower long-run investment and (7) public and private corrupt practices, which divert scarce resources from productive activities and reduce economic growth.

The analysis also indicates that a real deposit rate has a statistically significant impact on economic growth in Nigeria. Thus, a high deposit rate of interest encourages savings and economic growth in view of the link between savings, investment and economic growth. This result is consistent with the prediction of economic theory and existing studies that higher deposit interest rate from liberalisation will increase household savings in the banking system thereby enhancing economic growth.

The econometric results further reveal that financial deepening has negative effect on economic growth in Nigeria. The financial system in Nigeria is weak and can best be described as an inhibitor and banks are only in business to reap 'wind fall' profit. As Taylor observed, if financial markets are weak, the effectiveness of transmitting policy through interest rates will be limited. Thus,

there is the need for the financial system to be well developed so that it can efficiently and cheaply mobilise and allocate funds within the system to guarantee reasonable returns for savers and investment needs of the borrowers in order to contribute to economic growth.

Our results show that inflation rate has negative and statistically significant effect on economic growth, which means that the higher the rate of inflation, the lower the rate of economic growth. Studies have shown that high inflation rate is detrimental to growth, see [2]. The gross domestic savings have negative and fairly significant effect on economic growth. This is justifiable in Nigeria because the present low-deposit interest rate makes savings unattractive and a sizeable proportion of income is spent on consumption as a result of the low per capita income and high inflation rate in the country. The policy shift dummy has negative and an insignificant effect on economic growth, suggesting that the totality of the interest rate reform has not achieved the optimal growth rate in Nigeria. The error correction term (ECT_{t-1}) is of the expected negative sign and also significant. The absolute value of the coefficient of the error-correction term indicates that about 114 per cent of the disequilibrium in the real GDP growth rate is offset by short-run adjustment in each year.

Although, the goodness-of-fit of the estimated model indicates that the model is reasonably accurate in prediction, it is important to note that there are other factors (such as political instability, political unrest and the degree of democracy), which may have impact on economic growth, especially in less developed countries. For instance, Fosu [6], cited in [8] assessed the impact of political instability on economic growth, using the incidence of coups d'etat in 31 sub-Saharan African countries and found that abortive coups had the largest effect on economic growth, followed by coup plots. Studies have also shown that there is a significant positive association between democracy and economic growth [8]. As Soyibo and Olayiwola [17] argue, government will need to take appropriate notice of the complimentality of policies in its economic reform programmes.

5 Conclusion

The paper examines the implications of financial reform and interest rate on the economic growth in Nigeria. The cointegration and error correction model were used on time series analysis and annual data from 1970-2006. The results demonstrate that financial reforms and interest rates have positive and significant effect on economic growth. The results show that there exist a unique long-run relationship between interest rates and economic growth. Therefore, as a pre-requisite for generating economic growth, government must embark on growth-enhancing reforms and be sensitive to the behaviour of interest rates in the country. This will definitely inform the formulation of policy for private sector development as a catalyst for overall economic growth in the country.

References

[1]   African Institute for Applied Economics (AIAE), *Sustainability of Economic Growth in Nigeria: The Role of the Renewable Natural Resource, Summary of Research Findings and Policy Implications*, Enugu, Nigeria, 2005.

[2]   A.E. Akinlo, Impact of Macro-Economic Factors on Total Factor Productivity in Sub-Saharan African Countries, *World Institute for Development Economics Research Paper,* **2005/39**, (2005).

[3]   L. Albu, Trends in the Interest Rate–Investment–GDP Growth Relationship, *Romanian Journal of Economic Forecasting*; **3**, (2006).

[4]   D.A. Dickey and W.A. Fuller, Testing for Serial Correlation in Least Square Regression, *Biometrical,* **58**, (1979), 20-35.

[5]   D.A. Dickey and W.A. Fuller, Likelihood Ratio Test for Auto Regressive Time Series with a Unit Root, *Econometrical,* **49**, (1981), 1057-1072.

[6] A.K. Fosu, Political Instability and Economic Growth, *American Journal of Economics and Sociology*, **61**, (2002).

[7] C.W. Granger and P. Newbold, Spurious Regressions in Econometrics, *Journal of Econometrics*, **2**, (1974), 111-120.

[8] J.S. Guseh and E.Oritsejafor, Government size, Political Freedom and Economic Growth in Nigeria, 1960-2000, *J. of Third World Studies*, (2007).

[9] S.I. Ikhide and A.A. Alawode, Financial Sector Reforms, Microeconomic Instability and the Order of Economic Liberation: The Evidence from Nigeria, *African Economic Research Paper* **112**, (2001), ISBN 9966-944-53-2.

[10] S. Johansen and K. Juselins, Maximum Likelihood Estimation and Influence on Cointegration with Application to Demand for Money, *Oxford Bulletin of Economics and Statistics*, 1990.

[11] R.I. Mckinnon, *Money and Capital in Economic Development*, Washington, D.C., Brookings Institutiion, 1973.

[12] N.M. Odhiambo and O.A. Akinboade, Interest-Rate Reforms and Financial Deepening in Botswana: An Empirical Investigation, *Economic Notes*, **38**(1-2), (2009), 97-116.

[13] J.A.T. Ojo, *The Nigerian Financial System*, University of Wales Press, Cardiff, 1976.

[14] M.S. Oosterbaan, N.V. Der Windt, T.R.V. Steveninck and M.S. Oosterbaan, *Determinants of Growth*, 2000, Available at http://books.google.co.uk/books

[15] O. Owoye and O. A. Onafowora, M2 Targeting, Money Demand and Real GDP Growth in Nigeria: Do Rules Apply?, *Journal of Business and Public Affairs,* **1**(2), (2007).

[16] E. Shaw, *Financial Deepening in Economic Development*, New York, Oxford University Press, 1973.

[17] A. Soyibo and K. Olayiwola, Interest rate Policy and the Promotion of Savings Investment and Resource Mobilisation in Nigeria, *Research Report* **24**, (2000), Development Policy Centre, Ibadan.