

The Long Run Effect of Interest Rate and Money Supply on Petroleum Profit Tax (Pet) In Nigeria

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Abstract: *The study empirically examined the effect of interest rate and money supply on petroleum profit tax (PET) in Nigeria. The study employed annual time series data from 1980 to 2013 collected from various issues of Central Bank of Nigeria's Statistical Bulletin. An Error Correction Mechanism (ECM) Model was adopted in the analyses of the interaction among interest rate and money supply on petroleum profit tax. The granger causality pairwise test was also conducted in determining the causal relationship among the variables. The empirical results showed that, there was unidirectional causality between money supply and PET, money supply has positive effect on PET in the short run but negative effect in the long run with ($t=-1.35$, $P<0.05$) and ($t = 4.07$, $P>0.05$) respectively.*

It is recommended that, once money supply has negative effect on Petroleum profit tax in the long run, government should reduce the level of money supply in circulation in order to cause petroleum profit tax to adjust proportionally in the long run. A permanent increase in a country's money supply causes a proportional long run decline of its Petroleum profit tax but a permanent decrease in a country's money supply causes a proportional long run appreciation of its Petroleum profit tax.

Key words: *Petroleum profit tax (PET); Interest rate; Money supply; Economic growth; VECM*

I. Background To The Study

Taxation, according to Mu'azu (2013), is the sinews of the state. This underlines the critical role it plays in global economy. However, aside from its use as a means of raising government revenue, taxation is also often used as an instrument of regulating the economy, redistributing wealth and inducing preferred modes of behaviour, particularly consumption patterns and investment choices. Thus, while global economic stability can be perceived at both the macro and micro levels, taxation could be an important instrument of achieving or consolidating the gains of economic recovery. An economy such as Nigeria's which is so foreign capital dependent and which has suffered tremendously from capital flight and a domestic cash crunch might need to revise its tax regime encompassing incentives such as capital or investment allowances, tax credits, write-offs and tax holidays in a bid to attract more direct foreign investment and encourage a return to the capital market by otherwise disillusioned local and foreign investors. In an economy that has suffered depreciation in value by more than 60 percent in both its money and capital markets, government must do the needful in order to arrest the current horrendous hemorrhage.

The history of petroleum industry in Nigeria reveals that oil was discovered in Nigeria in 1956 at Oloibiri in the Niger Delta. The discovery was made by Shell-BP. Nigeria joined the ranks of oil producers in 1958 when its first oil field came on stream producing 5,100 barrels per day. After 1960, exploration rights in onshore and offshore areas adjoining the Niger Delta were extended to other foreign companies. In 1970, Nigeria was able to reap instant riches from its oil production. The country joined the Organisation of Petroleum Exporting Countries (OPEC) in 1971 and established the Nigerian National Petroleum Company (NNPC) in 1977, a state owned and controlled company which is a major player in both the upstream and downstream sectors. By the late 1960s and early 1970s, Nigeria had attained a production level of over 2 million barrels of crude oil per day. Although production figures dropped in the eighties due to economic slump, 2004 saw some improvements in oil production to a record level of 2.5 million barrels per day (Onyemaechi (2012)). Current development strategies aim at increasing production to more than 4 million barrels per day. The Nigerian petroleum industry has been described as the largest among all industries in the country. This is probably due to the belief that petroleum is one of the major sources of energy worldwide. The size, international characteristic, and role assumed by the petroleum industry were noted to have originated from the notion that petroleum is versatile as it currently satisfies a wide variety of energy and related needs. Petroleum is the most vital source of energy, providing over 50 percent of all commercial energy consumption in the world. The revenues obtained from crude oil in Nigeria are of absolute advantage to expenditure commitments on various projects at the local, state, and federal levels. The Nigerian economy relies heavily on the revenue derived from petroleum products, as they provide 70 percent of government revenue and about 95 percent of foreign exchange earnings. Apart

from this, the contribution of petroleum to national development is many and varied; employment generation, foreign exchange earnings, income generation, industrialisation, and improvements in other economic variables. While the major investors in the petroleum industry are the international oil companies (iocs), the principal legislation governing petroleum operations in Nigeria is the Petroleum Profit Tax Act (PETA) of 2007. Its main fiscal instrument is the Petroleum Profit Tax (PET). Under the PET, the tax rate was set at 67.5 percent for the first five years of operations by the oil company and 85 percent thereafter (Onyemaechi (2012).

The major sources of petroleum income are sale of crude oil and gas(oil revenue), Petroleum profits tax and royalties, licensing fees and other incidentals as shown in CBN Statistical Bulletin(2002 and 2009). The main focus of Petroleum Profits Tax (PET) is the upstream sector of the Petroleum industry, which deals with oil exploration, prospecting, development and production (EPDP). In 2009, Petroleum Profits Tax attracted 85% tax rate on export and 65.75% on domestic sale of oil and gas.

Oil revenue which is supposed to be a source of finance for economic development has turned out to be a bone of contention between many interest groups, precisely the government and oil and gas companies. Yakubu (2008) and Hoffman (1999) believed that countries lucky enough to have petroleum, can base their development on this resource. They point to the potential benefits of enhanced economic growth and the creation of jobs, increased government revenues to finance poverty alleviation, the transfer of technology, the improvement of infrastructure and the encouragement of related industries. But the experience of almost all oil-exporting countries to date, especially Nigeria illustrates few of these benefits (Terry, 2000).The problem of low economic performance of Nigeria cannot be attributed solely to instability of earnings from the oil sector.

The main objective of this study is to examine the effects of interest rate and money supply on petroleum profit tax (PET) in Nigeria. Other specific objectives are:

- To evaluate the effects of taxation on Nigerian economy.
- To examine the effect of interest rate on PET in Nigeria
- To investigate the effect of money supply on PET in Nigeria in the long run.

II. Literature Reviews

Petroleum Profits Tax (Pet) And Its Administration In Nigeria

According to Ogbonna and Appah (2012),the focus of Petroleum Profits Tax in Nigeria is the upstream sector of the petroleum industry which deals with oil prospecting, mining and production. Crude Oil production is taxed at the rate of 85% on export and 65.75% on domestic sale of oil within the periods under review (Kiable and Nwikipasi, 2009). The tax laws according to Adekanola (2007) have vested the authority to assess, administer and collect all taxes from corporate entities on the Federal Inland Revenue Services. Taxes administered at the Federal level include the Petroleum Profits Tax, Companies Income Tax, and the Value Added Tax as well as the Capital Gain Tax, when such capital gains are generated by corporate entities. The administration of taxes in Nigeria has also been focused on revenue generation to the detriment of stimulating economic development. Azubuike (2009) however posits that tax payers or revenue public payers are well disposed to perform their civic duties willingly when they see evidence of public expenditure which they can identify with or benefit directly from. Unfortunately, this has not been the case in Nigeria. Macdonald (1980) opines the fact that the retention of a corporation tax under an expenditure tax regime is justified in the Meade Report of 1978 on Tax Reform on the ground that it can raise revenue while not distorting the rate of return to saving. Ogbonna (2009) expressed the view that the administration of Petroleum Profits Tax in Nigeria has mainly been focused on revenue generation to the detriment of stimulating economic growth and development.

The Objectives Of Petroleum Profit Tax In Nigeria

According to Nwete (2004) the following are the objectives of petroleum taxation in Nigeria

- To achieve government's objective of exercising right and control over the public asset, Government imposes very high tax as a way of regulating the number of participants in the industry and discouraging its rapid depletion in order to conserve some of it for future generation. This in effect will achieve government aim of controlling the petroleum sector development.
- The high profit profile of a successful investment in the oil industry makes it a veritable source for satisfying government objective of raising money to meet its socio-political and economic obligations to the citizenry.
- To re-distribute wealth between the wealthy and industrialized economics represented by the multinational organizations, who own the technology, expertise and capital needed to develop the industry and the poor and emerging economies from where the petroleum resources are extracted.
- The high potential for environmental pollution and degradation stemming from industry activities makes it a target for environmental taxation, as a way of regulating its activity and promoting government quest for a cleaner and healthy environment.

- Cleaner production may be achieved by imposing tax on it for pollution and environmental offences. Under the petroleum Profits Tax Acts of 1959 on Oil Company, in computing its taxable profits from petroleum operations, is entitled to deduct all outgoings and expenses which are wholly, exclusively and necessarily incurred by such company for the purpose of such petroleum operations.

Azaiki and Shagari (2007), brought out that countries blessed sufficient to have petroleum, can base their development on this resource. They point to the potential benefits of enhanced economic growth and the creation of jobs, increased government revenues to finance poverty alleviation, the transfer of technology, the improvement of infrastructure and the encouragement of related industries. Ogbonna (2009) expressed the view that the administration of Petroleum Profits Tax in Nigeria has mainly been focused on revenue generation to the detriment of stimulating economic growth and development.

Effect Of Taxation On The Nigerian Economy

The Tax System In Nigeria Is Made Up Of The Tax Policy, The Tax Laws And The Tax Administration. All Of These Are Expected To Work Together In Order To Achieve The Economic Goal Of The Nation. According To The Presidential Committee On National Tax Policy (2008), The Central Objective Of The Nigerian Tax System Is To Contribute To The Wellbeing Of All Nigerians Directly Through Improved Policy Formulation And Indirectly Through Appropriate Utilization Of Tax Revenue Generated For The Benefit Of The People. In Generating Revenue To Achieve This Goal, The Tax System Is Expected To Minimise Distortion In The Economy. Other Expectations Of The Nigerian Tax System According To The Presidential Committee On National Tax Policy (2008) Include;

1. Encourage Economic Growth And Development.
2. Generate Stable Revenue Or Resources Needed By Government To Accomplish Loadable Projects And Or Investment For The Benefit Of The People.
3. Provide Economic Stabilization.
4. To Pursue Fairness And Distributive Equity
5. Correction Of Market Failure And Imperfection.

According To Waidyasekera (2010) The Primary Function Of A Tax System Is To Raise Revenue For The Government For Its Public Expenditure. So The First Goal In The Development Strategy As Regards Taxation Policy Is To Ensure That This Function Is Discharged Adequately.

- To Reduce Inequalities Through A Policy Of Redistribution Of Income And Wealth. Higher Rates Of Income Taxes, Capital Transfer Taxes And Wealth Taxes Are Some Means Adopted For Achieving These Ends.
- For Social Proposes Such As Discouraging Certain Activities Which Are Considered Undesirable. The Excise Taxes On Liquor And Tobacco, The Special Excise Duties On Luxury Goods, Betting And Gaming Levy Are Examples Of Such Taxes, Which Apart From Being Lucrative Revenue Sources Have Also Goals.
- To Increase The Level Of Savings And Capital Formation In The Private Sector Partly For Borrowing By The Government And Partly For Enhancing Investment Resources Within The Private Sector For Economic Development.
- To Protect Local Industries From Foreign Competition Through The Use Of Import Duties, Turnover Taxes/VAT And Excises. This Has The Effect Of Transferring A Certain Amount Of Demand From Imported Goods To Domestically Produced Goods.
- To Stabilise National Income By Using Taxation As An Instrument Of Demand Management. Taxation Reduces The Effect Of The Multiplier And So Can Be Used To Dampen Cyclical Fluctuations On The Economy.
- To Ensure Economic Goals Through The Ability Of The Taxation System To Influence The Allocation Of Resources. This Includes.
 - Transferring Resources From The Private Sector To The Government To Finance The Public Investment Program;
 - B) The Direction Of Private Investment Into Desired Channels Through Such Measures As Regulation Of Tax Rates And The Grant Of Tax Incentives Etc. This Includes Investment Incentives To Attract Foreign Direct Investment (FDI) Into The Country;
 - C) Influencing Relative Factor Prices For Enhanced Use Of Labour And Economizing The Use Of Capital And Foreign Exchange.

III. Research Methodology

Method Of Data Collection

The data were gotten from Central bank of Nigeria (CBN) Statistical Bulletin and Federal Inland Revenue service Bulletin. The model made use of petroleum profit tax (PET) as the explained variable, the explanatory variables are; interest rate, money supply and economic growth (proxied by Gross domestic products).

Sample size

This study employs annual data on the rate of petroleum profit tax (PET), interest rate, money supply and economic growth (proxied by Gross domestic products) for Nigeria over the period 1980 to 2013.

Data Analysis Techniques

Regression analysis technique was used to measure the relationship between a dependent variable and independent variables in the short run. To assess the long run effect of interest rate and money supply on petroleum profit tax in Nigeria, a time series technique which is more appropriate for testing the temporal or lead-lag relationship between variables were employed. Furthermore, time series technique addresses the problem of the stationarity of the variables which the classical OLS regression technique cannot address. Augmented Dickey-Fuller (ADF) test was also used to test the non-stationarity of the variables. After examining the unit-root tests and the order of the VAR, the Johansen cointegration test which uses two tests to determine the number of cointegration vectors, namely, the Maximum Eigenvalue test and the Trace test were also applied. The Maximum Eigenvalue statistic tests the null hypothesis of r cointegrating relations against the alternative of $r+1$ cointegrating relations. If cointegration has been detected between series, we know that there exists a long-run equilibrium relationship between them. The Vector error correction model (VECM) is to evaluate the direction of Granger causality both in the short and long run.

Model Specification

$$\begin{aligned} \log pet &= a_0 + a_1 \log GDP + a_2 \log intr + a_3 \log monspl + \epsilon & 1 \\ \log GDP &\quad - \quad \log \text{ of Gross Domestic Product} \\ \log pet &\quad - \quad \log \text{ of petroleum profit tax} \\ \log intr &\quad - \quad \log \text{ of interest rate} \\ \log mons &\quad - \quad \log \text{ of money supply} \\ \epsilon &\quad - \quad \text{error term} \end{aligned}$$

The basic VECM is

$$\Delta y_t = \alpha \beta' y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + \epsilon_t \quad 2$$

where y is a $(K \times 1)$ vector of $I(1)$ variables, α and β are $(K \times r)$ parameter matrices with rank $r < K$, $\Gamma_1, \dots, \Gamma_{p-1}$ are $(K \times K)$ matrices of parameters, and ϵ is a $(K \times 1)$ vector of normally distributed errors that is serially uncorrelated but has contemporaneous covariance matrix.

Presentation And Analysis Of Data

The data collected from different reliable source like CBN Statistics Bulletin 2013 were analyzed below:

Table 1: The Short Run Effects Of Interest Rate, Money Supply On PET.

Dependent Variable	Independent Variables	Coefficient	Standard Error	T	P>|t|	[95% Conf. interval]
<i>logpet</i>	<i>logGDP</i>	.6849545	.3868669	1.77	0.086	-.1040657 1.473975
	<i>logmonspl</i>	1.554729	.3817007	4.07	0.000	.7762452 2.333212
	<i>logitr</i>	-3.076394	.8817469	-3.49	0.001	-4.874729 -1.278059
	<i>constant</i>	-28.29302	4.363731	-6.48	0.000	-37.1929 -19.39313
R-square= 0.8981		Adj R-square = 0.8882		Root MSE = 1.3834		Prob> F = 0.0000
						F(3, 31) = 91.08

The Above Table Is Represented By Regression Plots Below:

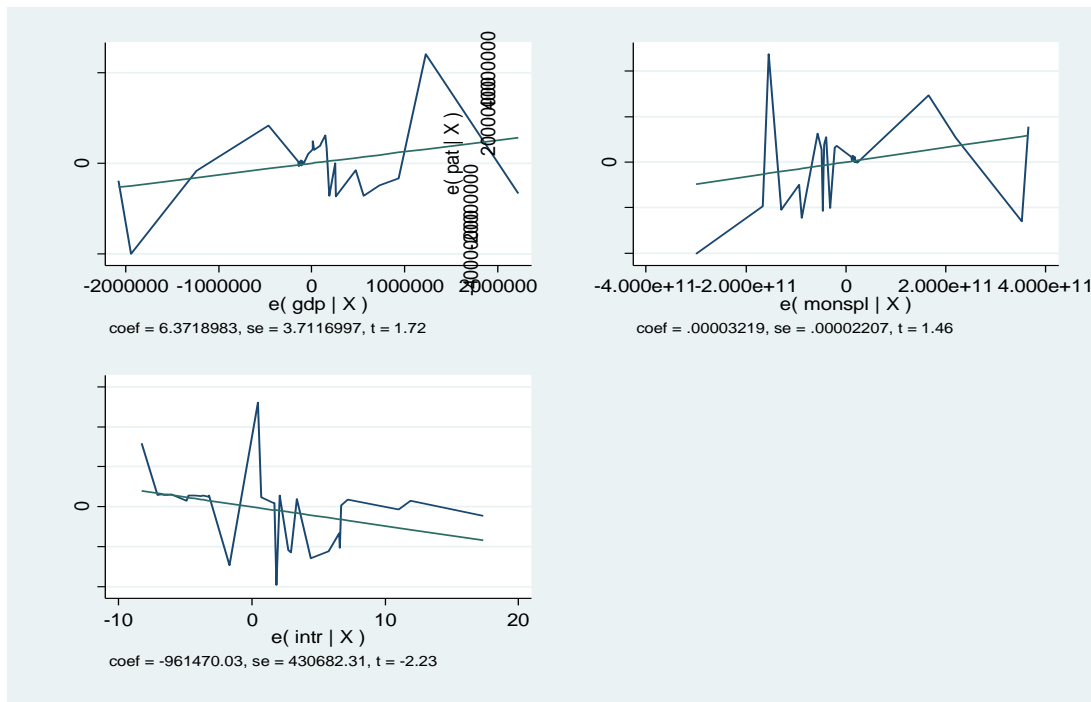


Table 1 also shows the short run effects of interest rate and money supply on petroleum profit tax (PET) by finding the log of PET compared with logarithms of on the independent variables. A unit increase in GDP brings about 1.18 units increase in PET. An increase in the level of GDP has a positive impact on PET. This also suggests a positive relationship between PET and economic growth in Nigeria in the short run. The result is also significant. The relationship between PET and Money supply (MONSPL) is also positive. This indicates that a unit increase in MONSPL increases PET by 1.5 units. Conversely, a unit increases in interest rate (ITR) reduces PET 3.05 units, suggesting that there is inverse relationship between PET and interest rate in the short run.

Given the coefficient of determination (R^2) to tune of 0.8981 (90%) and Adj R-squared to be 0.8882 (89%), it connotes the independence variables incorporated into this model were been able to determine variation of PET to 84%. The F and probability statistics also confirmed the significance of this model. The results indicate that the coefficient of PET is statistically significant and the constant is statistically significant.

Table 2 – Unit Root Test

Variables	ADF stat	1% critical value	5% critical value	10% critical value	Order of integration	Remark
GDP	4.045	-3.682***	-2.972	-2.618	I(0)	Stationary
MONSPL	15.627	-3.682***	-2.972	-2.618	I(0)	Stationary
INTR	-1.392	-3.689	-2.975	-2.619	I(1)	Non Stationary
PET	3.518	-3.689	-2.975**	-2.619	I(1)	Stationary

(*), (**) and (***) means stationary at 1%, 5% and 10% respectively.

Source: Authors’ Computation (2014) Through Stata 10

It has been a common practice, in applied econometric analyses, to test the order of integration of time series. The study applies ADF unit root test, at level and at the first difference of the time series with assumption of no drift and trend, to have the information about the order of a time series. ADF test results reported in the Table 2 are evident that we are unable to reject the null hypothesis for the presence of a unit root at level of each of the time series. All of the time series are stationary at their first difference. Since each of the time series is stationary at its first difference so the variables are cointegrated. There exists an equilibrium or long run relationship between the time series if all the variables are integrated of the same order, Engle & Granger (1987). The study applies Johansen cointegration technique. Johansen and Juselius (1991) introduced, in the multivariate cointegration test, the two likelihood ratio tests (Maximumeigen value and Trace tests) to find out the number of cointegrating vectors.

Table 3- Johansen Tests For Cointegration.

Rank	Eigen Value	Parm	LL	Trace statistic	5% critical value	1% critical	Eigen Value
0	-	39	1694.9497	98.1847	29.68	35.65	-
1	0.88247	44	1661.7627	31.8108	15.41	20.04	0.88247
2	0.59882	47	1647.6057	3.4969*1*5	3.76	6.65	0.59882
3	0.10667	48	1645.8573				0.10667

Source: Authors' Computation (2014) Through Stata 10

Table 3: produced information about the sample, the trend specification, and the number of lags included in the model. The main table contains a separate row for each possible value of r, the number of cointegrating equations. When r = 3, all three variables in this model are stationary.

In this study, because the trace statistic at r = 0 of 98.1847 exceeds its critical value of 29.68, the null hypothesis of no cointegrating equations are rejected. Similarly, because the trace statistic at r = 1 of 31.8108 exceeds its critical value of 15.41, the null hypothesis that there is one or fewer cointegrating equation is also rejected. In contrast, because the trace statistic at r = 2 of 3.4969 is less than its critical value of 3.76, the null hypothesis that there are two or fewer cointegrating equations cannot be rejected. Because Johansen's method for estimating r is to accept as r^{\wedge} the first r for which the null hypothesis is not rejected, we accept r = 2 as our estimate of the number of cointegrating equations between these three variables. The "*" by the trace statistic at r = 2 indicates that this is the value of r selected by Johansen's multiple-trace test procedure. The eigenvalue shown in the last line of output computes the trace statistic in the preceding line.

Table 4 - Eigen Value

Rank	Eigen Value	parm	LL	Eigen Value	SBIC	HQIC	AIC
0	-	39	1694.9497	-	113.6718	112.4558	111.8677
1	0.88247	44	1661.7627	0.88247	112.0845	110.7127	110.0492
2	0.59882	47	1647.6057	0.59882	111.5035*	110.0381*	109.3294
3	0.10667	48	1645.8573	0.10667	111.5015	110.0049	109.2811

The Hannan–Quinn information criterion (HQIC) method, Schwarz Bayesian information criterion (SBIC) method, and sequential likelihood-ratio (LR) test all chose five lags, as indicated by the "*" in the output. Both the SBIC and the HQIC estimators suggest that there are two cointegrating equations in the balanced-growth data.

Having determined that there is a cointegrating equation among the PET, MON and GDP series, the parameters of a bivariate cointegrating VECM for these three series by using Vector error-correction model were estimated below.

Table 5: Vector Error-Correction Model

Equation	Parms	RMSE	R sq	chi2	P>chi2
D_PET	5	1.5e+07	0.7599	91.76638	0.0000
D_gdp	5	305411	0.9266	366.1319	0.0000
D_monsp	5	3.3e+10	0.9547	611.3436	0.0000
Det(Sigma_ml) = 1.02e+46	Log likelihood = -1945.669\	AIC = 115.4511	HQIC = 115.7114	SBIC = 116.2143	

Source: Authors' Computation (2014) Through STATA 10

Variable	Coefficient	Std Error	Z	P>|z|	[95% Conf. Interval]
D_PET					
_ce1	-0.3527151	.1002221	-3.52	0.000	-0.5491468 -0.1562834
L1.					
PET					
LD.	-0.7727991	.1192256	-6.48	0.000	-1.006477 -0.5391212
gdp					
LD.	14.24755	4.462322	3.19	0.001	5.501554 22.99354
monsp					
LD.	-0.0000826	.0000614	-1.35	0.178	-0.0002029 .0000377
_cons	2758426	3168356	0.87	0.384	-3451437 8968289

D_gdp _ce1 L1.	-0256989	.002064	-12.45	0.000	-0297443	-.0216535
PET gdp LD.	.0121956	.0024554	4.97	0.000	.0073831	.0170081
PET | LD.	.6987392	.0918993	7.60	0.000	.5186199	.8788585
monspl | LD.	-9.48e-06	1.26e-06	-7.50	0.000	-.000012	-7.01e-06
_cons	347312.4	65250.7	5.32	0.000	219423.4	475201.4
D_monspl _ce1 L1.	451.1734	226.0685	2.00	0.046	8.087392	894.2594
PET LD.	-187.8319	268.9343	-0.70	0.485	-714.9334	339.2696
gdp LD.	37158.52	10065.55	3.69	0.000	17430.4	56886.63
monspl LD.	1.076826	.1384411	.1384411	7.78	.8054866	1.348166
_cons	2173.574	7.15e+09	7.15e+09	7.15e+09	-1.40e+10	1.40e+10
Cointegrating equations	Equation	Parms	chi2	P>chi2	Identification: beta is exactly identified	
	_ce1	2	158.465	0.0000		

Source: Authors' Computation (2014) Through STATA 10

Table 6- Johansen Normalization Restriction Imposed

Beta	Coefficient	Std Error	Z	P>|z|	[95% Conf. Interval]	
_ce1						
PET	1	.	.	.	.	.
Gdp	31.98555	3.94701	8.10	0.000	24.24956	39.72155
monspl	.0003085	.0000245	-12.59	0.000	-.0003565	-.0002605
_cons	1.32e+07	.	.	.	.	.

Source: Authors' Computation (2014) Through Stata 10

Table 5 contains information about the sample, the fit of each equation, and overall model fit statistics. The first estimation table contains the estimates of the short-run parameters, along with their standard errors, z statistics, and confidence intervals. The three coefficients on L. ce1 are the parameters in the adjustment matrix α for this model. The second estimation table contains the estimated parameters of the cointegrating vector for this model, along with their standard errors, z statistics, and confidence intervals. According to Johansen normalization restriction imposed table, one percent increase in GDP, increases PET by 31% in the long run, this shows that there is positive relationship between PET and GDP. Also, one percent increase in MONSPL, increases PET by .0003% in the long run, this shows that there is positive relationship between PET and money supply in the long run. Coefficient is statistically significant confirmed by $P>|z|$ which is 0.000. Overall, the output indicates that the model fits well. The coefficient on PET in the cointegrating equation is statistically significant, as are the adjustment parameters.

Granger Causality Wald Tests

Table 7: Granger Causality Wald Tests

Equation	Excluded	chi2	Df	Prob> chi2	Decision
Gdp	Monspl	28.561	1	0.000	Money supply granger- cause GDP
Gdp	PET	.61724	1	0.432	PET does not granger - cause GDP
Gdp	ALL	30.009	2	0.000	MONSPL and PET jointly granger- cause GDP
Monspl	Gdp	5.1133	1	0.024	GDP granger- cause money supply
Monspl	PET	.73629	1	0.391	PET does not granger - cause money supply
Monspl	ALL	5.1133	2	0.078	GDP and PET jointly granger- cause MONSPL
PET	Gdp	.81615	1	0.366	GDP does not granger- cause PET
PET	Monspl	8.8347	1	0.003	Money supply granger - cause PET
PET	ALL	59.515	2	0.000	GDP and MONSPL jointly granger- cause PET

Source: Authors' Computation (2014).

Consider The Results Of The Three Tests For The First Equation In The Table 5. The First Is A Wald Test That The Coefficients On The Two Lags Of MONSPL That Appear In The Equation For GDP Are Jointly Zero. The Null Hypothesis That MONSPL Does Not Granger-Cause GDP Cannot Be Accepted Because Prob> Chi2 Is 0.000, Therefore MONSPL Granger-Cause GDP. Contrarily, The Null Hypothesis That The Coefficients On The Two Lags Of PET In The Equation For GDP Are Jointly Zero Cannot Be Rejected Because Prob> Chi2 Is **0.432**. So The Hypothesis That PET Does Not Granger Cause GDP Cannot Be Rejected. The Third Test Is With Respect To The Null Hypothesis That The Coefficients On The Two Lags Of All The Other Endogenous Variables Are Jointly Zero. Because This Cannot Be Accepted In The Sense That Prob> Chi2 Is 0.000 That Is That MONSPL And PET, Jointly, Granger-Cause GDP

IV. Summary And Conclusions

This study examined the long run relationship among petroleum tax profit, interest rate, money supply and economic growth in Nigeria. It also looked at the direction of causality among petroleum tax profit, interest rate, money supply and economic growth employing the method of Johansen co-integration and the Granger causality tests using data spanning the period 1980-2013. Results also showed that PET revenue contributed positively to the development of the respective sector. The study also reviewed that there is a negative relationship between PET and interest rate in the short run but there is no relationship between PET and interest rate in the long run. Also, money supply enhanced PET positively in the short run but has negative impact on PET in the long run. It is now concluded that there exist the negative significant relationship between petroleum profit tax and money supply in Nigeria in the longrun but the relationship is positive in the short run.

Policy Recommendations

Based on the findings made in the course of this study, the following recommendations are hereby suggested

1. Once money supply did not have positive effect on Petroleum profit tax, government should reduce the level of money supply in circulation in order to causes Petroleum profit tax to adjust proportionally in the long run. A permanent increase in a country's money supply causes a proportional long run depreciation of its Petroleum profit tax but a permanent decrease in a country's money supply causes a proportional long run appreciation of its Petroleum profit tax.
2. It is recommended that Government should transparently and judiciously account for the revenue it generates through PET by investing in the provision of infrastructure and public goods and services. It is expected that the more effectively and efficiently revenue sis utilized by Government to create growth, employment opportunities and wealth in the economy, the more willing taxpayers would be to meet their obligations to the Government and discharge their duties in the overriding goal of achieving National Development.
3. Monetary policies should be used to create a favourable investment climate by facilitating the emergency of market based interest rate and exchange rate regimes that attract both domestic and foreign investments, create jobs, promote oil export and revive oil and gas companies that are currently operation far below installed capacity.

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