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Implication of Macroeconomic Fundamentals on the Twin-Evil of Macroeconomic Phenomena: "With the Focus on Nigeria"

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Abstract

Purpose of the Study: This study was designed to analyze the implication of Macroeconomic fundamentals on twin-evil of Macroeconomic phenomena: "with the focus on Nigeria.''

Methodology: The study Utilized annual time-series data on exogenous variables (Government Deficit Spending, GDS; Official exchange rate, OEXCHR; Monetary policy rate, MPR) to capture Macroeconomic fundamentals. While, Unemployment rate, UNEMPLR; Inflation rate, INFLR and Consumer price index, CPI were used as a summation of Macroeconomic phenomena to capture Misery index. The data on variables used in the study were sourced from Nigerian federal ministry of finance; Central Bank of Nigeria; and World Bank data bank between 1991and 2022 respectively. The study employed econometric techniques of ordinary least square and Two-stage least to analyze its data**.**

Findings: The study of Ordinary Least Square revealed that Government deficit spending and official exchange rate significantly eradicate misery index in a positive manner. Meanwhile, monetary policy rate insignificantly eradicate misery index in a negative manner. There was also a further revelation from the findings of two-stage least square that government deficit spending and official exchange rate exert concerted significant strength to eradicate misery from every citizen of Nigeria within the periods under study.. Meanwhile, the result found that it was insignificantly weak for monetary policy rate (MPR) to minimize misery index from every Nigerian citizen within the periods under study.

Unique Contribution to Theory, Practice and Policy: The study concluded that the authority should maintain a sound policy that will oversee money borrowed for critical projects and use it to create employment opportunity for Nigerian citizenry, ensure exchange rate is kept within a certain band that will reduce high cost of goods and services in the economy that we are currently facing and jettison the idea of increasing monetary policy rate, since this displayed a negative sign to help reducing misery index of the Nigerian populace during the periods of study.

Keywords: *Macroeconomic fundamentals; Macroeconomic Phenomenon; Misery Index; Ordinary Least Square Estimate; Two-stage Least Square Method*

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1.0 Introduction

The fundamentals of macroeconomics rang a bell of dominance right from the days of J.M. Keynes and Milton Friedman in economic landscape. The discussion of classical Economists, now and then, only centered on the view that market only clears itself in almost every aspect of economic angle – and that the government should minimize its participation in economic system. Twentieth century began to experience government policies of macroeconomics, as a result of Keynesian position that government should involve in economic process by making decision that will trigger the wellbeing of the economy. This position gave birth to fiscal policy and other macroeconomic policies that governments of various countries now adopt as a tool to shape the economy and drive it to a certain direction. Fiscal policy is conceptually the use of government use of taxing, spending and borrowing to leverage the economic activity level. In order to this, the government increases the tax rate and decreases its expenditures with a view to slow down the level or rate of economic activities. On the other hand, the reduction of tax rates and increased expenditures are done to stimulate other expenditures or private investment. Fiscal policy as an instrument of government economic policy must be coordinated skilfully with other policy weapons such as monetary policy, debt management policy, and commercial policy. In other words, Friedman suggested in his K-percent rule doctrine that policy makers should boost the circulation of money in the (economic) system by a certain fixed percentage on a yearly basis, in order to control inflation in the long-run. Furthermore, the K-percent rule proposed as fixing the rate of growth of money supply at the rate of growth of actual GDP. In this context, this study looks at these macroeconomic fundamentals – fiscal and monetary policies and how they can solve the macroeconomic problems of unemployment and inflation if rightly applied. Macroeconomic fundamentals comprise variables such as inflation, unemployment, fiscal policy and monetary policy, supply and demand and international trade. This study is only interested in focusing on fiscal policy and monetary policy, inflation, and unemployment; and other variables such as exchange rate; consumer price index; government deficit spending; and monetary policy rate that serve as a buttress for our analysis. Here, we look at how macroeconomic fundamentals of fiscal policy and monetary policy and these other independent variables affect these twin evil of macroeconomic phenomena of inflation, and unemployment which its combination defines misery index. Macroeconomic policies are perceived as having a short coming in Nigeria, this is so because these fundamentals are not giving tangible result based on poor implementation. Its performance to attain appropriate targets amount to zero. Based on this, Nigerian government has been putting policies on ground, but none of these could guarantee effectiveness in minimizing the misery, unemployment rate and inflation rate inflict on average citizen of Nigeria as regards these policies. The issue of deregulation of exchange rate regime has contributed immensely to these problem of unemployment and inflation rates thereby making unemployment and inflation to be on daily rise. As Okunroumu (1993), cited in Akeerebari, T.J. (2022) that in order to achieve macroeconomic stability the management of the Nigerian economy has been unproductive and negative in which no one can say the Nigerian

economy is performing well. There is a clear evidence of this adverse inflationary trend, rippling rate of foreign exchange causing fall and rise in Naira consecutively, unfavorable balance of payments as well as increasing unemployment rates which are all symptoms of growing macroeconomic phenomena of misery index. Macroeconomic fundamentals/ policies also fail in the area of oil subsidy, this alone has caused another severe suffering to average citizen of Nigeria. In this regard, many studies have been carried out, as well as, strategies to address this problem. Though, employing this specific approach of data analysis would make a quite difference regarding the approaches being used by other researchers in their previous studies, as well as, outcome of their findings. Our study now saddled with concern of responsibility to thoroughly go deep into finding solution to this problems of misery index by analyzing implications of macroeconomic fundamentals on the twin-evil of macroeconomic phenomena: "with the focus on Nigeria"

2.2 The Theoretical Framework

2.2.1 Keynesian Fiscal Policy

John Maynard Keynes' evolution of fiscal stimulus postulates that an injection of spending of the government guide eventually to added business activity and even more spending in an economy. The theory further postulates that expenditure of the government in the economy boosts aggregate output and generates more income. There is a believable tendency that if workers have the willingness to expend their additional income, the resulting effect of growth in gross domestic product, (GDP) could be even greater than the initial stimulus amount. In this theory, there is a tendency of belief that a one Naira expended in fiscal spending could eventually generate more one Nara than in growth. The theory of fiscal policy by J.M. Keynes for decades was a paradigm of dominance in doctrine of academic economics. Though, other economists, such as Murray Rothbard, Milton Friedman indicated that the Keynesian model misrepresented the link between investment, saving, and economic growth

2.2.2 Friedman Monetary Policy

In his essay of role of monetary policy in 1968, Milton Friedman outlined the problem with monetary policy which was widely followed in 1950s, and 1960s. Monetary Policy is a theory proposed by Milton Friedman which advocated that monetary policy that would result in the rate of nominal interest will be at zero or very close to zero. The main tenet of Friedman's monetary theory was that the opportunity cost of holding money faced by private agents should be equal the social cost of generating supplementary money fiat money. If there is an assumption that the additional cost of generating supplementary money is zero, or approximated by zero – nominal interest rates should be zero also. Practically, this proposes that the apex bank of a country should seek a deflation and/or inflation rate that is equal to the real rate of interest on government bonds and other safe assets, to make the nominal interest rate zero. This policy is resultant that those who have a tendency of holding money don't lose the value of money they save in vault due to inflation.

2.2.3 Okun's Misery Index

In 1970, the misery index was put together by economist Arthur Okun as an attempt to summarize a set of macroeconomic indicators into a simple linear equation, so as to track the state of macroeconomic health during the business cycle. Economic Discomfort Index (EDI) also referred to as misery index is formed to combine two fundamental phenomena of macroeconomics, such as unemployment and inflation in a single disutility function. This function according to Mankiw, 2010 measures the economic level of discomfort average individual felt by the severe consequences of unemployment rate and inflation rate. Although, the underlying notion of Economic Discomfort Index (EDI) has been evolved in diverse useful manners, (Blanchflower, Bell, Montagnoli, & Moro 2013: Setterfield, 2009). Misery Index is considered by some economists as a useful gauge of daily hardship for average individual, and an overall indicator of economic discomfort or misery. Misery or Economic Discomfort Index attempts actually to put into summation the most evident costs for society, this indicates how unemployment rate prevents individuals from earning income, and how high inflation rate increases the cost of living by reducing purchasing power (López, 2022:2 in Ahmet and Seher, 2022).

2.2 The Empirical Framework

Various empirical studies have been conducted to analyze relationship between variables in academic field of study. These studies in many kinds employed numerous techniques of analysis, these techniques perhaps applied time-series data, cross sectional data, and panel date. However, some of these studies arrived at different results, but this doesn't indicate that academic research is born out of a faulty and unproductive nature. In the course of this, this study takes a selection of few studies for review. These studies cut across local/Nigeria and international perspective. For instance,

Aliyu & Mahmood (2019) in their study, a relationship between monetary and fiscal policies and economic growth in Nigeria was established. Their study covered 10-year period, from 2006 to 2015; applying Pearson correlation as a method for their analysis utilizing money supply, tax revenue and GDP. The result of their study indicated that there is a proportion of percent mix of 87% and 13% for monetary and fiscal policy.

In his study, Ashiru I. analyzed the impact of fiscal policy on unemployment in Nigeria in 2023. His study used Autoregressive Distributed Lag model to analyze time-series data from 1991 to 2021; the results of the finding of the study revealed that there is presence of co-integration among variables. The study's finding further revealed that in the long-run taxation and government spending had no impact on reducing the rate of unemployment in Nigeria.

In 2016, Obayori J.B. carried out a study on fiscal policy and unemployment in Nigeria. After which, he employed co-integration and Error Correction Model techniques to analyze annual time-series data from 1980 to 2013. The finding of the study indicated that co-integration relationship

existed among variables under study; whilst the result of Error Correction Model portrayed that the relationship between unemployment rate and capital and recurrent expenditures is negative and significant.

Another study was conducted by Ebierinyo & Oyeinbrakemi in 2019, so as to analyze the effectiveness of monetary policy in control of inflation in Nigeria. A monthly time-series data which covered the periods of January 2009 and December 2016 was extracted from CBN statistical Bulletin. Their study employed Augmented Dickey-Fuller test, Johansen co-integration test and Error Correct Model to estimate relationship between variables under study. And the result portrayed that the long-run relationship among variables understudy moved towards equilibrium. Whereas, the finding revealed Treasury bill rate is effective to control inflation in both long-run and short-run. The finding furthered revealed exchange rate, money supply and monetary policy rate are effective in short-run and long-run respectively.

Udoh I.E., & Kokoette I.U., in their 2023 study on fiscal policy and inflation in Nigeria. Obtained time-series data from Central Bank of Nigeria, debt management office, World development indicator, and National Bureau of Statistics for the periods that spanned from 1986 to 2021. Their study looked at the employment of unit root test and Autoregressive Distributive Lag (ARDL). The result of their findings displayed that in the long-run, there is a statistically significant relationship between recurrent expenditure on administration, recurrent expenditure on transfers, capital expenditure on administration, capital expenditure on economic service, capital spending on social and community service, government recurrent expenditure, government capital expenditure, external debts and tax and inflation rate in Nigeria. Whilst, in the short-run, recurrent spending on social and community services; recurrent expenditure on transfers; capital expenditure on administration; capital expenditure on economic service; capital spending on social and community services; capital expenditure on transfer; government recurrent expenditure; government capital expenditure and tax as well portrayed statistically significant relationship with inflation rate in Nigeria.

Again, in 2021, Ali H., Ali, M.Z., Nosheen, F., & Din, A.S.U. carried out a research study in Pakistan; obtaining time-series data dated between 1977 and 2019. Their study applied Autoregressive Distributed Lag model as a technique for data analysis with the usage of unemployment rate as dependent variable, while money supply was used as a core independent variable and some control variables. The findings of the study found that the connection between spending deficit and unemployment rate is critically negative; whereas, gross domestic product was identified to be related to unemployment. On the contrary, Populace development rate and consumer price index were adversely related to unemployment in India

In 2022, a study on how monetary policy stabilized food inflation in India was carried out by Samal & Phanindra Goyari. They collected data in quarterly form which spanned from January 2009 to December 2019, these data were in quarter. Their study utilized quantile regression method of

analysis, and their findings revealed that across quantiles, contractionary monetary policy made food inflation stabilized. However, according to their study, exchange rate, transportation cost play a substantial role in promoting food inflation in low, middle and all quantiles. Their study further revealed monetary policy transmission via exchange rate and asset channels increased food inflation across all quantiles. Whereas, bank credit and interest rate channel in contract reduced it in lower and median quantiles.

Study on how monetary policy affects economic growth and inflation was executed in Sri Lanka by Amarasekara Chandranath in the year, 2008.The study made use of time-series data on the study variables that cut across 1978 and 2005, which include interest rate, money growth and nominal exchange rate movement and these variables were used as independent variables, whilst, Real GDP and Inflation were used to form dependent variables.

The study employed Vector Autoregressive technique for its analysis. The result of the finding showed that interest rate had decreasing impact on GDP growth and Inflation, while exchange rate appreciated DP growth and increasing inflation.

Also, another study in 2022, by Akeerebari, T.J. on insufficient currency in circulation on the rate of inflation and unemployment within Nigerian context. His study utilized annual time-series data which spanned from 1985 to 2020. Econometric tools of Vector Error Correction model and Autoregressive technique were applied in disaggregated model to analyze relationships between independent variables of study, such as government total expenditure, government tax revenue, export, money supply, exchange rate and prime lending rate and dependent variables unemployment rate and inflation rate. The results of the finding demonstrated that government total expenditure, government tax revenue insignificantly reduced unemployment rate, whereas export increased it. Furthermore, the result found, in the long-run, that money supply is responsible for inflation rate, while exchange rate decelerated it in both long-run and short-run.

Hossein, A., Hossein, T., & Sayed,K.H. (2018) undertook a study on the Effects of Monetary Policy on Output and Inflation in Afghanistan. Employing Dynamic equilibrium General stockastic Aproach; the results of its finding revealed that impulse response function of production is negative to the external aid shock. The results further displayed that financial shock, exchange rate shock, technology shock and external shock are positive to monetary and cost shocks. Similarly, there is a positive innovation as a result of impulse response function to all variables in the study, except for technology.

Again, study on the economic growth effect on misery index in Nigeria was ascertained by J I. Ubah, E K Bowale1, J O Ejemeyovwi, I. Jacobs, N. Adeleye & O Ihayere in 2021. Utilizing Autoregressive Distributive Lag (ARDL) model for its data analysis. The study result found inverse relationship between the growth of the economy and misery index

2.3 Shortcomings in selected literatures under review

Over the years, studies have been carried out to ascertain relationship between variables under study. Authors and scholars arrive at conflicting results, however that doesn't mean academic research has not been producing validated and complete results. Though, conflicting results have been arrived at by findings of different scholars – this provides an avenue that serve as a focal point which gives more motivating tendency to do more of research and/or study. In this case, research study seems unlimited to infinity. The purpose of this study under this section is to fill the identified gaps in the body of literature by looking at the vacuum most of these studies created and refused to fill with complete body of knowledgeable research study. This study doesn't only fill these identified gaps, but goes further to argue its findings based on some theoretical frameworks. The methods used for analysis by other researchers also of concern to this study – this study uses appropriate techniques, which are sequential in its analysis. Some of the studies selected here for review dealt not on up-to-date data, this also calls for another concern. This study tries to address this concern by collecting a vast range of time-series data that cut across thirty-one years periods. More so, most studies which are subjected to review under this section did not interpret results of their findings which is basic for empirical research. But this study provides empirical interpretation of the results of its findings which is pretty vital in research study. The studies selected here for review also failed to link their findings with other findings which gives aesthetic beauty to research works. On the basis of this, the current study provides empirical and theoretical links with recent findings of literature in the study – this garnishes the current study with interesting knowledge. Few studies selected here were not done in Nigeria – this is another concern that raises eyebrow. The current study covers Nigeria which is very necessary for a time the country is suffering from proper and sound macroeconomic policies that would have helped the country drives on the path of alleviating misery index. Like the studies of Ali, MZ, Nosheen F., & Din, A.S.U., (2021); Samal & Phanindra Goyari, (2022); Amarasekara Chandranath, (2008); Hossein, A., Hossein, T., & Sayed,K.H. (2018) that didn't cover Nigeria. The present study is Nigeria-specific, it aims at addressing issues that alleviating misery index, and how macroeconomic policies within Nigeria's context should be implemented for policy inference. Furthermore, Aliyu & Mahmood (2019) failed in their study to employ appropriate econometric method of data analysis, which is pre-requisite for academic study. The current study applies these appropriate econometric tools to analyse its data thus making it easy for interpretation of variables used in our study. More so, Hossein, A., Hossein, T., & Sayed,K.H. (2018); Amarasekara Chandranath (2008); Samal & Phanindra Goyari.(2022); Akeerebari, T.J (2022) in their seperate studies analyzed relationship between study variables, but failed to link their findings to the principles in the theoretical framework which underscore the study, this is very important in research study. The present study in its usual way, go step by step, to link almost all the results of its findings with recent related-research works in the study, which is very necessary for bringing the beauty of the work to bear. J I. Ubah, E K Bowale1, J O Ejemeyovwi, I. Jacobs, N Adeleye &

O Ihayere in 2021, in their study did not describe variables used, the present study describe and explain all the study variables used in its study. The present study further provides necessary variables that fit the study and contributes to the existing body of knowledge with a more robust interpretation of the findings. It goes a step further to discuss the core macroeconomic phenomena of unemployment and inflation rates like that of Artur Okun theory of misery index. The findings are argued based on this underlying theory.

3.0 Sources of Data and Variables used in the model

This section discusses sources of data of study of the implications of macroeconomic fundamentals on twin-evil of macroeconomic phenomena. The data of government deficit spending (GDS) is sourced from federal ministry of finance; whereas, data on monetary policy rate (MPR) is t sourced from Central Bank of Nigeria; also data on official exchange rate (OEXCHR) is sourced from World Bank data bank; Furthermore, data on consumer price index (CPI); unemployment rate (UNEMPR) and inflation rate (INFR) (which is summed to become misery index, MI) are sourced from World Bank data bank respectively.

3.1 Model Specification

This model is specified based on Okun's theory as he postulated that misery index (MI) is caused by high rates of Unemployment and Inflation (U+I), that is, MI = U+I. This theory viewed unemployment rate and inflation rate as core macroeconomic phenomena, which it is termed misery index. However, the theory was extended separately by Robert Barrow (1999) and Steve Hanke (2022) to incorporate interest rate and GDP growth rate and GDP per capita respectively. In the light of this theory, our model which is used to investigate the implications of macroeconomic fundamentals on twin-evil of macroeconomic phenomena in Nigeria is based on the theory proposed by Arthur Okun, 1970 with modification. The author proposed that misery index (MI) is caused by unemployment rate (U) and inflation rate (I). In this study, our model modifies the misery index by Okun to incorporate consumer price index (CPI). That is, MI = U+I+CPI as the significant cause of misery index in Nigeria. Other exogenous variables such government deficit spending (GDS); official exchange rate (OEXCHR); and monetary policy rate (MPR); which can explain this cause are also included. These combined variables of U+I+CPI may significantly bring about misery to average citizen of Nigeria as this study looks into it. In the light of this relationship, a functional form of economic model of implications of macroeconomic fundamentals on twin-evil of macroeconomic phenomena in Nigeria is specified as;

$$MI = f(GDS + OEXCHR + MPR) \quad (1)$$

This function of economic model is transformed into econometric model by adding random stochastic term, μ. Thus, it is specified as follows;

$$MI = \beta_0 + \beta_1 GDS + \beta_2 OEXCHR + \beta_3 MPR + \mu \quad (2)$$

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Also, this function of economic model is transformed into Two-Stage Least Square model by adding instrument variables, Z. Thus, it is specified as follows;

$MI = \beta_0 + \beta_1 GDS(-1) + \beta_2 OEXCHR(-1) + \beta_3 MPR(-1) + \mu, Z$……(3)

Whereas;

MI = Misery Index (Endogenous Variable)

β_0 = Constant term

β_1; β_2; β_3; = Parameters of exogenous variables

GDS = government deficit spending; OEXCHR = official exchange rate; MPR = monetary policy rate (Exogenous variables)

μ = random stochastic term

Z = Instrument Variables

A priori expectations of the model

$\beta_1 > 0$; $\beta_2 < 0$; $\beta_3 > < 0$

3.2 Explanation of Variables in the Model

This study is concerned with variables used in the model; these are dependent (endogenous) variable and independent (exogenous) variables.

The dependent (endogenous) variable in this model is a combination of inflation rate (INFLR), unemployment rate (UEMPLR) and consumer price index (CPI) and is used as a proxy for misery index, while independent (exogenous) variables are Government Deficit Spending (GDS), Official Exchange Rate (OEXCHR), Monetary Policy Rate (MPR).

(a) The Endogenous (Dependent) Variable

Misery index: is the endogenous variable used in this study and it measures economic distress every citizen of a particular country feels, this can be as a result of joblessness - which is brought about by unemployment. Unemployment is a situation in which someone is voluntary to work, but cannot get one. Misery index also has a consequential combination of increasing cost of living. Thus, the original misery index was invented in 1970s with the development of simultaneous high inflation rate and unemployment rate. However, in this study, consumer price index is added to complement significant distress every citizen of Nigeria feels as a results of increased prices of goods and services in the country.

(b) Exogenous (Independent) variables

There are three exogenous variables this study, these are:

Government Deficit Spending (GDS); Official exchange rate (OEXCHR); and monetary policy rate (MPR)

Government Deficit Spending (GDS): is one of the independent variables used in this study; government deficit spending is also known as budget deficit, which is the opposite of budget surplus. This reason why this variable is used as an independent variable is based on the position of Keynesian theory of stimulus. Hence, on a priori expectation, it is expected that an increase in government deficit spending would have a positive impact on alleviating misery index. To this end, it is expected from the finding that $\Delta MI/\Delta GDS > 0$, showing that there is positive and statistically significant relationship between government deficit spending and minimization of misery index.

Official exchange rate: this refers to the rate at which its determined nature is carried by the authorities of a nation. Similarly, it is the price of one currency in terms of another. Official exchange rates and exchange rate arrangements are established by governments. On a priori expectation, it is expected that a weak exchange rate would have a negative toll on the citizenry thereby increasing their misery index. To this end, it is expected from the finding that $\Delta MI/\Delta OEXCHR < 0$, showing that there is negative relationship between Official exchange rate and misery index.

Monetary policy rate: is another independent variable used in the model. This is the price tag the monetary authority of a country puts on borrowing money. It is a specific rate that leverages how expensive or cheap it is to get loan. Apex bank has an adjustment of monetary policy rate either to making things slow down when prices of goods and services rise so quickly in the economy or to help the economy grows. This is done by making borrow cheaper, while lowering it, and then encouraging spending and growth. Hence, on a priori expectation, it is expected that monetary policy rate would have a positive and negative impact on misery index. To this end, it is expected from the finding that $\Delta MI/\Delta MPR > < 0$, showing that there is positive and negative statistically significant relationship between Monetary policy rate and misery index.

4.0 Data Analysis Techniques and Results presentation in Tables

4.1 Ordinary Least Square Analysis

This section applies Ordinary Least Square method to estimate the intercepts of linear regression equations which analyses the relationship between endogenous variable - misery index (MI) and exogenous variables - government deficit spending (GDS); official exchange rate (OEXCHR) and monetary policy rate (MPR). The results of Ordinary least Square regression technique is computed in Table 4.1 below.

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Table 4.1: Ordinary least Square regression Results

Dependent Variable: LOG(MI)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.631013	0.816127	4.449080	0.0001
GDS	0.000156	3.20E-05	4.869779	0.0000
LOG(OEXCHR)	0.305766	0.083946	3.642395	0.0011
LOG(MPR)	-0.270712	0.237368	-1.140473	0.2638

R-squared = 0.806217; Prob(F-statistic) = 0.000000

Source: ***Authors computation (E-view 10 Software)***

From the results above, it is demonstrated that the coefficient of government deficit spending has positive sign and its probability value is significant at 5% level of confidence interval. This implies that as government borrows to spend that exerts significant impact on eliminating misery index from every citizen of Nigeria. Similarly, the coefficient of official exchange rate has positive sign and its probability value is significant at 5% level of confidence interval. This insinuates that official exchange rate exerts significant impact on removing misery index from every citizen of Nigeria. On the contrary, the result also portrays that the coefficient of monetary policy rate has negative sign and its probability value is insignificant at 5% level of confidence. This suggests that monetary policy rate is not good enough to reduce misery index from average citizen of Nigeria.

4.2 Variance Inflation Factors

Variance inflation factors here is used to test for multi-collinearity in our model. This is done in order to ascertain the reliability of the model, after subjecting the study to Ordinary Least Square estimator which the results are displayed above. Though, the results of the OLS are good for statistical reason also for decision making. However, when the same time-series data are used to test of multi-collinearity there is a serious indication that the explanatory variables in the study correlate with each other, while it shouldn't be so, according to one of the assumptions of ordinary least square estimator which states that there is no correlation between independent variables and error terms. Hence, this assumption fails that necessitates the employment of Variance inflation factors for correlation test. Table 4.2 below displays the results.

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Table 4.2 Variance Inflation Factors

Variance Inflation Factors

Variable	Coefficient Variance	Uncentred VIF	Centered VIF
C	447.3319	27.00227	NA
GDS	1.54E-05	8.591615	6.269355
OEXCHR	0.008335	17.98690	6.533462
MPR	1.397860	16.75614	1.163754

Source: ***Authors computation (E-view 10 Software)***

The results of Centered VIF show there is evidence of multi-collinearity in the model, it means Government deficit spending (GDS) is highly correlated; official exchange rate (OEXCHR) is also highly correlated; meanwhile the result of monetary policy rate demonstrates moderate correlation. Hence, this necessitates the application of Two-Stage Least Square techniques.

4.3 Two-Stage Least Square techniques.

Ordinary least square regression model in one of its assumptions states that there is no correlation between independent variables and error terms. When this assumption fails, for instance, when the relationship between variables affect each other, standard linear regression using ordinary least squares (OLS) would no longer provide optimal model estimates. Hence, the introduction of Two-stage least-squares regression takes effect. Two-stage least-squares is the advance or continuation of ordinary least square method uses instrumental variables. Instrumental variables in our model are same as the predictor variables considered problematic. The results of the two-stage least square model are optimal and it is presented in table 4.3 below.

Table 4.3: Two-Stage least Square regression Results

Dependent Variable: LOG(MI)
Instrument specification: GDS(-1), LOG(OEXCHR(1))
LOG(MPR(-1))

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.283319	1.520896	2.816312	0.0090
GDS	0.000169	3.78E-05	4.463739	0.0001
LOG(OEXCHR)	0.243273	0.121047	2.009738	0.0505
LOG(MPR)	-0.411116	0.433880	- 0.947534	0.3518

R-squared = 0.801959; Prob(F-statistic) = 0.000000; Instrument Variables = 4

Source: ***Authors computation (E-view 10 Software)***

The results of the two-stage least square show that Government deficit spending (GDS) and official exchange rate (OEXCHR) have a positive and statistically significant influence on reducing the misery index. However, monetary policy rate (MPR) exerts negative and insignificant influence on reducing misery index.

4.4 Discussion of Findings of Results

This section discusses the results of annual time-series data on macroeconomic fundamentals and twin evil of macroeconomic phenomena analyzed in our model. The model firstly employed Ordinary Least Square method to estimate the significant relationship between exogenous and endogenous variables – this is done so as to ascertain the reliability of the model estimate with Ordinary Least Square. The results of Ordinary Least Square method portray that Government deficit spending (GDS) and official exchange rate (OEXCHR) exert significance strength to alleviate the suffering of misery index average citizen of Nigeria feels in the course of this study respectively. The result of Government deficit spending (GDS) conforms to our a priori expectations and economic theory of Keynes which postulates the more government borrows and spends especially on capital projects creates employment and reduces misery index, but it is not in tandem with the finding by Ali H., Ali, M.Z., Nosheen, F., & Din, A.S.U.(2021). Also, official exchange rate (OEXCHR) doesn't conforms to our a priori expectations which postulates higher exchange rate causes serious inflation in country thereby increasing misery index. Similarly, the finding is not in line with the findings by Ebierinyo & Oyeinbrakemi (2019); Akeerebari, T.J. (2022); but in line with the finding by Samal & Phanindra Goyari, (2022); Amarasekara Chandranath (2008). More so, the result of monetary policy rate (MPR) conforms to a priori expectations of our model. And also, in together with the study by Samal & Phanindra Goyari,(2022). Secondly, the model applies Two-stage least square (2SLS) after detecting the presence of multi-collinearity in OLS model with utilization of the tool of Variance Inflation Factors, and the results of Two-stage least square (2SLS) reveal that the economic periods of Government deficit spending (GDS) and official exchange rate (OEXCHR) are strong significantly and positively to reduce economic period of misery index of every Nigerian citizen. The result further demonstrates that economic period of monetary policy rate (MPR) is weak to reduce misery index of every Nigerian citizen.

5.0 Unique Contribution of the study for Policy action

Nigerian government should setup committee that will monitor money earmarks for programs or projects meant for the betterment of Nigerians, especially those unemployed. On a similar note, exchange rate should be set within a tangible band that will guarantee flexibility in the system, as this variable within the period of study, proved itself to have what it takes to minimize misery index. Exchange rate should be floated and monitored by the authorities and also, production of domestic goods should be encouraged, so that when these goods are sold outside world will help make our currency has strong value. In furtherance, monetary policy rate (MPR) was not seen as

a veritable tool to fight misery index – this could be that the monetary authority doesn't consider giving out interest rate to the appropriate individuals, business organization etc. that will use this money for investment purposes.

Conclusion

Most of government's programs, policies, actions are geared towards eradicating these macroeconomic problems of unemployment, inflation etc. This is one of the reasons this study was put in place to look into the implication of macroeconomic fundamentals on misery index in Nigeria. Our study has a sole focus on Nigeria – and this was done in order to find out whether these variables (government deficit spending; official exchange rate and monetary policy rate) could be recommended for policy action as veritable tools to solve this problem of misery index in Nigeria. The study adopted econometric tools of ordinary least square and two-stage least square for analysis. In the course of the study, we discovered that Government deficit spending (GDS) and official exchange rate (OEXCHR) were good variables of macroeconomic fundamentals that could be used to fight the problem of misery index in Nigeria. In conclusion, the study concluded that the authority should maintain a sound policy that will oversee money borrowed for critical projects that create employment opportunity for Nigerian citizenry, ensure exchange rate is kept within a certain band that will reduce high cost of gods and services and jettison the idea of increasing monetary policy rate, since this contribute to the suffering of the Nigeria populace during the period of study.

References

Ahmet M.B. & Seher S., (2022). The Misery Index: An Evaluation on Fragile Five Countries: Journal of Abant Social Sciences: 1108-1123, doi: 10.11616/asbi.1144140

Akeerebari, T. J. (2022). Effect of insufficient currency in circulation on the rate of inflation and unemployment in Nigeria: the Buhari's administration experience. *American Journal of Economics*, *6*(1), 25 - 47. https://doi.org/10.47672/aje.887

Ali, H., Ali, M. Z., Nosheen, F., & Din, A. S. U. (2021). Unemployment and Monetary Policy Dynamics in Pakistan: Evidence from co-integration Analysis. *Pakistan Journal of Humanities and Social Sciences*, *9*(1), 01–09. https://doi.org/10.52131/pjhss.2021.0901.0107

Aliyu A., & Mahmood. O.A., (2019). Impact of Monetary Policy and Fiscal Policy on Economic Growth in Nigeria: *Journal of Economics and Sustainable Development* www.iiste.orgISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) DOI: 10.7176/JESD/10-24-16

Amarasekara, Chandranath, (2008). "The Impact of Monetary Policy on Economic Growth and Inflation in Sri Lanka," MPRA Paper 64866, *University Library of Munich*, Germany.

Ashiru Ibrahim (2023). Analyzing the Impact of Fiscal Policy on Unemployment in Nigeria *Asian Journal of Economics, Business and Accounting*, *23*(22), 96–108. https://doi.org/10.9734/ajeba/2023/v23i221139

Blanchflower, D. G., Bell, D. N. F., Montagnoli, A., & Moro, M. (2013, March 13). The effects of macroeconomic shocks on well-being (Working Paper). Hanover, NH: Department of Economics, Dartmouth College.

Ebierinyo & Oyeinbrakemi, (2019).The Effectiveness of Monetary Policy in the Control of Inflation in Nigeria: *Journal of Economics and Finance.* DOI: 10.9790/5933-0901028694

Harvard Library, Office for Scholarly Communication. "Unpacking the Multiplier: Making Sense of Recent Assessments of Fiscal Stimulus Policy," Page 821.

Hossein, A., Hossein, T., & Sayed,K.H.(2018). The Effects of Monetary Policy on Output and Inflation in Afghanistan: A Dynamic Stochastic General Equilibrium Approach. Iran. *Econ. Rev*. Vol. 22, No. 2, 2018. pp. 375-408

J I. Ubah , E K Bowale1 , J O Ejemeyovwi, I. Jacobs, N Adeleye & O Ihayere (2021). Misery and Economic Growth Nexus in Nigeria; Implications for Electrical Energy Management. *International Conference on Energy and Sustainable Environment* IOP Conf. Series: Earth and Environmental Science 665 (2021) 012042 IOP Publishing doi:10.1088/1755-1315/665/1/012042 1

López, F. S. (2022), Measuring the Effect of the Misery Index on International Tourist Departures: Empirical Evidence from Mexico, Economies, 10, 81, s. 1-16.

M. Friedman (1969). *The Optimum Quantity of Money*, Macmillan

Mankiw, N. G. (2010). *Macroeconomics*. New York, NY: Worth.

Obayori J.B., (2016). Fiscal Policy and Unemployment in Nigeria: *The International Journal of Social Sciences and Humanities Invention*: DOI: 10.18535/ijsshi/v3i2.09

Oradea Journal of Business and Economics, Volume Viii, Issue 2: Doi: 10.47535/1991ojbe173

Robert J. Barro (22 February 1999). "Reagan Vs. Clinton: Who's The Economic *Champ?" Bloomberg. Archived from the original on October 22, 2012.*

Samal & Phanindra Goyari, (2022). Does Monetary Policy Stabilise Food Inflation in India? Evidence from Quantile Regression Analysis. *The Australian Economic Review,* vol. 55, no. 3, pp. 361–372: DOI: 10.1111/1467-8462.12474

Setterfield, M. (2009). An index of macroeconomic performance. *International Review of Applied Economics. 23*, 625–649.10.1080/02692170903007680

Udoh , Idongesit Edem, & Ime Uwem Kokoette. 2023. “Fiscal Policy and Inflation in Nigeria”. *Asian Journal of Economics, Business and Accounting* 23 (22):96-108. https://doi.org/10.9734/ajeba/2023/v23i221139.