Crude Oil Shocks and Price Stability Within the Monetary Policy Framework: A SVAR Analysis

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Abstract_ The importance of stabilizing the macroeconomic indicators in the face of changing crude oil industrial fundamentals both within and on the international front, cannot be overemphasized. Several studies on crude oil production and macroeconomic stability in less developed nations have often concentrated on crude oil prices and revenue without recourse to the changing dynamics in the oil industry. This paper demonstrates how inflation rate responds to the activities in the oil industry within the context of the monetary policy framework. Three variables were used to capture the activities in the oil industry in Nigeria, viz; oil price, oil revenue and investment in exploration and drilling. The variables were sourced from CBN Statistical Bulletin, CBN website, Thomson Reuters workbook and Y-Charts. Utilizing a Structural VAR framework, findings reveal that the response of inflation to shocks from oil price was insignificant but responds significantly to investment in exploration and drilling within the monetary policy framework in Nigeria. The conclusion is hinged on the heterogeneous behaviors across the presence and absence of industry factor variable in the model which confirms that the happenings in the domestic industry have serious implications on how macroeconomic variables respond. The study thus, recommends policy changes including purposeful industry governance, classification of petroleum resources as strategic national assets, reconsideration of OPEC membership, economic diversification, and better management of revenue accruable from the petroleum industry.

Keywords: Rig-Count, Oil Shocks, Oil-Revenue, Price-Stability, Monetary-Policy, Heterogeneous and SVAR

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1. Introduction

The issues of international crude oil shocks and macroeconomic stability has over time been a major concern for scholars, government agencies, and development practitioners in recent years. This is because oil price has not been stable just like other commodities prices as a results of internal and external factors, [1]. Oil price shocks deepened both the real and financial sectors volatility which positively or inversely endanger the macroeconomic environment and pose threat to rate of industrial output, real gross domestic products, employment opportunities, investment, inflation, interest rate, flow of money supply and outflow of resources within and outside the country. [2], [3], [4]. Oil has been intensively viewed as the 'blood for industrial operations. The industrial demand for oil and the regulated supply by the oil producing states cause oil price shocks and disparities in the desired macroeconomic expected outcomes. The irreplaceable role play by crude oil and its sector has always put the demand and consumption of oil on a persistent increase. For instance, in 2015, the United States imported about 3.66 billion tons of crude oil, 3.36 billion tons were imported by China follows by 1.95 billion tons and 1.68 billion tons by India and Japan respectively and so on. The shocks in oil prices at a point favor the producers when the price of crude oil suddenly rise more than expectation due to increase demand or insufficient supply from the producers. This mostly causes inflation if not properly manage as result of positive oil shock gain by the producers. At the other hand, the importers gain massively from oil shock when the price of oil unexpectedly decline due to increase in supply or deficient demand. The Nigerian economy is not an exception to this concern, especially owing to the fact that a bulk of her fiscal-revenue is largely from the proceeds of crude oil export. According to the Central Bank of Nigeria [5], Nigeria's oil receipts account for more than 70% of federal revenue as well as 90% of her foreign exchange earnings. Other studies carried out on the Nigerian economy have also proved that the country is largely dependent on the activities in the crude oil industry, [6], [7], [8], [9], and [10]. This dependence or over-reliance of the Nigerian economy on crude oil industry increases her vulnerability to exogenous fluctuations of international crude oil prices, production and the unstable dynamics in the oil industry. This also have severe repercussions on the Nigerian

economy, some of which is the tendency of worsening important macroeconomic fundamentals, especially inflationary pressures, reduction in government revenue, fiscal responsibility failure, amongst others. Accordingly, the objective of stabilizing the general price level in the country continues to remain in conflict within the management of the economy's Fiscal and Monetary Policies, with little attention paid to the activities and dynamics of the crude oil industry. This has necessitated numerous works on the subject matter. Some of the works done on crude oil shocks and price stability in less developed oil-exporting economies has however, indicated a positive relationship between international crude oil-price and inflationary pressures. However, some other scholars have shown cases of negative relationship or no relationship at all, [11], [12], [13], [14], [15], [16], [17], [18], [6]. With closer scrutiny we observed that most of the studies never pay attentions to the activities in the domestic industry, such as investment in exploration and drilling. Using information on the Nigeria oil industry as shown in figure 1 and 2 we observed that outputs (crude oil production) responded to the fluctuation in investment in exploration and drilling than oil prices. The fluctuations in the graphs maybe attributed to two major factors which are external and domestic, that is, increased in oil price and the pipeline vandalism in the Niger Delta region of the country, [10].

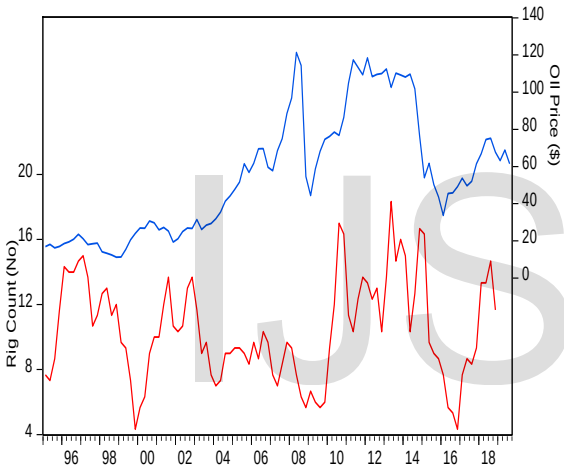

Figure 1: Graphical **Illustration of Oil Rig Count (investment in exploration and drilling)** and Oil Price in Nigeria

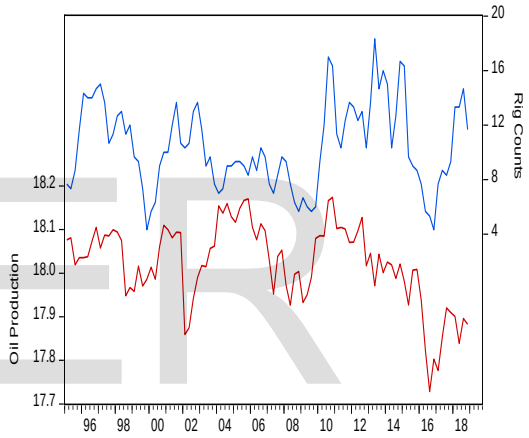

Figure2: Graphical Illustration of Oil Rig Count **(investment in exploration and drilling)** and Oil Production in Nigeria

Therefore, this study adopts the view that the keys to price stability and sustained economic growth may lie in a singular or multiplicity of industrial factors affecting oil production and sale rather than oil price alone. In doing this, the study focuses on how inflation rates respond to shocks in oil prices, as well as oil revenue within the monetary policy environment (Money supply and Exchange Rates) and industry factor (such as Rig Counts) in Nigeria from the 1st month of 1995 to the 6th month of 2019. This paper is divided into 5 sections, section one introduces the subject matter, section two discusses empirical findings while section three, four and five discusses the methodology, the findings and the conclusion of the paper.

2. Some Empirical Works

Several studies have been carried out on the subject matter. Some of which include works done by Iledare & Olatubi [20] in which they conclud that production and supply of oil do not seem to follow price trends closely but are rather affected more significantly by other factors such as political and technological development. More so, they assert that oil production in the Gulf countries, respond positively to a higher oil price shock in the economy while also indicating that the response of other

macroeconomic variables such as unemployment, income and revenue differed significantly across the Gulf Countries. Furthermore, a study by Blanchard and Gali, [19] observed that the effects of oil price shocks must have coincided in time with large shocks of a different nature. However, due to some partial identification strategy, their work failed to identify other shocks. Their study, notwithstanding, proffered some evidence which proved that increase in other commodity prices were important in the 1970s, even though their work was unable to demonstrate the shocks for the year 2000 and above. With regards to variance decomposition analysis, it was observed that oil price shocks were a considerable source of volatility for the variables used in their study. While only on the Russian economy, Ito [21] examined the total effect of oil prices on inflation and real gross domestic product with the application of vector error correction model within the time period of first quarter 1997 to fourth quarter 2015. The empirical result postulated that a 1 percent increase in the prices of crude oil causes the real GDP to rise by 0.25 percent over the next twelve months while inflations increase by 0.36 percent in the same time period. The study also found that monetary shock through interest rate channels direct effect on inflation and real GDP. Omisakin [22] in analyzing the causal effect of price shock of crude oil on the Nigerian economic performance between the time period of 1970 and 2005 using the VAR equation in modelling seven major macroeconomics variables such as RGDP, inflation, oil revenue, broad money supply, government capital spending, government recurrent expenditure and the real or actual oil prices. The corresponding results revealed that oil prices shocks have minimal effect on the performances of the macroeconomic variables. For instance, the growth of industrial production and oil price shocks combined with monetary shocks were the largest source of variation other than the variable itself. Recent studies have also been carried out on the subject matter. Cross and Nguyen, [23] noticed that positive energy price shocks were found to generate statistically significant reductions in real GDP growth and increases in inflation, with both sets of responses consistently declining over the sample period. Furthermore, they argued that interest rate responses were found to be consistently positive over the sample period. Other studies have also been carried out with particular reference to the Dutch Disease. Akinleye and Ekpo, [24] in their study found out that the Dutch disease syndrome was pronounced both in the short and long run, but that the long-run impact on GDP is more apparent. Using multivariate GARCH, Abubakar. [25] proved that Nigeria and Gabon were more susceptible to the high volatility in macroeconomic effects (exchange rate) of the Dutch disease than Angola in the short run. The study also revealed that there is no long run relationship in Nigeria and Gabon; however, stable long run interactions existed in Angola; also see [6] that suggested thresholds beyond which the relationship becomes negligible. Ayadi, Chatterjee, and Obi, [26] found a strong correlation between oil output and the economy (inflation, unemployment, exchange rate, and interest rate). They found that oil prices had direct first order effects on government revenues and hence on government expenditures, and had negligible second order effects on economic growth as measured by GDP. Furthermore, they also had significant second effects on exchange rates, inflation and hence cost of living index for import-dependent economies such as Nigeria. From the review of related literatures, it can be deduced that studies on the relationship between crude oil shocks and price stability are numerous in economic and energy literatures. Various indicators such as variables of oil price, oil revenue and price stability have been used in these demonstrations. However, little or no attention has been given to the role industrial variables have to play with regards to price stability. Thus, this study examined this relationship by introducing industrial sector variables (oil price, oil revenue, rig counts) in the model.

3. Data Issues and Model

The study utilized six variables in the models, Oil Price, Oil Revenue, Total Rig Counts, Inflation Rates, the Growth of Money Supply and Exchange Rate ranging from the 1st month of 1995 to the 6th month of 2019. For oil price, the study adopted spot market price of West Texas Intermediate (WTI) crude oil, which is considered as the benchmark for world oil prices. The WTI crude oil price was measured in US dollar and obtained from the Thomson Reuters workbook. Rig counts were used

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in the model to capture industrial factors which was the proxy for investment in exploration and drilling in the oil industry, sourced from Y-Charts.

The required series on Growth of Money Supply and Exchange Rates were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin, [5] and the CBN website. With respect to Inflation Rates, the Headline, Core and Food measured with the November 2009 base period. The data was also obtained from Central Bank of Nigeria (CBN) Statistical Bulletin, 2018 and CBN website. All variables were expressed in natural logarithmic form except inflation rates and total rig counts. The variables in the models were test for possible long-term relationship with the techniques of Johansen and Julius [27]. Table2 shows the summary of cointegrating relationship among the variables. Trace statistics and Maximum Eigenvalue indicated at least 2 cointegrating relationships among the variables in the models.

3.1 The Model

The study demonstrated the effects of fluctuations in oil shocks on the Nigerian macroeconomic variable (Inflation Rate) in the frameworks of the Structural Vector AutoRegressive (SVAR). The standard procedures for estimations of macroeconometric models are followed carefully and the Zivot [28] conditions are equally observed for the selections of appropriate estimation techniques of SVAR.

Generally, the SVAR model is casted as

$$A_1 x_t = A_1 x_{t-1} + \ldots A_p x_{t-p} + \mu_t \quad (1)$$

$$x_t = A_1^{-1} x_{t-1} + \ldots A_1^{-1} A_p x_{t-p} + A_1^{-1} \mu_t \quad (2)$$

$$x_t = B(L) x_t + \mu_t \quad (3)$$

Where

$$B(L) x_t = A_0^{-1} A_1(L) A_0 \mu_t \mu_t = \varepsilon_t \quad (4)$$

The residual μ_t is the reduced form of VAR and assumed to be *iid* as stated in (1). $A_1(L)$ is a matrix of polynomial in the lag operator, [28], [32], [33].

Identification and Contemporaneous Restrictions

No particular model was tested in this study, thus, the paper based the identification restrictions on different economic intuitions. The paper employed only short-run restrictions on the contemporaneous relations because the structural VAR based on short-run restrictions perform better, [29] in this regard. The short-run restrictions primarily control the contemporaneous feedback effects among the variables in the model. The identification in the equation is obtained by imposing restrictions on contemporaneous relation among variables included in SVAR. The identification restrictions were motivated by the following economic reasoning: first, Nigeria is a net oil exporter and a developing economy, and a price taker in the oil market. Also because the price of oil is determined by the global demand and supply conditions, the domestic output level, inflation rates and the exchange rates in our sample country will have a negligible effect on it. Therefore, the oil price is assumed to be exogenous.

Thus, the reduced error term for the shocks can be expressed as follow:

$$\mu_{oilp} = \varepsilon_{oilp} \quad (5)$$

Equation (5) shows that the error term of oil shocks (price, revenue and industrial factor) will be equal to its structural error term. However, in case of other variables in our model, a change in oil shocks (price, revenue and industrial factor) can have a contemporaneous effect on them as an increase (decrease) in oil shocks can raise (reduce) the exchange rates the naira to of US dollar and the growth of money supply in the domestic economy. Secondly, domestic price level is assumed to be influenced by all the variables including the monetary policy variables. Finally, we do not impose any restrictions with respect to the monetary policy variables, suggesting that the monetary variables respond to changes in all variables.

The reduced form error terms of the domestic variables (inflation, rig count, the growth of money supply and exchange rates) are as follows:

$$\mu_y = \varphi_{21} \mu_{oilp} + \varepsilon_y \quad (6)$$

$$\mu_y = -\varphi_{31} \mu_{oilp} - \varphi_{32} \mu_y + \varepsilon_\pi \quad (7)$$

$$\mu_y E_x = -\varphi_{41} \mu_{oilp} - \varphi_{42} \mu_y - \varphi_{43} + \varepsilon_\pi E_x \quad (8)$$

Estimation of Equations 6–8 allows us to measure the influence of oil shock (price, revenue and rig count) on the macroeconomic fundamental of the Nigerian Economy.

Graphs were used to illustrate the behavior of the variables and the econometric tests for unit roots,

developed by Dickey and Fuller. [30] and Philip and Perron, [31] were used to test for stationarity, whereas the cointegrating behavior among them was tested by the model of Johansson and Julius [27]. The techniques, are well established in literature. The results of stationarity behavior and cointegration are reported on Table1 and 2.

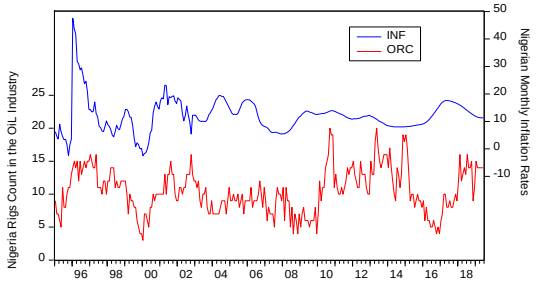

Figure 1: Graphical Illustration of INF and ORC in Nigeria, 1995M01 - 2019M06

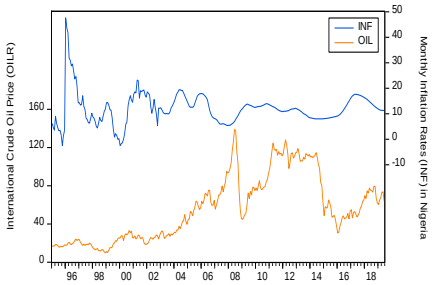

Figure 2: Graphical Illustration of INF and OILP in Nigeria, 1995M01 - 2019M06

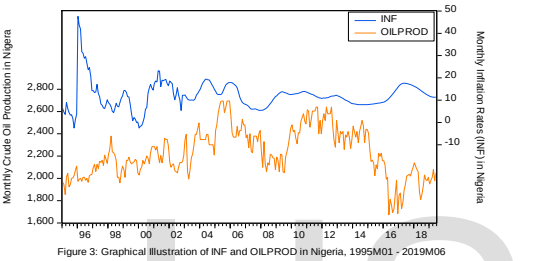

Figure 3: Graphical Illustration of INF and OILPROD in Nigeria, 1995M01 - 2019M06

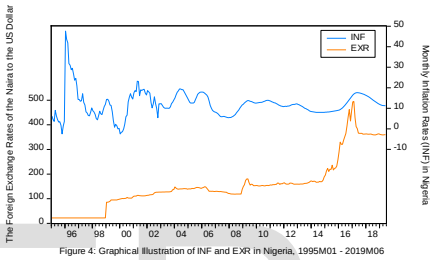

Figure 4: Graphical Illustration of INF and EXR in Nigeria, 1995M01 - 2019M06

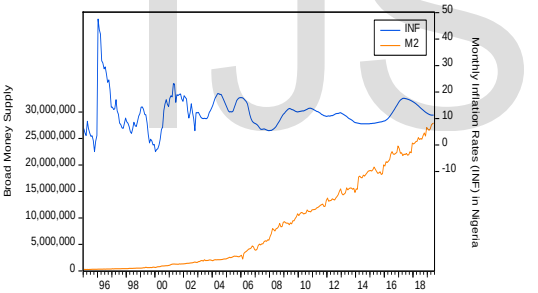

Figure5: Graphical Illustration of INF and M2 in Nigeria, 1995M01 - 2019M06

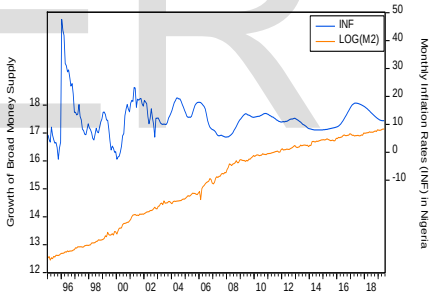

Figure6: Graphical Illustration of INF and log(M2) in Nigeria, 1995M01 - 2019M06

The most volatile series in the figures above were rig counts (i.e., the measure of investment in exploration and drilling) and oil productions in figure1 and 3. Inflation rates (Price Stability) tend to behave along with the behaviors of these series. The movement of inflation rates and other variables or series in the model tend to be independent of each other.

The unit root method was used for the test of stationary of the time series. The variables were tested showing the random walk properties of the time series (i.e., None, Intercept, Trend and Intercept), the results are summarized in table 1. It shows that all the series in the model exhibit random walk. Thus, we included in the model the intercept and trend assumption.

Table 1: Unit Roots Test

Panel I: Test None Intercept and Trend							
	Augmented Dickey-Fuller			Philip-Perron			
Variables	Levels	1st Diff.	5%	Levels	1st Diff.	5%	Decision
INF	-1.903	-16.73**	-1.942	-1.800	-16.84**	-1.942	I(1)
OILP	0.396	-14.19**	-1.942	-0.608	-12.31**	-1.942	I(1)
ORC	-0.913	-22.87**	-1.942	-0.806	-25.40**	-1.942	I(1)
EXR	1.632	-16.36**	-1.942	1.540	-16.41**	-1.942	I(1)
M2	6.471	-19.49**	-1.942	7.038	-19.70**	-1.942	I(1)
OILREV	0.741	-15.25**	-1.942	0.651	-15.26**	-1.942	I(1)
Panel II: Test Intercept Only							
	Augmented Dickey-Fuller			Philip-Perron			
Variables	Levels	1st Diff.	5%	Levels	1st Diff.	5%	Decision
INF	-4.674**	-16.701**	-2.871	-4.403**	-16.81**	-2.871	I(0)
OILP	-1.670	-14.19**	-2.871	-1.858	-12.30**	-2.871	I(1)
ORC	-4.030**	-22.84**	-2.871	-5.092**	-25.38**	-2.871	I(0)
EXR	-1.534	-16.53**	-2.871	-1.544	-16.54**	-2.871	I(1)
M2	-1.705	-21.96**	-2.871	-1.949	-22.53**	-2.871	I(1)
OILREV	-1.620	-15.25**	-2.871	-1.699	-15.27**	-2.871	I(1)
Panel III: Test Intercept and Trend							
	Augmented Dickey-Fuller			Philip-Perron			
Variables	Levels	1st Diff.	5%	Levels	1st Diff.	5%	Decision
INF	-4.685**	-16.68**	-3.425	-4.410**	-16.78**	-3.425	I(0)
OILP	-1.896	-14.19	-3.425	-2.138	-12.29**	-3.425	I(1)
ORC	-4.035**	-22.79**	-3.425	-5.111**	-25.32**	-3.425	I(0)
EXR	-1.934	-16.53**	-3.425	-2.055	-16.54**	-3.425	I(1)
M2	-0.367	-22.09**	-3.425	-0.229	-23.133	-3.425	I(1)
OILREV	-1.410	-15.26**	-3.425	-1.640	-15.26**	-3.425	I(1)

Source: Author Computations from E-view Results. Note, ** indicates significance of 5% (**≤0.05 level of significance)

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Table2 Summary of Cointegrating

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.129341	116.8169	95.75366	0.0008
At most 1 *	0.102239	76.51195	69.81889	0.0132
At most 2	0.073015	45.12711	47.85613	0.0882
At most 3	0.045270	23.06399	29.79707	0.2429
At most 4	0.030491	9.582820	15.49471	0.3142
At most 5	0.001963	0.571720	3.841466	0.4496

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.129341	40.30494	40.07757	0.0471
At most 1*	0.132239	41.98484	41.27687	0.0364
At most 2	0.073015	22.06312	27.58434	0.2171
At most 3	0.045270	13.48117	21.13162	0.4090
At most 4	0.030491	9.011100	14.26460	0.2852
At most 5	0.001963	0.571720	3.841466	0.4496

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

4. Results and Discussion

We demonstrated the response of inflation rates to shocks in crude oil and monetary policy variables in Nigeria in four models. We computed the structural impulse response functions for at least 20 periods. The impulse response functions trace the transmission of a unit standard deviation shock to the current and future values of the endogenous variables here inflation rates. The four models were estimated such that we have inflation model with oil price and without industry factor variable; inflation model of oil price with industry factor variable; inflation model with oil revenue without industry sector variable and; inflation model with oil revenue and industry factor variable. The optimum lags for the models were selected using different criteria. The optimum models were statistically and mathematically stable, and outlined to the conditions stipulated by Juselius [34]. Knowing that the results from the impulse response functions and forecast error variance decompositions are usually sensitive to the ordering of the endogenous series in the system, we ordered the series according to their order of impacts and find that the relative ordering of variables does matter given the economic condition stated in section 3. As a result, the ordering process was fixed by arranging the series as follows: inflation rates, oil price, oil revenue, rig counts, the growth of money supply and the Foreign Exchange Rate.

The structural response of domestic price to oil shocks is demonstrated in Figure 5. The response of inflation rates was highly volatile to the shocks in Oil-Price than to shocks in Oil-Revenue. By the time the industry factor variable was introduced into both models, the volatility of inflation rates became less volatile to both prices and revenue. However, the shocks to Oil-Price were positive but were negative to the shocks in Oil-Revenue. The response of inflation rates to shocks in industry factor variable due to external condition (fall in price) and domestic condition (pipeline vandalism and rig destruction) are slightly different. The response in the oil-revenue model is negative and permanent after the 20th quarter, whereas the shocks in the oil-price model dies off. This shows that oil shocks have little to contribute to domestic price stability in Nigeria.

The impulse response function indicates that inflation responds significantly, negatively to shocks in the industry factor within the first 3 quarters, thereafter it began rising and not reverting. The response of inflation to oil price was insignificantly positive within the first 3 quarters, the response to oil price shocks became negative for 5 quarters and thereafter became positive in the 6th and 8th quarter alike. Like oil price, oil revenue was insignificantly negative in the early stage and negative in the later stages but was mean reverting throughout the forecast horizon. The figures revealed that inflation rate responded to the shocks from monetary variables negatively but in a significant manner furthermore the response of inflation to the growth of money supply was more stable than that of its response to shocks from foreign exchange rates.

The models show weak response of inflation rate to the shocks from oil prices indicating that international oil prices have contributed little to the fluctuation in general price level in Nigeria. Rather, what significantly contributed to the instabilities in the general price level in Nigeria is the happenings in the oil industry (investment in exploration and drilling) and other factors that affected productions. The proxies for industry factor used in this study shows a strong significant effect on inflation rates. Hence, oil industry shocks (investment in exploration and drilling or rig count) is what could lead to macroeconomic instability in Nigeria and not necessarily oil price as postulated in [6]. [7], [8] and [9].

As an alternative way of checking the dynamics of transmission among the variables, in Part I of table 3a the variation of inflation rates to shock in price remain persistently higher to 23.96% in the 20th quarter. The percentage falls to 14.29% in the 20th quarter of Part II when introduced industry factor variable. The result implies that the happening in the domestic industry played higher role in how inflation rates responded to shocks in oil price. This result implies that the introduction of factor variables into the models reduces the higher fluctuations in domestic price of goods and services in Nigeria. Hence, the findings from this study shows that industry factors could play an important role in the management of the effects of oil price on the macroeconomic conditions of the Nigeria economy, especially in the area of economic growth and price stability.

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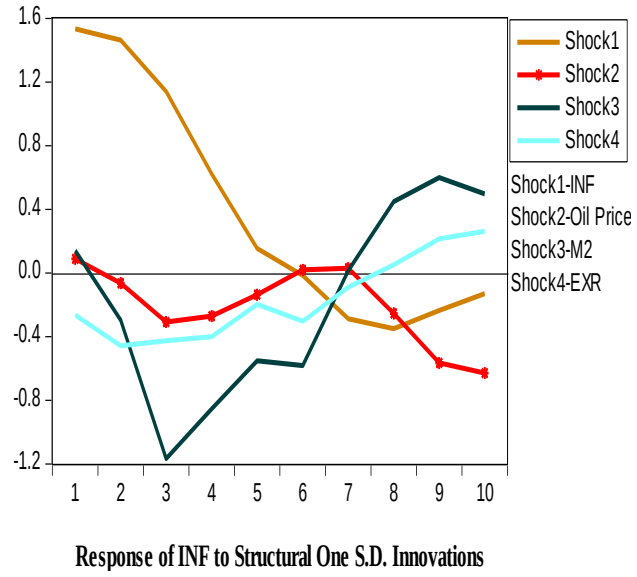

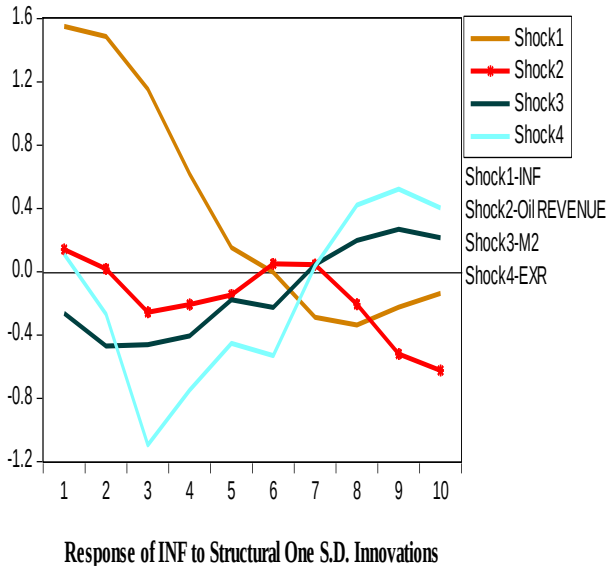

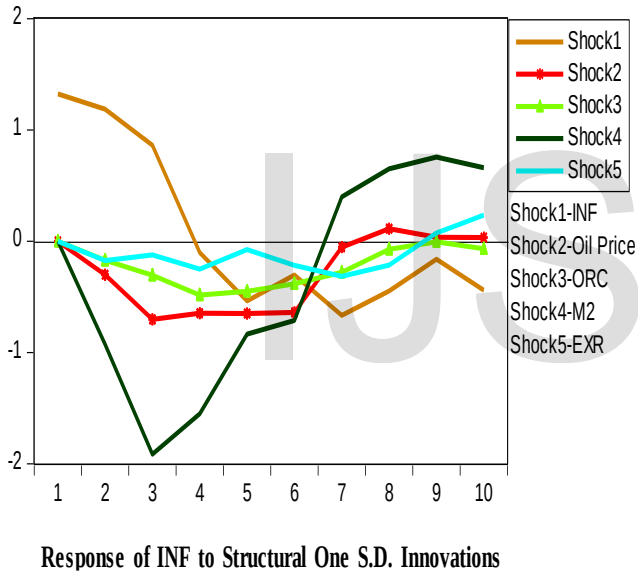

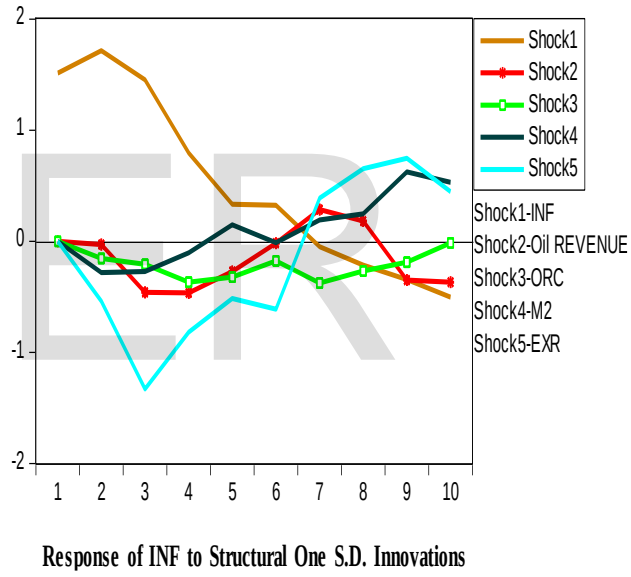

Figure 5: Impulse Responses of Inflation Rates to Oil Shocks

Table 3a: Variance Decomposition of INF for 20months using Oil price

	Part I: Variance Decomposition of INF				Part II: Variance Decomposition of INF with ORC				
Period	Shock1	Shock2	Shock3	Shock4	Shock1	Shock2	Shock3	Shock4	Shock5
1	96.03	0.32	2.84	0.81	100.00	0.00	0.00	0.00	0.00
2	73.96	1.37	5.89	18.79	70.01	2.21	1.00	25.70	1.07
3	64.81	2.08	6.90	26.21	63.189	3.85	2.17	29.49	1.30
4	62.02	1.99	7.52	28.47	57.57	4.21	3.07	33.53	1.62
5	61.12	2.53	7.28	29.07	54.19	4.91	4.31	34.69	1.90
6	54.04	8.19	7.31	30.46	49.32	4.54	4.17	37.17	4.80
7	46.22	16.01	11.50	26.26	44.31	9.29	4.19	32.47	9.73
8	40.99	21.02	13.88	24.12	40.21	12.42	5.67	29.83	11.86
9	37.47	23.16	16.25	23.11	37.35	14.51	6.49	27.85	13.81
10	35.04	23.96	19.10	21.9	35.65	14.29	7.34	25.18	17.53

Table 3b: Variance Decomposition of INF for 20months using Oil Revenue

	Part I: Variance Decomposition of INF				Part II: Variance Decomposition of INF with ORC				
Period	Shock1	Shock2	Shock3	Shock4	Shock1	Shock2	Shock3	Shock4	Shock5
1	95.99	0.78	2.75	0.48	100.00	0.00	0.00	0.00	0.00
2	92.16	0.39	5.77	1.67	92.98	0.01	0.43	1.42	5.16
3	70.57	1.43	7.44	20.56	69.34	3.73	1.77	1.44	23.71
4	66.28	1.59	7.82	24.31	65.06	4.00	2.70	1.49	26.75
5	65.19	1.96	7.87	24.97	60.41	4.53	4.055	2.08	28.92
6	58.42	7.57	8.02	25.99	56.24	4.98	3.96	4.53	30.29
7	47.42	20.01	10.46	22.11	52.31	9.47	3.63	6.63	27.96
8	46.56	20.87	10.66	21.91	47.99	13.92	5.57	6.47	26.05
9	46.57	20.79	10.70	21.93	43.99	15.46	7.24	6.81	26.49
10	46.03	20.62	11.02	22.33	43.78	15.58	7.36	6.83	26.45

Source: Author's Computations, 2020.

5. Conclusion

The illustrations and efforts made so far is to grape the extent and response of inflation rates to oil sector activities in Nigeria, with evidence of monthly data from January 1995 to June 2019. In the course of the study, six pronounce variables were selected due to their respective impact on macroeconomic analysis and oil sector activities and the data were sourced from different sources and analyzed with the SVAR method. The revelation made from the SVAR model lift the doubt that the basic and major factor that influenced Nigerian macroeconomic environment is traceable to persistent changes in the level of investment in oil exploration and drilling in the oil industry. The paper shows that fluctuations in prices in Nigeria are independent of dynamics in international oil prices but dependent on various industrial factors within the Nigerian economic environment. This paper therefore calls for urgent de-emphasize of oil sector in Nigeria as other sectors (agriculture and manufacturing) can trigger growth and are less volatile. Also efforts need to be made regarding the infrastructural environment and social attitude and norm if other sectors rather than oil sector stand to lead the Nigerian economy.

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