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FINANCING ECONOMIC DEVELOPMENT IN THE FACE OF FISCAL CONSTRAINTS

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ABSTRACT

The gap between the revenue and expenditures of the governments of Nigeria has been on a deficit in greater part of her fiscal history (CBN, 2021). The challenge of propelling the economy of Nigeria through deficit financing calls for a cursory evaluation of the cost-benefit of such financing option. The debate of financing economic development in the face of fiscal challenges has been resonating among researchers. Empirical studies have suggested that fiscal deficit has the potential of crowding out private investment (due to rise in interest rate which is inimical to economic development (Wicksell Theory, 1898). In some other studies, there is direct relationship between deficit financing and economic development (Vamvoukas, 2000; Isabel et. al, 2013). In all of these studies, especially those that relate to Nigeria, it is observed that the focus of these literature relate to fiscal policy and their impact on economic growth. They did not examine fiscal constraints and their likely impact on the economic development of Nigeria. This study examines this vacuum in the literature. This research aims at examining the impact of fiscal deficits on the economic development of Nigeria. The methods of estimation are the stationary test, cointegration test, autoregressive distributed lags and the vector autoregressive model. The data is sourced from the Central Bank of Nigeria and the World Bank. The empirics of this study show that a percentage change in interest rate and the balance of trade in the lag period leads to -457.52 and -1.37 change in the fiscal balance of Nigeria in the current period, respectively. However, the nexus between the fiscal balance of Nigeria and unemployment, price level, per capita income and output are positive from lag 1 to the current period.

Keywords: Deficit finance, Interest Rate, Balance of Trade, Unemployment, Auto-regression.

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1.0 **Introduction**

Fiscal policy is a fundamental tool in macroeconomic management. The policy involves the manipulation of the expenditure and revenue profiles of a country in bringing about the desired macroeconomic objectives. These objectives could be full employment actualization, price stability, poverty reduction, increase in aggregate output, human capacity development and exchange rate alignment. It is usual for governments, especially in developing and emerging economies like Nigeria, to state their fiscal policy frameworks in the budget. Budgetary policy has become a hub in the policy deliberations, revealing the fiscal directions of governments. Managing fiscal possibilities has been a source of anxieties in the face of volatilities in the expected revenue and expenditure profiling of the concerned economy. This stems from the fact that no country is existing as an island or in a closed economy circuit. There are shocks spiraling from not just the domestic economy, but also from the external environments. Thus, serious macroeconomic imbalance have emerged in the budgetary history of Nigeria. In the 2022 budget, for instance, the gap between the projected revenue and expenditure of government was estimated to be N6,259 trillion. This deficit fell below the figure recorded in the 2021 budget of N6,449 trillion, representing a percentage change of -2.59%. Precisely, the expected aggregate revenue in this budget was N10,132 trillion while the projected aggregate expenditure was N16,391 trillion. This deficit was expected to be financed by new borrowings, the proceeds from privatization, draw-downs on loans secured for specific projects. The capital expenditure of the budget was put at N4,891 trillion and this, in comparison with the 2021 budget, declined by -1.96%. The percentage of the capital expenditure in relation to the total budget was 29.54% in contrast to 34.24% earmarked in the previous budget. To improve the revenue drive, the strategies of the fiscal authorities were enhancing tax and excise revenue, review the effectiveness of policies for tax waivers and concessions, preserve the revenue from the oil and gas sector and promoting technologically driven custom to boost the revenue base of the agency.

The debate on financing economic development in the face of fiscal challenges has generated enormous contributions from researchers. Empirical studies have suggested that fiscal deficit has the potential of crowding out private investment, given the rise in interest rate and decline in savings as consequential effects. This was the findings of Umeora, 2013; Isah, 2012 and Barror, 1991. Such findings are

impediments to economic development as capita accumulation is a sine qua non to economic development (see Wicksell theory, 1898; Baumol, W., 1952; Keynes, 1937). This empiric was also corroborated by Ghosh and Hendrik, 2009 who found that there was inverse relationship between budget deficits and economic growth in the Unites States of America. Similar result was obtained by Adams and Bevan (2004) in a sample of 45 developing countries and Laudau, (1983) in a cross-sectional dataset of 96 countries. However, Isabel et. al, 2013, Vamvoukas, 2000, discovered that there was direct relationship between budget deficits and interest rates.

2.0 **Background of the Study**

2.1 **Tax Administration in Nigeria**

The administration of taxes and collection of revenues are carried out by various institutions at the three strata of governments in Nigeria- the federal, states and local governments. The Federal Ministry of Finance, the Federal Inland Revenue Service and the Nigeria Customs Service are involved in the administration of taxes at the federal level. In the respective states, the Board of Internal Revenue and Ministry of Finance executes tax matters. The revenue committee for local governments and Finance and Supply Department carry out tax administrative roles at the third level of government. The 1963 Republican Constitution of Nigeria assigned specific functions to be performed by the federal and state governments. These functions were contained in the exclusive list in which only the federal government can executes and the concurrent list that allows both the federal and state government to share responsibilities. The local governments were regarded as part of the regional government by this constitution. This status quo changed in the subsequent constitutions of Nigeria- the 1979, 1989 and 1999 constitutions. Here, specific roles were given to the local governments in the residual list. Items contained in this list includes refuse disposal, street naming and house numbering, rate collection, cemetery, licensing, etc. The exclusive list contains such expenditures viz external affairs, airport, mining, defense, police, custom, currency, electricity, prison, etc. The constituents of the exclusive list are road construction, education, museum, health, water resources, agriculture, etc.

Revenues from the crude oil sector constitute the bulk of Nigeria's export earnings accounting for over 58% of the aggregate revenue (Central Bank of Nigeria, 2019). Other remarkable sources of revenues to Nigeria are taxes (both direct and indirect

taxes), levies, royalties, penalty, fines and charges. The federal government of Nigeria get a lion's share of the aggregate revenues; this is followed by the state governments and then the local governments. The debate on 'who get what and why' is far from being over as some states are embroiled in legal battle with the federal government with respect to the value added tax and its collection.

Table 1. Federal Account Allocation to all the tiers of government (N Billion)

Items	2001	2002	2003	2004	2005	2006	2007
Federal Government	723.92	842.51	948.41	1,180.81	1,456.96	1,739.93	1,869.19
State Government	404.61	442.06	489.16	666.04	815.18	976.26	1,070.86
Local Government	324.23	360.23	396.80	507.87	622.10	744.81	815.32
13% Derivation Fund	91.20	92.10	138.33	205.44	348.82	424.36	437.43
Total	1,543.96	1,736.90	1,972.70	2,560.16	3,243.06	3,885.36	4,192.80

Items	2008	2009	2010	2011	2012	2013	2014
Federal Government	2,655.45	2,151.10	2,416.51	3,237.04	3,451.76	3,711.75	3,404.45
State Government	1,511.51	1,387.78	1,538.65	1,921.61	2,084.69	2,251.34	2,062.63
Local Government	1,151.53	992.28	1,252.42	1,459.35	1,583.01	1,708.58	1,563.15
13% Derivation Fund	637.82	455.33	548.55	765.30	774.26	844.28	694.20
Total	5,956.31	4,986.48	5,756.12	7,383.31	7,893.72	8,515.95	7,724.44

Items	2015	2016	2017	2018	2019
Federal Government	2600.98	2,081.41	2,564.04	3,483.89	3,344.56
State Government	1,597.64	1,347.23	1,681.47	2,210.73	2,174.97
Local Government	1,205.19	1,011.01	1,263.39	1,667.25	1,636.76
13% Derivation Fund	410.26	294.69	417.14	640.13	550.13

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Total	5,814.07	4,734.36	5,926.05	8,002.00	7,706.42

Source: Office of the Accountant General of the Federation

2.2 **Nigeria's Fiscal Profile**

Nigeria's economy has been dominantly financed by deficit during the period under consideration as can be seen in Table 2 below. Considering a sample period of 20 years, it is observed that the country had a deficit budgetary expenditure in 12 years. The Table 2 also shows the percentage of deficits with respect to the gross domestic product of Nigeria. For instance, in 2003, the country recorded a total deficit of $2,260 million and this was followed by fiscal surplus of $7,154 million in 2004, representing -2.20 and 5.49% of the gross domestic product (GDP) of Nigeria, respectively. The economy of Nigeria was perennially on deficit between 2009 and 2010 when the deficits soared to -15,842 (representing -5.33% of GDP) and -15, 395 (indicating -4.17% of GDP). The Nigeria's economy was perpetually on deficit finance from 2012 to 2019. As at 2019, the deficit expenditure rose to $24,288 million which was the highest in the period under review. The factors responsible for this dwindling income is domestic and globally motivated. There had been decline in the export of Nigeria's primary product as well as drift in their global demand. Also, as it has been noted previously, a greater percentage of Nigeria's export earnings is generated by the oil and gas sector. This leaves the economy susceptible to the vagaries of the external sector (see Ohiomoje, 2021).The study aims at examining the trajectory of the country's economic development in the face of these fiscal deficits.

Table 2. The Evolution of Deficits in Nigeria

Time	**Deficit ($ Million)**	**Deficit (% of GDP)**
2000	2757	4.07
2001	2,356	-3.22
2002	1,262	1.34
2003	-2,260	-2.20
2004	7,154	5.49
2005	8,326	4.91

2006	19,514	8.76
2007	-2,927	-1.12
2008	18,815	5.70
2009	-15,842	-5.33
2010	-15,395	-4.17
2011	1,789	0.43
2012	-592	-0.13
2013	-13,708	-2.66
2014	-18,795	-3.80
2015	-18,795	-4.65
2016	-20,346	-5.42
2017	-18,198	-4.32
2018	-21,019	-4.69
2019	-24,288	-5.66

Source: The International Monetary Fund

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3. **Methodology**

3.1 **Model Specification**

The variables used in the analysis of this study are specified in the following equations

$A = f(X_i)$ …… (1)

Where

i = 1, ……., 6

A= The aggregate annual net surplus/deficits of Nigeria

X_i= List of explanatory variables

In algebraic form, equation 1 can be written as

$$A = X_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 \ldots\ldots\ldots (2)$$

Where

X_0 = intercepts; b_i= slope or coefficient estimates;

X_1= unemployment;
X_2 = price level;
X_3= per capita income;
X_4= balance of payment; X_5 = output.
Equation (2) can be represented to indicate first difference parameter as

$$\Delta A = X_0 + b_1\Delta X_{1t-1} + b_2\ \Delta X_{2t-1} + \beta_3\Delta X_{3t-1} + b_4\Delta X_{4t-1} + b_5\Delta X_{5t-1} + b_6\Delta X_{6t-1} \ldots\ldots\ldots (3)$$

The long run dynamic of this model can be expressed as:

$$\Delta A = X_0 + b_1\Delta X_{1t-1} + b_2\ \Delta X_{2t-1} + \beta_3\Delta X_{3t-1} + b_4\Delta X_{4t-1} + b_5\Delta X_{5t-1} + b_6\Delta X_{6t-1} \sum_{i=1}^{n} \beta_{7i}\Delta CM_{it-1} + \Omega£_{t-1} \ldots\ldots\ldots (4)$$

3.2 **Estimation Method**

The methods of estimation of the analysis are stationarity test, autoregressive distributed lag, diagnostic tests and the vector error correction model.

3.3 **Data**

The sources of data for the study are the Central Bank of Nigeria' statistical bulletins, the International Monetary Fund and the World Bank.

4. **Result and Discussions**

The stationarity or otherwise of the series in the model is put to test and appendix 1 shows that the group unit root estimates are not stationary at levels with a probability value of greater than 5%. The series, however, have no unit root after first differencing as the Augumented Dickey Fuller estimate falls below the 5%

benchmark. Given this sequence, the Johansen Cointegration test was conducted in Table 2 (in the appendices section) to examine whether the variables have long run relationship. The result shows that there are three co-integrating equations as the Trace Statistics exceeds the 0.05 Critical values and this result is validated by the its probability value of less than 5%. Consequently, we estimate the vector error correction model (VECM) in Table 3 (in the appendices). The VECM shows that a 1% change in interest rate in lag 1 leads to a decline in the dependent variable (net surplus or deficit) by 457.52. The relationship is inversed and this indicates that contracting more debts to finance economic developmental projects in the face of fiscal imbalance or challenges between the revenue and expenditure profile of Nigeria plunges the economy of Nigeria into further fiscal gaps as debts or loans carry with them the promise to repay with interest at a future date. Similarly, a unit change in the balance of trade of Nigeria in the previous year generates fall in the dependent variable by 1.37 per cent in the current year. The elasticities between per capita income, price level, output and unemployment in lag1 period and the dependent variable are, however, positive. This means that increases in these regressors have the capacity of promoting fiscal viability in financing economic developmental projects in future periods. The speed of adjustments of the variables is -0.0768.

The diagnostic test is also carried out to test for auto-correlation, heteroscedacity and normality of the distribution. Table 4 in the appendices indicates that the Durbin Watson statistics approximates 2.00 (with a precise estimate of 1.94). This relates to equation 1 in the system of equation model. Also, the probability of Chi Square is 0.208 which is greater than 0.05. Similar results are obtained in other equations of the system of equations model indicating the absence of auto-correlation in the series. The Breusch-Pagan Godfrey Heteroscedacity test reveals that the model is homoscedastic. Further test on the normality of the distribution shows that the distribution is normal with zero mean and constant standard deviation.

To check the level of significance of the regressors with respect to the dependent variables, Table 5 in the appendices shows that the changes in the net surplus or deficit in a lag period have significant effects on aggregate output via interest rate. This finding aligns with the apriori expectation that changes in the fiscal balance of an economy have significant influence on its gross domestic product, given the premonition that fiscal deficits and its consequential financing through debts can

have reverse effect on the ride to economic development because these loans carry with it the obligation to pay them back with interests on future dates. If this obligation is jeopardized due to unseen circumstances or ill-administered loans in the domestic economy, this is inimical to economic development. Also, the study found that c(13) which denotes changes in the fiscal balance or fiscal challenges through the interest rate channel is significant at less than 10% with respect to the level of unemployment. This means that fiscal challenges as depicted by the net surplus or deficit variable is an important factor in determining the level of unemployment in the Nigerian economy. This is expected because when output is impacted through the interest rate channel, income or the profit of producers varies which negatively affects the sustainability of existing labour force as well as the search for more workers. From the system of equation model, we are adopting equation (1) and equation (5). This is because the former equation has a Durbin Watson (DW) estimate of 2.168 while the latter's equation that shows the relationship between fiscal challenge and unemployment has a DW estimate of 1.98. This shows that these two equations are not serially correlated. However, their R^2 are 8.80 per cent and 15.98 per cent respectively.

On the short run causality of the variables, equation (1) indicates that there is no short run causality running from interest rate, balance of trade, output, per capita income and price level to the dependent variable which is given by the net surplus or deficit (fiscal imbalance or challenges). This is premised on the findings that the probability of the Chi square exceeds the 5 per cent benchmark. Similarly, Equation (5) shows that the probability of Chi square is greater than 5 per cent, suggesting that we should accept the null hypothesis which states that there is no causality between the independent variables (in this case, net surplus or deficit, interest rate, balance of trade, output, price level and per capita income) and the dependent variable represented by unemployment in equation (5) of the system of equation model..

5. **Summary and Conclusion**

The study found that interest rate is very fundamental in shaping the financing of economic development in Nigeria in the face of dwindling revenue and fiscal deficits. A unit change in interest rate leads to fall in fiscal balance by 457.52. The negative relationship indicates that fiscal authorities should put interest rate charged on deficit financing in the front burner when considering fiscal options.

Debts with less stringent conditions like lower interest rates; longer duration that provides debtors the opportunity of leveraging on financing developmental projects that are usually of long term nature; technical assistance in the execution of projects are viable options to consider. Similarly, the nexus between the balance of trade and the fiscal balance of Nigeria is negative. A percentage change in this regressor in the previous year generates -1.37 per cent change in the fiscal balance of Nigeria in the current year. This suggests that if the value of import of visible items exceeds the value of export of such items, this generates favorable fiscal balance for Nigeria. Intuitively, this finding is more revealing to fiscal authorities as more efforts needs to be channeled in boosting the revenue from the import of visible commodities to Nigeria. There should be an effective review of tax waivers and concessionary policies on visible trade of Nigeria with other nations of the world as more of such items need to be included in the tax net of Nigeria. The result of this study also indicates that positive fiscal balance or surplus promotes higher per capita income, inflation, unemployment and output. This insinuates that as Nigeria generates more revenue from taxation in the lag period, this tantamount to a high level of unemployment in the domestic economy, high and persistent rise in the general price level leading to increased output in the current year. Thus, fiscal authorities should find the right balance between what is considered to be favorable fiscal condition and positive macroeconomic objective. This result is validated by Table 5 in the appendices which shows the level of significance of the selected variables in the model. Equation (5) in the Table shows that fiscal balance is an important variable in determining the level of unemployment in Nigeria.

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APPENDICES

Table 1. Group Unit Root Test

Group unit root test: Summary
Series: NET_SURPLUS_OR_DEFICIT, INTEREST_RATE,
BALANCE_OF_TRADE, OUTPUT, PER_CAPITA_INCOME,
PRICE_LEVEL, UNEMPLOYMENT
Date: 06/22/22
Sample: 2000 2020
Exogenous variables: Individual effects
Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 3

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.07273	0.0000	7	130
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.21309	0.0000	7	130
ADF - Fisher Chi-square	69.4234	0.0000	7	130
PP - Fisher Chi-square	179.254	0.0000	7	133

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Source: Author's calculation

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Table 2. Cointegration Test

Sample (adjusted): 2001-2020

Included observations: 20 after adjustments

Trend assumption: Linear deterministic trend

Series: NET_SURPLUS_OR_DEFICIT INTEREST_RATE BALANCE_OF_TRADE OUTPUT PER_CAPITA_INCO PRICE_LEVEL UNEMPLOYMENT

Lags interval (in first differences): No lags

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.981796	195.3554	125.6154	0.0000
At most 1 *	0.893940	115.2326	95.75366	0.0012

At most 2 *	0.755813	70.35756	69.81889	0.0453
At most 3	0.714949	42.16111	47.85613	0.1543
At most 4	0.368688	17.05936	29.79707	0.6357
At most 5	0.283042	7.860274	15.49471	0.4805
At most 6	0.058496	1.205524	3.841466	0.2722

Trace test indicat es 3 cointegratin g eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.981796	80.12281	46.23142	0.0000
At most 1 *	0.893940	44.87502	40.07757	0.0134
At most 2	0.755813	28.19645	33.87687	0.2046
At most 3	0.714949	25.10175	27.58434	0.1006
At most 4	0.368688	9.199087	21.13162	0.8160
At most 5	0.283042	6.654750	14.26460	0.5307
At most 6	0.058496	1.205524	3.841466	0.2722

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

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's Calculation.

Table 3. VECTOR ERROR CORRECTION MODEL (VECM)

Cointegrating Eq:	CointEq1
NET_SURPLUS_OR_DEFICIT(-1)	1.000000
INTEREST_RATE(-1)	-457.5219
	(82.0237)
	[-5.57792]
BALANCE_OF_TRADE(-1)	-1.367246
	(0.08469)
	[-16.1442]
OUTPUT(-1)	0.013467
	(0.04220)
	[0.31916]
PER_CAPITA_INCOME(-1)	1.235096
	(1.35981)
	[0.90829]
PRICE_LEVEL(-1)	116.9834
	(55.1160)
	[2.12250]
UNEMPLOYMENT(-1)	2056.379
	(682.673)
	[3.01224]
C	-8090.348

Error Correction:	D(NET_SURpS_OR_DEF.)	D(INTEREST)	D(OUTPUT)	D(PCI)	D(PRICE)	D(

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			D(BAL. OF TR.)				
CointEq1	-0.076800	-1.04 E-06	-0.103708	0.980693	-0.021514	1.65 E-05	4.17
	(0.05826)	(9.6E-05)	(0.13794)	(0.12520)	(0.00835)	(0.00022)	(2.3
	[-1.31822]	[-0.01081]	[-0.75185]	[7.83327]	[-2.57671]	[0.07586]	1.85
C	-108.0350	-0.125000	-661.9950	8630.526	76.45000	0.313500	0.259
	(376.164)	(0.62124)	(890.591)	(808.333)	(53.9080)	(1.40604)	(0.14
	[-0.28720]	[-0.20121]	[-0.74332]	[10.6769]	[1.41816]	[0.22297]	1.77
R-squared	0.088039	0.000006	0.030448	0.773186	0.269464	0.000320	0.159
Adj. R-squared	0.037375	-0.055549	-0.023416	0.760585	0.228878	-0.055218	0.113
Sum sq. resids	50939690	138.9366	2.86E+08	2.35E+08	1046184.	711.6967	7.626
S.E. equation	1682.255	2.778255	3982.843	3614.977	241.0837	6.287981	0.650
F-statistic	1.737692	0.000117	0.565283	61.36019	6.639430	0.005755	3.423
Log likelihood	-175.8830	-47.76162	-193.1202	-191.1820	-137.0280	-64.09797	-18.7
Akaike AIC	17.78830	4.976162	19.51202	19.31820	13.90280	6.609797	2.07
Schwarz SC	17.88787	5.075736	19.61159	19.41777	14.00238	6.709370	2.17
Mean dependent	-108.0350	-0.125000	-661.9950	8630.526	76.45000	0.313500	0.259
S.D. dependent	1714.602	2.704163	3937.016	7388.054	274.5405	6.121250	

Determinant resid covariance (dof adj.)	7.09E+25
Determinant resid covariance	3.39E+25
Log likelihood	-786.5162
Akaike information criterion	80.75162

Schwarz criterion	81.79714
Number of coefficients	21

Source: Author's Calculation.

Table 4. Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.490356	Prob. F(2,16)	0.2550
Obs*R-squared	3.140780	Prob. Chi-Square(2)	0.2080

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Sample: 2001-2020 Included observations: 20

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.008270	0.057489	-0.143857	0.8874
C(2)	9.868565	366.3956	0.026934	0.9788
RESID(-1)	-0.122421	0.233408	-0.524493	0.6071
RESID(-2)	-0.392096	0.232764	-1.684527	0.1115

R-squared	0.157039	Mean depend ent var	8.81 E-14
Adjusted R-squared	-0.001016	S.D. dependent var	1637.387
S.E. of regression	1638.219	Akaike info criterion	17.81746
Sum squared resid	42940173	Schwarz criterion	18.01661
Log likelihood	-174.1746	Hannan-Quinn criter.	17.85634
F-statistic	0.993570	Durbin-Watson stat	1.946662
Prob(F-statistic)	0.420971		

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Source: Author's Calculation.

Table 5. Estimates of the Level of Significance of Variables in the Model

System: UNTITLED

Estimation Method: Least Squares

Sample: 2001-2020

Included observations: 20

Total system (balanced) observations 140

Estimation settings: tol=0.00010, derivs=analytic (linear)

Initial Values: C(1)=-0.07680, C(2)=-108.035, C(3)=-0.07680, C(4)=
-0.07680, C(5)=-0.07680, C(6)=-0.07680, C(7)=-0.07680, C(8)=
-0.07680, C(9)=-0.07680, C(10)=-0.07680, C(11)=-0.07680, C(12)=
-0.07680, C(13)=-0.07680, C(14)=-0.07680

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.076800	0.058261	-1.318215	0.1898
C(2)	-108.0350	376.1637	-0.287202	0.7744
C(3)	-1.04E-06	9.62E-05	-0.010807	0.9914
C(4)	-0.125000	0.621237	-0.201212	0.8409
C(5)	-0.103708	0.137936	-0.751853	0.4535
C(6)	-661.9950	890.5907	-0.743321	0.4587
C(7)	0.980693	0.125196	7.833275	0.0000
C(8)	8630.526	808.3334	10.67694	0.0000
C(9)	-0.021514	0.008349	-2.576709	0.0111
C(10)	76.45000	53.90795	1.418158	0.1586
C(11)	1.65E-05	0.000218	0.075859	0.9397
C(12)	0.313500	1.406035	0.222967	0.8239
C(13)	4.17E-05	2.25E-05	1.850147	0.0666
C(14)	0.259000	0.145548	1.779485	0.0776

Determinant residual covariance	3.39E+25

Equation: D(NET_SURPLUS_OR_DEFICIT) = C(1)*(NET_SURPLUS_OR_
DEFICIT(-1) - 457.521861619*INTEREST_RATE(-1) - 1.36724631055
*BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) +
1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) -
8090.34794028) + C(2)

Observations: 20

R-squared	0.088039	Mean dependent var	-108.0350
Adjusted R-squared	0.037375	S.D. dependent var	1714.602
S.E. of regression	1682.255	Sum squared resid	50939688
Durbin-Watson stat	2.168469		

Equation: D(INTEREST_RATE) = C(3)*(NET_SURPLUS_OR_DEFICIT(-1) -
457.521861619*INTEREST_RATE(-1) - 1.36724631055
*BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) +
1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) -
8090.34794028) + C(4)

Observations: 20

R-squared 0.000006 Mean dependent var -0.125000 Adjusted R-squared -0.055549 S.D. dependent var 2.704164

S.E. of regression 2.778255 Sum squared resid 138.9366

Durbin-Watson stat 1.960269

Equation: D(BALANCE_OF_TRADE) = C(5)*(NET_SURPLUS_OR_DEFICIT(-1) - 457.521861619*INTEREST_RATE(-1) - 1.36724631055 *BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) + 1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) - 8090.34794028) + C(6)

Observations: 20

R-squared	0.030448	Mean dependent var	-661.9950
Adjusted R-squared	-0.023416	S.D. dependent var	3937.016
S.E. of regression	3982.843	Sum squared resid	2.86E+08
Durbin-Watson stat	2.015722		

Equation: D(OUTPUT) = C(7)*(NET_SURPLUS_OR_DEFICIT(-1) - 457.521861619*INTEREST_RATE(-1) - 1.36724631055 *BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) + 1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) - 8090.34794028) + C(8)

Observations: 20

R-squared	0.773186	Mean dependent var	8630.526
Adjusted R-squared	0.760585	S.D. dependent var	7388.054
S.E. of regression	3614.977	Sum squared resid	2.35E+08
Durbin-Watson stat	1.209763		

Equation: D(PER_CAPITA_INCOME) = C(9)*(NET_SURPLUS_OR_DEFICI
T(-1) - 457.521861619*INTEREST_RATE(-1) - 1.36724631055
*BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) +
1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) -
8090.34794028) + C(10)
Observations: 20

R-squared	0.269464	Mean dependent var	76.45000
Adjusted R-squared	0.228878	S.D. dependent var	274.5405
S.E. of regression	241.0837	Sum squared resid	1046184.
Durbin-Watson stat	1.430112		

Equation: D(PRICE_LEVEL) = C(11)*(NET_SURPLUS_OR_DEFICIT(-1) -
457.521861619*INTEREST_RATE(-1) - 1.36724631055
*BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) +
1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) -
8090.34794028) + C(12)
Observations: 20

R-squared	0.000320	Mean dependent var	0.313500
Adjusted R-squared	-0.055218	S.D. dependent var	6.121250
S.E. of regression	6.287981	Sum squared resid	711.6967
Durbin-Watson stat	2.767547		

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Equation: D(UNEMPLOYMENT) = C(13)*(NET_SURPLUS_OR_DEFICIT(-1) - 457.521861619*INTEREST_RATE(-1) - 1.36724631055 *BALANCE_OF_TRADE(-1) + 0.0134674409178*OUTPUT(-1) + 1.23509594328*PER_CAPITA_INCOME(-1) + 116.983426607 *PRICE_LEVEL(-1) + 2056.37909897*UNEMPLOYMENT(-1) - 8090.34794028) + C(14)

Observations: 20

R-squared	0.159783	Mean dependent var	0.259000
Adjusted R-squared	0.113105	S.D. dependent var	0.691169
S.E. of regression	0.650909	Sum squared resid	7.626295
Durbin-Watson stat	1.979293		

Source: Author's Calculation

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