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Monetary Policy amidst COVID – 19 Pandemic in Nigeria

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Abstract
This study examined the effectiveness of monetary policy on economic growth in Nigeria within the COVID-19 period spanning from December 2019 to October 2020. Three most adjusted monetary policy instruments were employed: the monetary policy rate, the exchange rate and broad money supply, which were made the explanatory variables. The growth rate stood as the dependent variable. Granger Causality and Vector Auto-Regressive (VAR) were employed for the analysis as informed by the unit root tests. It was found that, when applied individually, monetary policy rate and exchange rate granger caused economic growth while braod money supply did not. When jointly used, all three variables granger caused economic growth. Also, It was found that, monetary policy rate and exchange rate have significant impact on economic growth while broad money supply could not have any significant impact amidst the COVID-19 Pandemic period.This study therefore, suggests that, the monetary authorities could use the instruments of monetary policy rate and exchange rate to motivate economic growth amidst pandemic periods like this.More so, pumping out money can only have significant impact when the use of such money is guided for the intervention purpose only. If not, it could end up causing serious inflation.

Keywords: COVID-19 Pandemic, Economic Growth, Monetary Policy
JEL Classification: E51 E52 I18

1. Introduction

The global economy was brought to a standstill as a result of the novel corona virus (COVID–19). The whole world was very much in fear because of the Severe Acute Respiratory Syndrome (SARS) permeates the fibres that hold the global economic activities together. This situation led to shutdown of major economic activities leaving only, in some special cases, essential services that are considered to be very necessary for human existence.

The healthy status of many countries' economy were likely affected by the spillover effect that which be as a result of the sreade of covid-19 pandemic causing uncertainty to people in their home countries.

Monetary policy is a course of action that guide the principle and the control of flow of fund by the financial or monetary body – Central Bank of Nigeria (CBN) – in order to foster economic growth and development. The basic objective of monetary policy includes price stability, job creation, strong financial system, exchange rate stability, healthy balance of payment, sustainability of economic growth and development (Nnanna, 2001; Altman, 2003; Ikoh, 2010; Omotola, 2013; Acha, Ikoh&Nsien, 2016).

The CBN constitute the Monetary Policy Committee (MPC) who on regular basis meet to evaluate and decide on the performance of the economy regarding the instrument adopted and seeking to make changes in case the instrument adopted is not yielding the expected result. Monetary policy application is done through the use of the instruments like Monetary Policy Rate (MPR), Open Market Operation (OMO), Cash Reserve Ratio (CRR), Liquidity ratio (LR) and Treasury Securities. In the last meeting of the MPC in Nigeria on 22nd September, 2020, the CBN Governor Godwin Emefiele announced that the committee has voted to adopt CRR at 27.5%, MPR at 11.5%, LR at 30% and adjusted asymmetric corridor from -200/-500 to +100/-700 basis point around the MPR(IMF, 2020). Hence the committee observed that this decision may stifle that recovery of output growth and there is likelihood of economic contraction. The Central Bank of Nigeria (CBN) cut monetary policy by 100 basis points and expanded liquidity availability for non-bank financial institution, reducing interest rates on all applicable CBN interventions from 9% to 5% and introducing a one year moratorium on its intervention facilities, liquidity injection of 3.6 trillion into the banking system, including N100 billion to support the health sector, N2 trillion to manufacturing sector and N1.5 trillion to the real sector, among other. Still in response to COVID-19(IMF, 2020), the official exchange rate was adjusted from N307 per US dollar just before the pandemic to N361 at the start, and then gradually continued to increase up to N385 per dollar and even beyond(IMF, 2020). There exists an ongoing unification of different exchange rates under the investor and exporter (I&E) window, bureau de change, and retail and wholesale window, with the sole aim of making I&E rate trend in line with determination of exchange rate according to market forces (IMF, 2020).

However, the committee members were of the view that the option to ease will complement the bank's commitment to sustain the trajectory of the economic recovery and reduce the negative impact of COVID – 19 (CBN, 2020). In the heat of the pandemic policy options were dosed out like tax holiday, palliative for indigent ones in the society, interest rate reduction among others. Also, online platform for business was highly encouraged due to restriction of movement and prohibition of body contact in addition to new ways of distribution of goods and services through dispatch riders.

Adopting the right monetary policy amongst alternative macroeconomic frameworks remain a fundamental factor in policy making that can make or mar the economic fortune of any nation. scholars have argued that, the efficacy of the monetary policy is primarily in the achievement of the intended purpose (Chuku, 2009; Altman, 2003), but others like Fasanaya, Onakoyand Agboluaje (2013);

Adeoye, OjapinwaandOdekunle (2014) and Aliyu andEnglama (2009) were of the view that local price fluctuation is paramount in the hindrance of the success of monetary policy hence frustrating investment and growth in the economy.

In the face of this loop nest of economic dilemma of policy crises, comes the pandemic that brought the world economy to its knees, thereby making various economic policies ineffective and unrealistic. The MPC in Nigeria was out to look for better monetary policy that could curtail the obvious effect that may result from the shutdown of the nation's economy.

In the light of this effort, the Nigerian economy is yet to recover from the pandemic shock and businesses were just trying to break-even. Therefore, this paperis set to evaluate the effectiveness of these monetary policy instruments that were put in place to motivate growth in the economy within the COVID-19 period, knowing fully well that Nigeria is an emerging economy.Specifically, the study intend to examine the impact of three most used instruments of monetary policy: exchange rate; monetary policy rate; and broad money supply, on economic growth in Nigeria.

This paper is structured in the following order; Introduction, Literature Review, Methodology, Discussion of Findings, Conclusion and Recommendations.

2. Literature Review

Conceptual Issues

Economic policy is majorly divided into two; namely Monetary and Fiscal Policies. While fiscal policy is concerned with regulation of non monetary issues (tax, budget, terms of trade, etc) that affect the economy, monetary policy on the other hand is concerned mostly with combination of measures (tools or instruments) which is used collectively or selectively to control the supply of money and credit flow in any economy. The application of this policy – monetary – may take the form of expansionary when the MPC want to increase the volume money supply in the economy than accustomed but contractionary form of monetary policy which intends to shrink the volume of money in circulation in order to slow down economic activities so as to curb economic distortions (Freidman, 2001; Okigbo, 2008).

Acha, Ikoh&Nsien (2016) cited Lipsey & Chrystal, (1995) as saying that expansionary is usually used to check unemployment during recession by reducing interest rate hoping that easy access to credit will boom business activities but on the other hand contractionary tools are deploy into the economy to checkmate distortions caused by inflationary tendencies.

Ufoeze, Odimgbe, Ezeabalisi and lajekwu (2018) stated that monetary policy is usually embarked upon in order to control the acceleration of money supply in an economy. Every government desire to have a specific economic growth because it is very much believed that the rate of growth had impacted the purchasing power of economic agents; hence government action plan in the monetary sector is highly needed to cater for the monetary variables that would affect the government general economic policy.

Theoretical Review

According to Acha, IkohandNsien (2016), Keynesian school of thought brought the basis for the regulation of economic activities through interventions to keep the economy afloat. It argued that money stock can facilitate financial market activities thus affecting interest rate, investment, output and employment in moving towards full employment of resources. The moment spending is disallowed from the economy, low aggregate demand and contracting of the economy will set in. This is the view of most of the scholars who have argued in favour of the Keynesian principles. Friedman in 1968 argues that if the quantum of money supply is not checked, it may lead the economy into inflation. The consequences of inflation caused by unguided money supply is that it can lead to misallocation of resources, confiscation of wealth, distortion of pricing, raise the cost of doing business and depreciation of money worth (Borio, 1995).

Fischer (1997) suggested that prudent regulation and supervision are fundamental to compliance with monetary policy guidelines; hence calling for constant monitoring, probing, analyzing and enquiring into banks activities and information. It is on this background that Omotola (2013) pointed out that monetary policy realization is constrained by many factors in the existing social structure which comprises of security, corruption, goods hoarding and hedging, etc. saying that all put together have impacted negatively on the real sector of the economy thereby exposing the nation to import influenced inflation and shocks from external commodity consumed locally.

Therefore, Chuku (2009) states that the Keynesian IS – LM framework which is usually super imposed on Philip's curve is used to establish inflation and that changes in monetary policy affects the money supply, causing interest rate to send the demand and supply into equilibrium. Also, the classical quantity theory of money which is the Keynes school take to be money supply is believed that through its transmission display indirect effect on Gross Domestic Product (GDP). So, the monetarist agrees with Keynes that economy cannot operate at full employment of resources in the short run and expansionary monetary policy may work positively in the long run.

Empirical Review

Borio (2020) emphasized that prudential policy must be entrenched in the financial system in order to encourage the banks to ease capital buffers accumulation so as to keep credit flowing. Capital buffer implies amount of capital above regulatory minima. However, the implication of this capital buffer is that it will ease capital and liquidity requirements, impose blanket distribution restrictions like dividends and ease both classification exposures e.g. non – performing loans, regulatory treatment of accounting losses as well as new expected credit loss provision standard. The basic modification of approach shows three effects; every stakeholder must play its role to tackle the emergency of COVID – 19, to focus on a more micro-prudential approach and safety of individual banks existence.

Jerome (2020) stated that, the outbreak of COVID – 19 caused havoc on human and economic activities across the globe. Public health measures put in place to

check the spread of the virus enhanced sharp decline in economic activities as well as surge in job losses, weak demand, low oil prices all combined to low credit flow into households and Businesses in US and the world at large. Equity prices and nominal treasury dropped sharply causing functioning market deterioration and making all markets experience acute strains. This necessitated the Federal Reserve to bring into the economy interventions that can restore smooth market functioning like emergency credit and liquidity facilities. In the end, adjustments were made to the supervisory and regulatory role to facilitate market functioning and reduction of regulatory impediments to banks assisting economic agents in the US.

World Bank Group (2020), in an effort to discuss the Financial Sector Policy Interventions–Liquidity Support and Risk Mitigation expressed concerns as to how to bridge the financial gap created by COVID–19, financial sector vulnerabilities of the emerging markets like the Western Balkans whose financial system is fragile and financial stability risk of the region. Four major risks are likely to emerge in the event of COVID–19; market risk, liquidity risk, credit risk and risk to earnings and resilience. It is however noted that unusual monetary policy needs to be deployed in all effort to reduce the unforeseen effect of the pandemic on the economy. This is sometimes called discretional monetary policy.

Macroeconomic outlook resulting from the effect of the pandemic is dependent on monetary policy choice of action. The major concern of the financial authorities should be, to set the funds rate to keep inflation and unemployment in control. It is this understanding that makes some countries in Europe to adopt policy rate below zero and in US close to zero. It has become pertinent that when a country reaches it lower bound, the financial situation should not be allowed to worsen further hence policymakers must act swiftly rather than waiting for the doom. Flexible policy option must be adapted in relation to the peculiarity of every country's inflation and unemployment propensities (Curdia, 2020).

Pinshi and Malata (May, 2020) in the study fading the effect of corona virus with monetary policy found that there were many factor that could affect the economy from the pandemic uncertainty. The Bayesian Technique of the VAR model used, shows that cutting the policy rate would not help the economy to cope with the corollaries of COVID – 19. The study suggests that there is need to rethink other tactics and strategies that would prevent communication gap and evolve unconditional monetary policy measures. Furthermore, it was noted that fiscal policy could be a key driver in blurring the effects of the corona virus crisis.

Nikola (2019) argued that it is apparent to see coming of cashless society in the nearest future which would be aided by the central bank's evolution of digital electronic currencies as it is already happening in countries like Sweden. It is however recommended that financial inclusion, reviewing policy regulation framework as it will affect digital currencies, financial stability and the needed financial infrastructure must be in the front burner of MPC discussions so as to foster better ways of adopting cashless policy in any country.

Ufoeze, Odimgbe, Ezeabalisi and Alajekwu (2018) carry out study on the effect of monetary policy on economic growth. The study which covers a period of 30 years

used ordinary least square technique and revealed that monetary policy rate, interest rate and investment are not significant to economic growth while money supply and exchange rate were significant in Nigeria. Their study, however, used GDP as proxy in place of the growth in GDP, which could not be the best for the study. Secondly, they employed multiple regressions which measure the immediate impact of the relationship. It is a known fact that economic variables do not impact until after some times lag, and is informed that the method used might not be accurate. Lastly on this part of the paper, monetary policy and its effectiveness on economic development in Nigeria reveals that monetary policy is pivotal in the creation of favourable investment climate which can stimulate both exchange and interest rates that would in the end attract local and foreign direct investment, job creation and diversification of the economy (Akinjare, Babajide, Isibor & Okoafor, 2016). The study used OLS to carry the empirical investigation that shows that exchange rate, interest rate and monetary rate are positively related to economic development in Nigeria.

Fasanya, Onakoya and Agboluaje (2013) have examined the impact of monetary policy on economic growth in Nigeria. The study used time-series data covering the range of 1975 to 2010. The effects of stochastic shocks of each of the endogenous variables are explored using Error Correction Model (ECM). The study showed that long-run relationship exists among the variables. In addition, the core finding of this study showed that inflation rate, exchange rate and external reserve are significant monetary policy instruments that drive growth in Nigeria.

Adegbite and Alabi (2013) examined the impact of monetary policy on economic growth in Nigeria, using secondary data from central bank of Nigeria statistical bulletin covering the period of 1970 to 2010. Multiple regressions were employed to analyze data on such variable money supplies; inflation, exchange rate, interest rate and gross domestic product were all found to have significant effects on the Economics Growth with the Adjusted R^2 of 58%. Following the outcome of this study, it is, therefore, concluded that exchange rate stability had played an important key role in keeping inflation low for most of the transition period. This paper has so many issues, from spurious analysis to misspecification. Also there was no room for lag period.

The Gap in Literature

Most papers written prior to this study but within this COVID-19 period such as those of Borio (2020), Jerome (2020), World Bank Group (2020), Curdia (2020) and Pinshi and Malata (2020) could not look into the effectiveness of monetary policy during the COVID-19 era. Studies before this era based their investigations on era without the pandemic. Therefore, to the best of our knowledge, research has not been carried out to address this topic during the present pandemic and this is the main gap this study tries to fill.

3. Methodology

This study adapted the model of Ufoeze, Odimgbe, EzeabalisiandAlajekwu (2018). Thus, the study specified growth rate as the dependent variables, while monetary policy is represented by the most commonly used instruments of monetary policy

during the COVID-19 pandemic: monetary policy rate; exchange rate and broad money supply, remained the explanatory variable. This is presented in equation 1 as:

$G_r = f(M_{pr}, E_r, M_s)$ …..……..1

Where *Gr* is the growth rate of gross domestic product,M_{pr} stands for monetary policy rate, *Exr* is exchange rate of naira to the US dollar and M_s is broad money supply in Nigeria.

In this regard, the econometric model becomes

$G_r = \alpha + \beta_1 M_{pr} + \beta_2 E_r + \beta_3 M_s + \mu_t$ ……..……..2

Where μ_t represents the stochastic error term at present time

Data Issues

In measuring the effectiveness of monetary policy on economic growth amidst the pandemic, economic growth, which is usually gotten from change in GDP, was employed and gotten from National Bureau of Statistics (NBS) and Central Bank of Nigeria (CBN) online site. Monetary policy instruments are quite many and often used. However, for this study, we employed only the main instruments that were used during this pandemic according to International Monetary Fund ([IMF], 2020), which are monetary policy rate, exchange rate and indirect pumping of money in form of intervention scheme, which translated to expansion in broad money supply in discretionary form, and the exchange rate which was devalued many times and that has affected the nations exchange rate in real terms. To really examine this impact, weekly data was sourced from NBS and CBN within the period of the global attack, December 2019 to October 2020. The choice of October Due to the small size of observation, data set was transformed to weekly data to give forty-eight observations in all.

The Bureau de change exchange rate of United States dollars to the Nigerian naira was employed to cater forthe actual exchange rate not managed by the government, and it was sourced from the Central Bank of Nigeria online data base as well.

Estimation Procedure

After taking the natural log of the explanatory variables in question, a descriptive and correlation statistics were analysed. Pre-estimation technique using unit roots were employed which informed the study to use the Vector Auto-Regressive (VAR)/Vector Error Correction Mechanism (VEC) techniques. Forecasted variance decomposition was also used to diagnose the causes of variation, and then finally, post-estimation test was carried out using the VEC stability test.

4. Results

Table 1 showcases the descriptive statistics of the dataset with 48 observations. The table shows that Money Supply (Ms), have the highest mean followed by Exchange Rate(Er), Monetary Policy rate (Mpr) and Growth rate (Gr) respectively. Skewness is the measure of asymmetry of the data around its mean; the four variables are all

negatively skewed i.e the data has a long left tail. Standard deviation show rate of volatility of the dataset.

The Kurtosis shows that all the variables are less than 3 i.e. platykurtic distribution meaning the distribution is flat relative to normal. The Jarque-Bera shows normality distribution of data. The high Jarque-Bera probability above 0.05% as shown in the table means acceptance of the null hypothesis that the variables are normally distributed, except Er.

Table 1: Descriptive Statistics

	Gr	Er	M2	Mpr
Mean	-0.5566	419.4906	32153062	12.79167
Median	-1.76	443.8900	32593522	12.50000
Maximum	2.550000	473.4800	35690619	13.50000
Minimum	-3.62	359.0000	28783194	11.50000
Std. Dev.	2.454741	44.94398	2235746.	0.742576
Skewness	-0.03	-0.32	-0.09	-0.51
Kurtosis	1.29	1.37	1.82	1.99
Jarque-Bera	5.81	6.15	2.82	4.16
Probability	0.05	0.04	0.24	0.12
Sum	-26.72	20135.55	1.54E+09	614.0000
Sum Sq. Dev.	283.2105	94938.20	2.35E+14	25.91667
Observations	48	48	48	48

Source: Author's extract from Computation of E-Views 9.0.

Table 2 shows the correlation matrix and its probability of the relationship between the variables. Er and Ms show a negative relationship with Gr while Mpr shows positive relationship with Gr. they are all significant at 1% level of significance, as indicated by their respective probabilities.

Table 2: Correlation Matrix

Correlation Probability	GR	ER	M2	MPR
GR	1.0000			
ER	-0.8374			
	0.0000	1.0000		
M2	-0.6784	0.9286		
	0.0000	0.0000	1.0000	
MPR	0.5384	-0.8155	-0.9027	
	0.0001	0.0000	0.0000	1.0000

Source: Author's extract from Computation of E-Views 9.0.

The table below shows the summary of the Augmented Dickey-Fuller (ADF), Levin, Lin & Chu t*, Im, Pesaran and Shin W-stat and Phillip Peron (PP) unit root tests used. The four results show that all the variables are not stationary at level, but are stationary at 1st difference; this is an indication that the VAR method will be more desirable for the analysis.

Table 3: Unit Root Test

	At level	Probability	At 1st difference	Probability	Remark
Levin, Lin & Chu t*	-0.0615	0.4755	-8.6730	0.0000	1(1)
Im, Pesaran and Shin W-stat	1.6136	0.9467	-9.0472	0.0000	1(1)
ADF-Fisher Chi-square	2.3359	0.9689	63.1602	0.0000	1(1)
PP-Fisher Chi-square	2.2988	0.9705	74.4794	0.0000	1(1)

Source: Author's extract from Computation of E-Views 9.0.

Trend Analysis

The graph of the trend of Money Supply(M2), Exchange Rate(Er), Monetary Policy rate(Mpr) are Growth rate (Gr) in Nigeria is shown in figure 1 below; the Y-axis shows the rates while the X- axis shows the month.

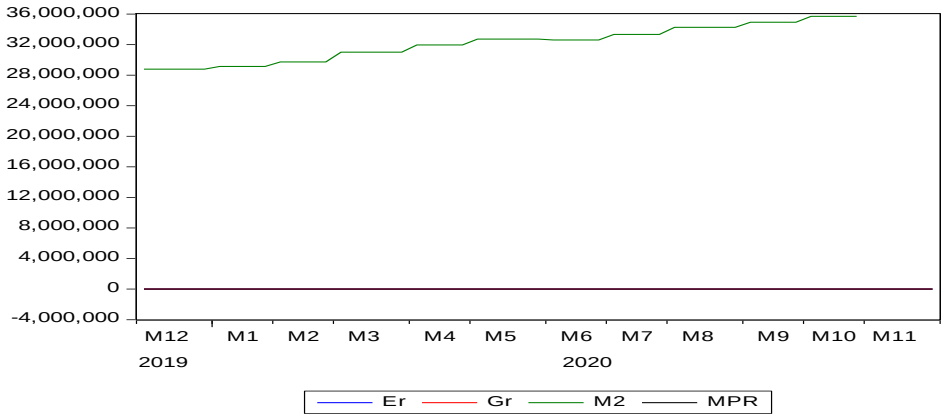

Figure 1: Trend Analysis

Table 4 is the presentation of the lag selection criteria. The optimal lag length of 2 is selected based on consequential modified LR test statistic, Final prediction error (FPE), Akaike information criterion (AIC), Schwarz information criterion (SC) and Hannan-Quinn information criterion (HQ).

Table 4: Result of Lag Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1014.308	NA	1.99e+14	44.27427	44.43328	44.33383
1	-837.4199	315.3224*	1.83e+11*	37.27913*	38.07419*	37.57696*
2	-833.4149	6.442903	3.13e+11	37.80065	39.23176	38.33675

*Note: * indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion*

Result on Table 5, using the trace statistics, indicates that there exist cointegrating equations at 5% significant level. Hence the null hypothesis of no cointegration equation is rejected using the MacKinnon-Haug-Michelis (1999) p-values.

Table 5: Cointegration Rank Test (Trace) Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.546593	72.77651	47.85613	0.0001
At most 1*	0.250000	37.97403	29.79707	0.0046
At most 2*	0.250000	25.31602	15.49471	0.0012
At most 3*	0.250000	12.65801	3.841466	0.0004

Source: Author's Computation

The Max-Eigen value result on Table 6 also shows that there exist cointegrating equations at 5% significant level. Hence the null hypothesis of no cointegration equation is rejected using the MacKinnon-Haug-Michelis (1999) p-values. Both results on Tables 5 and 6 indicate the existence of long run cointegration and hence long run relationship. This informed the error correction model.

Table 6: Cointegration Rank Test (Maximum Eigenvalue) Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.515763	32.63317	27.58434	0.0103
At most 1	0.333333	18.24593	21.13162	0.1209
At most 2 *	0.333333	18.24593	14.26460	0.0111
At most 3 *	0.333333	18.24593	3.841466	0.0000

Source: Author's Computation

Table 7 shows the result of the long run cointegration. From the result, the coefficients of Exchage Rate and Monetary policy rate show that they both have positive long run effect on Growth rate while Money supply (M2) has a negative impact on the long run meaning that an increase in Exchange rate and Monetary policy rate will invariably lead to an increase in growth rate while an increase in Money supply will lead to a decrease in Growth. More so, Exchage rate and Monetary policy rate have significant impact in the long run because their t-statistics values were above 2 except for Money supply which does not have.

Table 7: VEC Estimates – Result of Longrun cointegration Equation

Variables	Coefficient	Standard Error	t-statistics
GR(-1)	1.000000		
ER(-1)	0.097598	0.02386	4.09119
M2(-1)	-1.05E-08	6.4E-07	-0.01636
MPR(-1)	4.060950	1.26127	3.21973

Source: Author's Computation

Table 8 presents the short run impact and error correction mechanism (ECM) of the model at lag 1. The coefficient of ECM (-0.311757) shows a negative sign which indicates that 31% of the disequilibrium is corrected in each week. It is also significant because the t-statistics is more than 2. Like the long run coefficient table above, ER and MPR has positive short run on GR while M2 has a negative short

run impact but, they are all not significant in the short run as their individual t-statistics are all less than 2.

Table 8: Result of Error Correction Mechanism

Variables	Coefficient	Standard Error	t-statistics
ECM	-0.311757	0.09278	-3.36029
D(GR(-1))	0.078998	0.16076	0.49139
D(ER(-1))	0.028388	0.02517	1.12800
D(M2(-1))	-1.79E-07	6.1E-07	-0.29657
D(MPR(-1))	0.677149	0.78451	0.86315
R-squared	0.220227		
Adj. R-squared	0.122755		
F-statistic	2.259396		

Source: Author's Computation

Figure 2 below shows the graphical representation of the VAR stability check result. When the dots are outside the circle, the VAR is said to be unstable but if otherwise, it is stable (Asterious& Hall, 2007). The figure signifies that the VAR satisfies the stability condition check since the dots are located within the circle.

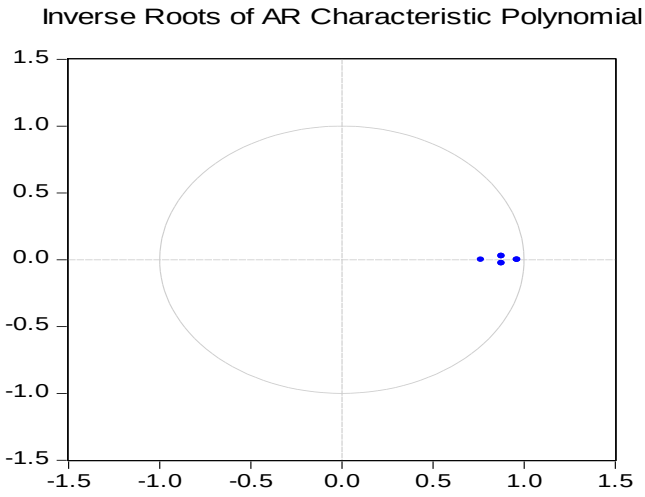

Figure 2: VAR Stability Check

From the result of variance decomposition for 10 periods, on Table 9, it reveals that in the first 7 days, Growth rate is explained by its own innovative shocks. In the second week (period 2), Monetary policy rate (MPR) explains 3.81% of the variation of shocks in growth rate while exchange rate and money supply are responsible for 2.00% and 0.69% respectively. From the period 3 up to the tenth period, Exchange rate (LER) is responsible for over 5% of variation in growth rate in period 3 up to an increase of above 21% in period 10, while Monetary policy rate in the 3rd period stands at 3.81% and 16.17% at 10th period. Money Supply on the

other hand contributes 1.83% of variance in growth rate in the third period and increasesup to 7.18% in the 10th period.

Table 9: Variance Decomposition of GR:

Period	S.E.	GR	LER	LM2	LMPR
1	0.919526	100.0000	0.000000	0.000000	0.000000
2	1.221650	95.89356	2.003984	0.688395	1.414062
3	1.437664	89.03346	5.330138	1.826914	3.809485
4	1.614473	81.65014	8.884001	3.039459	6.426396
5	1.764650	74.90374	12.10418	4.135076	8.857006
6	1.892515	69.19528	14.80266	5.051233	10.95082
7	2.000436	64.54671	16.97580	5.788188	12.68930
8	2.090485	60.83420	18.68944	6.369488	14.10687
9	2.164771	57.89866	20.02513	6.823572	15.25264
10	2.225415	55.58966	21.05894	7.176674	16.17472

Source: Authors' Computation.

The results of variance decomposition indicates that exchange rate as an instrument of monetary policy has more power in this regard than the monetary policy rate during this pandemic period.

5. Conclusion and Recommendation

This study examined the effectiveness of monetary policy on economic growth in the country within the COVID-19 period, using three most adjusted instruments: the monetary policy rate, the exchange rate and broad money supply, which were made the explanatory variables. The growth rate stood as the dependent variable. It was realized that when applied individually, monetary policy rate and exchange rate granger caused economic growth while braod money supply did not. When jointly used, all three variables granger caused economic growth. Also, It was found that, monetary policy rate and exchange rate have significant impact on economic growth while broad money supply did not have any significant impact.

This study therefore, suggests that, the monetary authorities could use the instruments of monetary policy rate and exchange rate to motivate economic growth amidst pandemic periods like this. More so, pumping out money can only have significant impact when the use of such monies is guided for the intervention purpose only. If not, it could end up causing serious inflation

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