

# THE IMPERATIVE OF NATIONAL SECURITY AND STABILITY FOR DEVELOPMENT PROCESS IN CONTEMPORARY NIGERIA

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## Abstract

The study examined the effect of instability on growth and investment from 1970 to 2003 using ECM-econometric techniques. Causal relationship between macro-economic instability and political instability was also investigated using Granger-causality tests. Data employed for the analysis were gathered from the Statistical Bulletin, the Central Bank of Nigeria publication complemented by the World Development Indicators published by the World Bank. The study showed that political instability and macroeconomic instability had impacted negative effects on growth while the effect of macroeconomic instability on investment was positive. A positive correlation was found between the measures of political instability and macroeconomic instability. The causal results revealed a uni-directional relationship running from macroeconomic instability to political violence indicating that growth in macroeconomic instability impacted harmful effects on political instability in Nigeria. The study, therefore, concluded that stability is pre-requisite ingredient for both private investment expansion and accelerated economic development in Nigeria.

## Introduction

National security and stability are critical issues in development process. More than ever before, the issue of national security and stability has seriously been engaging the attention of the governments of developed and developing countries alike. This might not be

unconnected with the postulated positive association between stability and growth (Young, 1995; Dowling, 1998; Belletini, 1998; Fosu, 2002 and Iyoha, 2002). Evidence abounds in the literature that any form of instability such as violence brings no good to people. Indeed, insecurity retards development, scares away investors, stultifies creativity and contaminates social relations (Rebelo, 1991; Campos *et al.*, 2002; Gradstein, 2002 and Ponzio, 2004). In this regard, far-reaching fundamental reforms to ensure growth, stability and development need to be put in place. When peace and security of a country is compromised and contaminated, it portends a negative effect on the economic growth (Alesina *et al.*, 1996; Arai and Kinnwall, 2001).

Authors observe that since 1960, more than 40.0 per cent of African countries have experienced at least one civil war (Collier and Hoeffler, 2002). For instance, Nigeria had civil war between 1967 and 1970 and presently war is being experienced in Angola, Somalia and some other part of Africa. Recent war events in most developing and some other few developed countries have manifestly brought to the fore the importance and relevance of the United Nations in the pursuit of global peace, security and stability. Insecurity is a global menace, which challenges the very basis of our development (World Bank, 2001). It must therefore be confronted globally. It is regrettable that conflicts and wars continue to be waged in many parts of the world. It is particularly disheartening that Africa has had a disproportionate share of these conflicts and wars with devastating impact on African societies and peoples. Insecurity of lives and properties seem the order of the day in the present African societies. Conflict kills the prospects for broad-based growth. Without security, in its broadest sense, the Millennium Development Goals (MDGs) of the global world will not be attainable for many poor countries.

The long-standing commitment of many developed and developing countries to fostering the objectives of the United Nations in the area of conflict prevention, peace and stability, is well known. Conflict kills the prospects for broad-based growth (World Bank, 2000). Without security, in its broadest sense, the national goals of many countries will not be attainable. Development efforts, including many lives and properties can be wiped out by war or instability.

It is apparent from the foregoing that national security is a desideratum, *a sine qua non* for economic growth and development of any country. As a matter of fact, national security is so critical and strategic that it makes way for sustainable development. National security prompts and at the same time reinforces the process of development on a long-term basis. The Nigerian government now sees security as a major challenge and a prerequisite of development. According to the Vision 2010 main report, the country's value systems not only unite the Nigerian society but also propel the forces of progress. Apparently, unity and faith are necessary for national security in a federation like Nigeria. As far as the country is concerned, national security is all about the protection and enhancement of the country's unity and fostering loyalty among the federating units. Nigeria is a multi-ethnic society, with a value system that derives from diversity of its people and their behavior, religions and culture. Therefore, peace and progress are indicative of the country's yearning for national stability and consequently national development.

The development process requires, among other things, capital accumulation of all sorts, namely; physical, material and human capital. It also involves infrastructural and utilities improvement such as transportation networks, water, electricity and telecommunication. It also requires stable macroeconomic environment and policy framework and of course stable polity. The impaired development process in contemporary Nigeria derives from the lack of these ingredients as the root cause, which can be traced to the issue of national security and stability.

Given the current global environment, a developing country like Nigeria, in the process of capital accumulation requires both local and foreign private investors, for her to maximize economic potentials. Foreign investment is needed not as a substitute, but to complement domestic investment for accelerated growth and development. Over the years Nigeria has tried to attract both domestic and private investors with numerous incentives and measures. Unfortunately this objective could not be attained due to certain reasons.

The issue of macroeconomic instability manifested in huge fiscal deficits, galloping inflation, high debt burden and unstable foreign exchange rates has been identified in the literature as being responsible for poor investment recovery and slow rate of economic growth. In addition, the political instability coupled with corruption and lack of

transparency and accountability on the part of the rulers discouraged private investment in the country. Also, the crisis in the educational system and prevalent social malaise could partly be responsible for the ugly situation. For instance, the insecurity of lives and properties as well as the tempo of criminal activities have been heightened in the present Nigeria.

The issues identified above are security-related problems, which have been assumed to have impaired capital inflow and prompted capital flight from the country. All these arguments are observed to have been responsible for the slow growth, and even negative economic growth, especially in the 1980s and mid 1990s. The inefficiencies and low productivity (with incessant strikes) identifiable with workforce have definitely deterred foreign investors in Nigeria. While it is less clear which form of instability will induce greater distortion in the economy, there is a general belief that the volatility of some aggregate macroeconomic variables, or at least their unpredictability, rise with their levels. Other mechanisms by which instability might affect growth have also been advanced. For instance, it has been argued that instability discourages saving by transferring income from lenders to borrowers. Thus the issue of slow saving response, low investment and poor economic growth in Nigeria may be largely explained by this view. However, the extent of such relationship needs to be empirically examined.

Nigeria's growth rate of real GDP per capital of 1.45 per cent during the 1970-2000 period compares unfavorably with that reported by other countries, and particularly those posted by China and the Asian Tigers. For instance, Hong Kong's real GDP per capita was 5.1 per cent between 1970 and 1996, 6.7 per cent for Singapore, 6.1 per cent for Taiwan and 6.8 per cent for South Korea. In sub-Saharan Africa, Botswana reported a growth rate of real GDP per capita of 8.0 per cent between 1982 and 1989 (Iyoha, 2000). Viewed in this comparative perspective, Nigeria's per capita income growth has been woefully low and needs to be improved upon.

The question that readily comes to one's mind is why a slow economic growth response to economic reforms in Nigeria? Yet in other words, why has the majority of Nigerians remained so poor? Despite economic and political reforms in Nigeria, the share of global FDI remains low. What are the economic and political factors that influence FDI

inflows and economic growth in Nigeria? Nigeria has suffered chronic political and macroeconomic instability over the past three decades. Have these measures of instability affected economic growth? For accelerated economic growth, macroeconomic and structural policies clearly matter but how can the design and implementation of adjustment policies help foster growth? The paper provides answers to these puzzles. The focus of this paper, therefore, is to bring to the fore the imperative of national security and stability for development process in contemporary Nigeria.

The remaining part of the paper is organized as follows: The review economic literature is presented in section II with our focus on the role played by insecurity and instability in growth process. While section III focuses on model specification and Error Correction Modeling techniques as the estimation techniques, section IV presents the major results of the empirical analysis of the relationship between instability and some aggregate macroeconomic variables. Section V concludes the paper.

### Review of Literature

The slow investment response and poor economic growth in many developing countries including African countries, led to the current waves of empirical investigations. The attention of researchers in this area focuses on the sources of poor economic performance of these developing countries. Empirical evidence suggests that social and political instability are major reasons for the divergence between poor and rich countries. Most studies found that security and stability of any country are necessary impetus for accelerated economic growth. However, there is still the unsolved puzzle that the relationship between development and investment rates is not monotonic but follows a hump-shaped pattern. The evidence, however, supports that no matter how instability is defined, it is an obstacle to economic growth.

For instance, Riedl (1999) in his study examines reasons why observed investment and growth rates in poor countries are lower than traditional theory predicts. His empirical evidence shows that although very poor economies have very low investment rates there are intermediately-developed economies that exhibit extremely high investment rates. The paper

indicates, within the framework of a simple game theoretic model, that if property rights over produced wealth are not perfectly secure very poor countries are in an instability and inefficiency trap. He also observes that there exists no redistribution schedule sustaining social stability. However, intermediately productive economies can exhibit investment rates higher than those of high productive economies. The results also support the hypothesis that inequality and investment rates are negatively correlated.

Alesina *et al* (1996) investigate the relationship between political instability and per capita GDP growth in a sample of 113 countries for the period 1950 through 1982. They define political instability as the propensity of a government collapse, and estimate a model in which such a measure of political instability and economic growth are jointly determined. The main result of the paper is that in countries and time periods with a high propensity of government collapse, growth is significantly lower than otherwise. They also discuss the effects of different types of government changes on growth.

Several studies, including Barro (1995) and Fischer (1993) have sought to quantify the effect of inflation on economic growth. These studies find that higher inflation reduces growth by a small, though meaningful, amount. They observe that each percentage point of inflation depresses a country's growth rate by 0.02 to 0.05 percentage point. Hence, a country with a five per cent inflation rate sacrifices anywhere from 0.10 to 0.25 percentage point of growth per year relative to a country with no inflation. It is worth stressing that low inflation and/or low budget deficits do not ensure that a country will enjoy healthy macroeconomic performance. Fischer (1993) points out that several franc-zone economies in Africa have had low inflation over the 1980s and 1990s, but have nonetheless grown slowly. However, he emphasizes that high inflation appears incompatible with sustained economic growth. In other words, monetary stability is necessary but not sufficient.

While most attention has focused on inflation, some authors have identified other macroeconomic factors as having an impact on growth. Two of such factors are government fiscal and exchange rate policies. For instance, Arai and Kinnwall (2001) empirically examine the hypothesis that high central government deficits and inflation impair growth using annual data for 115 countries over the period 1960-1995. Taking into account country heterogeneity and time-specific symmetric shocks, they estimate intra-country effects of past

inflation and budget deficits on growth. They find no evidence suggesting growth costs of macroeconomic instability. Their results, however, indicate reversed causality: the rate of growth determines inflation and deficits.

Mustafa, Kivilcim and Aysit (1999) investigate the empirical relationships between macroeconomic instability, capital accumulation and growth in Turkey over the period 1963-1999. They employ recent time series econometric techniques of cointegration and impulse analysis to analyze empirical relationships between the variables of interest. The results of their study indicate that the chronic and increasing macroeconomic instability of the Turkish economy has seriously affected the capital formation and hence growth. Furthermore, chronic macroeconomic instability seems to become a serious impediment to the public investment, especially its infrastructural component and shattered or, even reversed the complementarity between public and private investment in the long run. Therefore, Turkish experience has shown that macroeconomic instability not only hinders economic growth but it could also reverse the complementarity between public and private investment in the long run.

Obwoma (2001) examines the determinants of foreign direct investment (FDI) and their impacts on economic growth in Uganda. The paper discusses infrastructure and institutional bottlenecks that act as deterrents to FDI. The paper uses time series data to investigate the FDI-growth linkage. He observes that macroeconomic and political stability and policy consistency are much more important in attracting FDI in Uganda than various incentive schemes. The empirical results indicate that FDI has a positive impact on GDP growth in Uganda. Evidence from Latin America by Trevino *et al* (2002) also showed that political risk was found to be a significant factor in the foreign direct investment location decision.

The study by Fosu (2002) examines the differential roles of various measures of political instability events such as successful coups d'etat, abortive coups, or coup plots in the growth of sub-Saharan Africa. The author analyzes data on the incidence of coups d'etat for 31 countries in a cross-country augmented production function framework that incorporates political instability events as well as labor and capital as arguments. It finds that abortive coups, rather than successful coups, had the greatest adverse impact on

economic growth over the 1960-1986 period. Coup plots were also observed to be growth inhibiting. This deleterious effect of political instability is channeled via the deterioration in the marginal productivity of capital, regardless of coup event while abortive coups negatively influenced economic growth monotonically.

Ismihan *et al* (2002) find that the chronic and increasing macroeconomic instability of the Turkish economy has seriously affected the capital formation and hence growth. The main conclusion of the paper is that macroeconomic instability hinders growth and reverses the complementarities between public and private investment for Turkey. In light of these results, the paper suggests that chronic macro-economic instability seems to have become a serious impediment to public investment in Turkey. The study recommends that the government of Turkey should continue the current stabilization program to restore macroeconomic stability.

Chan and Gemayel (2003) in their study examine the relationship between FDIs and different types of risks associated with the macroeconomic environment in the Middle East and North Africa (MENA) regions. The economic, financial and political risk index of the International Country Risk Guide is used as a proxy for measuring the macroeconomic environment. They conclude that instability measure of each of the risk index provide a better fit than the index itself when explaining FDI inflows to GDP ratio over time for MENA countries. The results are consistent using either standard deviation or inter-quartile range as measure of instability for both cross-sectional model and dynamic panel model.

Ponzio (2004) shows that between 50 and 100 per cent of the decline in the growth rate during the four or five "lost decades" after independence in Mexico can be attributed to political instability. He further explains that political stability is responsible for about 50 to 88 per cent of the increase in the growth rate during the Belle Époque. Most importantly, there is no systematic difference in the growth rate after 1867 when he controls for political stability. He concludes that political instability is the single most important factor in explaining why Mexico lagged behind during the nineteenth century. Asiedu (2004) opines that in a competitive global economy, it is not enough just to improve one's policy environment but both the absolute and relative terms improvements have to be made.



It is obvious from the literature that no matter how insecurity and instability are defined, they are deterrent to investment and economic growth. Indeed, the sources of poor economic performance of Nigeria and some other poor countries of the world can greatly be associated with their high level of instability and insecurity. However, the extent to which insecurity can retard growth in Nigeria is not yet established in the literature. Furthermore, the results of growth models in literature predict the empirically unclear relationship. For some countries, the evidence negative relationship between instability and economic growth was unfounded while data support negative association for many others. Most studies, however, apply cross-country analysis, which makes generalization of findings more difficult. The study therefore employs Nigeria's data in order to empirically examine country-specific result.

#### Research Methodology

In order to successfully map out a strategy for accelerating Nigeria's growth rate and recovery in private investment in the years ahead, the study adopts the endogenous growth model of Barro (1990). The approach provides a breakdown of observed economic growth (GDP) into its main components namely, the changes attributable to the growth in factor inputs; capital (CAP) and labor (LAB) and the Solow's residual or unexplained component. Solow's residual encompasses all other sources of economic growth apart from those attributable to capital and labor. Following the endogenous growth model of Barro (1990), the simple production function framework is used to examine the relationship between instability and economic growth as in Nigeria. The model, adapted from Cobb-Douglas production function, is expressed as:

$$GDP = f(CAP, LAB, Z) \dots \dots \dots (1)$$

Equation (1) indicates that output (GDP) is related to capital (CAP), labor force (LAB) and other policy variables (Z), called Solow's residual that affect growth. It is expected that an

increase in capital and labor force, given a constant level of technology, will lead to increase in economic growth. Adopting a log-linear formulation, equation (1) becomes:

$$\ln GDP_t = a_0 + a_1 \ln CAP_t + a_2 \ln LAB_t + a_3 \ln Z_t + e_t \quad (2)$$

Many factors other than policies have impact on growth. These factors may include macroeconomic variables such as domestic investment (INV), debt stock (DEBT), foreign direct investment (FDI), inflation rate (INF) and the extent of economic integration or openness (OPEN). The capital factor, substituted with investment, is separated into its private (PINV) and public (GINV) components in order to determine effect of individual component. Following Levine and Renelt (1992), we include debt stock (DEBT) as one of the variables that impact on growth in developing countries. Although, several factors including debt, exports, money supply, general price level and many others, are found in the literature as determinants of growth, only debt series is included due to the problem of degree of freedom.

A recently much debated issue is why observed investment and growth rates in poor countries are lower than what traditional theory predicts. Theory and empirical evidence suggest that instability is a major reason for the divergence between developed and developing countries. The implication of this view is that for researcher to predict growth appropriately, growth model should include instability variable. However, there still exists the unsolved puzzle whether the relationship between economic growth and instability as well as investment and instability are positive or negative since most analyses were based on cross-country data. In line with this criticism, both political instability (PI) and macroeconomic instability (MI) measures are thus included in the growth model. Given the assumption that labor is surplus in Nigeria, labor input is dropped and the growth model to be estimated for analysis thus becomes:

$$\ln GDP_t = b_0 + b_1 \ln PINV_t + b_2 \ln GINV_t + b_3 \ln OPEN_t + b_4 \ln DEBT_t + b_5 PI_t + b_6 MI_t + e_t$$

$$b_1 > 0; b_2 > 0; b_3 > \text{ or } < 0; b_4 < 0; b_5 < 0; b_6 < 0 \dots\dots\dots(3)$$

Similarly, following theoretical and empirical evidence on foreign direct investment (FDI), gross fixed capital formation (GFCF) and private investment (PINV) determinants in developing countries, the FDI, GFCF and PINV models to be estimated for analyses are expressed respectively as:

$$\text{InFDI}_t = \alpha_0 + \alpha_1 \text{InGDP}_t + \alpha_2 \text{InINV}_t + \alpha_3 \text{InOPEN}_t + \alpha_4 \text{InDEBT}_t + \alpha_5 \text{PI}_t + \alpha_6 \text{MI} + e_t; \quad \alpha_1 > 0; \alpha_2 > 0; \alpha_3 > \text{or} < 0; \alpha_4 < 0; \alpha_5 < 0; \alpha_6 < 0 \quad (4)$$

$$\text{InGFCF}_t = \beta_0 + \beta_1 \text{InGDP}_t + \beta_2 \text{InOPEN}_t + \beta_3 \text{InDEBT}_t + \beta_4 \text{PI}_t + \beta_5 \text{MI} + e_t$$

$$\beta_1 > 0; \beta_2 > 0; \beta_3 < 0; \beta_4 < 0; \beta_5 < 0 \dots\dots\dots (5)$$

$$\text{InPINV}_t = \sigma_0 + \sigma_1 \text{InGDP}_t + \sigma_2 \text{InGINV}_t + \sigma_3 \text{InOPEN}_t + \sigma_4 \text{InDEBT}_t + \sigma_5 \text{PI}_t + \sigma_6 \text{MI} + e_t; \quad \sigma_1 > 0; \sigma_2 > 0; \sigma_3 > 0; \sigma_4 < 0; \sigma_5 < 0; \sigma_6 < 0 \quad (6)$$

Openness (OPEN) is measured by the ratio of exports to total trade {i.e.  $X/(X+M)$ } Political instability (PI) is measured in terms of breach of peace in the country while macroeconomic instability is measured by the variability of inflation rates, exchange rates and fiscal deficits. The breach of peace is, however, proxied by violence index (using number of riots, strikes and ethnic disturbances) in the country. The higher the measure of PI and MI, the lower the economic growth and vice versa.

For the causal relationship between political instability and macroeconomic instability in Nigeria, the study employs Granger causality test in order to determine the direction of causation. The models for the causality test are of the form:

$$\text{PI}_t = c_0 + \sum c_i \text{PI}_{t-i} + \sum c_j \text{MI}_{t-j} + e_t \dots\dots\dots (7)$$

$$\text{MI}_t = d_0 + \sum d_i \text{MI}_{t-i} + \sum d_j \text{PI}_{t-j} + e_t \dots\dots\dots (8)$$

where PI and MI are political and macroeconomic instability respectively. The study employs Nigeria's annual data from 1970 to 2003. Data were obtained from Statistical Bulletin of 2004, the publication of the Central Bank of Nigeria. The empirical results are reported in the section IV.

In order to eliminate wrong inferences from the regression results, the properties of time series that appear in equations 3 to 8 are first examined. In order to determine the properties of these series, Augmented Dickey-Fuller (ADF) test is employed. Following the unit root tests, cointegration test is then considered so as to determine the long run relationships of these models. Again, the cointegration test will be carried out by adopting ADF test to confirm whether the residuals from the long run estimated model exhibits stationarity property. The next step will be to switch to an error correction modeling (ECM) which incorporates both the short run and long run dynamics of modeling. The resultant parsimonious models are then employed in further analysis. The study uses E-views econometric package in determining the time series properties of all series as well as cointegration among the series.

#### Analysis of Econometric Results

This section reports the findings of the empirical relationship between instability and economic growth and investment rates in Nigeria. The effects political instability (PI) and macroeconomic instability (MI) on economic growth (GDP), gross fixed capital formation (GFCF), private investment (PINV) and foreign direct investment (FDI) are examined. Our analysis of econometric results begins with the results of unit root tests conducted on all time series specified in section III, which are reported in Table 1. The results of the Granger causality tests between political instability and macroeconomic instability are also reported in this section.

Except for openness (OPEN) and macroeconomic instability (MI) which are I(0) series, all others variables in Table 1 are found to be I(1) series. The results indicate that private investment (PINV), public investment (GINV), growth (GDP), Debt (DEBT), capital formation (GFCF), foreign direct investment (FDI) and political instability (PI) exhibit stationarity only at first difference. The MacKinnon critical values for rejection of hypothesis of a unit root are -3.6576, -2.9591 and -2.6181 for 1 per cent, 5 per cent and 10 per cent respectively. Some of these series are I(1) at 1 per cent significant level, some at 5 per cent level while some others are significant at 10 per cent.

Table 1: Unit Root Tests Results (1970-2003)

Series	Augmented Dickey Fuller (ADF) Statistics		
	Levels	First Difference	Integration Order
Nominal GDP (NGDP)	-0.3887	-3.6008**	I(1)
Real GDP (RGDP)	-0.5402	-3.4579**	I(1)
Private Investment (PINV)	-0.1133	-3.1898**	I(1)
Public Investment (GINV)	-1.0449	-2.7720*	I(1)
Gross Fixed Capital Formation (GFCF)	-0.3105	-3.6508**	I(1)
Debt Stock (DEBT)	-0.8608	-4.0324***	I(1)
Foreign Direct Investment (FDI) Inflows	-1.2226	-7.7461***	I(1)
Foreign Direct Investment (FDI) Outflows	-1.6666	-4.2383***	I(1)
Political Instability (PI)	-0.1344	-3.4584**	I(1)
Macroeconomic instability ((MI)	-3.0517**	-	I(0)
Openness (OPEN)	-3.2085**	-	I(0)

  

CORRELATION MATRIX							
	-InGDP	CONSTANT	-InPINV	-InGFCF	-InFDIINF	-PI	-MI
-InGDP	1.0000						
CONSTANT	.0000	1.0000					
-InPINV	.4253	.0000	1.0000				
-InGFCF	.2953	.0000	.5066	1.0000			
-InFDIINF	.0866	.0000	.2400	.1335	1.0000		
-PI	.0242	.0000	-.1244	.1815	-.0717	1.0000	
-MI	-.2458	.0000	.0279	-.1802	.2585	.2104	1.0000

\*\*\* significant at 1 per cent level, \*\* significant at 5 per cent level, \* significant at 10 per cent level

The correlation matrix at the lower part of Table 1 indicates that private investment (PINV) and foreign direct investment inflows (FDIINF) are negatively and significantly related to political instability measure. The correlation coefficients are -0.12 and -0.07 for PINV and FDIINF respectively. These correlation coefficients are significant at 5 per cent level. As for macroeconomic instability measure, the negative correlation coefficient is noticeable at 10 per cent level of significance for both economic growth (GDP) and gross

fixed capital formation (GFCF). The correlation coefficients are respectively -0.25 and -0.18 for GDP and GFCF. The results in Table 1 also indicate that both instability measures (PI) and (MI) are positively related at 10 per cent significance level. The correlation coefficient between PI and MI is 0.21.

**Table 2: Correlation Matrix and Granger Causality Test Results:**

EQ(1) Modelling -PI by OLS						
The Sample is 1975 to 2003 less 0 Forecasts						
VARIABLE		COEFFICIENT	STD ERROR	H.C.S.E.	t-VALUE	PARTIAL r2
-PI	1	-1.2898463	0.73455	0.75890	-1.75598	0.1396
-PI	2	-0.4390210	0.31599	0.35538	-1.38934	0.0922
-PI	3	-0.3754281	0.25335	0.26619	-1.48183	0.1036
-PI	4	-0.4073538	0.17521	0.21744	-2.32490	0.2215
CONSTANT		0.3316603	0.16672	0.12604	1.98936	0.1724
-MI	1	0.0107570	0.00899	0.00877	1.19702	0.0701
-MI	2	0.0233243	0.01124	0.01072	0.07443	0.1847
-MI	3	0.0084590	0.01103	0.00897	0.76714	0.0300
-MI	4	0.0018692	0.01014	0.00859	0.18431	0.0018
ecm1	1	0.5495980	0.68706	0.58150	0.79993	0.0326
R2 = 0.5494 $\sigma$ = 0.6902 F(9, 19) = 2.57 [0.0396] DW = 1.984						
RSS = 9.0516 for 10 Variables and 29 Observations						
Information Criteria: SC = -0.0032; HQ = -0.3270; FPE = 0.6407						
EQ(2) Modelling -MI by OLS						
The Sample is 1975 to 2003 less 0 Forecasts						
VARIABLE		COEFFICIENT	STD ERROR	H.C.S.E.	t-VALUE	PARTIAL r2
-MI	1	0.5980232	0.70591	0.67011	0.84717	0.0364
-MI	2	-0.2679374	0.30484	0.26033	-0.87895	0.0391
-MI	3	-0.1277327	0.27249	0.24637	-0.46877	0.0114
-MI	4	-0.1903821	0.24115	0.22592	-0.78946	0.0318
CONSTANT		-2.0035658	3.34366	3.07963	-0.59921	0.0185
-PI	1	9.2220484	4.70432	4.12142	1.96034	0.1682
-PI	2	9.6606848	6.20293	5.65068	1.55744	0.1132
-PI	3	4.3365403	5.09069	4.85901	1.85186	0.0368
-PI	4	-1.5191559	3.95431	3.55389	-0.38418	0.0077
ecm2	1	-0.8954931	0.77538	0.86064	-2.15491	0.0656
R2 = 0.6391 $\sigma$ = 15.6476 F(9, 19) = 1.65 [0.1704] DW = 1.877						
RSS = 4652.1197 for 10 Variables and 29 Observations						
Information Criteria: SC = 6.24; HQ = 5.92; FPE = 329.28						

Table 3: Error Correction Modeling Econometric Results

Explanatory Variables	Model 1	Model 2	Model 3	Model 4	Model 5
	$\ln$ NGDP	$\ln$ RGDP	$\ln$ FDIINF	$\ln$ GFCF	$\ln$ PINV
CONSTANT	2.88 (1.78)*	0.30 (0.20)	-3.42 (0.45)	-3.74 (1.52)	-6.16 (2.56)**
Dependent Variable <sub>t-1</sub>	0.57 (4.43)***	0.41 (1.86)*	-0.43 (4.06)***	0.82 (3.22)***	0.69 (3.02)***
$\ln$ NGDP <sub>t</sub>				0.49 (2.34)**	0.86 (3.81)***
$\ln$ NGDP <sub>t-1</sub>			-0.96 (1.37)	-0.26 (0.99)	-0.90 (3.17)***
$\ln$ PINV <sub>t</sub>	0.19 (2.43)**	0.14 (2.05)**			
$\ln$ GINV <sub>t</sub>	0.17 (2.01)**		1.01 (2.17)**		
$\ln$ GINV <sub>t-1</sub>		0.03 (0.58)			-0.14 (0.81)
$\ln$ OPEN <sub>t</sub>	9.08 (3.90)***	3.79 (2.23)**	20.33 (3.34)***		
$\ln$ OPEN <sub>t-1</sub>	-14.67 (5.11)***	-2.43 (1.93)*	-13.70 (1.78)*	9.94 (2.02)**	12.39 (2.59)**
$\ln$ DEBT <sub>t</sub>	-0.05 (1.96)*	-0.02 (0.61)	-0.39 (1.68)*		
$\ln$ DEBT <sub>t-1</sub>				0.12 (1.64)	-0.10 (2.18)**
PI <sub>t</sub>	-0.04 (1.92)*	0.01 (1.16)	0.11 (1.69)*		
PI <sub>t-1</sub>		-0.03 (1.95)*		-0.01 (2.25)**	-0.08 (1.93)*
MI <sub>t</sub>	-0.004 (3.71)***	-0.001 (1.58)*	-0.01 (2.07)**	-0.006 (2.58)**	-0.01 (2.44)**
MI <sub>t-1</sub>				0.004 (1.64)	-0.003 (1.77)
ECM <sub>t-1</sub>	-0.92 (4.44)***	-0.73 (2.31)**	-0.83 (5.73)***	-0.83 (2.58)**	-0.43 (2.25)**
R <sup>2</sup>	0.83	0.65	0.83	0.68	0.72
σ	0.09	0.06	0.48	0.16	0.18
DW Statistic	1.97	1.88	2.03	1.69	1.78
F Statistic	10.0(0.0)	2.10(0.72)	10.25(0.0)	3.91(0.004)	5.46(0.001)

The figures in parentheses below all coefficients are absolute t-statistics  
 \*\*\* significant at 1 per cent level, \*\* significant at 5 per cent level, \* significant at 10 per cent level

The Granger-causality test results reported in Table 2 clearly indicate that political instability (PI) has caused macroeconomic instability (MI) in Nigeria. The opposite causality is not confirmed. In other words, it is political instability that has triggered-off macroeconomic instability and not the other way round. The evidence of causality is established at 10 per cent level of significance. The one-way directional causation from political instability to macroeconomic instability portends that stability in the Nigerian polity is all what is required to bring about macroeconomic stability in Nigeria.

The results in Table 3 also reveal that macroeconomic (MI) and political instability (PI) bear negative effects on economic growth (GDP), gross fixed capital formation (GFCF) and private investment (PINV) in Nigeria. The effects of these instability measures are significant at 5 per cent and 10 per cent for both the current and lagged values. This indicates that instability has hindered growth as well as investment recovery in Nigeria. The number of the riots, violence, political assassination, and coup attempts has all contributed to the poor performance of the Nigerian economy over 1970-2003 periods.

The significance of lagged residuals ( $ECM_{t-1}$ ) in all models in Table 3 indicates that there exists long run relationship between economic growth, investment rates and instability measures. The implication of this result is that the variables in models 1 to 5 are, indeed, cointegrated. The coefficients of these lagged residual terms are significant at 1 per cent and 5 per cent level for GDP rates and investment rates respectively. Lagged value of debt stock ( $DEBT_{t-1}$ ) effect on private investment (PINV) is negative at 5 per cent significance level while current debt stock ( $DEBT_t$ ) negative effect is noticed at 10 per cent for economic growth (GDP) and foreign direct investment inflows (FDIINF). Lagged value of openness measure ( $OPEN_{t-1}$ ), bears positive effect on private investment (PINV) and gross fixed capital formation (GFCF) at 5 per cent level of significance. The current value of openness measures ( $OPEN_t$ ) also bear positive effect on economic growth (GDP) and foreign direct investment inflows (FDIINF) at 1 per cent level.

The results in Table 3 also indicate that political instability (PI) and macroeconomic instability (MI) bear significant negative effect on foreign direct investment inflows (FDIINF) in Nigeria. Foreign direct investment, indeed, represents an important source of financing economic growth in Nigeria. However, the political and macroeconomic



instability witnessed in Nigeria between 1970 and 2003 had inhibited FDI inflows thus, the slow growth rate of the Nigerian economy. It is apparent from the foregoing results that political and macroeconomic instability had impacted significant negative effects on economic growth and investment rates in Nigeria. This finding establishes the fact that Nigeria's development problems are deep-rooted in instability, no matter how it is defined.

### Conclusion

This study examined the relationship between economic growth and instability during the period 1970-2003 in Nigeria. Political instability may implies policy uncertainty and lack of public programs for development, but most important, violence, lack of property rights, and other forms of disorder that led to risk of loss for economic agents were employed. Political instability was measured by a combination of four variables: number of political assassination, coup attempts, ethnic disturbances and most importantly, violence.

The strong evidence is that there is a negative link between political instability and economic growth. The same evidence is very strong for macroeconomic instability and economic growth. Similarly, strong negative effect existed between instability and investment rate. The result is robust to different control variables, equation dynamics, estimation methods, and growth measurements. The transition to civil rule is yet to make positive impact on national security and stability, hence sustainable economic development eludes the country. The poor economic performance in Nigeria during 1970-2003 was attributed to political and macroeconomic instability. The higher the level of political and macroeconomic instability, the lower is the economic growth and investment rate. Macroeconomic adjustment efforts must, therefore, be accompanied by structural reforms aimed at reducing ethnic disturbances (breach of peace) in order to permanently increase Nigeria's growth rate.

The study has also shown that political and macroeconomic instability had negative effects on investment rates in Nigeria. The study, therefore, recommends prevention of insecurity and any form of instability by the political leaders in Nigeria. We are of the view that prevention of conflict is preferable to cure and the strategies of prevention must clearly

address the root causes of conflicts. The study recommends that the Nigerian government should review the current stabilization program to restore macroeconomic stability.

The study concluded that development efforts can be wiped out by any kind of insecurity such as war, and conflict. Without security, in its broadest sense, the developmental goals will not be attainable. Conflicts kill the prospects for broad-based growth. Also, broad-based economic growth, as basis for poverty alleviation, can only be improved upon if there is security to lives and properties. War or instability can wipe out developmental efforts, including many Naira and properties. As part of the commitment to durable peace and security, there must be a re-intensification of our resolve to eliminate all macroeconomic and political instability. These will go a very long way in reshaping the destiny of this country and thus brings accelerated development to the entire country.

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