DO ECONOMIC AND INSTITUTIONAL POLICIES MATTER FOR SUSTAINED ECONOMIC GROWTH FOR AN OIL–DEPENDENT NIGERIAN ECONOMY IN RECESSION?

HASSAN O. OZEKHOME
ADENIYI I. OKEOWO
Samuel Adegboyega University, Edo State, Nigeria

ABSTRACT

The Nigerian economy plunged into deep recession in the latter part of 2014, generating a lot of empirical and policy interests. Empirical evidence indicates that oil-dependent economies are usually subjected to negatively externally generated and transmitted shocks resulting from variations in commodity prices that tend to diminish growth. Given the Nigerian economy is highly dependent on oil exports and the resulting revenue, the volatile influence of an overbearing dependence on oil causes negative reverberations that induce economic contraction. Nevertheless, sound macroeconomic policies and institutional reforms can guarantee sustained economic growth. It is against this backdrop that this paper sought to examine the role of economic and institutional policy management for sustained economic growth in Nigeria over the period 1981-2021. The study utilizes the ordinary least squares (OLS) technique to first, determine the link between oil and growth in the absence of economic and institutional management, and the Generalised Method of Moments (GMM) estimation techniques to investigate the link between oil and growth, incorporating economic and institutional policy variables. The empirical results show that sustained economic is guaranteed when oil resource is accompanied by institutional and economic reforms. In particular, genuine savings, investments in human capital, industrial development, as well as macroeconomic and institutional policy reforms in the presence of oil, are more critical to sustained economic growth

Keywords: Economic, Institutional policies, Sustained economic growth, Oil-dependence, GMM

International Journal of Economic Development
Volume 15, Number 2, pp. 93-121, 2022

INTRODUCTION

Oil constitutes an important natural resource and source of national wealth around the world. Nonetheless, empirical evidence shows that natural endowments are neither necessary nor sufficient for sustained economic prosperity and progress (Gylfason & Zoega, 2002). Oil dependent economies are usually subjected to diverse macroeconomic fluctuations on account of international boom and bust cycles associated with oil pricing, with the resultant impulses reverberating on such economies. In particular, given Nigeria's very strong dependence on inherently volatile oil price, effective countercyclical macroeconomic management is essential to the rapid and sustained economic growth. Many resource-rich countries, including Nigeria have fall victim to the so-called 'resource-curse'. A high dependence on resource exports is often associated with lower growth and greater economic instability due to "boom-bust'' economic cycles under highly volatile commodity prices (Aunty, 2001, cited in Ozekhome, 2016).

The recessionary phase that greeted the Nigerian economy in the latter part of 2014 generated a lot of empirical interests among policy makers and academics. Theoretical and empirical evidence (e.g. Gylfason, 2001) show that resource dependent economies are usually subjected to negative externally generated and transmitted shocks, which tend to have adverse impact on the economies concerned. It is a well-known fact that exogenous shocks, particularly disturbances from the international crude oil market cause fluctuations (positive or negative) in the economy of the oil exporting countries, and hence positively or adversely affect macroeconomic stability (Obadan, 2014). Invariably, variations in commodity prices send shock waves to the economies of trading partners (Glyfason, 2001). Thus, externally-induced shocks arising from oil price

fluctuation generates and magnifies business cycles. Essentially, rising and falling oil prices are usually associated with periods of economic boom and bust. Such international economic booms and bust and the resulting impulses are often resonated in Nigeria in the form of output fluctuation (business cycles) in terms of recession, and other macroeconomic vulnerabilities.

Given that the Nigerian economy is highly dependent on oil, the volatile influence of an overbearing dependence on oil whose price is externally determined makes the economy highly procyclical. The reverberations particularly during falling oil prices in the international market results to recessionary phase, dwindling economic fortunes and decelerated growth. Added to this, over bearing dependence on few or single primary commodity export like oil in conjunction with weak institutional framework, and a pervasive and debilitating corruption as in Nigeria, may create opportunities for rent-seeking, both combining to undermine growth. However, sound macroeconomic policies and institutional reforms that supports capital accumulation (physical and human capital) investment and industrialization can guarantee sustained economic growth (Ozekhome, 2016). Mehlum et al. (2006) and Sarmidi et al. (2014) have argued that weak institutional capacity, an unstable political and economic climate, ethnic and religious fragmentation, poor regulatory frameworks, paucity of savings and investments e.t.c., are more likely both the cause and consequence of the poor growth indices experience in the region. Accordingly, economic and structural reforms can overcome any adverse effect of natural resources and the associated price shocks, through investment in human and physical capital, as well as industrial development, using resources generated from oil to launch an alternative and complementary growth trajectory that is not inhibited by oil price shock or vulnerabilities. Invariably, good economic management, reduction of rent-seeking tendencies, control

of corruption and institutional quality by means of good legal, economic and political frameworks can avert the negative effect of resource dependence on growth (Ozekhome, 2016).

The need for economic and institutional reform has become more imperative in order to restructure the productive base of the Nigerian economy from oil to non-oil, particularly against the backdrop of huge structural imbalances, worsening fiscal and external vulnerabilities, terms of trade deterioration, diminishing value of the domestic currency (Naira) against other major currencies, particularly the U.S Dollar, and a general growth deceleration. Macroeconomic management, must therefore, be comprehensive, coherent and consistent in terms of medium to long-term strategy, supported with sound institutional framework, incentives, strategy, coordination and a forward-looking perspective. The need for an augmented and complementary growth-enhancing trajectory epitomized in macroeconomic policy and institutional reforms has become more imperative to restructure the productive base of the economy to non-oil in recent times following the continued fall in oil prices and the resulting structural imbalances, worsening vulnerabilities, volatile financial markets, weakening demand, diminishing policy buffers, and a general growth deceleration as being experienced in the Nigerian economy. Given the quest to find a complementary and alternative source of resource generation, against the backdrop of lacklustre growth, this study becomes imperative (Ozekhome, 2016).

Following this introduction, the rest of the paper is organized as follows. Section 2 provides a review of some of the institutional and policy responses, as well as initiatives and strategies that have been adopted and implemented, particularly in the context of oil resource management and industrialization towards sustained economic growth in Nigeria. Section 3 contains a survey of the theoretical,

empirical and policy issues associated with the subject matter. The methodology, model specification and data are discussed in Section 4, while section 5 presents the empirical results and analysis. Section 6 concludes the paper, with some evidence-based policy recommendations.

INSTITUTIONAL AND ECONOMIC POLICIES FOR OIL RESOURCE MANAGEMENT FOR SUSTAINED ECONOMIC GROWTH IN NIGERIA

The Nigerian government has implemented various economic and institutional stabilization policies toward guaranteeing sustained economic growth. First, was the Petroleum equalization Fund (PEF). The fund was established to restore the economy from undue fluctuations and negative development arising from the negative external shocks and the reverberation in terms of fiscal smoothening. The savings from oil in the 'fat years' were to cushion the low earnings from the lean years. Following the poor outcome from the PEF on account of incessant claims by state governments for access to the distribution of resources (fiscal pool), and the continued global fall in oil prices, the Excess Crude Account (ECA) was created in 2004 to ensure a responsible fiscal management.

In 2011, the Federal Government exhibited new momentum for re-establishing counter-cyclical fiscal policy, pursuing fiscal consolidation limiting adhoc distributions of the ECA, and realizing the legislation for the creation for the Sovereign Wealth Fund (SWF) under institution rules than may be less vulnerable than the Excess Crude Account to short-run political pressures through the, replacement of ECA with SWF (Ozekhome, 2016, cited in Nigeria Economic Report, 2013). The SWF, a savings mechanism was derived from the Nigeria Sovereign Investment Act, in May 2011. Like other previous institutional saving funds, it was a stabilization fund to minimize the transmission of oil

price volatility (Obadan, 2014). In addition, resources saved over the years were to be used to create critical investment in both physical and human capital, particularly massive infrastructural development to launch and the fast track industrialization in order to diversify the productive based of the economy from mono-dependence on oil (Ozekhome, 2016).

In terms of economic policy reforms aimed at divesting from oil to increase the productive capacity of the economy, the Structural Adjustment Programme (SAP) was adopted in June, 1986. SAP was regarded as the universal recipe that would bring the desired transformation of the economy from mono-dependence on oil to industrial. Its aims and objectives include; to promote investment, stimulate non-oil exports and provide a base for private sector led-development, promote efficiency of Nigeria's industrial sector, privatization and commercialization of public investment, develop and utilize local technology by encouraging accelerated development and use of local raw materials and intermediate inputs rather than dependence on imported ones (Udah, 2010). In 1989, trade and financial liberalization policy were enacted purposely to foster competition and efficiency in the economy. Its aims and objectives include, stimulating competition among the domestic firms and between the domestic imports competing firms and foreign firms, the objective was to promote efficiency, reduction of levels of both tariff and non-tariff barriers, and market determination of exchange rate as well as deregulation of interest rates, meant to foster efficiency and productivity.

The National Economic Reconstruction Fund (NERFUND) was set up the same year as complementary institution to the industrial policy. NERFUND seeks to address the medium and long-term financial constraints experienced by small and medium scale entrepreneurs, provide the required financial resources to small and

medium scale firms and provide naira or foreign denominated loans to participating firms for a period of five or ten years with a grace period of one to three years. Bank of industry (BOI) established in 2000, was introduced as a development institution to accelerate industrial development through the provision of long-term loans, equity finances and technical assistance to industrial enterprises. The objectives include providing long-term loans, assist in employment generation and promote industrial dispersal and indigenous entrepreneurship. As part of the efforts towards the implementation of Nigeria's Industrial Policy, which focused on the competitiveness of the industrial sector, finance, efficient resource utilization, technological advancement, incentives to industries, research and development (R&D) among others, the National integrated Industrial Development Blue - Print was adopted by the Federal Government in 2007 (Udah, 2010). Other policy reforms, particularly in terms of low inflation rate conducive to growth, exchange rate management, interest rate stability and trade enhancement policies have also been adopted.

ECONOMIC AND INSTITUTIONAL REFORMS FOR SUSTAINED ECONOMIC GROWTH- THEORY AND EMPIRICAL EVIDENCDE

A recession is defined as a period of economic contraction in which there is decelerated economic performance in virtually all economic performance variables, necessitating a downward economic trajectory (receding economic performance). It connotes a period of low aggregate demand, investment, disappointing and lacklustre growth indices, economic and dwindling standard of living among the citizenry. It is a period when economic activities, are at lower ebb, and sometime, leading declining average human development indices (HDI). In the extreme,

case, it could also coincide with inflationary pressures to undermine economic performance.

Indeed, many oil-dependent countries, Nigeria (in focus), have fallen victim to boom-bust cycles magnified by pro-cyclical fiscal spending due to the oil price fluctuation, which resonates in the form of macroeconomic fluctuation, such as recession or inflation or the simultaneous occurrence of both (stagflation), as is been experienced in Nigeria. Oil export dependent- economies have experienced incidences of high rates of inflation, or short bursts of high inflation. These are usually caused by an external shock (such as oil price fall-for oil-exporting countries or by devaluation necessitated by the consequences of poor terms of trade, higher interest rates and structural rigidities in the economy, such as supply bottlenecks or low production and output capacities combining to generate weak economic performance. The theoretical explanation of recessionary phase is anchored on business cycle theories. Gylfason and Zoega (2002) demonstrate the key linkages between abundant natural resources and economic growth.

First, natural resource abundance can lead to the Dutch disease. Oil resource boom and the associated surge in raw-material exports can drive up the real exchange rate of the currency, thus possibly reducing manufacturing and service exports (Corden, 1984). Recurrent booms and busts tend to increase exchange rate volatility (Herbertsson, Skuladottir & Zoega, 1999), thus reducing investment in the tradable sector as well as exports and imports of goods and services. A boom in the primary sector then increases wages in that sector, thereby attracting labour from other industries or imposing higher production wage costs thereby fuelling inflation, leading to stagflation in which recession simultaneously coexist with accelerating inflation, as being witnessed in Nigeria.

Second, huge oil resource rents, especially in conjunction with weak fiscal, political, economic and legal

institutional structures in many developing countries and emerging market economies, may create opportunities for corruption and rent-seeking behaviour on a large scale, thus diverting resources away from more socially fruitful and growth-enhancing economic activities (Auty, 2001). In particular, the over-reliance on crude oil for over 90 percent of Nigeria's foreign exchange earnings makes its capital account susceptible to international crude oil price fluctuation. Added to this, is the unguarded depreciation of exchange that calls for a more a more pro-growth approach to external reserves management. There is clear evidence of the revenue not being able to fund the recurrent expenditure alone. In such cases, fiscal deficit becomes inevitable, given for instance that the 2016 recurrent expenditure far exceeded the capital expenditure- resulting to huge infrastructural and development-oriented project deficits. In such situation, economic contraction is inevitable. In Nigeria, the pervasive and debilitating corruption and huge mismanagement of resources, in which resources are fritted away unconscionably without recourse to the raining day, also largely contributed to the recessionary phase being currently experience. Evidence suggests that pronounced resource mismanagement, cronyism and corruption all tend to impede economic efficiency and growth (Bardhan, 1997). According to Gylfason & Zoega, (2002), natural resource abundance tends to thwart attempts towards establishing such a growth-friendly institutional framework through socially damaging rent-seeking activities. Third, natural resource abundance on account of a number of economic dis-incentives, tend to unduly favour resource production and export to the detriment of more growth-inducing sectors.

Fourth and closely related to the preceding one, abundant natural resources may imbue people with a false sense of security and lead governments to lose sight of the need for good and growth-friendly economic management, including free trade, bureaucratic efficiency, institutional

quality and sustainable development (Sachs & Warner, 1999). Put differently, abundant natural capital may crowd out social capital in a similar manner as human capital (Paldam & Svendsen, 2000). In the light of this perspective, one reason why high inflation tends to have a destabilizing impact on economic growth is that high inflation reflects flawed policies or weak institutions which impede growth. Incentives to create wealth through good policies and institutions may diminish because of the relatively effortless ability to extract less strenuous wealth from oil. It is not inevitable that existing natural resources prevent the emergence of a dynamic economy or that the discovery of such resources acts to dampen an already developed economy. Natural resources can be a blessing as well as a curse. From empirical evidence, savings and investment in human and physical capital constitute the key factors that separate those resource-rich countries that have grown rapidly from those that have had less success (Gylfason & Zoega, 2002).

Countries that depend heavily on resource product and exportation, particularly oil are highly susceptible to externally generated and transmitted shocks on account of instability of world commodity prices, and hence, unsustainable growth patterns. This volatility experienced by Nigeria and other resource-dependent countries is closely linked to their vulnerability to externally generated shocks resulting from variations in commodity prices. As Glyfason (2001) pointed out, because natural resources are internationally priced, the growth of resource rich-dependent countries tend to be hinged on the patterns and developments in the international markets. Government revenues and growth patterns in Nigeria have generally mirrored the unstable global conditions, with fluctuations in fiscal balances being synchronized with world trade cycles. .

For instance, oil price instability seems to have been transmitted into growth instability in Nigeria. Hence, the

need for a mechanism to protect the economy against oil market shocks and ensures sustainable growth (Obadan, 2014). Like most other oil export-dependent emerging economies, much of the responsibility for managing the risks from oil price fluctuations inevitably falls on fiscal policy. Many oil-dependent countries, including Nigeria, have fallen victim to boom-bust cycles magnified by pro-cyclical fiscal spending. Countries that have transformed the oil curse into an advantage for rapid economic growth and development have managed to implement countercyclical policies that build fiscal buffers during times of high oil prices through strong fiscal institutional mechanisms that can finance stimulus spending in the aftermath of a negative oil shock (Ozekhome, 2016).

The fundamental argument, therefore, is that countries can do well with their natural resources if they invest the associated rents in further capital in addition to using savings and investments to correct for depletion of such resources and its impacts on other forms of natural capital. Positive genuine savings rate implies that a country is adding to its overall wealth, and hence, is on a sustainable growth path. (World Bank, 2006). As Oyefusi (2018) further reiterates, whether countries do well with natural resources depends on the ability of governments to generate rents from the extractive industry and effectively distribute the same through savings and spending in ways that promote sustainable and inclusive development. Economic diversification is important in this respect as it enables countries build resilience to shifts occasioned by economic downturns including price dips. In the case of commodity exporting countries, it supports a shift from an over dependence on commodities to higher-value-added products and services (UNCTAD, 2019, cited in Ozekhome, 2022). Some other pertinent studies that found a significant link between oil resource, policy reforms, domestic institutional capacity and sustainable economic outcomes are IMF

(2007), Adegboye (2013), Obadan and Adegboye (2014), Tella and Ayinde (2016), Yaru et al. (2016), Ozekhome and Edosa (2019).

EMPIRICAL METHODOLOGY

Theoretical Framework

This section attempts to generate a neoclassical growth model in which natural resources is in-built. The aim is to show how optimal saving, and hence the rate of growth of output and capital, depends on the abundance of natural resources and the quality of the capital stock. Accordingly, a distortion in the optimal path of natural resources through depletion represents an exogenous shock and consequently, the competitive equilibrium will not generally coincide with possible set of optimization variables. However, the adverse effect of natural resources on economic growth can be reversed using the resources from natural endowment to generate an alternative and complementary growth trajectory that is not inhibited by the price shock associated through economic and institutional policy reforms.

Optimal Saving. We begin by deriving the optimal saving rate in an economy with natural resources. Here, output is be produced by labour *L*, natural resources *N* and capital *K* and the production function to be of the Cobb-Douglas variety:

$Y = AL^{a}N^{b}K^{1-a-b}$ ..... (1)

Where *A* represents overall efficiency, including technology. We can rewrite equation (1) in per capita terms as follows:

$y = An^{b}k^{1-a-b}$ ..... (1')

where $y = Y/L$, $n = N/L$ and $k = K/L$.

Consumption per capita, $c = C/Y$, is proportional to output

$c = (1- s)\, y$ ..... *(2)*

where $s = S/Y$ is the saving rate. In the transition towards a Solovian steady state, the capital/labour ratio evolves according to:

$\frac{k.}{k} = k/k\text{-}\gamma = Sy\text{-}\delta K / K\text{-}\delta = sy/k\text{-}\delta\text{-}\gamma$ ..... (3)

where *g* is the growth of the labour force; $\frac{k.}{k}$ is the growth rate of capital stock, Sy-δK is the savings/ investment ratio minus capital depreciation;δis the depreciation rate. In the steady state where $k / k = 0$, the capital-output ratio is an increasing function of the saving rate and a decreasing function of the depreciation rate and the rate of population growth:

$k/y = s/y+\delta$ (4)

Solving equations (1') and (4) together for *y* and substituting the result into the consumption function (2) gives

$c = (1\text{-}s)A^{1/a+b}n^{b/a+b}(1/\gamma+\delta)^{1\text{-}a\text{-}b/a+b}s^{1\text{-}a\text{-}b/a+b}$

Maximising consumption per capita in equation (5) with respect to *s* gives the following solution for the optimal saving rate:

$s = 1\text{-}a\text{-}b$ (6)

Hence, the greater the role of natural resources in the generation of national output –i.e., the greater *b* in equation (1) – the smaller is the optimal saving rate. Put differently, the presence of natural resources – that is, a positive share of natural resources in national income-reduces the marginal productivity and efficiency of capital and thus the propensity to save also. This way, natural capital crowds out physical capital. In an economy without natural resources ($b = 0$), the optimal saving rate in equation (6) obviously becomes simply 1– *a*, the golden-rule of capital accumulation. Equations (1'), (4) and (6) imply the following:

(i) The larger the share of natural resources in national income b, i.e the lower is the elasticity of output with respect to the saving rate. When *b* increases, the production function becomes more concave when plotted against capital and a given proportional increase in the saving rate raises future output, and hence also consumption, less. Because the elasticity of output with respect to saving

is decreasing in *b*, the optimal saving rate, which maximises steady-state consumption, is also a decreasing function of *b*. The larger the share of natural resources in national income, the lower is the optimal saving rate.

(2) An abundance of natural resources measured by their share in national income *b* causes the capital-output ratio to be lower due to lower optimal saving. In effect, natural capital crowds out physical capital to a degree.

(3) In the long run, the level of output per capita is inversely related to the share of natural resources in national output, given the level of natural resources *N*, due to less saving.

(4) However an increase in their level – holding their share of national income constant – makes output as well as the stock of capital rise.

(5) In contrast, the speed of adjustment towards steady state is an increasing function of the share of natural capital *b*, where the speed of adjustment is given by (1 - (1 - *a* - *b*)) (*g*+ *d*) which is increasing in *b*. This is the rate of decrease of the difference between the current and the steady-state level of capital and is. The larger the natural capital share the smaller is the share of physical capital in national income and hence the more rapid is the adjustment to steady state. The speed of adjustment is given by (1 - (1 - *a* - *b*) (*g*+ *d*) which is increasing in *b*. This is the rate of decrease of the difference between the current and the steady-state level of capital and is independent of the savings rate. (Romer, 1996, cited in Gylfason & Zoega, 2002). In sum, an economy where the owners of natural resources receive a high proportion of national income inevitably converges quickly to a steady state, with a low saving rate and a small capital-output ratio and, most importantly, low output per capita.

Endogenous Growth. Using an endogenous growth model, we can that demonstrate how economic growth depends on

the abundance of natural resources and the quality of the capital stock in the long run facilitated by increased savings. In particular, natural resources can affect the rate of growth of output and capital both directly through the quantity of investment, as well as indirectly through the quality of investment. The pioneer endogenous growth model of Romer (1986) is adopted where sustainable growth arises from constant returns to capital at the social level. At the firm level, there are constant returns to all factors of production and diminishing returns to capital. The basis of constant social returns to capital lie in learning-by-investing and instantaneous knowledge spillovers. The model is expanded to include natural resources. This is based on the assumption that both the productivity of labour as well as that of the natural resource is augmented through learning and that the level of labour- and natural-resources-augmenting technology can be proxied by the aggregate stock of capital, which is a function of investment; hence the generation of knowledge. This gives us the following production (output) function for the representative firm:

$$Y= (qK_i)^{1-a-b} (KN_i)^b (KL_i)^a \quad (7)$$

where; *Yi* denotes the output of the representative firm *i*and *q* is the exogenous productivity of capital, and takes a value between zero and one, a and b are the elasticity parameters. Equation (7) gives equation (1) when $A=q^{1-a-b} K^{a+b}$, $K=\Sigma K_i$, $L =\Sigma L_i, N = \Sigma N_i$and all firms are of equal size. If some investment projects miss the mark and fail to add commensurately to the capital stock, we have $q < 1$. One way to interpret *q* is to view it as an indicator of distortions in the allocation of installed capital due, perhaps, to a poorly developed financial system, but perhaps also due to trade restrictions or government subsidies that attract capital to unproductive uses in protected industries or in state-owned enterprises where capital may be less productive than in the private sector (Gylfason, Herbertsson&Zoega, 2001).

Another way is to view the quality index q is that it is the ratio of the economic cost (i.e., minimum achievable cost) of creating new capital to the actual cost of investment (Pritchett, 2000; Gylfason&Zoega, 2001. We assume that the quality of capital has remained constant in the past in the absence of macroeconomic and institutional policy reforms, which means that all units of capital are of the same quality. In other words, interest is on the implications of having different vintages of capital in the presence of natural resources.

Savings and Growth. Households with an infinite planning horizon maximise discounted future utility with respect to consumption per capita and subject to an asset-accumulation constraint. This gives the standard Euler equation for the growth of consumption per worker:

$g_k = \sigma(r - \rho)$ (8)

Where $g_{k=}$ growth of consumption per capital; σ is the elasticity of inter-temporal substitution (assuming constant relative risk aversion); ρ is the substitution parameter and$r$ is the rate of time preference. Using equation (8) and assuming symmetric equilibrium, the following expression for the optimal rate of growth of consumption and output is arrived at:

$g = \sigma((1 - a - b)q^{1-a-b} N^b L^{a-\delta-\rho)})$ (9)

Thus, increased savings and capital accumulation induces a higher rate of growth.

Model Specification

Following the theoretical framework, the functional model for this study is specified as:

$$GRGDP_t = f\left(OIL_{t,}\ SAV_t\right) \quad (10)$$

In model (10) above, economic growth depends on oil and savings; in the absence of economic and institutional policy

variables. However, on the inclusion of economic and institutional policy variables, model (11) is derived as:

$$GRGDP_t = f\left(OIL_{t,}\ SAV_t\ INV_{t,}\ SCH_t, INDP_{t,}\ INF_{t,}\ \ INST_t \right) \quad (11)$$

In model 11, economic growth depends not only on oil but on economic and institutional reform variables that guarantees a more sustained growth trajectory.

The econometric form of both model is specified in double log form as:

$$lnGRGDP_t = \alpha_0 + \alpha_1 \ln OIL + \varepsilon_t \quad (11')$$

$$lnGRGDP_t = \beta 0 + \beta_1 lnOIL_t + \beta_2 lnSAV_t + \beta_3 lnINV_t + \beta_4 lnSCH_t + \beta_5 lnINDP_t + \beta_6 lnINF_t + \beta_6 lnINF_t + \beta_7 lnINST_t + Ut \quad (12)$$

where;

GRGDP= Growth rate of real GDP (a measure of economic growth)

OIL = Oil price

SAV = Savings-GDP ratio

INV= domestic investment-measured as Gross fixed capital formation as share of GDP (measure of domestic investment)

SCH= Secondary school enrolment ratio (measure of human capital accumulation/development)

INDP= Industrial production/output (a measure of industrialization) wherein increasing share of industrial output in total output reflects industrialization.

INF= Inflation rate (measured by growth of the consumer price index) - an indicator of macroeconomic policy environment.

INST= institutional development

Institutional development is measured by averaging the six indicators of institutional quality proposed by Kaufamann, Kraay & Mastruzzi (2010) to include accountability,

political stability; government effectiveness, regulatory quality, rule of law and control of corruption.
U= Stochastic error term
Apriori expectation: $\alpha_1, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5\beta_7 > 0; \beta_6 < 0$.

Method of Estimation

The basic approach to this study involves first demonstrating the effect of oil resource endowment on economic growth using an output function that assumes constant returns to scale between resources and capital accumulation. This will show whether complementarity exists between oil resource endowment and physical capital accumulation in terms of output growth Nigeria. The second part of the analysis will specify a growth model that seeks to examine the effect oil, capital accumulation, industrialization, macroeconomic policy and institutional variable on economic growth in Nigeria. In doing this, we evaluate the effects of institutional quality and macroeconomic policies in the face of resource availability on growth. This will provide the background for assessing the roles of macroeconomic and institutional policy variables in guaranteeing a sustained economic growth, particularly in the face of economic contraction and vulnerabilities rising from mono-dependence on oil. In order to overcome the problem of joint endogeneity in the estimation and, thus to control for the biases resulting from simultaneous or reverse causation, the study adopts the generalised method of moments (GMM) estimation approach.

Sources of Data

Data used in this empirical analysis are annual time series data covering the period 1981 to 2021. The data are sourced from the CBN Statistical Bulletin (Various issues) and World Development Indicators (WDI) of the World Bank.

DATA ANALYSIS AND DISCUSSION OF RESULTS

In what follows, we present the OLS results of regressing economic growth rate solely on oil before prior to the inclusion of macroeconomic policy and institutional reform variables that allows investment in both human and physical capital and industrialization.

Table 1. Estimates of Economic Growth on Oil Dependent Variable: GRGDP

Variable	Coefficient	t-ratio
LnOIL	-0.1065*	-1.8842
LnSavings	0.2271**	2.282
R^2 = 0.873	F- Value=25.07	DW Statistic=1.68

,**, denotes significance at 10%, 5% and 1% level, respectively***
Source: Author's computation

The adjusted coefficient of determination is 0.873%, an implication that about 87 per cent of the systematic variations in economic growth over the study period is explained by the two independent variables (oil and savings). The F-value of 25.1 is highly significant, passing the significance test at the 1 per cent level. Thus, the hypothesis of a significant linear relationship between economic growth rate the two independent variables is validated. The Durbin Watson statistic of 1.68 shows that there is no serial correlation in the model, implying that the model can be used for structural and policy analysis The signs of both coefficients are in line with theoretical expectation, and the t-value of oil is significant at the 10 per cent level, while that of savings is significant at the 5 per cent level. Their elasticity coefficients show that oil dependence in the absence of economic and institutional

policy reforms deteriorate growth by 1.8 percent, while savings induce growth by 1.3 percent.

Invariably, oil dependence tend to have a dampening impact on growth, as demonstrated in the 'resource curse' in the clear absence of sound macroeconomic policy and institutional framework that transform the rent from natural endowment to the generation of an alternative and complementary growth trajectory that is not inhibited by the negative price shock associated with commodity prices (oil in this context). In addition, the 'voracity effect' and 'common pool' problem associated with oil in which competitive interest groups, particularly political actors engage in various short-changing acts to get more share from oil resources, exacerbated by corruption and mismanagement of oil resources and the vulnerability and propensity to oil conflicts all combine to undermine growth. The t-ratio of saving is significant at the 5 per cent level; a clear indication that resource saving for the rainy day, enhances economic growth, particularly when it is used for growth-enhancing investment.

An examination of the results reported in table 2 show that all variables have the correct signs. The coefficient of lagged growth rate of real GDP has the correct but not significant at the 5 per cent level. This implies a weak level of persistence in economic growth rate, as previous economic growth could stimulate further growth in the economy, but the impact is however weak . Since all the data are in log form, the coefficients are elasticities. The coefficient of lagged growth rate of real GDP implies that a 10 per cent increase in previous growth will stimulate future economic growth in the succeeding year by 9 per cent. The coefficient of oil is positive and significant at the 5 per cent level and that of savings is positive and significant at the 5 per cent level; further buttressing the view that a prudential saving course brought about by economic and institutional policy reforms has a significant stimulating effect on

economic growth by reversing the resource curse, particularly when resources saved from oil earnings are used for growth-enhancing investment. The elasticity coefficient indicates that a 10 per cent increase in national savings will induce economic growth by 1.9 per cent, while that of oil will induce economic growth by 2.2 per cent.

Table 2. GMM Estimates of Economic Growth on the Inclusion ofMacroeconomic and Institutional Policy Variables (GMM)

Variable	Coefficients	T-Ratios
C	0.071	0.982
Lagged GRGDP	0.013	1.802
LnOIL	0.208**	2.067
LnSAV	0.112**	2.163
LnINV	0.263**	2.237
LnSCHL	0.605**	2.231
LnIND	0.071	1.214
LnINF	-0.054**	-2.106
INST	0.092*	1.853
Breusch-Godfrey Serial Correlation LM Test Statistic	2.781 (0.32)	
Hansen-J stat	0.78	

,**, denotes significance at 10%, 5% and 1% level, respectively***
Source: Author's computation

The coefficients of domestic capital formation (investment) and human capital development are appropriately positive and are both significant at the 5 per cent level, respectively. Thus, implies that increase investment in both human and physical will steer economic growth to higher levels. Their elasticity coefficients indicate

that a 10 per cent rise increase in physical and human capital will induce economic growth by approximately 2.9 per cent and 3.1 per cent, respectively.

The level of industrialization (as measured by industrial output) has the expected positive sign but is not statistically significant. Since the t-value of its coefficient is greater than unity, we may infer that industrial output facilitates rapid economic growth, but its effect is rather weak due to the low level of industrialization and technological technology know-how to propel rapid industrialization in Nigeria. Strong macroeconomic and sectoral policy reforms are therefore needed to rapidly steer the economy into industrialization. Its elasticity coefficient shows that a 10 per cent increase in industrial development will induce economic growth in the Nigeria by approximately 1.8 per cent. Thus, increased in both human and physical capital investment and industrialization capacities will stimulate higher growth; de-emphasizing over bearing dependence on oil. Sound institutional framework is needed because in open economies, as in the case of oil exporting countries, output is more prone to terms of trade shocks, but when institutions are sufficiently strong to ensure that post distributions follow the "rule of law" rather than opportunistic grabs by social groups, the severity of the shocks might not play a role in determining the overall performance of an economy (Rodrick, 1999, Ozekhome, 2016).

The coefficient of institutions is positively related to growth but significant only at the 10 percent level. Thus, quality institutions (particularly legal and fiscal) are positively related to growth, especially in minimizing the voracity effect and rent-seeking behaviour of powerful political group with vested interests in Nigeria. The impact is however due to the weak institutional framework in Nigeria. Strong institutions are therefore needed to combat economic contractionary forces (recession) and steer the

economy to a sustained growth path. Its elasticity coefficient indicates that that a 10 percent increase in the right institution will induce economic growth by 0.92 percent. The coefficient of inflation (proxy for macroeconomic environment) is appropriately negative in line with economic theory and is significant at the 5 percent level. This implies that high inflation rates militate against rapid economic growth. This destabilizing effect of inflation on growth is buttressed by the findings of Alesina and Tabellini (2005). In fact, theory and evidence suggests that low inflation rates is crucial for macroeconomic stability and long-term growth, as no country has achieved sustained high growth in a persistently high inflation environment. It underscores the critical importance of a sound and stable macroeconomic policy environment for sustained economic growth. Its coefficient indicates that a 10 percent increase in inflation will diminish economic growth by 1.1 percent.

The post-estimation evidence for the robustness and validity of results obtained, show a Breusch-Godfrey LM test statistic, which fails to reject the null hypothesis of no serial correlation {with F-Statistic = 2.78 (0.32)}, as the p-value of the test statistic is greater than 0.05. This implies that the there is no serial correlation in the model. Similarly, the Hansen- J-statistic of 0.81, fails the significance test at the 5 percent level, indicating the non-rejection of the null hypothesis that the over-identifying restrictions are equal zero. The over-identifying restrictions, are therefore, equal to zero and valid. By implication, the specification of the model cannot be rejected, since it is well-specified and the instruments appropriate and valid. There is thus, no significant evidence to invalidate the model, as it is consistent for structural and policy perspectives.

CONCLUSION AND POLICY RECOMMENDATIONS

This study examined the role of economic and institutional policy reforms in sustained growth in Nigeria, particularly against the backdrop of the manifest dependence on oil and the associated economic downturn that arise from negative external shocks. Ordinary least squares (OLS) and Generalised Method of Moments (GMM) estimation techniques are employed to determine first, the relationship between oil in the absence of economic policy and institutional policy variables, and then, the relationship when institutional and economic policy variables are brought are incorporated as collaborate determinants of growth.

The empirical results show that sustained growth can be guaranteed when institutional capacity, regulatory frameworks and macroeconomic environment are strong to support genuine savings and investments, as well as rapid industrial growth and development by guaranteeing growth trajectory not inhibited by international oil price shocks. Apparently, the very strong dependence on oil to the detriment of other growth-enhancing sectors and opportunities constitutes the root of the economic deterioration in Nigeria. The international economic booms and bust associated with resource export-dependence and the resulting impulses are often resonated in the Nigerian economy in the form of negative transmission. Policy reforms epitomized in economic and institutional transformation are therefore the surest way to a more rapid and sustained economic growth in Nigeria, particularly by investing the resources generated from oil on human and physical capital accumulation.

Against the backdrop of the empirical findings, the following policy recommendations are made:

(i) Fluctuations in oil price caused by external shocks can provoke economic fluctuations in the

form of recession. This requires sound macroeconomic policy management and institutional framework to guarantee sustained economic growth.

(ii) Diversification of the productive base of the economy in other to wean it off the volatile influence of a pronounced dependence on oil export and the associated internationally generated and transmitted shocks, which tend to precipitate economic contraction.

(iii) Increased investment in both physical and human capital accumulation through a prudential course of savings (genuine savings), using resources generated from oil to launch a sustained growth trajectory.

(iv) Implementation of sound and stable macroeconomic policies (fiscal and monetary), particularly with respect to output growth, low level of inflation and those that encourage rapid industrialization of the economy.

REFERENCES

Adegboye, A. C. (2013). Fiscal policy and macroeconomic stabilisation in Nigeria: Are there institutional Issues? Paper prepared for the 54th Annual National Conference of the Nigeria Economics Society, held in Abuja, 17th – 19th September 2013.

Aunty, R. (2001). Resource abundance and economic development. Oxford, Oxford University Press.

Alesina, A., & G. Tabellini (2005). Why is fiscal policy often procyclical? *NBER Working Papers* No 11600 (Cambride, MA: *National Bureau of Economic Research*.

Bardhan, P. (1997). Corruption and development: A review of the issues. *Journal of Economic Literature,* 35, 1320-1346.

Corden, W., Max (1984). Booming sector and dutch disease economics: Survey and consolidation. *Oxford Economic Papers* 36, 359-380.

Gylfason, T., Herbertsson, T. T., & Zoega, G. (2001). A mixed blessing: Natural resources and economic growth. *Macroeconomic Dynamics* 3, 204-225.

Gylfason, T., & Zoega, G. (2001). Obsolescence. *CEPR Discussion Paper 3*.

Gylfason, T., &Zoega, G. (2002). Natural resources and economic growth: The role of investment. Economic Policy Research Unit, University of Copenhagen, *Studies 6*.

International Monetary Fund (IMF, 2007). The Role of fiscal institutions in managing the oil revenue boom. Paper Prepared by the Fiscal Affairs Department, IMF, Washington DC.

Kaufmann, D., Kraay, A., &Matruzzi, M. (2010). The World Governance Indicators: A summary of methodology, data, and analytical issues. *World Bank Policy Research Working Paper* No. 5430, September.

Mehlum H, Moene K, & Torvik R. (2006). Institutions and the resource curse. *Economic Journal*, 116 (508) 1-20.

Nigeria Economic Report (2013). World Bank, Washington D.C.

Obadan, M.I. (2014). Fiscal policy options for managing the emerging oil price shock in Nigeria. A presentation at the policy dialogue on Management of Oil Price Shock in Nigeria organised by the National Institute for Legislative Studies (NILS) and the Nigerian Economic Society, in Abuja, 2nd December, 2014.

Obadan, M.I. & Adegboye, A. C. (2014). Is fiscal policy procyclical in Nigeria? *Nigerian Economic and Financial Review*, 13(4), 1-22.

Okafor, E.E. (2008). Development crisis of power supply and implications for industrial sector in Nigeria. *Stud Tribals*, 6(2), 83-92.

Oyefusi, A (2018) "Comparing Socioeconomic and Human Development in Nigeria and other oil-producing countries" in The Unfinished Revolution in Nigeria's Niger Delta eds. By Obi, C and Oriola, TB. *The Roundtable, Routledge.* Taylor & Francis Group.

Ozekhome, H.O. (2016). Fiscal and macroeconomic stabilization: Evidence from Nigeria. *West African Financial and Economic Review*, *WAFER)*, 15(2), 45-67.

Ozekhome, H. O. (2022). Does financial development promote export diversification in Nigeria (Forthcoming).

Ozekhome, H.O. & Edosa, M. (2019). Budgetary management and economic development in Nigeria. *SAU Journal of Management and Social Sciences*, 4 (1&2), 223-232.

Herbertsson, T.T., Skuladottir, M. G., & Zoega, G. (1999). Three symptoms and a cure: A contribution to the economics of the Dutch disease. *Working Paper* No. W99:10, Institute of Economic Studies, University of Iceland.

Paldam, M., & Svendsen, G.T. (2000). An essay on social capital: looking at the fire behind the smoke. *European Journal of Political Economy* 16, 339-366.

Pritchet, L. (2000). The tyranny of concept: CUDIE (cumulated, depreciated, investment effort) is not capital. *Journal of Economic Growth*, 5, (7), 50-65.

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy* 94, 1002-1037.

Rodriguez, F., & Rodrick, D. (2000). Trade policy and economic growth: A skeptic's guide to the cross-national evidence. *NBER Macroeconomics Manual.*

Rodrik, D. (1999). Where did all the growth go? External shocks, social conflict, and growth collapses. *Journal of Economic Growth*, 4 (4), 385-412.

Sachs, D., & Warner, A.M. (1999). Natural resource intensity and economic growth in Mayer *et al*. *Energy Economics*, 24(6), 112-172.

Sarmidi, T., Law, S.H., & Jafari, Y., (2014). Resource curse: new evidence on the role of institutions. *International. Economics. Journal*, 28 (1), 191–206.

Tella, S. A. & Ayinde, T.O. (2016). Institutions and Sustainable fiscal management: Empirical evidence from Nigeria. Paper prepared for the 56th Annual National Conference of the Nigeria Economics Society in Abuja.

Todaro, M.P., & Smith, S. C. (2011). *Economic development.* Tenth ed., Edinburg, England, Pearson Education Limited.

Udah, E. B., (2010). Industrial development, electricity crisis and economic performance in Nigeria. *European Journal of Economics, Finance and Administrative Sciences,* 18, 1-19.

Yaru, M.A., Moboloji, H.I., Kilishi, A. A. & Yakubu, A. T. (2016). Budgetary institutions and fiscal discipline in Nigeria: Empirical Evidence from Kwara and Kaduna States. Paper prepared for the 56th Annual National Conference of the Nigeria Economics Society in Abuja.

World Bank (2006). Where is the Wealth of Nations? Measuring capital for the 21st century' The World Bank, Washington DC.

Bio-note

Hassan O. Ozekhome (PhD) is a Lecturer in the Department of Economics, Samuel Adegboyega University, Ogwa, Edo State, Nigeria. He holds a B.Sc (Hons) (Economics and Statistics), M.Sc (Economics) and PhD (Economics) of the University of Benin, Benin City, Nigeria. He has keen teaching and research interests in Macroeconomics, Microeconomics, Development economics, International economics, Monetary and Financial Economics, Energy Economics, Environmental Economics, Mathematical Economics, Statistics, Quantitative Methods and Applied Econometrics. He has several publications in reputable international and local journals, and has participated and presented empirical research and policy papers in many international and local conferences and workshops.

Adeniyi I. Okeowo PhD (Econs) is a lecturer in the Department of Economics, Samuel Adegboyega University, Ogwa, Edo State, Nigeria. His teaching and research interests are in Development Economics, Microeconomics, History of Economic Thought and Econometrics. He has several published papers in leading international and local Journals, and has attended many conferences and workshops.