

Analysis of the impact of the broad money supply on the gross domestic product in Iraq for the period (2004-2020)

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Abstract

The research aims to know the impact of the money supply on the gross domestic product in Iraq for the period (2004-2020), and to clarify the basic concepts of each of the money supply and the gross domestic product with a statement of the relationship between them.

Where the research reached a number of results, including: that there is a direct relationship between money supply in the broad concept M2 with the volume of GDP, and that the growth rate of money supply is greater than the growth rate of the volume of GDP in Iraq. Because of the inflexibility of the production system in Iraq, the research concluded with recommendations, including the need to pay attention to the production process and encourage producers to increase GDP and achieve economic stability, the need to find a balance between the money market and the commodity market and make the money supply equal to the national product to avoid inflationary gaps.

يهدف البحث إلى معرفة أثر العرض النقدي على الناتج المحلي الإجمالي في العراق للفترة من (2004-2020)، وإيضاح المفاهيم الأساسية لكل من العرض النقدي والناتج المحلي الإجمالي مع بيان العلاقة بينهما. حيث توصل البحث إلى عدد من النتائج منها: أن هناك علاقة طردية بين عرض النقد بالمفهوم الواسع M2 مع حجم الناتج المحلي الإجمالي، وأن معدل نمو عرض النقد أكبر من معدل نمو حجم الناتج المحلي الإجمالي في العراق بسبب عدم مرونة الجهاز الإنتاجي في العراق، واختتم البحث بتوصيات منها ضرورة الاهتمام بالعملية الإنتاجية وتشجيع المنتجين لزيادة الناتج المحلي الإجمالي وتحقيق الاستقرار الاقتصادي ضرورة إيجاد توازن فيما بين السوق النقدي والسوق السلعي وجعل المعروض النقدي مساوي للناتج القومي لتجنب حدوث فجوات تضخمية.

the introduction

Monetary policy is one of the most important tools of the state's economic policy. Since monetary policy is one of the branches of economic policy, it is an important element in achieving economic stability as a goal that the economic policy system works to achieve, and monetary policy changes have a clear impact on the overall macroeconomic variables of any economy in the world as they affect the financial markets through the role they play in allocating Economic resources and the process of linking savers and investors within the framework of its function of collecting and transferring financial resources from savers represented by units of financial surplus to investors represented by units of financial deficit, and as is known, the use of monetary policy variables follows the nature of the system of variables that affect the overall economic activity, with differences in directives Variables with the intent of affecting any deficiency,

Regardless of the type of economic system, the money supply remains one of the variables of economic activity, as some countries depend in their orientations the money supply in the direction that affects inflation or even achieve growth in output and employment. In light of the foregoing, this research focuses on the impact of the broad money supply on the gross domestic product in Iraq for the period (2004-2020).

First : the importance of research

The importance of the research is to show the course of monetary policy and the effective impact of the broad money supply on the gross domestic product, as well as the possibility of following a monetary policy that leads to achieving a balance between cash flows and government spending to prevent inflationary pressures in light of the shocks and financial challenges that occur in most rentier countries because of their adoption On the oil habits in their government budgets, here comes the role of monetary policy in overcoming the problems and raising the level of GDP, thus increasing the levels of economic growth as a whole.

Second: the research problem

The research problem is the following question:

Does monetary policy represented by the broad money supply have a clear impact on the gross domestic product in Iraq during the period (2004 - 2020)?

Third: the research hypothesis

The research starts from the premise that:

The monetary variables have a weak impact on the gross domestic product in Iraq because of the monetary policy and the rentier characteristic of the Iraqi economy.

Fourth: Research objectives

The objective of the research objective is determined by identifying the broad money supply in the gross domestic product in Iraq and measuring the gross domestic product during the research period.

Fifth: Research Methodology

The descriptive approach was used to find out the concepts of money supply and the GDP and the relationship that combines, while the analytical method was used to analyze the relationship between the broad money supply and the gross domestic product in Iraq.

The first topic / the theoretical and conceptual framework for the presentation of the broad criticism**First: the concept of money supply**

Before we begin to explain the money supply, we must address the concept of money in general, as there are many and different definitions in different time periods. members of society and is used as a tool to pay the price of goods and services that individuals buy and is also used to "pay off obligations and debts." Reference can be made to the linguistic origin For the word money, since money is a plural of the word cash, which is the source of the verb cash, i.e. distinguishing good dirhams from counterfeit, and it was said dirham cash, i.e. a good dirham. The word "money" in the Arabic language refers to the meaning of money for work, which represents currency and the continuation of dealing and use, and it means cash, which is paid as wages for work to the worker, while the word "Money" in English goes back to the Romans, especially the goddess Juno who resides in the temple of Capitoline Jupiter. Temple of Capitoline Jupiter, in which money is kept (gold, silver, bronze coins) The goddess is known as Juno Moneta, who works to protect the money kept in the temple located in Rome during the year 344 BC, and later this temple became a house for minting and preservation, and the word Money is also derived from the name of this goddess Moneta.

Most economists agree on the importance of money and its active role in the economies of the world, as it is an important turning point in economic activities because it affects significantly and directly economic variables such as inflation and depression.

The concept of the development of the money supply is related to the development of the functions for which money works, as it was initially known based on its exchange function and its use as a tool for exchange and payment in that era, being generally accepted. Therefore, it includes a group of elements that perform monetary functions and represent the total basic means of payment.

From all of the above, we find that the money supply expresses the number of monetary units that people own in their bank balance or in circulation, and therefore it represents a “cash” balance, not a “cash flow” and the cash balance means the amount of money that is in the possession of individuals and is measured at a specific moment in time. While the cash flow is defined as the amount of money that is measured during a certain period of time.

Second: the factors affecting the money supply

There are many factors affecting the money supply, the most important of which are:

1-The percentage of banks’ reserves of the money they keep to cover the public’s deposits and to face the cash withdrawal from them in a way that ensures the liquidity of the banking system.

2-People's tendency and habits to dispose of money as a percentage of what they want to keep of ordinary money for circulation or money for deposits.

3-Financial and monetary policies: where the state can influence the money supply through these policies. In the case of reducing money, for example, the state represented by the central bank raises the legal reserve ratio, raises the discount rate, or enters the open market (free) in the form of a seller of government bonds when used for monetary policy. But if the state wants to increase the money supply and by using fiscal policy, it works to reduce taxes or increase government spending, or both, or it resorts to borrowing from public authorities in the state with what is called public debt.

4-The amount of cash available in circulation or as a cash reserve with the banking system, including the volume of currency issued by the central monetary authorities or governments, as the policy of the central bank allows to provide credit rates and its cost, as well as the available amounts of gold, and the central bank is a means for the state that can During which the money supply is controlled through the monetary

multiplier mechanism, which affects the ability of commercial banks to create credit or the process of issuing legal money.

5-Economic expansion: In light of economic expansion, the government can increase the money supply, but it adheres to strict standards to maintain balance in the economy. Therefore, it must match the money supply with the quantity of goods and services produced, meaning that changing the money supply must be compatible with the economic situation.

The second topic: the theoretical and conceptual framework of the gross domestic product

First: the concept of gross domestic product

Gross domestic product is one of the indicators used to measure the size of the economy, and through it the values of goods and services that are produced locally during a certain period are calculated, and in this way it differs from the gross national product because the latter calculates the values of goods and services produced by the residents of the region only, regardless of whether this production was It takes place in this area or outside it. Societies seek to raise the levels of their GDP in order to raise the level of per capita GDP to high levels to raise the living standards of individuals, so it is natural for the GDP to become the focus of society's attention and economists work to measure it and track its growth rates and is symbolized by the symbol GDP in the overall economy, which is An abbreviation for Gross domestic product, it also represents consumer purchases of goods and services, as well as business establishments' purchases of equipment and machinery, housing purchases by the family sector, the purchase of non-residential buildings by business establishments, as well as government purchases of goods and services. Gross domestic product is seen as the total volume of current production It is calculated by combining these forms and how much is it from the current product. Gross domestic product is defined as the sum of the nominal or real values of goods and services finally produced during a particular economy and a certain period of time, usually one year. The level of US production of all locally produced goods and services, as this indicator reflects on the level of economic performance and living well-being that target a country, so GDP rates increase in times of prosperity and decline in times of economic recession.

Second: Types of GDP

1- Nominal/monetary GDP

The nominal GDP is called when it represents the product of multiplying the produced quantities of goods and services in a particular year by their prices during

the same year within the state's borders (the market price), and it is expressed in absolute terms, the data of the gross domestic product before inflation.

- Real GDP (produced at constant price 2

It refers to the total that a community purchases of locally produced goods and services during a specific period of time based on a reference price that is calculated according to a reference that is relied upon for the rest of the years, when the real gains are reclaimed for the rest of the years. The gross domestic product for a particular year on the basis of the price of the same year is called the nominal GDP, while when it is estimated for a particular year on the basis of the price of the base year, it is called the real GDP.

Third: the methods of calculating the gross domestic product

There is more than one way through which GDP is calculated, the most important of which are:-

1- Expenditure Approach(way of spending):

This scale is used to calculate expenditures, usable for private use (by governments) or investment spending (by the commercial sector) C, government by the letter G, investment by the letter I, and net exports with the symbol NX (exports minus imports)

Here we get the GDP equation: **$GDP=C+I+G+N$ (1)**

2- Added value method (Vad):

The value added is defined as the amount of the difference between the total value of production and the value of inputs and expenses for production, excluding wages According to the following equation:

Added value = value of existing production (total) - value of production inputs.

3- Final product method

The gross domestic product is measured according to this method at the producer, i.e. when the production process began and the stage of creating the gross domestic product began, and it is calculated as all the values produced from the various final goods and services, as the goods and services produced are added in the final and using the elements available for production in a community and a specific period of time was to be One year, and usually, the value of the gross domestic product during a specified period of time is estimated at current prices, i.e. according to the prevailing prices in the markets for final goods and services during the assessment period According to this method, the final quantities of goods and services produced during a year in the community are counted, then each good or service is multiplied by the prevailing market price to arrive at its monetary value. .

The third topic / analysis of the impact of the broad money supply on the gross domestic product in Iraq for the period (2004-2020)

First: The evolution of money supply in the broad sense M2 in Iraq

The concept of money supply in the broad sense is one of the important concepts and is adopted by financial and monetary institutions, including the International Monetary Fund, and within the framework of this volume of money the narrow concept of money M1 in addition to accounts or time deposits and symbolized by the symbol (TD) as well as savings accounts in banks and symbolized by it With the symbol (S) and expresses the money supply equation in its broad sense M2 as follows:

$$M_2 = M_1 + TD + S \quad \dots \quad (3)$$

The money supply in the broad sense M2 in Iraq witnessed successive increases at the beginning of the study period until 2007, it amounted to 12,254000 million dinars in 2004, then rose to 14683617 million in 2005 with an annual growth rate of 0.20%, and it continued to rise until it reached 21080249 million in 2006 , with a growth rate of 0.44%, but it rose to 87,679,504 million dinars, which is more than three times the amount of supply in previous years, with a growth rate of 3.16%, as shown in Table (1) and Figure (1), And many factors that contributed to increasing the money supply in the broad sense in Iraq at the beginning of the period, these first years were represented in the issuance of a new law for the Central Bank of Iraq aimed at preserving its independence and playing the required role in the transition to a market economy as a cornerstone of the transitional tasks of the economy The National also issued a new unified national currency with international specifications in terms of paper quality and the difficulty of counterfeiting and the ability to keep it to replace the poor local edition currency, in addition to taking successful steps to enhance foreign exchange reserves, especially after the Paris donors conference in which Iraq's debts became 120 billion dollars after If it is estimated to be between 500 and 600 billion US dollars, And obtaining exemptions estimated at 80% of them and the rest of them are interest-free debts with the possibility of dropping them as well, which supported the foreign cash reserve with the Central Bank, as it strengthened its balance to reach 35 billion dollars as a currency reserve, a health condition that the Iraqi economy has not witnessed for decades. When the foreign exchange reserves amounted to nearly 40 billion dollars, following the nationalization of oil, the correction of its world prices, and the increase in Iraqi oil exports. After the year 2007, the Central Bank adopted a monetary policy within the framework of its tasks to control the money supply and manage local liquidity, which seeks to bring the growth rates of money supply in harmony with the productive capabilities of the economy, especially since Iraq is an oil country that depends on a single source in generating income and spending. The monetary policy is compatible

with the real flows of goods and services in order to achieve general equilibrium through the equilibrium of the market for goods and services and the money market, i.e. achieving desirable growth rates in the gross domestic product, in addition to the responsibility of the Central Bank to get rid of economic problems, including inflation. In addition to the negative impact of the global financial crisis that appeared in 2008, so we find that the money supply in the broad sense decreased to 34919,675 million dinars in 2008, i.e. a negative growth rate of (-0.60%), and then began to gradually rise according to the management and direction of the Central Bank of Iraq. It rose to 45437918 million in 2009, with a growth rate of 0.30%, and continued in that gradual rise as shown in the following figure, and since the Iraqi economy is an oil economy and is affected by external factors as in the aforementioned crisis, it was affected by the global financial crisis in 2014, as the supply decreased Cash in its broad sense reached 82595493 in 2015, with a negative growth rate of (-0.09%). Then it continued with a gradual rise at a slow growth rate until 2020, as it achieved a negative growth of (-0.88%) as a result of the negative effects imposed by the Corona pandemic (COVED-19) and the closure of the countries of the world and consequently the economies of the world contracted to their lowest levels, and then Iraq was affected It is the same as the rest of the world, and this is reflected in the money supply in the broad sense M2.

Table (1)

Money supply in the broad sense in Iraq M2 and its growth rate for the period (2004-2020)

Money Supply Growth Rate % (2)	Money supply in the broad sense in Iraq million dinars (1) M2	the details
		the year
-	12254000	2004
0.20	14683617	2005
0.44	21080249	2006
3.16	87679504	2007
-0.60	34919675	2008

0.30	45437918	2009
0.33	60386086	2010
0.20	72177951	2011
0.05	75466360	2012
0.16	87679504	2013
0.03	90727801	2014
-0.09	82595493	2015
0.07	88067169	2016
0.02	89441338	2017
0.07	95390725	2018
0.08	103440475	2019
-0.88	11973009	2020

Source: Central Bank of Iraq, General Directorate of Statistics and Research, Annual Economic Report, various issues. Table 2 of the researcher's work based on the data of column No. 1.

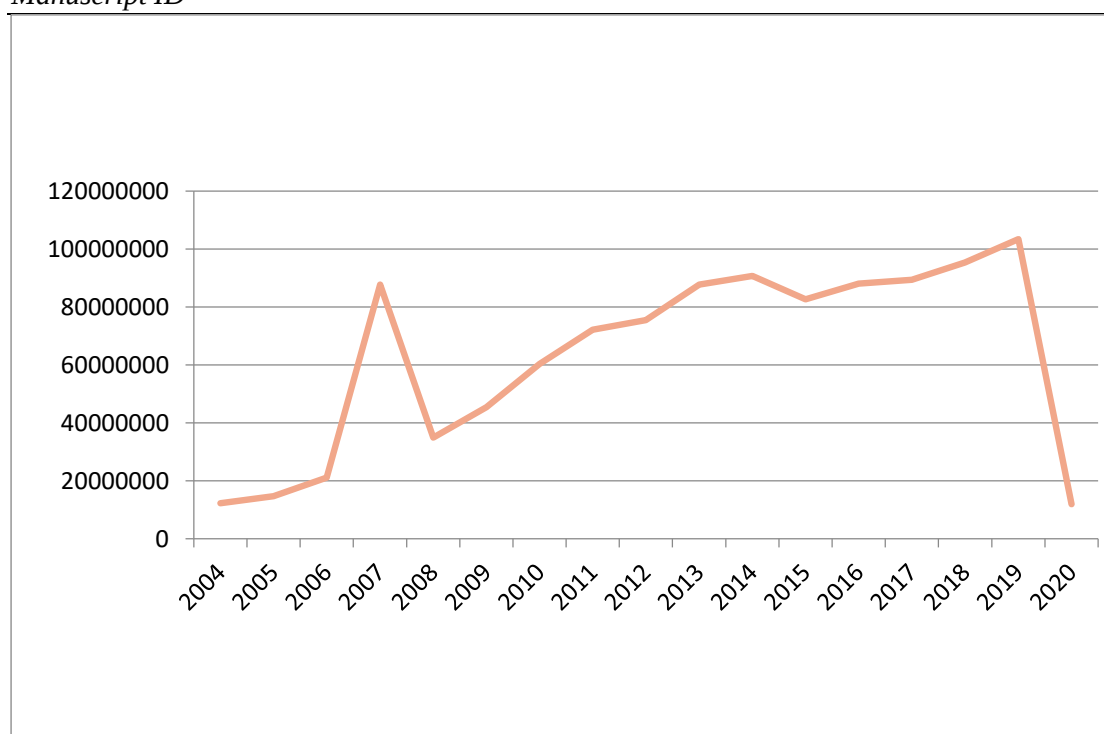


Figure (1)

Broad money supply in Iraq for the period (2004-2020)

Second: The evolution of the gross domestic product in Iraq

The gross domestic product, in its general form, is expressed in economic growth. It is also one of the most important indicators of economic performance adopted by the countries of the world, including Iraq. It is calculated according to real or fixed numbers or current prices, which take the inflation rate into account, and through which the level of economic progress of that country is measured as it is concerned. The countries of the world are diversifying the components of that output and making sure that all sectors contribute to it. As for the Iraqi economy, it has been suffering for decades from deep imbalances in the volume of GDP, due to its heavy dependence on oil to generate the output, and this made it more exposed to the outside world and its inability to rely on diversified resources, As the proportion of the contribution of oil revenues to total public revenues amounted to (97.6%) in 2003, then it rose to reach (98.2%) in 2016 and (99.9%) in 2020. As for the percentage of contribution of oil revenues to the gross domestic product in Iraq, it reached 14.9% in 2003 and then reached 47.9% in 2016, which is considered a high percentage, while they exceeded 55% in 2018. Thus, Iraq is a country that depends on oil revenues with distinction, and as is known, the relative importance of the oil sector in Gross domestic product is one of the measures of the degree of diversification and hence economic growth. An increase in this relative importance reflects a decrease in the degree of economic diversification and at the same time

means a decrease in the contribution of other sectors to the GDP. Table (2) shows the volume of GDP in Iraq at constant and current prices, and we note through the aforementioned table that the volume of GDP at constant prices is in continuous improvement and with good growth rates, as it achieved a growth rate that reached A significant deterioration due to extinction, mismanagement, lack of tools and equipment, poor maintenance, poor production and distribution and other surrounding conditions, in addition to the deterioration of security conditions in some cases. GDP at constant prices from 101843861.4 million dinars in 2004 to 120626517.1 in 2008, It was growing at a positive rate of 8% in 2008, but the global financial crisis affected the volume of output and it fell to 124,702847.9 million, bringing the annual growth rate down to 0.3% in 2009, due to the deteriorating security situation in Iraq or the drop in oil prices due to the repercussions of The global financial crisis, which negatively affected the rest of the economic activities, and the case applies to the volume of GDP at current prices. It achieved good growth rates for the mentioned period. It achieved 532353558.7 million dinars in 2004 and increased to 157026061.6 million in 2008, and it achieved a very large growth rate of 0.41% , However, it quickly decreased to 130,642187.0 million due to the repercussions of the global financial crisis and the contraction of the Iraqi economy as a result, and it achieved a negative growth rate of (-0.17%), but in the period (2010-2013) and after the financial crisis was overcome and oil prices improved globally, The gross domestic product recorded an increase at current and constant prices, as it rose from 132687028.6 million in 2010 to 174990175.0 million in 2013, with a positive growth rate of 0.08%, as well as the volume of output at current prices, its growth rate was positive and reached 0.08% in 2013, and after the global economy was exposed to a new crisis In 2014, its misguidance was reflected in the Iraqi economy quickly, until the growth of the output in real prices fell to 0%, while the growth of the total output at current prices amounted to (-0.03%) as a result of the contraction in the real growth rate in Iraq.

The negative growth remained until 2015, but the contraction in the growth of the output at current prices rose to (-0.27%), which is the highest rate of decline in the growth of the gross domestic product. The deterioration of the infrastructure and the disruption of commercial movement, simultaneously with the global financial crisis, and the growth of output after that continued to recover gradually and very slowly until it achieved negative growth in some of them as in 2017 and 2018. As for the volume of output at current prices, it achieved positive growth rates of 0.15 and 0.11, in 2017 and 2018, and in 2019, the Iraqi economy witnessed a gradual recovery thanks to the remarkable improvement in the security situation, As the gross domestic product at constant prices was recorded at 21,1789,774.7 million dinars, and the growth rate was 0.04%, while the volume of output at current prices amounted to 266,190,571.3 million in 2019. The volume of output quickly decreased again as a result of being affected by the Corona pandemic that swept the world, which negatively affected the growth of the gross domestic product at constant

prices in Iraq to 189837573.5 million and a negative growth rate of (-0.10%). Negative growth amounted to (-0.25%). As shown in the table.

Table (2): Gross domestic product at constant and current prices and growth rates for each of them in Iraq for the period (2004-2019) (million dinars)

Growth rate % (4)	GDP at current prices (3)	Growth rate % (2)	GDP at constant prices 2007 = 100 (1)	the year
-	53235358.7	-	101843861.4	2004
0.38	73533598.6	0.02	103546578.8	2005
0.30	95587954.8	0.06	109389941.3	2006
0.17	111455813	0.02	111455813.4	2007
0.41	157026061.6	0.08	120626517.1	2008
-0.17	130642187.0	0.03	124702847.9	2009
0.24	162064565.5	0.06	132687028.6	2010
0.34	217327107.4	0.08	142700217.0	2011
0.17	254225490.7	0.14	162587533.1	2012
0.08	273587529.2	0.08	174990175.0	2013
-0.03	266420384.5	0.00	175335399.6	2014
-0.27	194680971.8	0.05	183616252.1	2015
0.01	196924141.7	0.14	208932109.7	2016
0.15	225722375.5	-0.02	205286149.1	2017

0.11	251064479.9	-0.01	202776268.9	2018
0.06	266,190,571.3	0.04	211789774.7	2019
-0.25	198774325.4	-0.10	189837573.5	2020

Source: the Central Bank of Iraq”, the General Directorate of Statistics and Research, annual bulletins for different years (2004-2020) - columns 4.2 prepared by the researcher based on the data of the same table

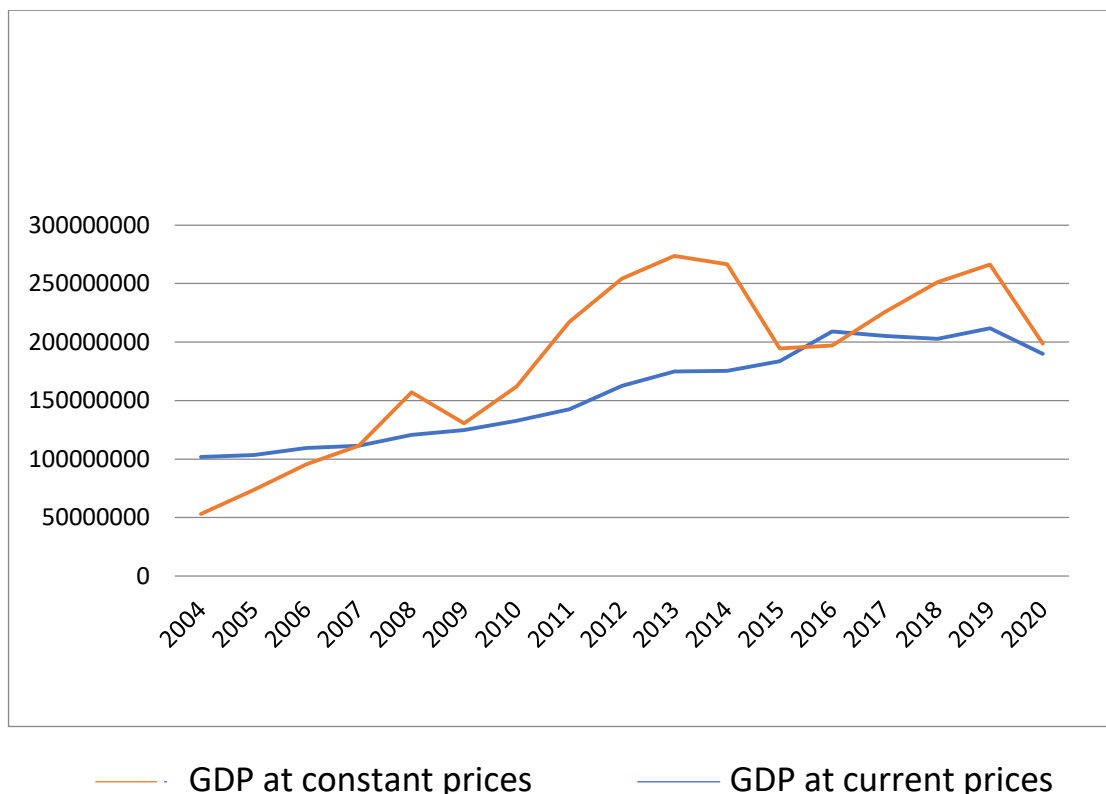


Figure (4)

The size of Iraq's gross domestic product at constant and current prices for the period (2004-2020) is one million dinars

Third: The impact of the development of the broad money supply M2 on the gross domestic product in Iraq (2004-2020)

We mentioned in the theoretical framework of the research that there is a direct relationship between the money supply in the broad concept M2 with the size of the gross domestic product, and when we analyze the impact on this relationship in Iraq, we find that the case of Iraq is identical to what has been addressed in the literature of books and references. As we find through Table (1) and the following Figure (1), that there is a direct relationship between the money supply in the broad sense with the size of the gross domestic product in Iraq, while the money supply increased from

. 12254000 in 2004 to 14683617 in 2005 with an annual growth rate of 0.20%. We find that the size of the gross domestic product rose for the same period from 101843861.4 million dinars in 2004 to 103546578.8 million in 2005, with a growth rate of 0.02% in 2005, and the positive relationship between them continued in subsequent years. The growth rate of the money supply M2, is higher than the growth rate of the gross domestic product in general and this is due to the policy of the Central Bank in pursuing expansionary policy as well as the expansionary fiscal policy, which aims to achieve economic development through the restoration of infrastructure and reconstruction as a result of war damage and the disappearance of the capital. The material money working in Iraq from the years of the siege in the previous decade, and when we go back to the table, we notice that through the increase in the money supply to 8,767,954 million in 2007, after it was 2,108,249 million in 2006, i.e. a very large growth rate of 3.16%. As for the volume of the gross domestic product, it amounted to 111,455,813.4 million dinars in 2007, after it was 1,093,899,411.3 million in 2006, with a growth rate of only 0.02%, which is in application of what we mentioned that the growth rate of money supply is greater than the growth rate of the volume of GDP in Iraq and this is related in addition to the above. He mentioned, to the inflexibility of the production system in Iraq and the diversity of the production base, which needs a period of time and requires years after study, planning and implementation in order to achieve a significant growth in the volume of GDP, as well as the interest in the diversity of that production base and attention to the front and rear connections of the economic sectors without focusing Production and interest only in one sector without other economic sectors

, Also, the effect of this positive relationship is faster in the money supply M2 due to the government's ability to change the economic policy that it follows faster than other measures. million yen, after it achieved a positive growth rate in the previous year, and the growth rate declined to (-0.60%) in 2008. As for the size of the GDP, its response to this shock was slower than the response of the money supply to that shock. Although Iraq is almost completely dependent on the export of crude oil to the countries of the world, and therefore any external shock will be reflected on the

volume of the gross domestic product, so the total product amounted to 111,455,813.4 million in 2007, with a growth rate of only 0.02%, while the output rose to 120,626,517.1 million and a growth rate of 0.08% in 2008, and the direct relationship between the money supply M2 and the size of the GDP in Iraq continued even for the period from 2008 to 2014, when Iraq was exposed to the second financial shock that hit the developed world and quickly reflected on the Iraqi economy, the money supply declined in the sense The broad range from 907,278,011 million dinars in 2014 to 825,954,931 in 2015, which is a result of the government taking austerity measures to maintain economic stability in Iraq, and the growth rate of the money supply M2 declined to (-0.09%) in 2015. While the size of the gross domestic product declined to 175,335,399.6 million, and the annual growth rate was 0% in that year, and it achieved a modest growth to 183,616,252.1 in 2015, and it achieved a positive growth rate of only 0.05%, as a result of the effects of the global economic shock on the Iraqi economy. In 2016, and after the relative decline of the effects of the financial crisis, the Iraqi government started an expansionary monetary and fiscal policy in order to restore the Iraqi economy to its activity. Therefore, we find that the money supply in the broad sense has increased from 825,954,931 in 2015 to 880,671,691 million in 2016, with a growth rate of 0.07%. In subsequent years, the size of the gross domestic product (GDP) declined to 205,286,149.1 million in 2017.

First: the conclusions

Through the research, a number of conclusions were reached, the most important of which are:

- 1) The growth rate of the money supply is greater than the growth rate of the volume of GDP in Iraq, and the reason is due to the inflexibility of the production system in Iraq and the diversity of the production base, which needs a period of time and requires years after study, planning and implementation in order to achieve significant growth in the volume of output gross domestic.
- 2) The money supply is directly affected by economic shocks, while the gross domestic product will respond slower to the shock, even though Iraq is almost completely dependent on the export of crude oil to the countries of the world. Therefore, any external shock is reflected in the size of the gross domestic product.

Second: Recommendations

- 1 - It is imperative to achieve a balance between money supply and demand, because any imbalance in the money market is reflected on the local market for goods and services and the balance of payments, thus an imbalance in net foreign assets.

2 - Paying attention to the diversity of that production base and paying attention to the front and back links of the economic sectors without concentrating production and paying attention only to one sector without the other economic sectors.

3 - The need to find a balance between the money market and the commodity market, and to make the money supply equal to the national product in order to avoid inflationary gaps.

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