Innovations

Capital Market, Non-Oil Sector and Economic Growth in Nigeria

Oluwasogo Adediran, Ph.D
Center for Economic Policy and Development Research (CEPDeR)
Department of Economics and Development Studies, Covenant University, Ota, Nigeria

Babatunde Adekunle, Ph. D
Economic Unit, Department of Social Sciences, Distance Learning Institute,
University of Lagos, Akoka, Nigeria.
&
Adekunle Ademayowa Adebayo, Ph.D
Lagos State University of Education, Oto/Ijanikin,Lagos State,Nigeria.

Corresponding Author**: Oluwasogo Adediran**

Abstract: *This study examines the relationship among capital market, non-oil sector and economic growth in Nigeria using the Capital Asset Pricing Model (CAPM) as a base line in analysing the effect of fluctuations in oil price on stock market prices. The study further employed the use of OLS regression and ECM to examine the long and short run effect of the variables. The study found out that stock price and stock market liquidity ratio impact the non-oil sector in the short run, while market capitalization, interest rate and exchange rate have significant and positive impact on the non-oil sector in the long run in Nigeria in the years of review. The result of the analysis also shows the presence of a long run relationship among the variables that are used in the model. Therefore, this study is significant because it juxtaposes the fact that the relationship between capital market and non-oil sector could positively influence output of the economy. Moreover, it will be useful to policymakers in their attempt to arrive at dynamic and reliable monetary policies to promote the non-oil sector of the economy.*

1. Introduction

Oil price fluctuations affect the economy through different channels. One of these channels is the monetary transmission mechanism. Monetary responses to higher and lower oil prices may be asymmetric or may have asymmetric effects. These fluctuations have dug huge holes in the foreign reserves of most nations especially the oil dependent ones. Oil producing nations that rely majorly on oil exports have been worse off, with such countries now feeling the ripple effect of the declining oil prices on different sectors of their economies as well as on their economic policies. The reductions in oil prices can cause economic harm supporting the view that major sectoral dislocations caused by abrupt oil price falls is a key mechanism for economic harm. And, this explains why the rapid decrease in oil prices during the 1980s did little to promote economic growth. Falling oil prices affect monetary and fiscal policies differently depending on whether the country is an oil importer or exporter. For importers, the pass-through into slowing inflation may ease pressure on central banks and could provide in some cases room for policy accommodation. However, in a generally weak global growth environment and with policy

interest rates constrained by the zero lower bound in major economies, monetary policy might need to respond to deflation risks.

In the Nigerian case, which is Africa's biggest oil producer. The economy has seen growth in all sectors but despite this, she remains heavily oil dependent. Crude oil sales account for up to 80 percent of all government revenue and more than 90 percent of the country's exports. However, the loss in oil revenues for Nigeria will strain public finances considering the fact that the sharp decline in oil prices can be accompanied by substantial capital outflows, reserve losses, and sharp currency depreciations, with potentially negative cross-border spill-over effects. Efforts to boost the productivity of the non-oil sector is bound to increase domestic investment in developing countries generally (Onodugo, Ikpe and Anowor 2013) and this is bound to enhance their growth potential in the long run. Invariably, a conscious effort to foster productivity in the non-oil sector is to enhance the capital market with enough funds. However, cases of inappropriate policies and misplacement of economic priorities ravaging developing countries are major threats to their economic growth. Hence, misdirected credit policies, overvalued exchange rates, inefficient agricultural infrastructure investments, economic mismanagement, inadequate infrastructural base and poor producer support policies mean that the non-oil sector like manufacturing and agriculture remain weak and inefficient in stimulating domestic investment in Nigeria.

Therefore, the basic objective of the study is to ascertain the impact of capital market on non-oil sector in Nigerian economic growth. The specific objectives however include to: assess the effect of capital market on non-oil sector in Nigeria and investigate the effect that capital market and non-oil sector have on economic growth in Nigeria. As a result, the study seeks to answer the following questions: What is the effect of capital market on non-oil sector in Nigeria and do capital market and non-oil sector have any significant effect on economic growth of Nigeria? Adequate response to these questions would suggest policy initiative that can help diversify the economy. This study is significant because it juxtaposes the fact that capital market and non-oil sector could have causality and hence influence output of the economy. Moreover, it will be useful to policymakers in their attempt to arrive at dynamic and reliable monetary policies to promote the non-oil sector of the economy.

2. Literature Review

There have been several attempts by the previous studies in developed and developing economies to link the growth of the capital market with the economy. For instance, Agarwal (2001) argued that financial sector development facilitates capital market development, and in turn raises real growth of the economy. Rousseau and Sylla (2003); Calderon and Liu (2003) supported that financial system development promotes economic growth. In the same vein, Beckaert, Harvey & Lundblad (2005) demonstrated that capital market development increases economic growth. Similarly, Bolbol, Fatheldin&Omran(2005), indicated that capital market development has contributed to the economic growth of Egypt. Osinubi and Amaghionyeodiwe (2003) also examined the relationship between Nigeria stock market and economic growth during the period 1980-2000 using ordinary least squares regression (OLS). The result indicated that there is a positive relationship between the stock market and economic growth and suggest the pursuit of policies geared towards rapid development of the stock market.

Similarly, Pedro and Erwan (2004) asserted that financial market development raises output by increasing the capital used in production and by ensuring that capital is put into best uses. While Ogwumike and Omole (1996), Abdullahi (2005),Adam and Sanni (2005) and Adediran, Oduntan& Matthew (2017) also stressed the importance of capital market in economic development of Nigeria. However, Irving (2004) considered the links between stock exchanges and the overall socio-economic development to be tenuous, non-existent or even harmful, but advised African countries not to devote further scarce resources and efforts to promoting stock exchange, since there are many wealthier

problems to address in African: high poverty levels, inadequate social services and undeveloped infrastructure.

Meanwhile, Olurankinse& Bayo (2012), Ude&Agodi (2014) and Ifeacho, Omoniyi& Olufemi (2014) found that non-oil export has a significant positive relationship with the economic growth of Nigeria, which indicates that the rise in the non-oil export leads to a significant improvement in the Nigerian level of economic development. Onodugo*et al.,* (2013) investigated the specific impact of the non-oil exports on the growth of Nigerian economy using data between 1981 and 2012, while adopting the Augmented Production Function (APF), the study employsthe Endogenous Growth Model (EGM) in its analysis. They discovered a very weak impact of non-oil export on economic growth in Nigeria. Adenugba&Dipo (2013) analysed the effectiveness of Nigeria's export promotion strategies in diversifying the productive base of the Nigerian Economy from Crude oil as the major source of foreign exchange. Time series data ranging from 1981 to 2010 and regression analysis was adopted. Findings from the study reveal that non – oil exports have performed weakly in boosting the Nigerian economy. The study equally found that non-oil exports have a positive effect on the economic growth of Nigeria, but it has performed below expectations.

However, Akeem (2011) and Abogan, Akinola and Baruwa (2014) concluded that the relationship between non-oil exports and economic growth in Nigeria is positive and insignificant. The study examined the significant role of non-oil export on economic growth in Nigeria using the Ordinary Least Square Methods involving Error correction mechanism, it revealed that the impact of non-oil export on economic growth was moderate as a unit increase in non-oil export impacted positively by 26 percent on the productive capacity of goods and services in Nigeria during the period. Similarly, Cynthia, Chinedum&Ikechi(2021) posits that there is no gain saying the fact that, the rate of development at the Nigerian capital market has noteffectively mobilize financial resourcesfor the development of other productive sectors of the Nigerian economy. According to the study, the major reason for this obvious neglect could be due to the predominant role the oil sector is playing as the major foreign exchange earner in the Nigerian economy.

Acha and Akpan (2019), examined whether stock market development raises economic growth in Nigeria, by employing the error correction approach. The econometric results indicate that stock market development (market capitalization GDP ratio) increases economic growth. He however, recommended the removal of impediment to stock market development which include tax, legal and regulatory barriers, development of the nation's infrastructure to create enabling environment where business can strive, employment policies that will increase the productivity and efficiency of firms as well as encouraging the Nigerian Securities and Exchange Commission to facilitate the growth of the market, restore the confidence of stock market participants and safeguard the interest of shareholders by checking sharp practices of market operators.

Ezeoha, Ogamba&Onyiuke (2009) investigated the nature of the relationship that exists between stock market development and the level of investment (domestic private investment and foreign private investment) flows in Nigeria. The authors discovered that stock market development promotes domestic private investment flows thus, suggesting the enhancement of the economy's production capacity as well as promotion of the growth of national output. However, the results show that stock market development has not been able to encourage the flow of foreign private investment in Nigeria.

Therefore, inspiteof the significance nature of this topic, not many studies have been undertaken to incorporate nominal exchange rate and stock market liquidity ratio to analyse the impact of capital market changes on non-oil sector in Nigeria. This study aims to fill this gap. To achieve this, the study adopted ordinary least squares (OLS) technique due to the order of integration as revealed by the Augmented Dickey Fuller test for unit root. While, the scope of the study was extended from 1980 to

2019. This period is relevant to the study because it covers era of different policy formulations, reforms and implementations in Nigeria.

3. Theoretical Framework

One of the models that can be used to project the expected return from a common stock, or any type of asset, is the Capital Asset Pricing Model or CAPM. In general, it describes the relationship between the risk of a particular asset or stock, its market price, and the expected return to the investor thence, its link to this study.

The CAPM model serves as a base line in analysing the effect of changes/fluctuations in oil price (which can be treated as a shock) on stock market prices. According to Jones and Kaul (1996), oil price is a risk factor for stock markets and diversification of investment does not eliminate totally, all the risks associated with investment. As such, Investors deserve a rate of return that compensates for taking on a risk. This rate of return that compensates the risk of investment is what CAPM seeks to reveal. According to Fama and French (2004), the CAPM was developed by Sharpe (1964), which is a development on the model of portfolio choice (Markowitz, 1959). According to the model, an investor selects a portfolio at time t-1 that produces a stochastic return at time t. It assumes that the investors are risk averse, as such, when choosing among portfolios, they care only about the mean and variance of their one period investment return. Therefore, investors choose "mean- variance- efficient" portfolios, in the sense that the portfolios (1) minimize the variance of portfolio return, given expected return, and (2) maximize expected return, given variance. The linear relationship between the return required on an investment (whether in stock market securities or in business operations) and its systematic risk is represented by the CAPM formula of William Sharpe which shows that the expected return on a security is:

$$E(R) - R_f = Cov(R_j, R_m)\,(E(R_m) - R_f)/\,\sigma^2 R_m \qquad (3.1)$$

Where:

$E(R_j)$ = The expected return on the jth security

$Cov(R_j, R_m)$ = The covariance of the return of the jth security with a market factor

$E(R_m)$ = The return of this market portfolio

$\sigma^2 R_m$= The variance of the return on the market portfolio

R_f = The risk- free rate of return

Defining beta:

$$\beta_j = Cov(R_j, R_m)/\,\sigma^2 R_m \qquad (3.2)$$

Therefore, the model becomes:

$$E(R) - R_f = \beta_j(R_m) - R_f) \qquad (3.3)$$

The above equation simply explains that the expected return minus the risk-free rate or the risk premium on the security equals the risk premium on the total market portfolio times the market sensitivity of the security. In other words, the formula states the expected return of a stock is equal to the risk-free rate of interest, plus the risk associated with all common stocks (market premium risk), adjusted for the risk of

the common stock being examined that is to say that the investor can expect a rate of return on an asset that compensates them for both the risk-free rate of interest, the stock market's risk, and the stock's individual risk. The capital asset pricing model (CAPM) captures the risk factor and the returns on securities this makes it relevant for our study. The model states that the price of a stock is tied to two variables: the time value of money, and the risk of the stock itself.

When measuring the risk of the stock itself, the capital asset pricing model explains risk in terms of its relative to the overall stock market risk. To figure out the expected rate of return of a particular stock, the CAPM formula only requires three variables:

- r_f = which is equal to the risk-free rate of an investment
- r_m = which is equal to the overall stock market risk
- β = which is equal to the stock's beta

The CAPM helps investors to figure out the expected return on a particular investment.The calculation provided by the CAPM help investors determine their return by using a formula that explains the relationship between expected return and risk:

Expected Rate of Return $=r = r_f + \beta(r_m - r_f)$ (3.4)

Where:

- r_f = The risk-free interest rate is what an investor would expect to receive from a risk-free investment
- β = A stock beta is used to mathematically describe the relationship between the movements of an individual stock versus the entire market. Investors can then use a stock's beta to measure the risk of a security.
- r_m = The expected market return is the return the investor would expect to receive from a broad stock market indicator.

3.1 Model Specification

Adapting the CAPM and adjusting it in order to capture other factors (macroeconomic variables) that affect stock prices in Nigeria and moving from the general to the specific modelling, which is in line based on the fall in oil price and its effect on the Nigeria stock prices. In demonstrating the application of ordinary least squares (OLS) method, the multiple linear regression analysis is used with Non-Oil Sector, Stock Prices, Market Capitalization, Stock Market Liquidity Ratio, Interest Rate and Exchange Rate as the variables of interest. Therefore, the extent to which the independent variables influence stock prices in Nigeria would be verified empirically.

Hence, the models for this study are specified as follows;

$NOIL = f(SP, MCAP, SMLR, INT, EXR)$ (3.5)

Where:

NOIL = Non-Oil Sector

SP = Stock Price

MCAP = Market Capitalization on Nigerian Stock Exchange

SMLR = Stock Market Liquidity ratio

INT = Interest Rate

EXR = Exchange Rate

The Econometric form of the model is specified as follows;

$$NOIL = \beta_0 + \beta_1 SP + \beta_2 MCAP + \beta_3 SMLR + \beta_4 INT + \beta_5 EXR + \mu_1 \quad (3.6)$$

A Priori Expectation

It is expected that $\beta_0 > 0, \beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0$

Where β_0 is the coefficient of the constant term, $\beta_1, \beta_2, \beta_3, \beta_4$ *and* $\beta_5$are the coefficient of the stock price, market capitalization, stock market liquidity ratio, interest rate and exchange rate respectively. While μ_1 is the random variable or white noise component which is assumed to be random. Random in the sense that it can take on any value.

3.2 Description and Measurement of Variables

Stock Prices: It is the prices of equity sold on the floor of Nigerian Stock Exchange.

Market Capitalization: is the aggregate valuation of the company based on its current share price and the total number of outstanding stocks. It is the total annual market capitalization on the Nigerian stock exchange used as a proxy to capture capital market. It is expected to be positively related with GDP

Stock Market Liquidity Ratio: A measurement of a company's capacity to pay for its liabilities with its assets. It is measured by dividing total value of shares traded by gross domestic product multiplied by 100 percent. It is an explanatory variable to capture capital market and it is expected to be positively related with GDP.

Interest Rate: The interest rate margin (INT), which measures the difference between deposit and lending rates in the banking sector is used to measure the efficiency of the sector. It is expected to be negatively related to GDP.

Exchange Rate: An exchange rate is the price of a nation's currency in terms of another currency.

3.3 Methods of Data Analysis

This research work adopted multiple linear regression analysis of the ordinary least squares method to determine the effect of financial sector development on economic growth of Nigeria.

3.3.1 Unit Root Test

It is used to test for the stationarity of the time series data. This involves testing of the order of integration of the individual time series under consideration. These tests are initially performed at levels and then in first difference form. Three different models with varying deterministic components are considered while performing the tests. These are (1) model with an intercept which assumes that there are no linear trends in the data such that the first differenced series has zero mean (2) model with a linear trend which includes a trend stationary variable to take account of unknown exogenous growth and (3) a model which neither includes a trend nor a constant. The most popular ones are Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller (1979). Augmented Dickey Fuller (ADF) test statistics shall be compared with the critical values at 5% level of significance. A situation whereby the ADF test statistics is greater than the critical values with consideration to absolute values, the data at the tested order will be said to be stationary. Augmented Dickey-Fuller test relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favour of the alternative hypotheses of stationarity. The tests are conducted with and without a deterministic trend (t) for each of the series.

The general form of ADF test is estimated by the following regression:

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum \alpha \Delta y_t + e_t \quad (3.7)$$

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum \alpha \Delta y_t + \mu_1 + e_t \quad (3.8)$$

Where: Y is a time series, t is a linear time trend, Δ is the first difference operator, α 0 is a constant, n is the optimum number of lags in the dependent variable and e is the random error term.

The null hypothesis is that $\alpha_1 = 0$. If the null hypothesis $\alpha_1 = 1$, then we conclude that the series under consideration Δ(yt) has unit root and is therefore non-stationary.

If the ADF test fails to reject the test in levels but rejects the test in first differences, then the series contains one unit root and is of integrated order one I(1). If the test fails to reject the test in levels and first differences but rejects the test in second differences, then the series contains two unit roots and is of integrated order two I(2).

3.3.2 Cointegration Test

Engle and Granger (1987) states that if several variables are all I(d) series, their linear combination may be cointegrated, that is, their linear combination may be stationary. This mean that the variables exhibit long-run relationship.

Decision rule: Accept H_0: (there is no significant cointegration relationship) if t-statistic is greater than asymptotic critical - value or if the p – value is less than the level of significance, otherwise reject.

H_1: (there is significant cointegration relationship) if test statistic is less than the asymptotic critical values or if the p- value is greater than the level of significance. Testing sequence terminates if the null hypothesis cannot be rejected for the first time.

3.3Sources of Data

This research work mainly used the secondary data. The data aremarket capitalization on stocks (MCAP), non-oil (NOIL) stock prices (SPdomestic), exchange rate (EXR) and Interest rate (INT). All were extracted from Central Bank of Nigeria (CBN) statistical Bulletin from 1981 to 2021.

4.1 Analysis of Data

4.1.1 Descriptive Statistics of Data

Table 4.1: Descriptive Statistics of Data

	NOIL	SP	MCAP	SMLR	INT	EXR
Mean	27464.23	206056.4	4801.190	1.200945	18.82355	88.82697
Median	4886.000	129122.4	662.5000	0.762039	18.18000	111.9433
Maximum	184667.0	804141.0	19077.40	6.911100	31.65000	253.4923
Minimum	195.0000	1797.800	6.800000	0.044367	10.50000	2.020575
Std. Dev.	44696.16	208676.6	6494.682	1.559015	4.693559	70.29011
Skewness	1.977562	1.101342	1.018482	2.203405	0.563142	0.209984
Kurtosis	6.445286	3.683681	2.453505	7.911181	3.370779	1.996446
Jarque-Bera	35.53763	6.870684	5.745176	56.23876	1.816075	1.528680
Probability	0.000000	0.032214	0.056552	0.000000	0.403315	0.465641
Sum	851391.0	6387747.	148836.9	37.22930	583.5300	2753.636
Sum Sq. Dev.	5.99E+10	1.31E+12	1.27E+09	72.91586	660.8849	148221.0
Observations	39	39	39	39	39	39

Source: Authors Computation, 2022

Table 4.1 presents the result of the descriptive statistics. Stock price had the highest mean value of 206056.4 while stock market liquidity ratio has the lowest value of 1.200945. Stock price also had the maximum value of 804141.0, while stock market liquidity ratio has the minimum value of 0.04 in the sample country, Nigeria. All the variables employed in the model were found to be positively skewed. This implies that the distribution has a long right tail and it is skewed to the right. On the other hand, Non-oil, stock price, stock market liquidity ratio and interest rate are variables whose kurtosis value is greater than three and this is called Leptokurtic distribution (slim or long-tailed). This implies that the distribution has heavy tails than normal distribution. Also, market capitalization and exchange rate are variables whose kurtosis is less than three and this is called Platykurtic distribution. This implies that the distribution has shorter tails than normal distribution. Juxtaposed against these are the probability values and the Jarque-Bera test of normality, which is an asymptotic test. The probability associated with the Jarque-Bera test highlights that the variables are normally distributed apart from market capitalization and exchange rate.

4.5 Econometric Properties of Data

4.5.1 Augmented Dickey-Fuller Test for Stationarity

As a preliminary step in the error correction modelling process, unit root test was conducted on the data. This determined their empirical characteristics. The rationale for this is to guard against generating spurious results. The technique used is the Augmented Dickey-Fuller test (ADF). The result is presented in Table 4.4 below.

Table 4.4: ADF Unit Root Test Results

Variable	ADF Tau Statistics		Order of Integration	Probability
	5% Significant	1% Significant		Value
NOIL	-5.078429 (2) [-2.971853]	-5.078429 (2) [-3.689194]	1	0.0003
SP	-6.296680 (2) [-2.976263]	-6.296680 (2) [-3.699871]	1	0.0000
MCAP	-5.313781 (2) [-2.967767]	-5.313781 (2) [-3.679322]	1	0.0002
SMLR	-4.703667 (2) [-2.967767]	-4.703667 (2) [-3.679322]	1	0.0008
INT	-6.555458 (2) [-2.967767]	-6.555458 (2) [-3.679322]	1	0.0000
EXR	-3.480323 (2) [-2.967767]	-3.480323 (2) [-3.679322]	1	0.0160

Source: Authors Computation, 2022

In Table 4.4, the test result indicates that the time series variables, non-oil sector, stock price, market capitalization, stock market liquidity ratio, interest rate and exchange rate were found to be non-stationary at levels (see Appendix II). However, after first differencing the series, Table 4.4 indicates that all the variables employed in the study are stationary at first difference, I(1) at both 5% and 1% level of significance. We can therefore conclude that all the variables are stationary at first difference; hence, we reject the null hypothesis of "*no stationary*" at first difference. This indicates that those incorporated series in the regression model have no unit-root. It also meansthat the series in their first difference are mean reverting and converge towards their long-run equilibrium.

4.5.3 Johansen Cointegration Result

The Johansen cointegration result was chosen ahead of the Engel and Granger test because the model adopted for the study was a multiple regression model. The Engel and Granger test is more suitable for a simple regression model.

Table 4.6a: Cointegration Test result

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical value	Probability**
None *	0.576006	88.16306	69.81889	0.0009
At most 1*	0.519439	50.40947	47.85613	0.0282
At most 2	0.209213	18.16620	29.79707	0.5538
At most 3	0.156840	7.838203	15.49471	0.4828
At most 4	0.007514	0.331863	3.841466	0.5646

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Authors Computation, 2022

From the table above, the trace statistic indicates two cointegrated equations at 5% level of significance. *Denotes rejection of the hypothesis at 5% level of significance. Therefore, in the model, there are at least two cointegrating equations. This result is derived by comparing the trace statistic with the 0.05 critical value.

Table 4.6a shows the eigenvalue and the maximum eigenvalue statistic to further confirm the cointegration result. From the table, the eigenvalue statistic indicates two cointegrated equations at 5% level of significance. *Denotes rejection of the hypothesis at 5% level of significance. Therefore, in the model, there are at least two cointegrating equations. This result is derived by comparing the max Eigen statistic with the 0.05 critical value.

4.7 Discussion of Results

This study is carried out to examine the impact of capital market on non-oil sector on of Nigeria economy. The first approach was to carry out the unit root test for the various variables that were used in the model. The unit root test showed that none of the variables were stationary at that level forms. Rather, the variables had to be differenced once before they became stationary at I(1). This is not a surprise outcome because time series data are known to exhibit random walk. Since all the variables became stationary at the same level, it gave the impression that they might have a long run relationship among them. The study proceeded with the Johansen cointegration test. The cointegration test showed two cointegrating equations which is an indication that our variables are cointegrated. That is, there is a long run relationship among the variables.

The ordinary least squares results indicate that the co-efficient of the constant is 7.015333, which implies that when all independent variables are held constant, the non-oil sector will be 7.015333. The analysis further shows that market capitalization has positive and significant impacts on non-oil sector of the Nigerian economy. The implication is that as the financial market begins to expand through the capital market, the non-oil sector of the economy will continue to witness an expansion. Stock price was also found to have a positive effect but it was not significant on non-oil sector. Also, interest rate was found to have positive and significant impact non-oil sector of Nigeria economy. The implication of this is that lower interest rate policy will have a positive effect and control on non-oil sector and hence help to stimulate the growth of non-oil sector in Nigerian economy. Furthermore, the result confirmed both stock market liquidity ratio and exchange rate have a negative effect on non-oil sector over the period of study.

5.1 Summary

In the study, we examine the impact of capital market on non-oil sector of Nigeria between 1981 and 2019. The stationarity test confirmed that all the data employed in the study were not stationary at levels. However, they all became stationary after first differencing the data, which means that the data are mean reverting and therefore, useful for making forecast in the study. Furthermore, the result also shows that there is a long run relationship between non-oil, stock prices, market capitalization, stock market liquidity ratio, interest rate and exchange rate. This confirms that there is a long run relationship between capital market and non-oil sector. The Granger causality test shows that there is unidirectional causality from non-oil sector to market capitalization.

In addition, the empirical analysis from the ordinary least squares technique revealed the effect of capital market variables on non-oil sector. From the result of the analysis, stock price and stock market liquidity ratio impact the non-oil sector in the short run, while market capitalization, interest rate and exchange rate have significant and positive impact on the non-oil sector in the long run in Nigeria between 1986 and 2016. Also, we found that there is absence of autocorrelation in the estimated model as suggested by the Durbin-Watson statistic. The Error Correction Mechanism which shows the speed of adjustment from short run to long run is negative and statistically significant.

5.2 Conclusion

This study examined the impact of capital market on non-oil sector of Nigeria between 1981 and 2021. It is generally asserted that capital market has important role to play in promoting economic growth in a country. However, the lack of focus on non-oil sector of the economy led to the conduct of this study.

Therefore, the result obtained from the scientific enquiry confirmed that stock price and stock market liquidity ratio impact the non-oil sector in the short run, while market capitalization, interest rate and exchange rate have significant and positive impact on the non-oil sector in the long run in Nigeria between 1981 and 2021. We, therefore, conclude that capital market has positive and significant impact on non-oil sector of Nigeria between 1981 and 2021.Therefore, the government should enact effective macro-economic policies along with momentous improvements in the structure and functioning systems of governance for stabilising economic growth along with the diversification of the economy and economic reforms towards the development of the non-oil sectors. To this end, we proceed to suggest some possible policies in section 5.3 to ensure the sustenance of growth in Nigeria.

5.3 Recommendations

Based on the results obtained, the following policy recommendations are made.

In order to attain the path of growth of the economy, government should enact effective macro-economic policies along with momentous improvements in the structure and functioning systems of governance for stabilising economic growth along with the diversification of the economy and economic reforms towards the development of the non-oil sectors. Review and strengthen existing policies and incentives to support the growth of the non-oil sector.

The positive and significant relationship with long run relationship between capital market and non-oil sector implies that capital market well developed can foster growth of the non-oil sector of the economy thereby promoting growth in Nigeria. Therefore, the federal government of Nigeria should focus on using the fiscal and monetary policy instruments to stimulate the economy in the desired direction in order to sustain economic growth process. We call on the Central Bank of Nigeria to consistently embark on an expansionary monetary policy to bail the economy out of recession and to help regulate the exchange rate in order to encourage the non-oil sector of the economy.

Furthermore, the introduction of a special stimulus package to encourage investments in the non-oil sector of the economy, with particular emphasis on the mineral and tourism sectors where huge capital requirement has continued to discourage investment. Since interest rate is observed to positively impact the non-oil sector, efforts should be made at lowering the cost of borrowing in the commercial banks and other financial institutions in order to boost investment and increase economic growth in the country. In addition, to foster economic growth through the non-oil sector, the government should enact policies that guarantee the deepening of the capital market. Where government wishes to achieve a short-term growth objective in the non-oil sector, targeted policies should be directed to stock prices and market liquidity ratio to drive the objective. In the same vein, market capitalization, interest rate and exchange rate should be specifically targeted by the monetary authorities where the objective is to achieve a long-term growth in the non-oil sector.

Reference

1. *Abdullahi, S. A. (2005). Capital Market Performance and Economic Development in Nigeria: An Empirical Analysis. Paper Presented at the Department of Business Administration, Bayero University Kano.*
2. *Abogan O P, Akinola, E. B. &Baruwa, O. I. (2014), Non-oil export and Economic growth in Nigeria (1980-2011), Journal of Research in Economics and International Finance (JREIF), Vol. 3(1): 1-11.*
3. *Adamu, J. A. &Sanni, I. (2005), Stock market development and Nigerian economic growth.Journal of Economic and Allied Fields, 2 (2): 116-132.*
4. *Adediran, O. Oduntan, E., Matthew, O. (2017). Financial development and inclusive growth in Nigeria: A multivariate approach. Journal of Internet Banking and Commerce.22(8):1-14.*

5. *Adenugba, A.A. &Dipo, S.O. (2013) Non-Oil Exports in the Economic Growth of Nigeria: A Study of Agricultural and Mineral Resources. Journal of Educational and Social Research, 3, 403-418.*
6. *Acha, I.A. &Akpan, S.O. (2019). Capital marketperformance and economic growth in Nigeria.International journal of economics andfinancial research, 4 (2): 10-18.*
7. *Agarwal, B. 2001. Economics and Other Social Sciences: An Inevitable Divide? Contributions to Indian Sociology 35 (3): 389–99.*
8. *Akeem, U. O. (2011). Non-Oil Export Determinant and Economic Growth Nigeria (1988-2008). European Journal of Business and Management, 3(3): 236-251.*
9. *Bekaert, G., Harvey, C., &Lundblad, C. (2005). Does financial liberalization spur growth?Journal of Financial Economics 77: 3–55.*
10. *Bolbol, A.; Fatheldin, A. &Omran, N. (2005), Financial development, structure, and economic growth: The case of Egypt.Research in International Business Finance, 19 (1): 171-194.*
11. *Calderon, C. & Liu, L.(2003). The direction of causality between financial development and economic growth,Journal of Development Economics, Elsevier, vol. 72(1), pages 321-334, October.*
12. *Cynthia, U.G., Chinedum, N.N. &Ikechi, K.S. (2021). Effects of Capital Market Development on the Economic Growth of Nigeria. International Journal of Innovation and Economic Development, 7(2), 30-46.*
13. *Dickey, D. and Fuller W. (1979). "Distribution of the Estimators for Autoregressive Time Series with a Unit Root" Journal of the American Statistical Association, 74: 427-431.*
14. *Ezeoha,A.Ogamba, E. &Onyiuke, N. O. (2009).Stock market development and private investment growth in Nigeria, Journal of Sustainable Development in Africa. 11(2): 20 – 35.*
15. *Fama, E. F., & French, K.(2004). The Capital Asset Pricing Model: Theory and Evidence.Journal of Economic Perspectives, 18 (3): 25-46.*
16. *Ifeacho, C., Omoniyi, B. O. & Olufemi O. B. (2014). Effects of Non-Oil Export on the Economic Development of Nigeria.International Journal of Business and Management Invention, 3(3), pp. 27-32.*
17. *Irving, J. (2004).Regional integration of stock exchanges to Eastern and Southern Africa: Progress and prospects.IMF Working Paper COP/05/122. Washington. International Monetary Fund.Issue 14, pp.182-195.*
18. *Jones, C.M.&Kaul, G. (1996) Oil and the Stock Markets. Journal of Finance, 51, 463-491. Markowitz, H. (1959). Portfolio Selection: Efficient Diversification of Investments. Cowles Foundation Monograph No. 16. New York: John Wiley & Sons, Inc*
19. *Ogwumike, F. O. & Omole, D. A. (1996), The stock exchange and domestic resource mobility in Nigeria. S. Mensah Ed, Massachusetts: Rector Ltd: 230-251.*
20. *Olurankise, F. && Bayo, F. (2012). Analysis of the Impact of Non-oil sector on economic growth. Canadian Social Science, 8(4): 244-248.*
21. *Onodugo, V.A., Ikpe, M. and Anowor, O.F. (2013) Non-Oil Export and Economic Growth in Nigeria: A Time Series Econometric Model. International Journal of Business Management & Research, 3, 115-124.*
22. *Osinubi, T. S. &Amaghionyeodiwe, L. A. (2003), Stock market development and long-run growth in Nigeria, Journal of African Business, 4 (3): 103-129.*
23. *Pedro, S. A. & Ewan, Q. (2004), The Implications of capital-skill complimentary in economies with large informal sectors, Centre for Latin America Working Papers, 0404, Federal Reserve Bank of Dallas.*
24. *Rousseau, P &Sylla, R.(2003). "Financial Systems, Economic Growth, and Globalization," NBER Chapters, in: Globalization in Historical Perspective, pages 373-416, National Bureau of Economic Research, Inc.*
25. *Sharpe, W. F. (1964). Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk. Journal of Finance, 19(3): 425– 42*
26. *Ude, D. K. and Agodi, J. E. (2014). Investigation of the impact of non-oil revenue on economic growth of Nigeria. International Journal of Science and Research, 3(11): 2571 2577.*