Democracy and the Performance of the Nigerian Economy

Aminu Umaru

Lecturer Department of Economics School of Management and Information Technology Modibbo Adama University of Technology Yola, Adamawa State Nigeria

Gbenga Adeyemi

Lecturer Department of Social Science (Economics) College of Social and Management Sciences Wesley University of Science and Technology Ondo, Ondo State Nigeria

> **Bolaji Eunice Kehinde** Lecturer, Department of Economics Federal College of Education Zaria, Kaduna State Nigeria

Abstract

This paper investigates the impact of democratic dispensation on the performance of the Nigerian economy between 1983 and 2012. The paper divide the period into two (military and democracy i.e. 1983-1998 and 1999-2012). It's employed descriptive statistic (comparative analysis of major indicators of economic performance in Nigeria through simple averages) and multiple regression analysis (OLS), causality as well as Johansen cointegration technique. The Johansen cointegration result shows that there was no cointegrating equation; implying the absence of long run relationship between economic growth and democracy in Nigeria. The results of causality are contained in table 4.0.2.2. The results revealed that there was no causation existed between GDP and poverty as well between GDP and democracy, one-way causation existed between corruption and GDP, but the causation runs from GDP to corruption which implied that corruption cannot cause GDP but GDP does cause corruption, one-way causation existed between democracy and poverty, but the causation runs from poverty to democracy and not the other way round, also that one-way causation existed between corruption and democracy, but the causation runs from corruption to democracy which implied that corruption cannot cause democracy but democracy does causes corruption. The causality result further revealed the existence of bi-directional causation between corruption and poverty which implied that corruption can cause poverty and poverty can also cause corruption. Most importantly corruption causes poverty more than poverty does cause corruption. The main concern of this study is to find out whether or not that democracy can cause growth in output in Nigeria. This paper revealed to us that there was no causation between GDP and democracy in Nigeria. The results of OLS indicated that unemployment, corruption and democracy were statistically significant while the coefficient of inflation, poverty, and the constant were found statistically insignificant. The result further revealed that change in unemployment rate, inflation rate, poverty level and corruption level raises output in the economy while change in democracy reduces output in the economy. The result of descriptive statistics revealed that on the average GDP is higher during democracy than during the military, unemployment rates, poverty level and corruption were found on the average be higher during democracy than during military, inflation rate on the average is higher during the military than during democracy.

This paper adopted unemployment, poverty and corruption as the yardstick for measuring performance of the Nigerian economy. Based on the results of this study we recommend that military regime is the best for the Nigerian economy for now in terms of reduction in unemployment, poverty, corruption and income inequality. Democracy can be the best if and if the politicians take interest of the nation first in all ramifications before their personal interest.

Keywords: GDP, unemployment, poverty, inflation, corruption and democracy, co-integration

1.0 Introduction

Since independence (1960) to date, Nigeria Nation has served as a political game-arena for two different regimes, namely military regime and democratic regime. As an adage goes, a woman who has married two men is in a better position to know, which is manlier. According to Mercy and Aigbokhaevbolo (2006) democracy and development are twin words which had formed topics for debate about their relationship among scholars, national leaders, politicians, ordinary citizens, top executives as well as youth and in some cases among academicians. As it were, almost everyone in Nigeria is anxious to know what dividends democracy can bring particularly now that it is on its third republic or third visit so to say in Nigeria. Nigerians will like to see dividends of democracy to include economic growth and development, so much so that the debate about economic growth and development has now become the concern of all and sundry. Economic growth according to economists is an essential aspect of economic development. In short it is a pivot of economic development and without it there may be no economic development. To us economic growth is just a quantitative change in economic activities (GDP) while economic development is both quantitative and qualitative change in the economic activities (I.e. GDP + improvement in welfare of the citizenry). This paper adopted welfare of the citizens as a yardstick for measuring performance of the economy. There are some people in Nigeria today who strongly believe that democracy is the only panacea to free the nation from bondage and slavery of underdevelopment. Others feel that given the nature and diverse cultures of Nigeria, it is only a leadership with the element of coercion such as the military that can bring about economic growth and development in Nigeria. This paper is set to determine which of the afore mentioned argument can suit the Nigerian situation today. Democracy in Nigeria has three phases 1960-1966 first republic, 1979-1983 second republic and 1999 to date (i.e. third republic or to us is the third phase of democracy in the country).

One of the arguments that are often made to explain problems of development in authoritarian regimes (such as the situation in Nigeria from 1983 – 1999 and some other Africa nations) is the one that blames development problems on lack of democracy. According to Umez (1998) the essence of the argument (referred here as democracy-leads to-economic growth perspective) is that lack of democracy is the major cause of the problems of development in Nigeria. Before considering this argument, let us first of all conceptualize democracy within the purview of the Nigerian economy.

According to Umez (1998) democracy means statement about sovereignty and nothing else.

In this context, we shall use the word "democracy" to a mean government of the people, by the people and for the people. This, we believe, is the proper use. In a democratic dispensation the interest of people take the center stage in the policy marking and decision taking. To Umez (1998) democracy means sovereignty which can reside in one person, a selected few (as we have seen time and time again in many African countries, especially in Nigeria), or the whole adult population. Sovereignty in the adult population is established and nurtured when a representative government permits and maintains certain basic principles; only then can such be properly and assertively called a "democracy". These principles are (a) universal political participation, (b) political equality, (c) majority rule, (with substantive recognition of the minority rights), (d) rule of law, (g) government responsiveness to the public opinion, and of course, (f) the basic freedoms of speech, press, assembly, religion and organization (see, Umez, 1998).

2.0 Review of Related Literature

According to democracy-leads-to-economic growth perspective. Nigeria should establish democracy first in order to achieve economic growth because the military is not equipped to play a developmental role in the economic sphere, perhaps the best known version of this perspective is presented by Alexander madiebo (1980). He states: "A military government is a major setback for any nation and should be avoided at all costs".

This is because military men are unqualified for the task of government and good governance and either lean too heavily on advice which may not always be in the best interest of their people or, worse still, attempt to rule without it.

Henry Biene (1971 and 1976) and Eric Nordlinger (1970) argue that the militaries are akin to interest groups, as such, they are more concerned with the advancement of their own corporate interests, (e.g military autonomy, salaries, and arms procurement) even when such interests are clearly at odds with those of the larger society.

Thus, according to Umez (1998) the military will be more apt to increase its own budget and proportionately reduce the budget allocated to civilian and non-defense projects, SamielDecalo (1976) argues that "militaries are hardly organizations. Rather, some factions of the military are self-interested players of a Hobbesian political environment, preoccupied with their own selfish aggrandizement which tends to retard economic growth.

According to Umez (1998) within Nigeria, there are additional (though related) reasons why many Nigerians (in particular are clamoring for democracy-the return of the civilian government. First, is the ascendancy of the Nigerian military in governance and the economic decline in Nigeria. It is an indisputable fact that Nigerian economy has been declining, and that Nigeria is one of the most coup prone nations in Africa. In fact, military intervention has become an integral part of the electoral cycle in Nigeria that in thirty-eight years, from the time of independence (1960) to (1998), the military has rules Nigeria for twenty-eight of those years).

While it is beyond the confines of this study to provide a comprehensive of the various studies which outline the difference between military and civilian governments, it is instructive that some of the attributes assigned to the military, eg, pursuit of narrow interest, apply equally to the civilian leaders. This point is exemplified by the pursuit of their own interest. Both the military government and the decratic government pursuit their own interest at the detriment of the interest of the nation.Clearly, self interest may be at odds with what serves the collective good. To that extent, neither the military nor a civilian government in Nigeria would assure development. thus, the underlying question in this chapter are that; what is economic growth?, is democracy a precondition for economic growth?, if democracy is a panacea for economic growth and development, then how can effective and efficient democracy be achieved?.

According to Umez (1998) it is clear that a democratic process is preferable to a military rule. Compared to a military rule, democratic principles, when enforced, provide a more stable environment for investments and therefore likely to promote economic growth. It is common knowledge that business investors are usually reluctant to invest in a polity in which coups and counter coups remain the means of changing governmental personnel. Indeed, progressive economic performance is better assured with a democratically elected civilian leadership than within military.

In addition, democracy provides periodic elections that allow people to change (and control) their government personnel (and in some cases, government policies through referenda), accordingly, elected officials are presumed to respond to the public opinion or risk rejection at the poll. The assumed relationship between democratically elected leaders and the citizens is based on reciprocity.

According to him, military rules, does not provide direct mechanisms that allow the people to control the military personnel or its policies. In fact, in a military rule, the question becomes who will police military? Above all, the record of the military regime in terms of civil rights leaves a lot to be desired because most authoritarian regimes do not tolerate opposition, and therefore do not guarantee civil liberties.Notwithstanding the positive virtues of a democratic government (which, in principle, makes democracy far better than a military rule). He maintains that democracy is not self-executing and therefore, does not automatically lead to economic growth. While the democratic process (hence, the principles of democracy) better guarantees performance for the people, one must be reminded that Nigeria has miserably failed in at least two attempts at democracy, 1960-1966 and 1979-1983 (see, Umez, 1998). The first civilian government (1960-1966) did not keep Nigeria one. The second republic (1979-1983) was known to be generally corrupt. This study seek to examined the present democratic dispensation with the view to finding a better regime for Nigeria from among the two regimes (military and democracy).

According to Umez (1998) corruption destroys and economy because instead of serving the people, corrupt officials start serving their own narrow selfish interests (thereby creating a government of the few, by the few, for the few). Just as some people are skeptical about investing in a country ruled by the military, some prefer not to invest in a nation mired in corruption.

Nigerian leaders and the elite must rise above corruption: they must obey the laws of the land; they must have consideration for their fellow Nigerians; they must be democratic at heart; they must be selfless, honest and committed to better serve the interest of the country at large; and they must be truly patriotic. And when this is done, a sound economy will be established, and democracy will be maintained, and preserved.

Often, he compared democracy with "Rose Royce", and a corrupt official with one who does not know how to drive a car but nonetheless wants to drive, Mr. "I. Too Know".

Rose Royce is generally believed to be one of the best cars, built to last for a long time. However, if Mr. IToo Know (who does not know how to drive a car) is entrusted with driving this Rose Royce, this nice car might be wrecked in a matter of seconds, conversely, if we entrust this Rose Royce with a good driver, the life of this car and its beauty are likely to be extended and preserved, ceteris paribus.

Just as Rose Royce is believed to be one of the best cars, democracy is believed to be the best form of government primarily because its principles are geared toward serving the interest of the larger public, hence government of the people by the people. However, if corrupt, selfish, inconsiderate, and mindless officials are elected in a democracy, they will destroy the economy and democracy itself (just as Mr. IToo Know will destroy the Rose Royce), democratic principles and good law notwithstanding. It is obvious that corrupt officials do not obey the laws and democratic principles, and, as we know, the real essence of any law lies in its implementation. If laws and democratic principles are only partially observed or totally ignored, what then is left of democracy? Frankly, nothing desirable!

Since that is the case, one is therefore compelled to ask these fundamental questions. Military and democracy governance, which one can better be a panacea for achieving economic growth and development in Nigeria?

Let us address, at this juncture, another point about the relationship between democracy and economic growth. It has been argued that lack of democracy in Nigeria is the cause of the problems of development because the civilian governments have not enjoyed the length of time as the military; as such democracy did not have the opportunity to thrive.

There is no doubt that the military has been in power for almost 28 years of the time in Nigeria from independent in 1960 while civilian has been in power for 26 years making a total of 54 years. However, did not civilian leaders actually have the opportunity to sow the seeds of progress but failed to do so? Specifically, how do we explain some cases of corruption and embezzlement of public funds with the past civilian government? Or have Nigerians forgotten the rampant corruption within the last republic?

According to Umez (1998) the major source of problems in Nigeria, as He viewed it, is caused by "ajommadu"the wicked people. Ajommadu" will always destroy and destroy and destroy. They are sadists who enjoy inflicting wounds on others while watching them dies slowly by the way side. These "ajommadu" are the ones who have kept Nigeria in this state of economic, political and social mess all this time. They embezzle public funds with God-forbidden impunity. They cause scarcity of gasoline in a country that is ranked among the top in crude oil production. They constantly interfere with the electricity even in hospitals with patients on life-support machines. They lie to the people, and often address themselves in borrowed roves and fake titles. All these wicked acts are all motivated by bribery and corruption produced by the value system of "he who no dey fast, na him go board last". That is where the major problem lies, it is "ajommadu". Pure and simple.

To him, therefore, formation of new parties toady and the cancellation of the previous elections will not matter a bit so far as the "ajommadu" are practicing their sadism in Nigeria. So far as the revolving doors keep bringing them in, changing dress from khaki to "agbada", or changing parties, canceling elections, writing and rewriting the constitutions will NOT solve Nigeria's major problems of development. In fact, to him doing these things over and over often means enriching these people (and those waiting on the wings to rob the nation when their time comes). After all, there is no election in Nigeria that is free of alleged fraudulent practices. These ones conducted last year (2007) were not the first and neither will they be the last. The most effective solutions to Nigerian major problems lie with the good leaders-those who are guided by the principles of "charity begins at home" patriotism and consideration for others--- the true meaning of democracy.

It is time Nigerians started calling a spade a spade and a garden fork a garden fork, democracy cannot thrive in a society where the rich continue to get richer (at the expense and exploitation of the masses) and the poor are subjected to perpetual and agonizing death.

The pursuit of democracy, though an excellent idea, must not lead Nigerians (or other people for that matter) to ignore the basic engine that establishes, and makes civilization run, namely, economic growth (brought about by good leaders dedicated to bring development to their country). Once nationswell-being is neglected, i.e., once most of the leaders in a democracy start serving their own interest instead of those of the people, the regimes legitimacy will be eroded, and democracywill surely die. In fact, there is an impressive body of empirical evidence demonstrating that economic crises of various types can trigger transition from democratic regime to authoritarian regime.

The survivability of a regime (including the democratic regime of the Nigeria and US, as a matter of fact) depends upon the performance of the regime itself. A polity cannot provide economic prosperity, welfare and domestic order—the overall good living standards - if the leaders do not care for the common good. In a simple language, Nigeria will not survive if the leaders typically subscribe to the prevalent habits of decay in Nigeria that encourage corrupt practices as necessary and sufficient means to ends.Umez (1998) in his paper "is democracy the engine of economic growth?" found that democracy is the best form of government when its principles are enforced to the later. The military government is the worst option for the country because they serve their own interest instead of the interest of the people. Mercy and Aigbokhaevbolo (2006) conducted a research on democracy and economic growth: Statistical evidence from 1960-2002 and found that democracy not military regime is the best regime for achieving meaningful growth and development in Nigeria.

According to Wikipedia the free encyclopedia (2011) Economic growth is the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Of more importance is the growth of the ratio of GDP to population (GDP per capita), which is also called per capita income. An increase in per capita income is referred to as intensive growth. GDP growth caused only by increases in population or territory is called extensive growth.Growth is usually calculated in real terms – i.e., inflation-adjusted terms – to eliminate the distorting effect of inflation on the price of goods produced. In economics, "economic growth" or "economic growth theory" typically refers to growth of potential output, i.e., production at "full employment".

As an area of study, economic growth is generally distinguished from development economics. The former is primarily the study of how countries can advance their economies. The latter is the study of the economic aspects of the development process in low-income countries. See also Economic development.

Since economic growth is measured as the annual percent change of gross domestic product (GDP), it has all the advantages and drawbacks of that measure. For example, GDP only measures the market economy, which tends to overstate growth during the change over from a farming economy with household production. An adjustment was made for food grown on and consumed on farms, but no correction was made for other household production. Also, there is no allowance in GDP calculations for depletion of natural resources.^[3]

Theories and Models of Economic Growth

Classical Growth Theory

According to Wikipedia the free encyclopedia (2011), In classical (Ricardian) economics, the theory of production and the theory of growth are based on the theory or law of variable proportions, whereby increasing either of the factors of production (labor or capital), while holding the other constant and assuming no technological change, will increase output, but at a diminishing rate that eventually will approach zero. These concepts have their origins in Thomas Malthus's theorizing about agriculture. Malthus's examples included the of the number of seeds harvested relative to the number of seeds planted (capital) on a plot of land or the size of the harvest from a plot of land versus the number of workers employed. Criticisms of classical growth theory are that technology, the most important factor in economic growth, is held constant and that economies of scale are ignored.

The Neoclassical Growth Model

According to Wikipedia the free encyclopedia (2011), the notion of growth as increased stocks of capital goods was codified as the Solow-Swan Growth Model, which involved a series of equations that showed the relationship between labor-time, capital goods, output, and investment. According to this view, the role of technological change became crucial, even more important than the accumulation of capital. This model, developed by Robert Solow (1956) and Trevor Swan(1956), was the first attempt to model long-run growth analytically.

This model assumes that countries use their resources efficiently and that there are diminishing returns to capital and labor increases. From these two premises, the neoclassical model makes three important predictions. First, increasing capital relative to labor creates economic growth, since people can be more productive given more capital. Second, poor countries with less capital per person grow faster because each investment in capital produces a higher return than rich countries with ample capital. Third, because of diminishing returns to capital and the growing burden of depreciation, economies eventually reach a point where any increase in capital no longer creates economic growth. This point is called a steady state.

The model also notes that countries can overcome this steady state and continue growing by inventing new technology. In the long run, output per capita depends on the rate of saving, but the rate of output growth should be equal for any saving rate. In this model, the process by which countries continue growing despite the diminishing returns is "exogenous" and represents the creation of new technology that allows production with fewer resources. Technology improves, the steady state level of capital increases, and the country invests and grows. The data do not support some of this model's predictions; in particular that all countries grow at the same rate in the long run or that poorer countries should grow faster until they reach their steady state. Also, the data suggest the world has slowly increased its rate of growth.

Salter Cycle

According to Wikipedia the free encyclopedia (2011), the Salter cycle is one of economies of scale and learningby-doing that lower production costs. Lowered costs increase demand, resulting in another cycle of new capacity which leads to to greater economies of scale and more learning by doing. The cycle repeats until markets become saturated due to diminishing marginal utility.

Endogenous Growth Theory

Growth theory advanced again with theories of economist Paul Romer and Robert Lucas, Jr. in the late 1980s and early 1990s. Unsatisfied with Solow's explanation, economists worked to "endogenize" technology in the 1980s. They developed the endogenous growth theory that includes a mathematical explanation of technological advancement. This model also incorporated a new concept of human capital, the skills and knowledge that make workers productive. Unlike physical capital, human capital has increasing rates of return. Therefore, overall there are constant returns to capital, and economies never reach a steady state. Growth does not slow as capital accumulates, but the rate of growth depends on the types of capital a country invests in. Research done in this area has focused on what increases human capital (e.g. education) or technological change (e.g. innovation).

Energy and Energy Efficiency Theories

The importance of energy to economic growth was emphasized by William Stanley Jevons in The Coal Question in which he described the rebound effect based on the observation that increasing energy efficiency resulted in more use of energy. (See: Jevons paradox) In the 1980s, the economists Daniel Khazzoom and Leonard Brookes independently put forward ideas about energy consumption and behavior that argue that increased energy efficiency paradoxically tends to lead to increased energy consumption. In 1992, the US economist Harry Saunders dubbed this hypothesis the Khazzoom–Brookes postulate, and showed that it was true under neoclassical growth theory over a wide range of assumptions.

The importance of electricity to economic growth has been recognized by economists, prominent businessmen, economic historians and various engineering, technical and science organizations and government agencies. Conclusions of a report prepared for Los Alamos National Laboratory for the United States Department of Energy and the National Academy of Sciences stated: "Electricity use and gross national product have been, and probably will be, strongly correlated".

The report's conclusion went on to say that the energy intensity of the U.S. economy (electricity consumed per dollar of GDP) had been declining for a number of years. All approaches to the inclusion energy into the theory of production are known as the energy theory of value, which, nevertheless, does not have an accurate and complete formulation. For example, Ayres and Warr have presented a model that aims to address deficiencies in the neoclassical and endogenous growth models. It claims that physical and chemical work performed by energy, or more correctly energy, has historically been a very important driver of economic growth.Key support for this theory is a mathematical model showing that the efficiency of a composite indicator using electrical generation and other energy efficiencies is a good proxy for the Solow residual, or technological progress, that is, the portion of economic growth that is not attributable to capital or labor.

The proper role of energy in production processes was elucidated by the technological theory of social production. Energy growth theory economists have criticized orthodox economics for neglecting the role of energy and natural resources. Ayres and Warr's model relates the slowing of economic growth to energy conversion efficiencies approaching thermodynamic limits, and cautions that declining resource quality could bring an end to economic growth in a few decades. Hall et al. (2001) state: "Although the first and second laws of thermodynamics are the most thoroughly tested and validated laws of nature: the basic neoclassical economic model is a perpetual motion machine, with no required inputs or limits."

Unified Growth Theory

Unified growth theory was developed by OdedGalor and his co-authors to address the inability of endogenous growth theory to explain key empirical regularities in the growth processes of individual economies and the world economy as a whole. Endogenous growth theory was satisfied with accounting for empirical regularities in the growth process of developed economies over the last hundred years. As a consequence, it was not able to explain the qualitatively different empirical regularities that characterized the growth process over longer time horizons in both developed and less developed economies. Unified growth theories are endogenous growth theories that are consistent with the entire process of development, and in particular the transition from the epoch of Malthusian stagnation that had characterized most of the process of development to the contemporary era of sustained economic growth.

The Big Push

According to Balami (2006) in theories of economic growth, the mechanisms that let it take place and its main determinants are abundant. One popular theory in the 1940s, for example, was that of the Big Push, which suggested that countries needed to jump from one stage of development to another through a virtuous cycle, in which large investments in infrastructure and education coupled with private investments would move the economy to a more productive stage, breaking free from economic paradigms appropriate to a lower productivity stage.

Schumpeterian growth is an economic theory named after the 20th-century AustrianeconomistJoseph Schumpeter. Unlike other economic growth theories, his approach explains growth by innovation as a process of creative destruction that captures the dual nature of technological progress: in terms of creation, entrepreneurs introduce new products or processes in the hope that they will enjoy temporary monopoly-like profits as they capture markets. In doing so, they make old technologies or products obsolete.

This is the destruction referred to by Schumpeter, which could also be referred to as the annulment of previous technologies, which makes them obsolete, and "...destroys the rents generated by previous innovations." (Aghion 855) A major model that illustrates Schumpeterian growth is the Aghion-Howitt model.

Institutions and Growth

According to Acemoğlu, Simon Johnson and James Robinson, the positive correlation between high income and cold climate is a by-product of history. Europeans adopted very different colonization policies in different colonies, with different associated institutions. In places where these colonizers faced high mortality rates (e.g., due to the presence of tropical diseases), they could not settle permanently, and they were thus more likely to establish extractive institutions, which persisted after independence; in places where they could settle permanently (e.g. those with temperate climates), they established institutions with this objective in mind and modeled them after those in their European homelands. In these 'neo-Europes' better institutions in turn produced better development outcomes. Thus, although other economists focus on the identity or type of legal system of the colonizers to explain institutions, these authors look at the environmental conditions in the colonies to explain institutions. For instance, former colonies have inherited corrupt governments and geo-political boundaries (set by the colonizers) that are not properly placed regarding the geographical locations of different ethnic groups, creating internal disputes and conflicts that hinder development. In another example, societies that emerged in colonies without solid native populations established better property rights and incentives for long-term investment than those where native populations were large.^[51]

Human capital and growth

One ubiquitous element of both theoretical and empirical analyses of economic growth is the role of human capital. The skills of the population enter into both neoclassical and endogenous growth models.

The most commonly used measure of human capital is the level of school attainment in a country, building upon the data development of Robert Barro and Jong-Wha Lee (2001). This measure of human capital, however, requires the strong assumption that what is learned in a year of schooling is the same across all countries. It also presumes that human capital is only developed in formal schooling, contrary to the extensive evidence that families, neighborhoods, peers, and health also contribute to the development of human capital. To measure human capital more accurately, Eric Hanushek and Dennis Kimko(2000) introduced measures of mathematics and science skills from international assessments into growth analysis. They found that quality of human capital was very significantly related to economic growth. This approach has been extended by a variety of authors, and the evidence indicates that economic growth is very closely related to the cognitive skills of the population.^[55]

Inequality and Economic Growth

Inequality in wealth and income is negatively correlated with subsequent economic growth. A strong demand for redistribution will occur in societies where much of the population does not have access to productive resources. Rational voters have to internalize this dynamic problem of social choice. 2013 Economics Nobel prize winner Robert J. Shiller said that rising inequality in the United States and elsewhere is the most important problem. Increasing inequality harms economic growth. High and persistent unemployment, in which inequality increases, has a negative effect on subsequent long-run economic growth. Unemployment can harm growth not only because it is a waste of resources, but also because it generates redistributive pressures and subsequent distortions, drives people to poverty, constrains liquidity limiting labor mobility, and erodes self-esteem promoting social dislocation, unrest and conflict. Policies aiming at controlling unemployment and in particular at reducing its inequality had a positive effect on economic development. Savings by the wealthy, which increases with inequality, was thought to offset reduced consumer demand. The International Monetary Fund determined that the analysis based on comparing yearly equality figures to yearly growth rates was flawed and misleading because it takes several years for the effects of equality changes to manifest in economic growth changes.

The credit market imperfection approach, developed by Galor and Zeira (1993), demonstrates that inequality in the presence of credit market imperfections has a long lasting detrimental effect on human capital formation and economic development. The political economy approach, developed by Alesian and Rodrik (1994) and Persson and Tabellini (1994), argues that inequality is harmful for economic development because inequality generates a pressure to adopt redistributive policies that have an adverse effect on investment and economic growth.^[62]

Quality of Life and Economic Growth

Happiness has been shown to increase with a higher GDP per capita, at least up to a level of \$15,000 per person. Economic growth has the indirect potential to alleviate poverty, as a result of a simultaneous increase in employment opportunities and increase labour productivity. A study by researchers at the Overseas Development Institute (ODI) of 24 countries that experienced growth found that in 18 cases, poverty was alleviated. However, employment is no guarantee of escaping poverty, the International Labour Organisation (ILO) estimates that as many as 40% of workers as poor, not earning enough to keep their families above the \$2 a day poverty line.For instance, in India most of the chronically poor are wage earners in formal employment, because their jobs are insecure and low paid and offer no chance to accumulate wealth to avoid risks; other countries found bigger benefits from focusing more on productivity improvement than on low-skilled work. Increases in employment without increases in productivity leads to a rise in the number of working poor, which is why some experts are now promoting the creation of "quality" and not "quantity" in labour market policies. This approach does highlight how higher productivity has helped reduce poverty in East Asia, but the negative impact is beginning to show. In Vietnam, for example, employment growth has slowed while productivity growth has continued. Furthermore, productivity increases do not always lead to increased wages, as can be seen in the United States, where the gap between productivity and wages has been rising since the 1980s. The ODI study showed that other sectors were just as important in reducing unemployment, as manufacturing. The services sector is most effective at translating productivity growth into employment growth. Agriculture provides a safety net for jobs and economic buffer when other sectors are struggling. This study suggests a more nuanced understanding of economic growth and quality of life and poverty alleviation. It then follows that if really democracy is a panacea for economic growth in Nigeria, then quality of life ought to change far above what is now happening in the country.

3.0 Methodology and Data

This study adopted democracy-leads-to-economic growth model. Economic growth which is proxy by GDP is the dependent variable while democracy (dummy variable -1 represent democratic regime while 0 represent military regime), poverty, unemployment, corruption, and inflation serve as independent variables. Descriptive statistics and OLS techniques were used to establish the relationship between economic growth and democracy in Nigeria.

Granger causality test technique was used to establish short run causation between economic growth and democracy in Nigeria.

Model Specification

The model is specified as follows:

Model 1

 $\begin{array}{l} GDP = f(DEMO, POV, UNEM, INF, CORP) \qquad (i) \\ GDP = \beta_0 + \beta_1 DEMO + \beta_2 POV + \beta_3 UNEM + \beta_4 INF + \beta_5 CORP + \mu \qquad (ii) \\ Where GDP = Gross domestic product (proxy for economic growth) \\ DEMO = Democracy, POV = Poverty, UNEM = Unemployment, INF = Inflation, and CORP = Corruption. \end{array}$

A-priori expectation

It is expected that β_0,β_1 and $\beta_4 > 0$ while β_2,β_3 and $\beta_4 < 0$

Model 2

The model of causality test is specified as follows:

 $\begin{array}{l} GDP = \sum \varphi i \; DEMOt-1 + \sum \; \Theta j \; GDPt-1 + \mu t1 \; ------(iii) \\ DEMO = \sum \; \alpha i \; DEMOt-1 + \sum \; dj GDPt-1 + \mu t2 \; ------(iv) \\ \textbf{Apriori Expectation: } \varphi i > 0, \; \Theta j < 0, \; \alpha i > 0 \; \text{and } dj < 0. \end{array}$

Econometric Diagnostic Test

Johansen Cointegration Test

Cointegration is a diagnostic test in order to determine whether there is a long run relationship between two or more variables in a model. When time series variables are non-stationary, it is interesting to see if there is a certain common trend between those non-stationary series. If two non-stationary series $X_t \sim I(1)$ has a linear relationship such that $Z_t = m + \alpha X_t + \beta Y_t$ and $Z_t \sim I(0)$, (Z_t is stationary), then the two series X_t and Y_t are cointegrated. It is always employed when simple causality test fail to establish such relationship in the short run. Whenever the variables are found to be related in the long run, it then follows that the variables can affect each other in the long run. There are two broad approaches to test for the cointegration, Engel and Granger (1987) and Johansen (1988). Broadly speaking, cointegration test is equivalent to examine if the residuals of regression between two non-stationary series are stationary. This paper employed a simple test of cointegration: the Johansen Test. Johansen develops maximum likelihood estimators of cointegrating vectors.

Decision Rule: The decision rules upon which to accept or not that there exist a long run relationship between variables is thus. The TRACE-statistics and the critical value at an appropriate level of significance determine whether to accept or to reject the null hypothesis. If TRACE-statistics value is greater than the critical value, the null hypothesis is rejected; on the other hand, if TRACE-statistics is less than the critical value, the null hypothesis is accepted. The hypothesis indicates the number of cointegrating equation(s) and the usual levels of significance are 1 and 5percents.

4.0 Results and Discussion

4.0.1 Descriptive statistics

Table 4.1 GDP during the military and democratic dispensation in Nigeria

AVERAGE	847,078,.87		20,644,320.304
TOTAL	13,553,261.9		289,020,484.3
1998	2708430.9		
1997	2801972.6		
1996	2702719.1	2012	89904000
1995	1933211.6	2011	30987200
1994	899863.2	2010	29108024.45
1993	683869.8	2009	24712670
1992	532613.8	2008	24296329
1991	312139.8	2007	20657318
1990	267550	2006	18564594.7
1989	216797.5	2005	14610881.5
1988	139,085.3	2004	11411066.9
1987	105,222.8	2003	6947819.9
1986	69,147.0	2002	5403006.8
1985	67,908.6	2001	4685912.2
1984	59,622.5	2000	4537637.2
1983	53,107.4	1999	3194023.6
MILITARY	GDP(millions)	DEMOCRACY	GDP(millions)

Table 4.1: Provides the Data about the GDP in Nigeria during Military and Democracy PeriodI.E. 1983-1998 and 1999-2012 Respectively

Source: Cbn Statistical Bulletin 2010 Cbn Annual Report 2012 And Nbs Annual Report 2012

It is cleared from the table above that the Annual Average GDP (proxy for economic growth) during the military period, from 1983 to 1998 was \aleph 847,078.87 and during democratic dispensation i.e. 1999 – 2012 was \aleph 20,644,320.304. This result revealed that average GDP during the military was lower than it is during democratic dispensation; this implied that Nigerian economy is performing more during democracy than the military regime. To the traditional economists GDP and GNP was the yardstick for measuring performance of an economy. Based on that one may conclude that democracy is better than military in terms of economic performance in Nigeria. This does not mean democracy is the best for the Nigerian economy since GDP is not the best and only yardstick for measuring the performance of the economy according to Prof. Dudley Seer is poverty, unemployment and income inequality which this study also adopted.

Table 4.2 Unemployment rate during the military and democratic dispensation in Nigeria

MILITARY	Unemployment Rate	DEMOCRACY	Unemployment Rate
1983	6.4	1999	3
1984	6.2	2000	18.1
1985	6.1	2001	13.7
1986	5.3	2002	12.2
1987	7	2003	14.8
1988	5.3	2004	11.8
1989	4.5	2005	11.9
1990	3.5	2006	13.7
1991	3.1	2007	14.6
1992	3.4	2008	14.9
1993	2.7	2009	19.7
1994	2	2010	21.4
1995	1.8	2011	23.9
1996	3.4	2012	25.7
1997	3.2		
1998	3.2		
TOTAL	67.1		219.4
AVERAGE	4.473333333		16.87692308

Table 4.2: Provides the Data about the Unemployment Rate in Nigeria during the Military and
Democracy Period I.E. 1983-1998 and 1999-2012 Respectively

Source: Cbn Statistical Bulletin 2010. Cbn Annual Report 2012 and Nbs Annual Report 2012

It is cleared from the table above that the Annual Average unemployment rate during the military period, from 1983 to 1998 was 4.5 per cent and during democratic dispensation i.e. 1999 – 2012 was 16.9 percent. This result revealed that average unemployment rate during the military was lower than it is during democratic dispensation; this implied that Nigerian economy was creating employment more during military than the democratic regime. This further implied that if unemployment is adopted as a yardstick for measuring performance of the Nigerian economy; then military regime would be the best for the Nigerian economy than democracy. It is obvious that when unemployment problem is solved, poverty and income inequality would be a thing of the pass.

Table 4.3 Inflation rate during the military and democratic dispensation in Nigeria

Table 4.3 Provides the Data about the Inflation Rate in Nigeria during the Military and
Democracy Period I.E. 1983-1998 and 1999-2012 Respectively

MILITARY	inflation Rate	DEMOCRACY	inflation Rate
1983	23.2	1999	6.6
1984	40.7	2000	6.9
1985	4.7	2001	18.9
1986	5.4	2002	12.9
1987	10.2	2003	14.0
1988	56.0	2004	15.0
1989	50.5	2005	17.8
1990	7.5	2006	8.2
1991	12.7	2007	5.4
1992	44.8	2008	11.6
1993	57.2	2009	12.4
1994	57.0	2010	13.7
1995	72.8	2011	10.8
1996	29.3	2012	12.2
1997	10.7		
1998	7.9		
TOTAL	490.5		166.4787062
AVERAGE	32.70121028		12.80605432

Source: Cbn Statistical Bulletin 2010. Cbn Annual Report 2012 and Nbs Annual Report 2012

It is cleared from the table above that the Annual Average inflation rate during the military period, from 1983 to 1998 was 32.7 per cent and during democratic dispensation i.e. 1999 – 2012 was 12.8 percent. This result revealed that average inflation rate during the military was higher than it is during democratic dispensation; this implied that Nigerian economy was experiencing high price instability during military than the democratic regime. Inflation and performance of the economy proxy by GDP are assumed to be positively correlated such that when inflation increases GDP will increase. If that is the case, then military regime is better than democratic regime in terms of influence on economic performance. In terms of welfare, high inflation rate tends to derail living standard, hence one can recommend democracy to military. But this paper was aimed at analyzing performance.

Table 4.4 Poverty level during the military and democratic dispensation in Nigeria

Military	Poverty	Democracy	Poverty
1983	39.0	1999	69
1984	43.0	2000	70
1985	46.3	2001	70
1986	46	2002	54.4
1987	45.4	2003	70
1988	45	2004	54.4
1989	44.5	2005	81.2
1990	44	2006	54
1991	43.5	2007	54
1992	42.4	2008	54
1993	49	2009	54
1994	54.7	2010	69
1995	60	2011	71.5
1996	65.6	2012	72
1997	66		
1998	68		
TOTAL	802.4		897.5
AVERAGE	53.49333333		69.03846154

Table 4.3: Provides the Data about the Poverty Level in Nigeria during the Military and Democracy Period
I.E. 1983-1998 and 1999-2012 Respectively

Source: Cbn Statistical Bulletin 2010. Cbn Annual Report 2012 and Nbs Annual Report 2012

It is cleared from the table above that the Annual Average poverty level during the military period, from 1983 to 1998 was 53.5 and during democratic dispensation i.e. 1999 - 2012 was 69.04. This result revealed that average poverty level during the military was lower than it is during democratic dispensation; this implied that Nigerian economy was able to fight poverty by creating employment more during military than the democratic regime. This further implied that if poverty level is adopted as a yardstick for measuring performance of the Nigerian economy; then military regime would be the best for the Nigerian economy than democracy. It is obvious that when poverty problem is solved the economy will perform more than what it is now.

Table 4.4 Corruption level during the military and democratic dispensation in Nigeria

Table 4.4: Provides the Data about the Corruption Level in Nigeria during the Military and DemocracyPeriod I.E. 1983-1998 and 1999-2012 Respectively

MILITARY	Corruption	DEMOCRACY	Corruption
1983	0	1999	1.6
1984	0	2000	1.2
1985	0	2001	1
1986	0	2002	1.6
1987	0	2003	1.4
1988	0	2004	1.6
1989	0	2005	1.9
1990	0	2006	2.2
1991	0	2007	2.2
1992	0	2008	2.7
1993	0	2009	2.5
1994	0.99	2010	2.4
1995	0.63	2011	2.4
1996	0.7	2012	2.7
1997	1.8		
1998	0.9		
TOTAL	5.0		27.4
AVERAGE	0.334666667		2.107692308

Source: Cbn Statistical Bulletin 2010. Cbn Annual Report 2012 and Nbs Annual Report 2012

It is cleared from the table above that the Annual Average corruption level during the military period, from 1983 to 1998 was 0.35 and during democratic dispensation i.e. 1999 – 2012 was 2.11. This result revealed that average corruption level during the military was lower than it is during democratic dispensation; this implied that Nigerian economy is highly corrupt during democratic dispensation than during military regime. This further implied that if corruption is to be adopted as a yardstick for measuring performance of the Nigerian economy; then military regime would be the best for the Nigerian economy than democracy. It is obvious that when corruption problem is solved, unemployment, poverty and income inequality would be a thing of the pass.

4.0.2 Empirical Results and Discussion

Table 4.0.2.1 Multiple Regression Results

Dependent Variable: GDP Method: Least Squares

Sample: 1983 2012 Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	-15680851	11338134	-1.383019	0.1794
UNE	2582330.	532605.2	4.848489	0.0001
INF	77556.76	107966.3	0.718342	0.4795
POV	1318.030	209624.2	0.006288	0.9950
COR	11054251	3725612.	2.967096	0.0067
DEM	-28030557	9026019.	-3.105528	0.0048
R-squared	0.748983	Mean depender	nt var	10085792
Adjusted R-squared	0.696688	S.D. dependent		17920197
S.E. of regression	9869331.	Durbin-Watson		1.631149
Sum squared resid	2.34E+15			
Log likelihood	-522.3693			
F-statistic	14.32221			
Prob(F-statistic)	0.000002			

Source: E-Views 7 Computer output

Table 4.0.2.1 contains linear regression results for the growth model effects of unemployment, inflation, poverty, corruption and democracy in Nigeria. The results indicated that the coefficient of unemployment, corruption and democracy were statistically significant while the coefficient of inflation, poverty, and the constant were found statistically insignificant. Precisely, the coefficient of unemployment, inflation, poverty, corruption and democracy were found statistically significant at 1 percent as indicated by their probability values of 0.0001, 0.0067 and 0.0048 respectively. The coefficients of inflation is rightly signed (positive), and the coefficients of unemployment, poverty, corruption and democracy were wrongly singed (positive, positive and negative respectively); this further shows that they were found inconsistent with the theoretical expectations of this study. The result of the study therefore, implies that 1 percent change in unemployment rate, inflation rate, poverty level and corruption level raises output in the economy by 2580851 units, 77556.76 units, 1318.03 units and 11054251 units respectively. Though individually some variables of the study were found statistically insignificant, especially, inflation and poverty. The F-statistic value of 14.32221, which measure the joint significance of the explanatory variables, was found to be statistically significant at 1 percent level as indicated by the corresponding probability value of 0.000002 in table 4.0.2.1. This implies that all the variables of the model were jointly significantly affecting output level in Nigeria during the period under review.

The R^2 value of 0.7490 (74.90%) implies that 74.90percent total variation in the rate of GDP was explained by unemployment rates, inflation rates, poverty level, corruption level and democracy in Nigeria. Coincidentally, the goodness of fit of the regression remained high after adjusting for the degree of freedom as indicated by the adjusted R^2 (R^2 =0.6967 or 69.67%). The Durbin-Watson statistic 1.6312 in table 4.0.2.1 is observed to be higher than R^2 (0.7490) indicating that the model is non-spurious (meaningful). The Durbin-Watson statistics 1.6312 is less than 2 but tending towards 2 indicating a negligible presence autocorrelation.

Table 4.0.2.2	Granger	Causality	Results
1 auto 7.0.4.4	Oranger	Causanty	Mesuits

Null Hypothesis:	Obs	F-Statistic	Prob.
POV does not Granger Cause GDP	29	0.34135	0.5641
GDP does not Granger Cause POV		1.67111	0.2075
COR does not Granger Cause GDP	29	1.82020	0.1889
GDP does not Granger Cause COR		3.11537	0.0893
DEM does not Granger Cause GDP	29	0.93013	0.3437
GDP does not Granger Cause DEM		0.13156	0.7198
COR does not Granger Cause POV	29	5.24583	0.0304
POV does not Granger Cause COR		2.53185	0.1237
DEM does not Granger Cause POV	29	1.07834	0.3086
POV does not Granger Cause DEM		5.83898	0.0230
DEM does not Granger Cause COR	29	1.85898	0.1844
COR does not Granger Cause DEM		2.04811	0.1643

Source: E-Views 7 Computer output

The results of causality are contained in table 4.0.2.2. The results revealed that there was no causation existed between GDP and poverty as well between GDP and democracy, the null hypothesis were accepted. The result also that one-way causation existed between corruption and GDP, but the causation runs from GDP to corruption which implied that corruption cannot cause GDP but GDP does cause corruption.

Lags: 1

The null hypothesis was rejected at 10 percent as indicated by its probability value of 0.0893; this is confirmed by their F-statistics value of 3.1154. The results also revealed that one-way causation existed between democracy and poverty, but the causation runs from poverty to democracy and not the other way round. The null hypothesis was rejected at 5 percent as indicated by its probability value of 0.0230; this is confirmed by their F-statistics value of 5.8390. The result also that one-way causation existed between corruption and democracy, but the causation runs from corruption to democracy which implied that corruption cannot cause democracy but democracy does causes corruption. The result further revealed the existence of bi-directional causation between corruption and poverty which implied that corruption can cause poverty and poverty can also cause corruption. Most importantly corruption causes poverty more than poverty does cause corruption. The null hypothesis that corruption causes poverty was rejected at 5 percent level while that of poverty causes corruption was rejected at more than 10 percent level. The main concern of this study is find out whether or not that democracy can cause growth in output in Nigeria. This paper revealed to us that there was no causation between GDP and democracy in Nigeria. This provide the basis to conducting cointegration test in order to find out whether there existed a long run relationship between economic growth (GDP) and democracy in Nigeria for the period under review.

4.0.2.3 Cointegration Test Discussion

Johansen cointegration test results contain in table 1 in appendix revealed no existence of long run relationship between GDP and democracy in Nigeria as indicated by the TRACE-statistic. The TRACE-statistics results revealed that there is no cointegrating equation at both 1percent, 5percent, and 10percent level. The null hypothesis of there is cointegrating equations was rejected at 5percent level.

5.0 Concluding Remark

In this study, an attempt has been made to analyze the impact of democracy on the performance (growth) of the Nigerian economy. The comparative analysis of growth of key indicators performance of the Nigerian economy during the military and democracy. The study revealed that "democracy" had negative impact on unemployment, poverty, and corruption and positive impact on inflation and GDP. Performance of an economy was measured by unemployment rate, poverty level, corruption and income inequality. This paper revealed that GDP is not the best and only vardstick for measuring performance of an economy, because it may be growing but if unemployment, poverty and corruption is increasing, then the economy is not performing well. The Johansen cointegration result shows that there was no cointegrating equation; implying the absence of long run relationship between economic growth and democracy in Nigeria. This implied that democracy and economic growth are not related both in the short and long run. The results of causality are contained in table 4.0.2.2. The results revealed that there was no causation existed between GDP and poverty as well between GDP and democracy, one-way causation existed between corruption and GDP, but the causation runs from GDP to corruption which implied that corruption cannot cause GDP but GDP does cause corruption, one-way causation existed between democracy and poverty, but the causation runs from poverty to democracy and not the other way round, also that one-way causation existed between corruption and democracy, but the causation runs from corruption to democracy which implied that corruption cannot cause democracy but democracy does causes corruption.

The causality result further revealed the existence of bi-directional causation between corruption and poverty which implied that corruption can cause poverty and poverty can also cause corruption. Most importantly corruption causes poverty more than poverty does cause corruption. The main concern of this study is to find out whether or not that democracy can cause growth in output in Nigeria. This paper revealed to us that there was no causation between GDP and democracy in Nigeria. The results of OLS indicated that unemployment, corruption and democracy were statistically significant while the coefficient of inflation, poverty, and the constant were found statistically insignificant. The result further revealed that change in unemployment rate, inflation rate, poverty level and corruption level raises output in the economy while change in democracy reduces output in the economy. The result of descriptive statistics revealed that on the average GDP is higher during democracy than during the military, unemployment rates, poverty level and corruption were found on the average be higher during democracy. This paper adopted unemployment, poverty and corruption as the yardstick for measuring performance of the Nigerian economy.

Based on the results of this study we recommend that military regime is the best for the Nigerian economy in terms of reduction in unemployment, poverty, corruption and income inequality as well as performance (GDP).

Democracy can be the best if and if the politicians take interest of the nation first in all ramifications to their personal interest; they should also bear at the back of their mind that whatever they take from government coffers outside their salaries and allowance, they must surely give account of it before the creator.

References

- Alexander A. M. (1980), The Nigerian Revolution and the Biafran War (Enugu: Fourth Dimension Publishers, 386.
- Aghion, P. and P. Howitt, (1992). A Model of Growth Through Creative Destruction Econometrica, 60(2), pp. 323-351.
- Alesina, A. and D. Rodrik, (1994), "Distributive Politics and Economic Growth," Quarterly Journal of Economics, 109(2), pp. 65-90.
- Balami, D.H (2006). Macroeconomic Theory and Practice. Salawe prints, Off Leventies, Wulari, Maiduguri.
- Barro, R.J and L. Jong-Wha, (2001), "International data on educational attainment: Updates and implications." Oxford Economic Papers 53, No. 3. pp. 541-563.
- Eric, N, (1970) "Soldiers in Mufti: The Impact of Military Rule Upon Economic and Social Change in the Non-Western States", American Political Science Review, Vol, 64, 1131-1148,
- Galor, O. and J. Zeira, (1993), "Income Distribution and Macroeconomics," Review of Economic Studies 60(1), pp. 35-52.
- Eri, U. (1992) "debt Crisis in Nigeria: is it macroeconomic Debtor Mismanagement or Imprudent Credit Lending? A case study" Unpublished Master's Thesis, Texas Woman's University. Denton, Texas, 41-42
- Eric, A.H and D.D. Kinko (2000), "Schooling Labor force quality, and the growth of nations." American Economic Review 90, No. 5: pp.1184-1208.
- Hall, C. et'al (2001), "The Need to Reintegrate the Natural Science with Economics". Bioscience 51 (8): pp. 663-673.
- Henry, B. (1971)(ed.) The Military and Modernization, Chicago: Aldine,
- Henry, B. (1976) Soldiers in Politics: Military Coups and Governments, Englewood Cliffs: Prentice-Hall. Ibid
- Henry, B. (1978) the Military and Modernization, Chicago: Aldine, 22
- Howard, Z.(1995), "How Democratic in America," in Robert E. DiClerico and Allan S. Hammock (ed), Points of View: Readings in American Government and Politics, (New York: McGraw-Hill, Inc., 2-13:
- Izevbuwa, O. and S. Iyare, (1991) "The Economic of Nigerian Federalism: Selected Issues in Economic Management", Publius: The Journal of federalism, vol, 21, 97
- Janda, et al. (1995), The Challenge of Democracy: Government in America, (Boston: Hougton Mifflin Company, 33-37,
- Mercy, A.A. and O. Aigbokhaevbolo, (2006) Democracy and Economic Growth: Statistics Evidence from Nigeria 1960 2002. Journal of Applied Science, 6:257-265
- Robert, M. S. (1956). "A contribution to the Theory of Economic Growth," Quarterly Journal of Economics, 70(1), pp. 65-94.
- Samuel, D. (1976) Coups and Army Rule in Africa, (New Haven: Yale University Press.
- Person, T. and G. Tabellini, (1994), "Is Inequality Harmful for Growth?" American Economic Review 84(3), pp.600-621.
- Trevor, W. S. (1956). "Economic Growth and Capital Accummulation." Economic Record, 32, pp. 334-361.
- Wikipedia the free encyclopedia (2011)

Appendix

Table 1: Johansen Cointegration Test

Sample (adjusted): 1985 2012 Included observations: 28 after adjustments Trend assumption: Linear deterministic trend Series: GDP DEM Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.378239	14.36718	15.49471	0.0734
At most 1	0.037204	1.061582	3.841466	0.3029

Trace test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.378239	13.30559	14.26460	0.0704
At most 1	0.037204	1.061582	3.841466	0.3029

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values