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Coordination between monetary and fiscal policies and its impact on monetary inflation in Iraq

Lect. Dr. Jabbar Saadoon Darag
AL-Nahrain University, Faculty of Business Economics, Department of Banking Economics, Baghdad, Iraq
Email: jabbar.saadon@nahrainuniv.edu.iq

Prof. Lect. Dr. Sahar Fathallah Muhammed Ali
AL-Nahrain University, Faculty of Business Economics, Department of Banking, Baghdad, Iraq
Email: dr.sahar@nahrainuniv.edu.iq

***Abstract*---**This study indicates the effectiveness of fiscal and monetary policies in influencing inflation in the Iraqi economy, as fiscal policy affects raising inflation rates and the general price level, while monetary policy affects reducing inflation during the period (2004-2023) in the Iraqi economy. Therefore, the impact of the two policies on inflation was measured and analyzed by studying the problem of autocorrelation using the ARDL program, where a sample of fiscal policy tools was taken and represented by public expenditures, while the money supply was taken as an expression of monetary policy, and the data was taken from the Central Bank of Iraq. The study concluded that monetary and fiscal policies are not significant and do not affect economic inflation in Iraq. The study recommends adopting an economic policy that tends to activate productive sectors and activate the role of the private sector in parallel with the optimal use of oil resources in light of fluctuations in global oil prices and opening the door to investments, with the adoption of a balanced monetary policy coordinated with fiscal policy and calling for the flow of investments.

***Keywords*---**Monetary policy, Fiscal policy, Inflation and ARDL.

Corresponding author: *Darag, J.S., Email: jabbar.saadon@nahrainuniv.edu.iq*
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1. Introduction

Fiscal policy and monetary policy occupy an important position in economic policy, and fiscal policy and monetary policy complement each other, and they are the two basic elements of national economic policy, and require consensus on procedures and measures. Therefore, in this study, we try to address the type of relationship between fiscal policy and monetary policy and its impact, we try to explain the impact of the relationship between the two fiscal policies, and try to quantitatively evaluate the impact of the relationship between fiscal and monetary policies on inflation in the Iraqi economy from 2004 to 2023.

1.1. The importance of the study

The importance of this study stems from the following considerations: First: The nature of the relationship between fiscal and monetary policy in the Iraqi economy during the study period and its impact on inflation. Second: The importance of this study also lies in trying to analyze and measure the impact of fiscal and monetary policies on inflation in the Iraqi economy during the study period.

1.2. Study Hypothesis

The study assumes that fiscal and monetary policies have an impact on inflation in the Iraqi economy, as expansionary fiscal policy leads to an increase in the general price level and contractionary monetary policy leads to a decrease in the general price level. Price level (inflation.(

1.3. Research Methods

The study relies on economic analysis methods, uses some statistical or experimental methods, and uses the study of autocorrelation using the ARDL model to estimate parameters and test the model, and relies on scientific sources, publications, official statistics, studies and scientific papers to achieve the study hypotheses and purpose. To complete this work, the study was divided into the following parts: The relationship with inflation in the Iraqi economy. Research purpose:

- The theoretical framework of the concept of inflation and the impact of fiscal and monetary policies on it
- The concept of inflation.
- Theories that explain inflation
- The impact of fiscal and monetary policy on inflation.
- Analysis and measurement of the impact of fiscal and monetary policies on inflation in the Iraqi economy

2. Previous studies

Abdul Razzaq Aziz Hussein's study entitled The Impact of Fiscal and Monetary Policies on Inflation in the Iraqi Economy for the Period 2003 - Mid-2010 Analysis and Measurement, and the study concluded that fiscal policy greatly restricts monetary policy through money supply, which is determined by total public

spending as a percentage of oil revenues (95-97%). Monetary policy exerts significant restrictions on fiscal policy through exchange rates, and thus forms public expenditures.

Muhammad Muhammad Hazam Al-Qatibi's study, entitled Determinants of Inflation and the Role of Fiscal and Monetary Policies in Addressing It in the Republic of Yemen 1990-2006 AD, and the research came out with a set of results, the most prominent of which are: Inflation has become a long-term phenomenon in the Yemeni economy, manifested in the continuous rise in prices, and there are multiple factors and causes of inflation, the most important of which are: Currency: The imbalance between the flow of expenditures and the flow of actual supplies of goods. The study also indicated that the economic reform program between 1995 and 2006 achieved relative economic stability, but removed support from the economy. Some commodities had a negative impact on the deterioration of living conditions and the expansion of poverty in Yemeni society.

Study by Naseem Hassan Abu Jamea, The impact of economic policies on the inflation rate during the period (1937-2017) Study, the case of the United Kingdom, and the research concluded that there is a negative situation between the interest rate and the exchange rate of the pound sterling, tax revenues and economic inflation in inflation rates in the United Kingdom during the study period.

3. The theoretical aspect

3.1. The theoretical framework of the concept of inflation and the impact of fiscal and monetary policies on it:

In this special topic, we try to deduce the theoretical framework of inflation as a concept and identify the most important theories that explain inflation, the most important of which is the important theoretical framework. Theoretical views on the impact of fiscal and monetary policies on inflation within the economy:

3.1.1. The concept of inflation: Economic inflation is one of the most common economic concepts. However, despite its widespread use, there is no consensus.

This is due to the disagreement among economists about the definition of the concept of economic inflation, and thus inflation is a continuous rise in the general level of prices (), and what does the continuous rise in prices mean: most goods and services, or average. Prices in the economy, higher than before, including the costs of factors of production, include goods and services, as follows, goods, such as food, clothing, furniture, equipment, building materials, transportation and services are, health, education, communications, tourism and housing services, similarly, inflation can be considered as (a large amount of money chasing a small amount of goods), that is, the growth rate of average money income is greater than the growth rate of average production, or in other words, the rate of change in aggregate demand (consumption expenditure + investment spending) is higher and views differ on this in terms of the rate of

change in aggregate supply and domestic production, imports and stocks of goods and therefore the average increase in prices in the short term in which the volume of production remains constant or almost constant, some financial and others monetary. Inflation can appear as a state of continuous rise in general prices, followed by a decline in the purchasing power of monetary units, as economic imbalances in the markets for goods, services and factors of production, and as an imbalance between cash flows and material flows. Some interpret inflation as an undeclared tax imposed indirectly on everyone (indirect tax), which affects the poor and those with limited income more severely than the rich. Over time, this naturally leads to a widening gap between the different classes of society and the erosion of the purchasing power of salaries and wages, which leads to economic, social and even political instability. Therefore, inflation can take different forms depending on the perspective of observation, i.e. there may be increases in prices without an increase in cash income, or there may be an increase in cash income, costs are borne without a decrease in profits, and excessive cash formation may occur without an increase in prices or cash income, and therefore the different phenomena, which are all called inflation, are phenomena independent of inflation, and from an intellectual point of view they differ according to the different schools of economics, and therefore the concepts related to inflation can be classified according to two criteria: (Hattat, 2006, p. 18) which are a criterion based on the concept of inflationary causes, and the other criterion is the concept based on the characteristics of the inflation phenomenon.

3.1.1.1. The concept based on inflationary causes.

Inflation is measured as a percentage of the increase in the general level of prices in a specific period of time, usually a year, compared to what it was in a previous period. If the comparison is for a previous period of time (several years), the annual compound growth rate of the general level is taken as a measure of the pace of inflation, and the annual inflation rate is calculated using a set of indicators.

-Implicit deflator of GDP.
-General index of wholesale prices (single.(
-Import and export indices
- Consumer price index (basket of goods and services weighted according to their relative importance).

This standard is based on the theory that considers the concept of inflation as a monetary doctrine and a theory based on supply and demand and on the basis of income and spending factors, as the classical school sees in explaining inflation that ((every increase in the amount of inflation leads to the circulation of money to an overall increase in the price level (), for a price level based on supply and demand, inflation is explained as a result of an imbalance in this relationship, which is, the increase in total demand over total supply causes prices to rise. Among the proponents of this theory are (Perot, Femen and Lerner) (Ghazi, 2000, p. 9). As for the theory of spending and income, inflation is explained as ((an increase in the rate of spending and income)) assuming that the quantity of existing goods remains constant, then an increase in monetary spending and monetary income leads to an increase in prices and inflation in schools (Fisher) (Al-Ruby, 2001, p. 13).

3.1.1.2. The concept based on the characteristics of the inflation phenomenon

The proponents of the standard focus on defining inflation and explaining its meaning in terms of its characteristics and effects, the most important of which is the rise in prices, and among these economists are Marshall, Robinson, Flaman and Clouzot And others... Robinson defined inflation as ((an unreasonable rise in... regularity of prices), Marshall defined it as ((a rise in prices)), Flaman defined it as ((a general rise in prices)), and Crusoe said it is ((a general trend of rising prices driven by monetary factors))) and some stipulate in this analysis the permanence and continuity of the rise, so the temporary or intermittent rise cannot be called inflation. Ackley said it is ((a continuous and tangible rise in the general level of prices. Or the average price)). In conclusion, a specific and comprehensive definition of inflation can be given, that is, every increase in currency circulation will lead to the total actual demand exceeding the increase in the total supply of goods and services during a certain period, and thus leads to inflation. This definition expresses the gap between the amount of money in circulation and the amount of goods and services produced in the market during the study period, so inflation is a result of this gap and the rise in prices is an indicator of it(Al-Shammari, 77; 1995).

3.2. The impact of fiscal and monetary policy on inflation:

Fiscal and monetary policy can be viewed as an interconnected system, depending on the economic relations related to the role of money in the economy on the one hand and the role of money in the economy on the other hand. Ultimately, the philosophy of fiscal and monetary policy is primarily based on the idea of taking steps to enable both policies to adapt to monetary expansion. The needs of customers in the economy match, and this compatibility must fully reach a certain level of capacity because, and economists do not deny that if the compatibility is not complete, economic relations will be less disturbed, and from this logic, fiscal policy makers are interested in public spending, which can be inferred from the size of public revenues and monetary policy, and the compatibility with the money demand function can be inferred from the degree of compatibility of the money supply with the demand for money on the one hand, however, in developing countries, it is difficult to obtain consistent estimates of public spending and public revenues (fiscal policy) and the functions of money demand and money supply (monetary policy) because the necessary information is difficult or difficult to obtain in these countries. Economies can be exposed to repeated shocks that make the time series consistent and compatible with each other, so fiscal and monetary authorities must adopt other means to change spending from income demand and money supply from demand demand (Nagham H.Neama and Hadeel Sh.Mahmoud, 6,2024)

3.2.1. The impact of fiscal policy on inflation:

All schools of economics agree that fiscal policy is a tool to influence economic activities to achieve the economic, social and political goals it seeks, which means that fiscal policy is a method or financial action plan followed by the state

through the use of financial means, and includes, in addition to public loans, public revenues and expenditures to achieve certain goals, the most important of which are improving the national economy, promoting development, enhancing economic stability, achieving social justice, providing equal opportunities for ordinary citizens by bringing social classes closer together and reducing gaps between individuals in the distribution of income and wealth.
Developing countries are characterized by the absence of a clear economic system, as we find hybrid systems that combine the characteristics of the capitalist system and some features of the socialist system, and these countries also depend on foreign financial aid, and are characterized by low productive investment, high marginal propensity to consume, and widespread unemployment and inflation. The economies of these countries are characterized by weak or inflexible production mechanisms and the inability to operate idle production resources, and therefore they lack strong, efficient and flexible production mechanisms, which requires expanding the demand for currency. If this is reflected in inflation, consumption will rise at the expense of low savings with stable income.(Al-Naqdi Al-Shafi'i ,1952: 250)

The economies of these countries also suffer from a high general budget deficit, which is due on the one hand to weak financial resources due to the general recession, the abundance of tax exemptions and tax evasion, and on the other hand, in addition to the weak tax capacity and local debts. In addition to the increasing burdens, there is an increase in military spending and the lack of rationalization of public spending (Jabbar Saadoon Darag, 76, 2024).

3.2.2. Impact of Monetary Policy on Inflation:

Monetary policy is a method or regulation adopted or pursued by monetary authorities to control money in the society in order to achieve some predetermined goals.
The central bank of the country does this by increasing or decreasing the quantity of money in circulation and influencing the level of credit through interest rates and appreciation rates by applying its traditional weapons (monetary policy tools) to influence investment and thus total spending in the society. According to the believers of the monetarist school, monetary policy affects various economic activities effectively whether they are contractionary or inflationary in nature. According to their point of view, this full utilization of the factors of production, and thus economic equilibrium, cannot be achieved through any intervention in economic activities by the state using fiscal policy to achieve a planned goal. Rather, such intervention would deepen the imbalance. Hence, economic policy gives primacy to monetary policy due to the large disparity and the superior multiplier effect of changes in the quantity of money on changes in the level of economic activity compared to fiscal policy (taxes and spending). Critics have pointed out that the effect of a change in the volume of money on aggregate demand and thus on the gross national product and the price level is similar in many respects to the classical case, whose long-term effect is limited to the general price level only. In the short-term, however, money has a direct and fundamental effect on aggregate spending and thus on monetary income as follows (Sami, 1982: 169):

First case: The increase in the money supply by the monetary authorities leads to an increase in the cash balances of individuals and enterprises above the desired level, which leads to an increase in spending by these individuals. Therefore, the increase in aggregate demand would lead to an increase in production and employment - if the economy is below the level of full employment - this would lead to an increase in the desired balances. However, in the case of the economy operating at full capacity or the inflexibility of the production system, the effect appears in the rise in prices; and the adjustment between the desired and real balances is made, in this case, through prices. Prices only move upwards. **Case 2:** If the central bank reduces the money supply by selling government papers in the open market, there will be a decrease in the quantity of money in general, available to the public, which then reduces spending on goods and services, pushing money income to a lower level. Thus, whenever the public finds liquidity unsatisfactory, it limits its purchase until such time as money income falls back to that level that re-establishes the original ratio with the money supply (Nazim Muhammad Al-Shammar, 20, 2010).

The basic idea of modern monetary theory then is that changes in the quantity of money may offset economic imbalances by restoring economic equilibrium. Thus we can say that even if the ideology of monetary policy differs across schools with different foundations or even if the theory is not one but a variety of principles, everyone recognizes that a workable monetary policy needs to be in place to be able to stimulate the economy and control imbalances. From here we can look at the most important effects that changes in price increases (inflation) have. (Al-Shammari, 75; 1995).

-The effect of income redistribution: The decrease in real wages due to price increases usually affects people with fixed incomes.

-Impact on debt: Weak prices relieve debtors of their obligations because they pay money with less purchasing power.

The conflict between monetary and fiscal policy is the main reason behind the lack of credibility of economic units in monetary policy. Therefore, unless the central bank is forced to do so, it should not adopt monetary policies that conflict with fiscal policy. The Iraqi economy, and we also focus on reshaping fiscal policy along the lines of monetary policy, with the aim of combating inflation through direct taxes and fiscal discipline. Cooperation between monetary and fiscal authorities helps achieve the common goals of both authorities without compromising the credibility of economic policy as a whole. Reforms can only continue in the presence of macroeconomic stability and financial stability, because the lack of financial stability and the continuation of a large fiscal deficit will lead to higher interest rates, while if interest rates are fixed at a lower level in the presence of macroeconomic stability and financial stability if the fiscal deficit is too large, inflation will spread, the demand for loans will increase significantly, and the allocation of resources in the economy will be distorted. It is clear that the fiscal authorities rely on domestic debt, external debt, and currency issuance to finance the deficit, a large part of which is affected by the decisions of the monetary authorities, which explains the overlap between fiscal policy and monetary policy. The necessity of coordination between them, because if there is no coordination between monetary policy and fiscal policy, there will be three possibilities (Sundarajan1994, 184):

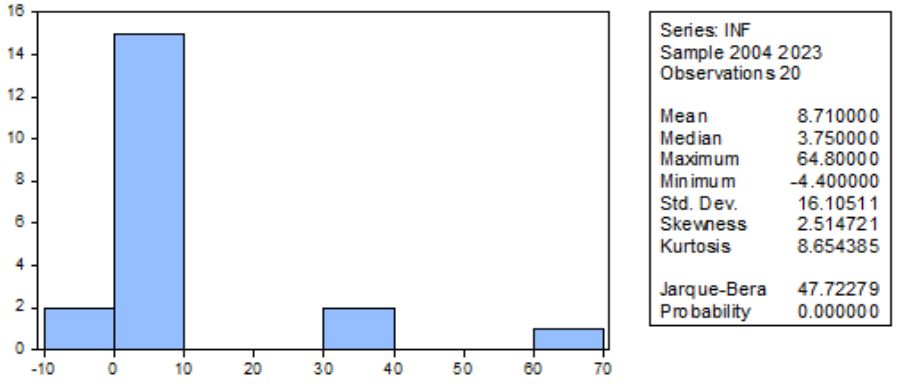
The first possibility: the dominance of monetary authorities, such as the dominance of the central bank over the currency itself. Authorities. And determines the growth of the monetary base independent of the government's demand for money and the possibility of financing from local and foreign financial markets. Which prompted the government to reduce the budget deficit to a level that enables it to obtain funds from local and foreign financial markets and face the risk of inability to repay the money borrowed from these markets, as not consuming these debts would make traders in the financial sector lose interest in financial markets. Government bonds, which in turn leads to difficulties in issuing new debt and bearing interest rates. High, which makes the cost of debt unpopular. The **second possibility:** is the dominance of fiscal policy, where the Ministry of Finance takes the initiative in determining the size of the budget deficit without consulting the monetary authorities. There is the possibility of financing from the bond market (domestic debt), while the monetary authorities refuse to increase the money base (direct government borrowing) to finance any deficit. If the financing of the deficit exceeds the expansion of demand for real base money at the target price level, this will lead to increased financial pressures. Inflation, as the rise in the price level in the domestic market leads to increased external cash flows. Instability can also lead to higher inflation rates, which may harm growth in the domestic real and financial markets (Soha N.Jameel, Namir A.Al-Saigh ,112,2024).

The third possibility: the independence of the institutions themselves, where we find that the monetary and fiscal authorities work independently and thus may take conflicting decisions.(Jabbar Saadoon Darag, 5, 2024).
Their objectives are linked to the monetary base and the size of the budget deficit, as the monetary authorities finance the exposed part of the budget deficit in the domestic and foreign bond markets. If the capital market is underdeveloped, it will be in a state where it cannot provide large amounts of financing, but if it is developed and the objectives of fiscal policy conflict with monetary policy, interest rates on domestic bonds will rise. The market may rise to its highest levels.
In conclusion, it is clear that coordination between monetary and fiscal policy can achieve better results than any of the possibilities (the three possibilities mentioned above), because such coordination will not lead to the fiscal authorities' inability. The budget will only reduce costs but will promote the expansion of domestic capital markets.
- Inflation and the balance of payments: Inflation means a decrease in domestic demand for locally produced goods, thus decreasing exports and increasing imports, which appears as a deficit in the balance of payments.
- Redistribution of wealth: This requires that investment returns such as property rights on real estate, bonds, etc. return much higher interest than profits and the huge advance first in prices and then the rise in the value of their properties, which increases their cash flows. In short, economic stability requires coordination between the work of fiscal and monetary policy through mechanisms for formulating and implementing economic policy by the state and taking corrective measures unanimously within the framework of a unified plan, and this is what has brought success to the economies of countries, especially developing ones.

4. Analysis and measurement of the impact of fiscal and monetary policies on inflation in the Iraqi economy from 2003 to 2023:

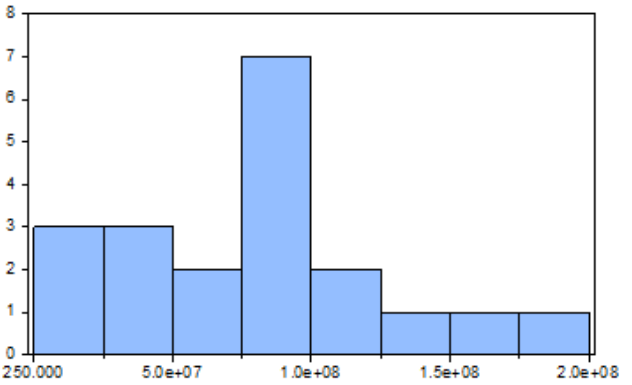
Fiscal and monetary policies aim, through their tools, to achieve the stability policies adopted by countries in order to address the various economic imbalances that accompany economic development. Since fiscal policy represents the objective aspect of economic policy, while monetary policy represents the monetary aspect of comprehensive economic policy, this requires a high degree of coordination with other economic policy tools, as well as the effectiveness and efficiency of fiscal policy and monetary policy. Relative importance. Since one of the economic stability policies differs from one economy to another, due to the difference in the nature of the current economic structure and the difference in the degree of development of financial and monetary markets from one country to another, which affects the degree of economic stability, in addition to the difference in the current economic situation, the progress of the situation also differs (Christine Ammer and Dean S.Amme, 29, 1977).

4.1. The table below shows the descriptive statistics for the variable represented by monetary inflation, in Iraq



In the table above, as shown by the parameters, the p-value is less than five percent, so the distribution is normal: Jarque-Bera test: P 0<.05, normal distribution.

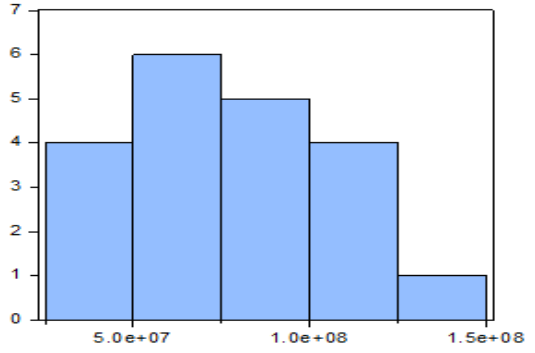
4.2. The table below shows the descriptive statistics for the variable of broad money supply in Iraq



Series: MS2	
Sample 2004 2023	
Observations 20	
Mean	81166297
Median	87019674
Maximum	1.81e+08
Minimum	12254000
Std. Dev.	47741339
Skewness	0.388674
Kurtosis	2.575434
Jarque-Bera	0.653772
Probability	0.721166

In the table above, as shown through the parameters, the p value is greater than five percent, and therefore the distribution is normal: Jarque – Bera test: P > 0.05, Normal distribution.

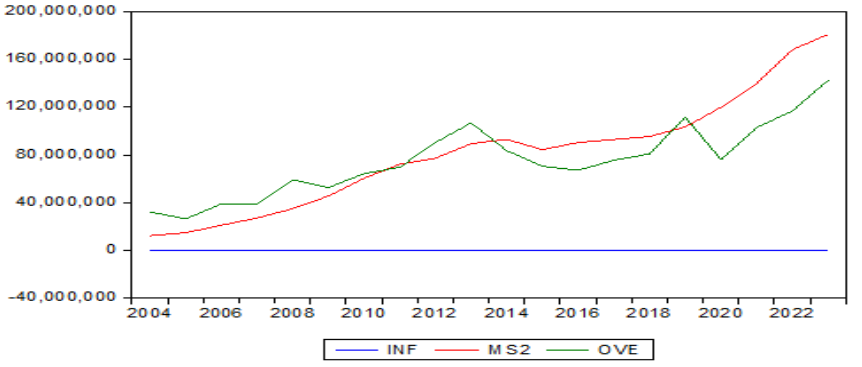
4.3. The table below shows the descriptive statistics of the public expenditure variable in Iraq



Series: OVE	
Sample 2004 2023	
Observations 20	
Mean	75348781
Median	72943815
Maximum	1.42e+08
Minimum	26375175
Std. Dev.	30410400
Skewness	0.317417
Kurtosis	2.574548
Jarque-Bera	0.486686
Probability	0.784002

In the table above, as shown through the parameters, the p value is greater than five percent, and therefore the distribution is normal: Jarque – Bera test : P > 0.05, Normal distribution.

4.4. The graph showing inflation, broad money supply and public expenditure in Iraq



From the above diagram, and during the study period, it is clear that any change in the money supply and public expenditures leads to an infinite change in monetary inflation.

4.5. Autoregressive distributed lag methodology
Unit root sample test:

Table 4.5.1, Unit root test procedure for the monetary inflation field variable, as shown below:

Null Hypothesis: D(INF) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 3 (Automatic - based on SIC, maxlag=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.096712	0.0002
Test critical values:	1% level	-4.728363	
	5% level	-3.759743	
	10% level	-3.324976	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 15

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(INF,2)
Method: Least Squares
Date: 11/12/24 Time: 04:27
Sample (adjusted): 2009 2023
Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF(-1))	-1.657161	0.233511	-7.096712	0.0001
D(INF(-1),2)	0.305873	0.089619	3.413042	0.0077
D(INF(-2),2)	0.321242	0.057038	5.632063	0.0003
D(INF(-3),2)	0.137299	0.037961	3.616811	0.0056
C	-4.785410	1.764083	-2.712690	0.0239
@TREND("2004")	0.337998	0.127797	2.644803	0.0267

R-squared	0.967272	Mean dependent var	-0.100000
Adjusted R-squared	0.949090	S.D. dependent var	6.649060
S.E. of regression	1.500248	Akaike info criterion	3.938312
Sum squared resid	20.25670	Schwarz criterion	4.221532
Log likelihood	-23.53734	Hannan-Quinn criter.	3.935295
F-statistic	53.19870	Durbin-Watson stat	1.469772
Prob(F-statistic)	0.000002		

The unit root test for the monetary inflation variable. above, shows stability at the zero level and in the normal test equation there is no trend, we notice that the value of the probability sum (-7.096712) is less than 1% and the value of t (t-statistic) at the 1% level (-4.728363) and the 5% level, (-3.759743) and the 10% level (-3.324976) is smaller, so we accept the alternative hypothesis and reject the null hypothesis.

Table 4.5.2, Unit root test procedure for the broad money supply variable, as shown below:

Null Hypothesis: D(MS2,2) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.614853	0.0024
Test critical values:	1% level	-3.886751	
	5% level	-3.052169	
	10% level	-2.666593	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 17

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(MS2,3)
Method: Least Squares
Date: 11/12/24 Time: 04:37

Sample (adjusted): 2007 2023
Included observations: 17 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MS2(-1),2)	-1.333001	0.288850	-4.614853	0.0003
C	878711.6	1958283.	0.448715	0.6601

R-squared	0.586741	Mean dependent var	-1158067.
Adjusted R-squared	0.559191	S.D. dependent var	1184826 2
S.E. of regression	7866473.	Akaike info criterion	34.70425
Sum squared resid	9.28E+14	Schwarz criterion	34.80227
Log likelihood	-292.9861	Hannan-Quinn criter.	34.71399
F-statistic	21.29687	Durbin-Watson stat	1.930096
Prob(F-statistic)	0.000337		

The unit root test for broad money supply, above, shows stability at the zero level and in the normal test equation there is no trend, we notice that the value of the probability sum
(-4.614853) is less than 1% and the value of t (t-statistic) at the 1% level (-3.052169) and the 5% level, (-3.052169) and the 10% level (-2.666593) is smaller, so we accept the alternative hypothesis and reject the null hypothesis.

Table 4.5.3, Unit root test procedure for the overhead variable, as shown below:

Null Hypothesis: D(OVE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=4)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.253817	0.0006
Test critical values:	1% level	-3.857386	
	5% level	-3.040391	
	10% level	-2.660551	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 18

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(OVE,2)
Method: Least Squares
Date: 11/12/24 Time: 04:41
Sample (adjusted): 2006 2023
Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(OVE(-1))	-1.291894	0.245896	-5.253817	0.0001
C	7823630.	4291947.	1.822862	0.0871

R-squared	0.633049	Mean dependent var	1734354.
Adjusted R-squared	0.610115	S.D. dependent var	2807889
S.E. of regression	17532677	Akaike info criterion	0
Sum squared resid	4.92E+15	Schwarz criterion	36.30147
Log likelihood	-324.7132	Hannan-Quinn criter.	36.40040
F-statistic	27.60259	Durbin-Watson stat	36.31511
Prob(F-statistic)	0.000079		1.864903

The unit root test for the overhead variable, above, shows stability at the zero level and in the normal test equation there is no trend, we notice that the value of the probability sum (-5.253817) is less than 1% and the value of t (t-statistic) at the 1% level (-3.857386) and the 5% level, (-3.040391) and the 10% level (-2.660551) is smaller, so we accept the alternative hypothesis and reject the null hypothesis.

4.5.4. Cointegration test or (bounds test)

Dependent Variable: INF
Method: ARDL
Date: 11/17/24 Time: 11:03
Sample (adjusted): 2005 2023
Included observations: 19 after adjustments
Maximum dependent lags: 1 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (1 lag, automatic): MS2 OVE
Fixed regressors: C
Number of models evalulated: 4
Selected Model: ARDL(1, 0, 0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
INF(-1)	0.297804	0.250392	1.189349	0.2528
MS2	-4.94E-08	1.76E-07	-0.280580	0.7829
OVE	-7.50E-08	2.80E-07	-0.267661	0.7926
C	14.85027	13.21244	1.123961	0.2787

R-squared	0.278041	Mean dependent var	7.500000
Adjusted R-squared	0.133649	S.D. dependent var	15.58447
S.E. of regression	14.50570	Akaike info criterion	8.371625
Sum squared resid	3156.231	Schwarz criterion	8.570454
Log likelihood	-75.53043	Hannan-Quinn criter.	8.405275
F-statistic	1.925601	Durbin-Watson stat	2.180068
Prob(F-statistic)	0.168825		

*Note: p-values and any subsequent tests do not account for model selection.

From the above results, it is clear to us that there is no joint integration between them, which is explained by the parameters.

4.5.5. ARDL Test

ARDL Bounds Test
Date: 11/17/24 Time: 09:42
Sample: 2005 2023
Included observations: 19
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	2.939206	2

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85
2.5%	4.41	5.52
1%	5.15	6.36

Test Equation:
Dependent Variable: D(INF)
Method: Least Squares
Date: 11/17/24 Time: 09:42
Sample: 2005 2023
Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-23.61527	13.20277	-1.788660	0.0939
MS2(-1)	9.63E-08	1.73E-07	0.556951	0.5858
OVE(-1)	1.30E-07	2.90E-07	0.448493	0.6602
INF	0.738552	0.256181	2.882931	0.0114

R-squared	0.370214	Mean dependent var	-1.431579
Adjusted R-squared	0.244257	S.D. dependent var	16.49475
S.E. of regression	14.33946	Akaike info criterion	8.348571
Sum squared resid	3084.301	Schwarz criterion	8.547400

Log likelihood	-75.31143	Hannan-Quinn criter.	8.382221
F-statistic	2.939206	Durbin-Watson stat	2.200572
Prob(F-statistic)	0.067215		

Through the result (F-statistic) which shows a value less than all levels, and thus it becomes clear to us that the model is not significant, which confirms the neutrality of money in the long term.

Conclusion and Recommendations

Conclusions

The study came out with a set of conclusions and recommendations that can be summarized as follows:
As follows:

1. Inflation occurs in the face of strict government fiscal and monetary policies that aim to reduce liquidity in the economy to reduce cash income, which leads to a decrease in aggregate demand and thus a decrease in prices. The mechanism for reducing liquidity in the economy is through reducing government fiscal policy. Spending, or raising tax rates, or both.
2. The fiscal policy of the Iraqi economy has greater restrictions on monetary policy in addition to inflation expectations, inflation is caused by fiscal policy on the demand side.
   Monetary policy is a nominal stabilizing factor for inflationary expectations, which is more dangerous than inflation, which leads us to inflation due to the inflexibility of the production system as expectations are consistent with the reality of the coming periods. We must break this cycle.
   Inflation expectations are the real mechanism by supporting the exchange rate of the dinar against reserves. We find that the new purchasing power theory takes into account Iraq's trade conditions with the outside world, as well as the rise in oil prices and the presence of global inflation.
3. The shift from the so-called monetary aggregate targeting to targeting inflation itself through exchange rate tools is the result of fundamental factors that depend on the nature of the money demand function and the factors affecting it, the most important of which is the availability of the money demand function. The level of proportionality between monetary activity and real activity so that the ratio of money to GDP (the degree of liquidity) increases in a stable manner consistent with financial growth and general economic stability.
4. The absorptive capacity of government agencies to implement investment and service projects is weak: The production of government services represented by municipal administration, public transportation, electricity, water, sanitation, etc. has deteriorated. This has led to disruptions in the production of services and goods and the aggravation of the security situation, which has led to irregular supply of goods and services in local markets and a reduction in working hours. On the other hand, security issues have led to difficulties in supplying imports at border crossings and high insurance costs, in addition to a high tendency to consume and a weak tendency to save due to the blockade policies and personal poverty, in addition to an increase in current

expenditures in public expenditures at the expense of investment expenditures. In addition, this has led to an increase in the general price level.

Recommendations

The study also presents a set of recommendations to deal with inflation:- In line with the short-term vision, it is necessary to establish the basic pillars to deal with inflation through financial and monetary policies-:

1. The necessity of adopting economic policies aimed at stimulating the productive sector and stimulating the economy
   Given the volatility of global oil prices, the role of the private sector goes hand in hand with the optimal exploitation of oil resources and opens the door to investment. Implementing a balanced monetary policy coordinated with the financial policy to direct investment flows.
2. The expansion of the monetary aggregate is the main cause of the inflation phenomenon, and therefore economic stability must be achieved by unifying and fixing the value of the Iraqi currency unit in relation to foreign currencies and stabilizing the growth of the currency in a way that achieves economic stability. This is the responsibility of monetary policy, which must make the exchange rate system more flexible than the current situation, and propose controlling the money supply, controlling wages, and limiting the exchange rates associated with it. High value.
3. The phenomenon of rising prices and consumer expectations of inflation must be considered and dealt with seriously, because inflation threatens the structure of the economic system, as it is an undeclared tax imposed indirectly on everyone, and its impact on the rich compared to the people, the poor and those with limited income are the most affected, in addition to the factors of economic and social instability, and it must be noted that raising wages to combat inflation will lead sooner or later to a similar rise in prices. The increase in government spending supported by oil revenues has led to an increase in local demand, which has led to a large surplus in local liquidity.
4. Expanding the areas of vertical and horizontal construction according to the area of residential construction, and allowing the private sector to enter this field to eliminate the sharp rise in housing prices and rents, which has a major impact on residential construction. The rise in prices in the sector and its reflection on the general price level.
5. Activating the production sector, especially the government sector, and activating institutions with high productivity to bridge the gap in local production instead of relying on foreign imports.
6. Prices and exchange rates have an important impact on inflation in the Iraqi economy through monetary policy, so we recommend issuing bonds in foreign currency by forecasting future exchange rates and taking advantage of the interest rate differential of the local currency. Foreign currencies to absorb excess cash liquidity through bonds.

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