



Money Supply and Its Effect on Inflation Analysis Study on Iraqi Economy for period 2000-2017

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ABSRTACT

Over the past decades, the Iraqi economy has undergone significant political developments that have had their effects on various aspects of life, including the economic aspect. The Iraqi economy has witnessed fluctuations in many economic variables depending on the political reality and the surrounding circumstances. Despite all these developments and divergences in economic policy trends and the use of their instruments, the common denominator over the past years was to increase the volume of cash flow and increase inflation rates. Iraq witnessed a rise in the general level of prices throughout the nineties of the last century and the first two decades of the current century was a kind of creeping inflation that was characterized by continuity throughout the study period.

Hence the importance of research to find out the relationship between the offer of money and inflation, and if this relationship is an obvious issue of most economic thinkers and monetary policy, then why the monetary policy in Iraq insists on the new issuance of the currency, which is a key factor in inflation, The salaries and wages of the employees of the state and the public sector, with all the increase in total demand, in return for the decline in the contribution of the economic sectors, the deterioration of the productive apparatus and the poor efficiency of its performance in general.

❖ Introduction:

The problem of inflation is one of the major problems facing the capitalist economy a long time ago, until it became an economic and monetary phenomenon facing most of the economies of developed and developing countries. Iraq was among them and still suffers from the consequences of this problem, which reflects a general rise in price levels.

This topic has received wide attention by economists, and has been addressed by many schools of thought research and analysis and occupied interest and discussion within the corridors of universities and scientific research centers, in view of the negative effects of this phenomenon on the overall economic and social activities, as they contribute to influence the purchasing power of the currency and reduce From the state of monetary preference even to the performance level of the individual and society.

The development of the money supply in the Iraqi economy and the need for more tunnels because of the conditions of the economic blockade suffered by the Iraqi economy during the eighties and nineties of the last century and what required by military spending as a result of the wars experienced by Iraq and then the occupation after 2003 and so far impact on the sustainability of inflation.

❖ The Importance of Research:

The importance of the research is to show the impact of the money supply on the inflation rates in the Iraqi economy, and shed light on the most important economic and social effects of this phenomenon, and the need to adopt an economic policy that will create a balance between cash flow (cash supply) and commodity flow (GDP), because of the impact of events in the case of price stability in the market and thus economic stability.

❖ Search Hypotheses:

1. There is a positive relationship between money supply and inflation rate in Iraq according to the monetary theory.
2. Money supply had an impact on inflation in the Iraqi economy during the period 2000-2017.

❖ Research Methodology:

The research was based on the descriptive-analytical approach through the use of some economic measuring tools based on the statistical data to analyze the relationship between money supply as the independent variable and inflation as the dependent variable and the time period 2000-2017. and the destruction of infrastructure, especially after the occupation (2003 to 2018). And the resulting decrease in the purchasing power of the dinar because of the general rise in the level of prices with a focus on the impact of increased money supply on the phenomenon of inflation, which examines the phenomenon inherent in the Iraqi economy.

For the sake of clarity in the analysis, the research relied on:

- * Simple correlation coefficient R to measure the relationship between the independent variable and the dependent variable.
- F was tested to measure the significance of the relationship between the variables used, and the use of linear regression analysis to determine the relation between the two variables in order to prove the hypothesis of the research.

The first topic

Theoretical Framework of Inflation

Inflation is a serious problem that many economies have suffered in terms of their economic systems. We will discuss the definition of inflation and its reasons and its economic and social effects to explain the seriousness of this phenomenon and the efficiency of the performance and the ability of monetary and fiscal policies to curb inflation and mitigate its negative effects on economic development.

❖ The meaning and measurement of inflation:

Inflation is defined as the general rise in the price level in the long term, leading to a decrease in the real value of money (the purchasing power of the currency) and hence the decline in real income of the members of the community, reflecting the rise in prices of goods and services, especially consumer, where the marginal tendency of consumption rises as money Real income decline.

The Iraqi economy has witnessed the rise of inflation since the beginning of the eighties of the last decade due to the Iran-Iraq war. This phenomenon was exacerbated during the 1990s due to the economic siege imposed on Iraq, paralyzing all sectors of the economy. As a result, In the demand, which led to high price levels have a significant impact on the purchasing power of the currency, has prompted the exceptional circumstances experienced by the Iraqi economy to resort to increase the issuance of cash to meet the urgent need for more spending.

The interpretation of inflation by the classic school by Fisher economist matches the situation that prevailed in the Iraqi economy, where it is summarized that the change in the overall level of prices linked to the change in money supply in the same direction and amount. (Ackley, 1978, p 426), ie, increasing the amount of money (money supply) necessarily leads to an increase in the general level of prices. If the quantity of goods and services is stable and the trading speed is stable, any increase in the money supply necessarily means a rise in the general price level ". The relationship is "

$$PQ = Vy \cdot M$$

$$\Delta P Q = Vy \Delta M$$

The Keynesian school interpreted inflation not on the basis of money supply as the problem was not the supply side according to Say's Law, "supply creates demand", but the problem lies in effective demand because the state of full use of economic resources, including resources The Keynesian theory has emphasized the phenomenon of monetary preference. Criticism is self-seeking, unlike the classic school mechanism. Thus, the demand for criticism consists of three main motives: "Mt, the demand for cash for spending purposes consumer and investment, and Ms (keeping a portion of cash to deal with contingencies that may arise in the future) and the Mi which expresses monetary investment (currency swaps in other currencies to take advantage of fluctuations in exchange rates or investment in the stock market...

Friedman's theory also reflected her rejection of the ideas of Keynesian theory and re-adhering to classical principles, but a new dress, focusing on a more serious phenomenon of inflation, the "Stagflation" that "Nutty Boy" who gave birth to the mating between depression and inflation, The genes of inflation and depression at the same time, this means the phenomenon of unemployment.

This theory considered the money supply to be governed by a decision by the monetary authorities and that the changes in the money supply are governed by the size of the Gross Domestic Product (GDP), "the quantity of goods and services produced within a year", in light of which the general level of prices is determined. Any rise in prices (inflation) leads to a decline in the value of money and thus less the percentage of monetary preference (the low motivation to keep money in liquid form, and the emergence of manifestations of monetary inflation.

❖ **Measuring Inflation:**

A number of measures are available to measure inflation in the country, including:

1. Consumer Price Index (CPI): This is a comparison of consumer prices for the current year at the prices prevailing in the base year.

$$\text{Fiscal price} = \text{General Price level in current year} / \text{general price level in base year} \times 100\%$$

This measure faces many criticisms, notably:

A. That the changes in prices of consumer goods chosen may not necessarily reflect the prices of all goods and services.

B. That the changes in the prices of goods and services may not all be changing in the direction of the rise, but some of them may fall in prices, while others remain unchanged prices.

C. Differences in quality of goods and services selected.

Due to these shortcomings, inflation was calculated by means of the weighted index by giving weight to each commodity or service and then the percentage price of that commodity or service was multiplied by the weight given to it. The sum of the percentage prices after multiplying them in weights is divided by the sum of the weights and not by the number of goods and services as in the usual method (arithmetic mean).

$$\text{Weighted Index} = \text{Price} \times \text{Weight Weighted for Comparison Year} / \text{Price} \times \text{Weight Weighted for Base Year} \times 100$$

The result is therefore more accurate than its predecessor. The consumer price index can be calculated according to the following equation: (Samuelson, 2006, p. 704).

$$\text{Inflation rate} = \text{Consumer price index for the current year} - \text{Consumer price index for the previous year} / \text{Consumer price index for the previous year} \times 100.$$

❖ **Types of Inflation :**

There are different types of inflation can be distinguished:

1. Creeping Inflation

It is a type of inflation, which is the lowest level of unwanted inflation, where the increase in prices starts slowly and gradually ranging between 2% - 4%, and this type of inflation can be controlled by using some of the fiscal or monetary policy instruments.

2. Impaired or Hidden Inflation

The result of state interference in price fixing is often caused by price hikes or government subsidies, which Western European countries suffered during the Second World War. This type of inflation also prevailed in many former socialist countries and developing countries.

3. Hyper Inflation

This type of inflation is rapidly increasing the circulation of cash and greatly weakening the second function of money as a store of value, and is often difficult to control this type of inflation, as an example of what happened in Germany after World War I, where the value of the German Mark so low that Before the war, each Mark became equal 33,000 Marks after the war. Bulgaria and Hungary suffered from this after World War II and Latin American countries such as Argentina and Brazil (Zubaidi, 2011, p. 31). It also suffered from the Iraqi economy after the economic siege imposed on him in the mid-nineties, where the general level of prices rose by more than 700%. (Menati, 2015)

❖ Causes of Inflation:

Many schools of thought and economic theories have addressed the causes of inflation:

1. Big Bush Theory:

The increase in demand leads to a rise in the price level, which is known as demand inflation. In other words, the main reason for the emergence of inflation is the increase in demand (cash expenditure) without a corresponding increase in the supply of goods and services (GDP). In other words, the growth of the cash flow is greater than the growth of the commodity flow, which leads to the emergence of the so-called inflationary gap.

2. Cost of Production Theory:

That higher production costs (such as higher wages, higher profit rates, higher prices of productive users in general and imported in particular lead to higher product prices to cover higher costs, so this type of inflation is known as cost inflation.

3. Structural inflation:

A general rise in price levels resulting from structural imbalances in the economy. This is what most economies in developing countries are characterized by the weak flexibility of their productive apparatus and the inability to respond to demands for increased demand.

❖ Inflation Effects

First: Economic Effects:

There are a number of economic effects reflected by the phenomenon of inflation, the most important of which are:

1. The dominance of the phenomenon of inflation and the high levels of prices in the economy drives the owners of capital to direct capital intended for investment towards the areas of rapid profitability and non-productive activities, especially (speculative activities) for the sale and purchase of real estate, for example because they achieve quick and profitable profits compared to the profits achieved by productive activities.
2. Higher prices push producers to increase production in high-profit areas, which leads to higher living costs and deteriorating living standards.
3. Increasing inequality between groups of society, where inflation increases the incomes of the capitalist class owning the means of production and the deterioration of the real wages of fixed income. The higher the inflation rate, the lower the middle class will be affected in society to join the poor.
4. Inflation necessarily leads to a reduction in the marginal tendency of savings, and consequently a decrease in the basic source of investment (savings), which affects the rate of economic growth as a function of the level of investment, economic growth rates are low and the state of prosperity is negatively affected.
5. Since inflation is inverted at the general level of prices, it means that the higher the inflation rates the depreciation of the currency and decreased purchasing power.
6. High price levels necessarily mean a decrease in the volume of exports and an increase in the volume of imports, leading to the deficit of the trade balance and then balance of payments deficit.
7. Inflation leads to a decrease in the real value of the tax revenue due to erosion of the value of the currency.

Second: Social Effects:

The situation of monetary inflation reflects serious negative social effects, such as changing social values, the prevalence of wasteful consumption, the spread of administrative and financial corruption, especially bribery, the spread of social and economic crime, the disintegration of the community structure and the emergence of parasitic strata, Members of the community are suffering the people because of class differences and the spread of corruption in all forms.

❖ **Inflation in the Iraqi Economy:**

The problem of inflation in the Iraqi economy since the seventies of the last century due to the high prices of crude oil, which led to the increase in the volume of foreign revenues to Iraq, and then increased money supply, and since the eighties, which witnessed the outbreak of the Iraq-Iran war increased the need for more spending, Annual inflation rates increased to about 10.6% for the period 1980-1985, and prices continued to rise to reach 18.6% during the years of the explosive plan (1986-1990). (Khazraji, 2010 p. 12)

Prices continued to rise during the period (1991-1995) to reach 228.7% by the 1988 base year. (Central Bank of Iraq - Directorate General of Statistics / Department of Studies).

The value of the Iraqi dinar has deteriorated and the living standards of individuals have deteriorated. In order to alleviate inflation, the Ministry of Commerce has established what is known as the rationing system to provide citizens with the necessary consumer needs, which included all members of society in all their categories to mitigate the negative effects of inflation, . The following table shows the evolution of the annual inflation rate for the period 2000-2017.

Table (1)

Annual inflation rate in Iraq for the period 2000 – 2017

Years	Annual inflation rate%
2000	4.9
2001	16.3
2002	19.3
2003	32.5
2004	26.9
2005	36.9
2006	53.2
2007	30.7
2008	2.7
2009	-2.8
2010	2.5
2011	5.6
2012	6.1
2013	2.4
2014	2.2
2015	1.4
2016	0.5
2017	0.2

Central Bank of Iraq / Directorate General of Statistics and Research - Department of studies and for different years.

The above table shows that the inflation rate witnessed a decline after 2003 compared to previous years, with inflation peaking at 53.2% in 2006. The period of occupation witnessed the replacement of the local currency, the increase in spending, the weak security situation and the weakness of political and economic stability. During the period above, the economy was dominated by the phenomenon of inflationary recession resulting from the rise in the general level of consumer prices and unemployment as an economic problem. The poverty rate in Iraq has increased and unemployment among young people has deteriorated and the economy has witnessed deterioration in its productive sectors, destruction and devastation that have hit most of the economic establishments.

The Second Topic

Money supply

❖ Money Supply Concept:

Money was defined as anything that was generally accepted. The characteristic of criticism was general acceptance. It was also known that it was all used for purposes of exchange. The classical school considered the function of money to be a tool to facilitate the exchange only. (Mt), the demand for cash for purposes of consumption and investment spending exclusively, while the Keynesian school added other functions of money, a store of value or a repository of wealth (based on the theory of monetary preference that asserted that money required for itself, Cases that may arise in the future (Ms), in addition to being a tool for future payments.

Money has passed in various forms, including various types of "commodity money - metal, paper money, credit money, in addition to electronic money"

The concept of money supply was linked to the functions it performed. Classical theory focused on the amount of money not only the total used but also the speed of circulation. Therefore, the volume of money supply is the total amount of money multiplied by the speed of cash circulation. (Sethi, 1996 P.44). In light of this, two concepts of cash supply can be distinguished:

1. Narrow Money Supply (M1)

Is the sum of the means of payment traded in a country over a period of time, and is based on the basic money function as a tool to facilitate the swap process where the mass of cash available in circulation (currency traded outside the banking system and the public and consists of banknotes and any auxiliary coins) Cash deposits are checkable, ie demand deposits created by commercial banks, ie, money supply in the narrow sense M1

$$M1 = NC + DD$$

Where NC represents net currency trading, DD current deposits (money on demand).

Money supply in the narrow sense is the most appropriate to define the concept of money supply. It includes the net currency in circulation and the current deposits used in the tunnels, while time deposits and savings deposits are not considered part of the money supply because they are not accepted for payment after conversion into current currency or deposits . (Sethi, T.T 1996 p.44).

2. Broad money supply M2

Is the supply of money in the narrow sense plus time deposits and savings deposits, ie, the broad money supply = currency trading + current deposits + term deposits + savings deposits

$$M2 = M1 + Td + Sd$$

Where Td refers to term deposits and Sd savings deposits.

Here, it is possible to point out that money in the broad sense of the M2 is more accurate in terms of the relation to national income, and M2 money supply increases as the monetary issue increases and the credit money created by commercial banks increases.

❖ The Development of Money Supply in Iraq:

Money supply develops with the development of production, increasing population size, increasing the state's revenues from hard currency and positive expectations.

The money supply in Iraq has witnessed an upward trend since the 1980s, as it increased rapidly due to the Iraq-Iran war and necessitated an increase in spending to provide military equipment and supplies and the needs of military expenditures. Money supply increased from 82.3% in 1980 to 85.5%. Ministry of Planning, Planning Authority, Iraqi Economy 1980-1988, January 1990).

Table (2)

The Evolution of the money supply in Iraq for the period 2000-2017

Years	Money Supply M1 "Billion dinar "	Growth Rate %
2000	1728	16,4
2001	2159	24,9
2002	3013	39,6
2003	5773	91,6
2004	10148	75,8
2005	11399	12,3
2006	15460	35,6
2007	21721	40,5
2008	28189	29,8
2009	37300	54,7
2010	51743	38,7
2011	62473	20,7
2012	63735	2,0
2013	73858	15,9
2014	72692	1,5
2015	65435	10,0
2016	70733	8,1
2017	71162	0,6

Central Bank of Iraq, Annual Bulletin for various years.

It is clear from the above table that the money supply is increasing in different proportions. The years of occupation have increased significantly. In 2003, the growth rate of money supply rose to about 92% compared to 2002. Thus, the huge increase in money supply is due to the increase in money supply Foreign exchange derived from oil exports, which led to increased spending and the high level of imports, which led to high inflation rates. Then began to decline but at varying rates and the lowest level of growth in 2014, where it was 1.5% then rose to 10% in 2015, then dropped to 8.1% in 2016 and then to 0.6% in 2017. The increase in money supply during 2017 appears to be the result of a rise in net foreign assets due to the improvement in the price of a barrel of oil during 2017 to \$ 49.3 per barrel against \$ 36 per barrel in 2016. (Annual Economic Report 2017, Central Bank of Iraq, Statistics and Research Department, p. 23)

The Third Topic

The Effect of Money Supply on the Monetary Inflation in Iraq.

“Applied Side”

❖ Measuring the impact of money supply in inflation

To explain the relationship between inflation as a variable and the supply of money as an independent variable, it is necessary to measure the effect of the change in money supply in the inflation experienced by the Iraqi economy for the period 2000-2017 using the simple linear regression model. This relationship can be expressed by the following regression equation:

$$Y_i = b_0 + b_1 x_i + E$$

Where Y_i is the dependent variable that represents the inflation rate expressed in the general level of consumer prices.

x_i : The independent variable that represents the width of money in the narrow sense .

b_0, b_1 : regression equation coefficients.

E : Random error.

Table (3) below shows the evolution of M1 money supply and the annual inflation rate in Iraq for the period (2000-2017).

Table (3)

Money Supply M1 Evolution and Annual Inflation Rate in Iraq *

For the period 2000-2017.

Years	Money supply M1 "billion"	Annual inflation rate (%)
2000	1728	4,9
2001	2159	16,3
2002	3013	19,3
2003	5773	32,5
2004	10148	26,9
2005	11399	36,9
2006	15460	53,2
2007	21721	30,7
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2011	62473	5,6
2012	63735	6,1
2013	73858	2,4
2014	72692	2,2
2015	65435	1,4
2016	70733	0,5
2017	71162	0,2

* Central Bank of Iraq / Directorate General of Statistics and Research - Department of Studies, annual publications for different years.

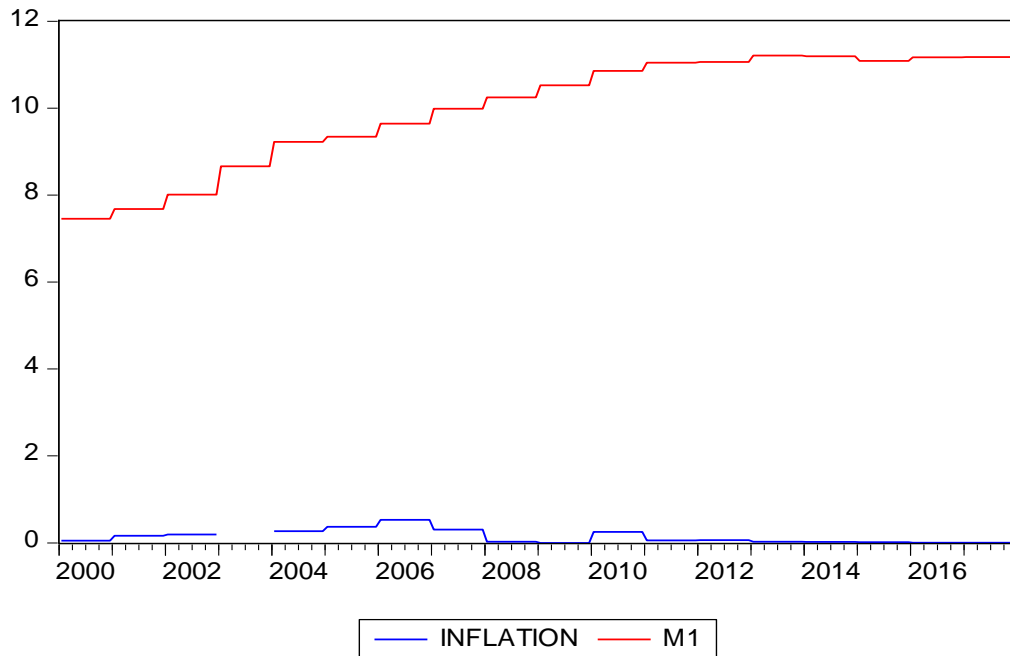
Annual data without logarithm

Dependent Variable: INFLATION
 Method: Least Squares
 Date: 05/13/19 Time: 00:22
 Sample: 2000 2017
 Included observations: 17

Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0125	-2.834860	1.16E-06	-3.28E-06	M1
0.0002	4.806335	0.055249	0.265546	C

0.137824	Mean dependent var	0.348857	R-squared
0.158206	S.D. dependent var	0.305448	Adjusted R-squared
-1.104199	Akaike info criterion	0.131848	S.E. of regression
-1.006174	Schwarz criterion	0.260759	Sum squared resid
-1.094455	Hannan-Quinn criter.	11.38569	Log likelihood
1.140751	Durbin-Watson stat	8.036429	F-statistic
		0.012545	Prob(F-statistic)

Figure (1)



Analysis results:

INF = a + b Mi
 INF = 0.265 - 0.000328 Mi
 (t prob) (0.0002) (0.012)
 (F prob) (0.012)
 R2 = 34.8 %

The relationship between inflation rates (INF) and money supply in Iraq (M1) was estimated in a simple linear regression relationship using annual data for the period (2000-2017). This estimated relationship shows that it is economically illogical and inconsistent with economic theory, As a whole (F. prob 0.012) as well as the significance of the estimated parameters separately. The estimated relationship revealed an inverse relation between the money supply (M1) and the inflation rate (INF) through the negative sign of the money supply parameter (0.000328) Was very weak and low through the depreciation of the M1.

In other words, the increase in the money supply is offset by the low rate of inflation. This is contrary to the assumption of economic theory and economic logic, where the relationship between them is assumed to be positive, ie the increase in money supply leads to high inflation. The inflation rates in Iraq and during the period are relatively constant because of the relative stability of the exchange rate of the Iraqi dinar against the US dollar, and therefore there is a direct relationship between the two variables and this because of the nature of the Iraqi economy irregular or orderly and the existence of other variables that may affect the relationship Directly or indirectly.

This was evident in Figure (1), which reflects the low and forgotten stability of the inflation rate while there was a positive upward trend in the size of money supply in the Iraqi economy for the period under study.

❖ **Conclusions and recommendations:**

• **Conclusions.**

1. There has been a weak inverse relationship between money supply and the rate of inflation in the Iraqi economy.
2. Inflation is one of the economic problems experienced by the Iraqi economy, which has serious social, political and security implications. What deepens the problem is the prevalence of inflationary inflation, which combines inflation and unemployment with its negative effects, reflected in the lack of employment opportunities for the majority of society, And the holders of certificates, which makes them do business outside their specialties, if found, reflecting the psychological effects difficult to a large generation of young people.
3. The Central Bank of Iraq was able to reduce inflation rates after 2003 in light of increasing foreign oil revenues resulting from high crude oil prices.
4. The Iraqi banking system is still suffering from underdevelopment, poor level of services provided to customers and limited use of modern technology in dealing. Therefore, the volume of currency in circulation remained the largest percentage of money supply compared to the volume of current deposits.
5. The deterioration of the basic productive sectors and the weakness of the productive apparatus in general, which led to dependence on imports in satisfying domestic demand, which exacerbated the problem of inflation and reflected its negative impact on all segments of society.

• **Recommendations:**

1. The need to grant greater autonomy to the Central Bank of Iraq and non-interference in its affairs, and grant him the powers and wide authority to draw monetary policy and the development of mechanisms capable of addressing economic problems, notably the phenomenon of inflation and the promotion of banking work and activate its role to serve the development process.
2. The Central Bank shall establish some mechanisms that would absorb the surplus cash available to the public through upgrading the level of service provided to the public by the customers with the banks and encouraging them to save and keep money in the banks and not to keep the cash out of them to increase the volume of current deposits that constitute A weak ratio compared to the size of the currency traded in the market.
3. Improve the efficiency of the performance of monetary policy in Iraq and increase its effectiveness in influencing the absorption of the cash surplus in the market and increase the confidence in the local currency (dinar) and directing the investment capital towards the productive areas to restore life to the basic economic sectors in order to diversify the economy and eliminate the rent

economy adopted mainly On a single sector of depletion and governed by external factors more than internal factors, and attention to the infrastructure destroyed by the war and the development of a serious policy of reconstruction and reconstruction of the ravages of war and the return of life for industrial projects disabled, also re-interest in the agricultural sector and activate its role to reduce the volume of imports, which are almost the goods offered mostly imported and poor quality in spite of the high prices in the market due to manifestations of administrative corruption, which permeated all joints of economic life, reflecting the negative impact on the march of growth and development in the Iraqi economy.

❖ **Sources:**

1. Ackley, Gardner , *MACRO ECONOMICS : Theory and Policy*. (Collier Macmillan publishers) LONDON, 1978.
2. *Annual Economic Report 2017*, Central Bank of Iraq, Statistics and Research Department.
3. Al-Zubaidi, Hussein bin Salem Jaber "*Inflation and Depression*" Al-Warraaq for Publishing and Distribution, First Edition, Amman, 2011.
4. Central Bank of Iraq, Directorate General of Statistics and Research, Department of Studies.
5. *The Impact of Money Supply on Inflation in Algeria during the Period 1986-2014, A Standard Analytical Study*", Journal of Economic Sciences, Management and Commercial Sciences, Volume 10, No. 16, pp. 303-316.
6. David Begg and Stanley Fisher and Others, *Economic*, (London .Mc Grew – Hill company Europe),1997.
7. Dagher, Mahmoud Mohamed, Ramadan El-Sobaie, "*The Impact of Money Supply and Exchange Rate on Inflation in the Libyan Economy*." [Http://www.iasj.net/net/iasj?](http://www.iasj.net/net/iasj?)
8. Khazraji, Thuraya "*Monetary Policy in Iraq between past accumulations and challenges of the present*", Journal of the Baghdad College of Economics, University, Issue 23, January 2010.
9. Menati , Adnan ,Saleh, "Money Supply and its Impact on Inflation - An Analytical Study in the Iraqi Economy for the Period 1990-2013", Dananer Magazine, No. 7, 26, 2015.
10. Mr. Ali, Abdel-Moneim "*Studies in Money and Critical Theory*", Al-Ani Press, Baghdad, 1970.
11. Samuelsson, Nordau's, *Economics*, Lebanon Library, First Edition, Beirut 2006.
12. Singh. J , "*Money Supply – Meaning and Measures of Money Supply*" Economics Discussion , Retrieved, 21 /5/2017.
13. T.T Sethi, "*Monetary Economics*", (new –Delhi and company LTD, 1996).
14. [https:// mawdoo3.com](https://mawdoo3.com), *Money Supply*