Kurdish Studies
Jan 2024
Volume: 12, No: 1, pp. 1946-1959
ISSN: 2051-4883 (Print) | ISSN 2051-4891 (Online)
www.KurdishStudies.net

Received: October 2023 Accepted: December 2023
DOI: https://doi.org/10.58262/ks.v12i1.135

Understanding the Impact of Business Cycle Shocks on the US Economy: A Monetary Approach

Ahmed Abdulla Salman[1], Hassanain Mohsin Mukheef[2]

Abstract

The topic of business cycle shocks has emerged in the literature of capitalist economic philosophy, with some attributing it to climate change and others linking it to a lack of consumption, a decrease in profit margins, or swings in monetary variables. Hence, the study aimed to examine the influence of fluctuations in monetary indicators on objective indicators, which in turn cause business cycle shocks in Turkey. The research hypothesis posited that the US economy is influenced by and influences natural business cycle shocks, manifested in the indicators of the US economy throughout the study period. To test this hypothesis, we examined the trajectory of monetary indicators such as money supply, interest rate, and private bank credit and their influence on the validity of objective indicators such as GDP, investment, and unemployment rate. The study revealed that variations in monetary indicators result in absolute indices, giving rise to two distinct business cycles within the US economy. The first factor is the outcome of an internal disruption caused by the US derivatives crisis in 2008, which hurt the entire global economy. The second factor pertains to the external shock caused by the widespread outbreak of the Corona epidemic in 2020. It is worth noting that the effects of these monetary shocks on actual variables such as output, investment, and employment are not uniform. The impact varies depending on the magnitude and severity of the shock, as well as the degree of autonomy of the monetary authority.

Keywords: *Business cycle shocks, Monetary approach, U.S. economy, financial derivatives*

1. Introduction

The subject of business cycle shocks is one of the renewable topics in the economies of resource-rich developed countries as well as resource-poor countries that depend on raw materials as a rentier resource, with the development of economic systems resulting in turns and deviations that led to the instability of the economy and affected its performance, which showed new features and characteristics on the ground that differ from the previous ideas and time periods of economic thought for the concept of the business cycle, especially in the capitalist system, which considered the cycle a renewed transient, taking a periodic form In the economy, which provoked a difference in the views of many economists who are sure that the cycle can not be avoided, but can be mitigated according to general economic policies, they considered it a phenomenon or a problem in itself and gave it importance in their proposals, which made their new economic ideas in mathematical formulas and standard at times, and predict their occurrence at other times.

[1] College of Administration and Economics, Wasit University. Email: asalman@uowasit.edu.iq
[2] College of Administration and Economics, Wasit University. Email: hassanainmohsin84@gmail.com

The American economic system is one of the most developed, advanced, and diversified economic systems after the interaction and integration of a set of human, natural, and information elements, which made it dominate the global economy and is distinguished by its geographical location, which gives it openness to the continent of Australia and Asia in the west, Africa and Europe in the east, as well as owning rivers, lakes, the Rocky mountain range, a coastal range, and the high plateaus, as its land area is (9869675)() 1km2 and the population of (313877662) Nesma in 2012, which enabled him to employ his resources of mining wealth, agricultural land and energy sources in the marketing of products as a result of the diversification of the structure of GDP, as it achieved its highest amount in 2012 of the national product. The importance of the research comes from its review of macroeconomic indicators that reflect the performance of the US economy in investing and exploiting all available natural and human resources to achieve accurate economic growth rates during a specific period in light of the changes that occur in the US economy to show the contribution of those real sectors represented in GDP, investment, unemployment rate and change in stock as leading sectors driving the growth of the local economy, As well as knowing the basis of economic growth achieved and the extent of its contribution to the output of surplus added value. The problem of the study includes the existence of an overlap between the natural business cycle and the economic cycle and its reflection on the overall indicators in the US economy. The study proceeds from the premise that the US economy affects and is affected by shocks of natural business cycles and is reflected in the indicators of the US economy that source crises during the study period. This study aims to know the changes that have occurred in the economy of objective indicators and monetary indicators on the one hand and link these indicators in the analysis of the same direction to find out the extent of the impact of monetary variables in the fundamental variables within the US economy and then reach the occurrence of two business sessions during the study period.

2. Dialectical Intellectual Link Between Business Cycle Shocks and Critical Approach

The subject of the business cycle refers to one of the main cyclical features in a particular industrial economy based on a tangled monetary system, which leads to instability in the institutions of business owners, leaving various shocks that provoke intellectual controversy between many monetary economies, which can be clarified as follows:

2.1. Commodities Stock Accumulation and Depletion

The business cycle generally passes in four stages; at the recovery stage, the credit cycle approved by Hautery expands with an increase in bank deposits (**2**) due to the increase in the amount of money supplied. Hence, the interest rate decreases, stimulating business people to expand investment in capital and consumer commodity production, so production, employment, and sales increase, which increases the demand for commodity inventory. As well as the high profits achieved as a result of total spending from sometimes, and sometimes, the government responds in its obligations to increase spending to provide public goods and services as well as work on their maintenance, resulting in the outcome of the accumulation of stock in the period of economic boom, while in the period of depression spending and production decreases and then decreases commodity stock of all

[1] Zainab Abdullah Mankash, US-China Relations after the Cold War and their Political and Economic Dimensions, Dar Al-Academiyoun for Publishing and Distribution, First Edition, Amman, 2020, p. 123.
[1]) – Yasser Muhammad Jadallah, Muhammad Ghars al-Din, Economic Fluctuations, Al-Israa Press, Cairo, 2005, p. 162.

kinds, so the phenomenon of unexpected stock emerges [1], which is of the following two types: -

(A) Unexpected Positive Commodity Inventory

The phenomenon of unexpected favorable stock emerges when there is a surplus of commodity supply that exceeds the demand for it within the economy, in the sense that consumers, investors, and the government do not want to spend cash on this commodity surplus, so it is noted that the planned spending is less than the actual spending.

We start from the equilibrium point (T) at the intersection of the aggregate demand curve with aggregate supply. The real GDP (Y) is determined when total spending equals total supply. There is no surplus or deficit in inventory. It is noted that the area to the right of the equilibrium point (T) represents an accumulation in the favorable stock as a result of low cash spending on actual output, and from the preceding, Hautery's theory of the occurrence of the business cycle can be shown through commodity inventory according to the following scheme (1):

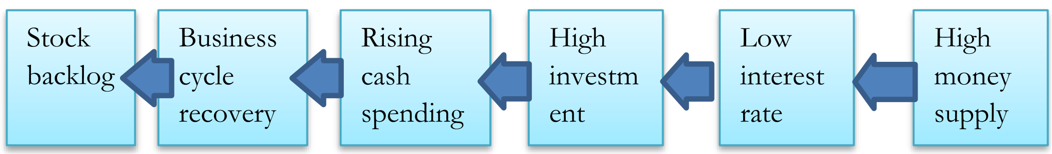
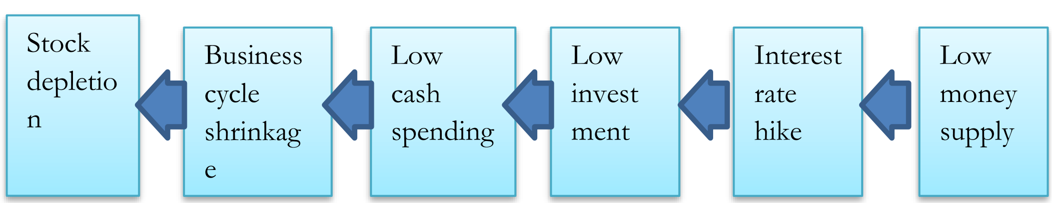


Figure (1). Unexpected Positive and Negative Commodity Inventory.
Source: - Prepared by the researcher

(B) Unexpected Negative Commodity Inventory

Negative stock is achieved in all types of goods due to the increase in cash spending as a result of the increase in the money supply, which leads to an increase in sales of goods, leading to a decrease in commodity inventory to less than planned () This can be illustrated in the previous graph (6), that the area to the left of point (T[2]) represents the depletion of commodity inventory because cash spending is greater than the real GDP, which results in the entry of the business cycle into a wave of depression when the commodity stock has depleted The road of the scheme (2) the following: -



Source: - Prepared by the researcher

2.2. Second: Technology's Rigidity and Spread on Business Cycle Transition

Technological development and its spread is one of the main factors in the occurrence and transition of the business cycle, as development takes multiple forms based on the views of Schumpeter, including innovation, organizer, and credit to finance the modern innovation process that leads to a change in productivity and investment, as well as the labor force and then the business cycle within the economy, which can be clarified as follows: -

[1]Abdul Razzaq Bani Hani, Principles of Macroeconomics, Dar Wael Publishing, Third Edition, Jordan, 2014, p. 211.
[2] Ismail Muhammad Dais, Economic Policies between Theory and Practice, Dar Al-Yazouri, First Edition, p. 205.

A – Business Cycle Effects of Technological Rigidity (Negative Technological Shock)

Assuming a technological stagnation that leads to a period of economic recession as a result of the lack of introduction of innovation or the obsolescence of the tools of the production process that leads to the expansion of the negative technological shock (1) due to the lack of loans and the decline in bank credit, investment, operation, production, and aggregate demand decrease, and thus the contraction of the business cycle on the one hand, and the other hand, the decline in investment demand as a result of the low accurate price of returns, which makes regulators and business owners replace capital instead of power. Workers within the production process, as a result of the low cost of capital resulting from the decrease in demand for labor, can be shown in the following figure (2):

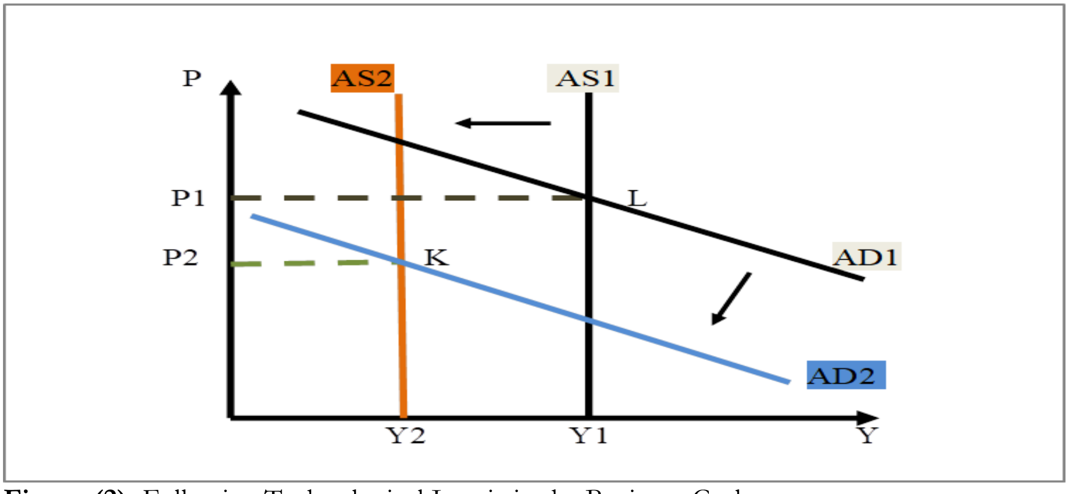


Figure (2). Following Technological Inertia in the Business Cycle.
Source: - August Swanenberg, Macroeconomics, translated by Khaled Al-Ameri, Dar Al-Farouk for Cultural Investments, first edition, Cairo, 2008, pp. 275-276.

The equilibrium point (L) is determined at the intersection of the (AD) curve of aggregate demand with the curve (AS). Total supply GDP is determined at (Y1) and the price level at (P1) when a stagnation occurs in technological innovation in a particular country that leads to a contraction in the business cycle, and thus aggregate demand decreases to (AD2). Aggregate supply to (AS2), a new equilibrium point is determined at (K)—the GDP drops to (Y2) and the price level to (P2).

B – Tech-Driven Business Cycle Impact (Positive Technology Shock)

Assuming the entry of a wave of innovation and the spread of technology () in the 2 production process by business owners and regulators as a result of the expansion of credit within the economy, it is expected to achieve profits, increase investment, and low cash interest rates, so production and demand for labor increase and thus aggregate demand so that it will be a positive technological shock 3() that enters the business cycle a recovery period and from the graph (3) this can be shown as follows: -

[1])) – Ahmed Assaf, Alaa Al-Din Sadiq, Macroeconomics, Dar Al-Fikr Distributed Publishers, First Edition, Amman, 2013, p. 231.
[2] Paul Madison, The Collapse of the World Economy: The End of the Age of Greed, translated by Antoine Bassil, Publications Company for Distribution and Publishing, Second Edition, Lebanon, 2012, p. 204.
[3]))– Ahmed Assaf, Alaa al-Din Sadiq, Macroeconomics, op. cit., p. 231.

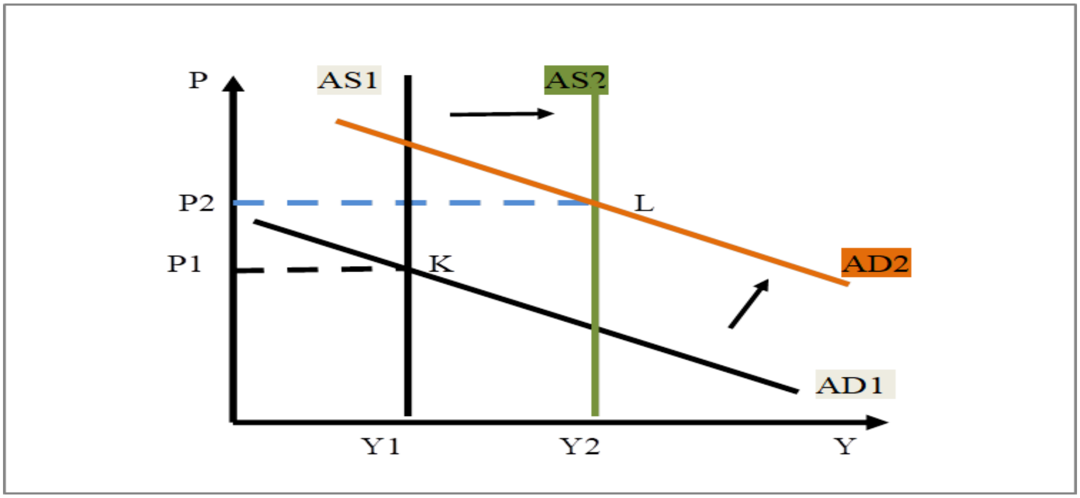


Figure (3). Following Technological Development in the Business Cycle.
Source: - Muhammad Abdul Hamid Shehab, Macroeconomic Analysis, Arabic Library, First Edition, Egypt, 1441 AH, p. 372.

The equilibrium point (K) at the intersection of the curve (AD1) aggregate demand with the curve (AS1) aggregate supply is determined by the output of the whole at (Y1) and the price level at (P1) when a wave of innovation enters a particular country as a result of the expansion of bank credit, which leads to economic recovery and a positive technological shock resulting in the employment of factors of production and increase incomes and then increase aggregate demand to (AD2) and aggregate supply to (AS2).) At a new equilibrium point (L), real GDP increases to Y2 and price level to P2.

3. The effect of the Monetary Approach on Total Equilibrium

The money approach can achieve stability and economic growth by using monetary policy channels when the growth rate of the money is consistent with the goods and services produced within an economy. But sometimes the growth of the amount of money exceeds the commodity supply or vice versa, causing shocks in the real economy, including on the demand side and others on the supply side, as well as consumption and investment shown as follows:

Second: - The Business Cycle and Total Supply Shocks

It refers to a sudden event that leads to an increase or decrease in the supply of goods and services, which leads to the transition of the entire aggregate supply curve and takes it out of equilibrium1, as the level of this shock is determined by two factors, the first is productivity change, which refers to the highest level of actual output that can be produced when fully employed without generating an inflationary gap (), 2and the second Change in the prices of the elements of production (wages, interest, profits, rents) in the sense of the costs of factors of production, any change in productivity and prices of production elements leads to the transition of the aggregate supply curve in the opposite direction, causing a negative or positive shock within the economy as follows: -

(1)- Robert Hall , Marc Lieberman Economics : Principles and Applications , sixth edition , Cengage Learning , South – Western , U.S.A , 2012 , p 849 .
[2] Ahmed Mohamed Al-Mandhour and others, Macroeconomic Theory, Alexandria, 2004, p. 262.

(A) Positive Overall Supply Shock

The shift of the entire aggregate supply curve to the right was the result of a positive change as a result of an increasing growth in the money supply, which leads to an increase in cash spending, so prices rise, which motivates workers to demand an increase in their cash wages as a result of the decrease in purchasing power and real wages, which represent a decrease in factor costs. So, business owners increase the demand for labor, and thus production increases, so the aggregate supply curve moves to the right from (AS) to (AS1).) Figure (4) results in an increase in GDP and lower prices, causing a positive supply shock and expanding the business cycle within the economy.

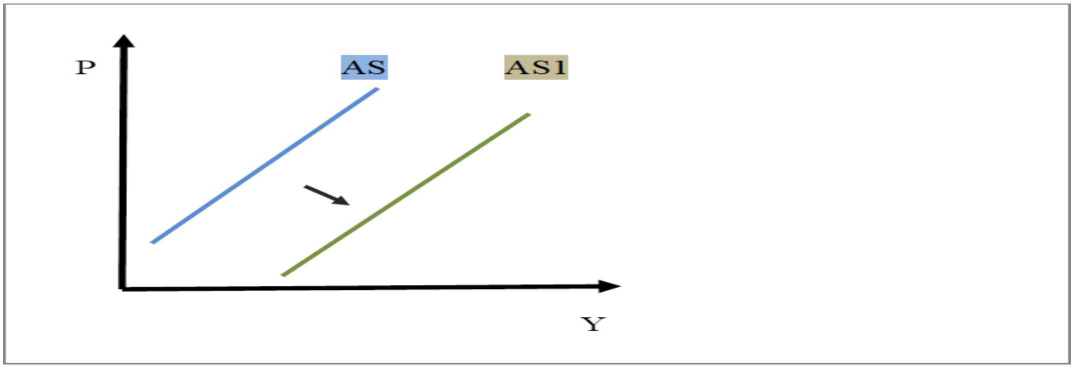


Figure (4) Positive Overall Supply Shock.
Source: Frederic S. Mishkin Economics of money and financial markets 8th Ed, New York, 2007, p. 570.

(B) Negative Total Supply Shock [1]

The transition of the aggregate supply curve to the left indicates the impact of a negative factor attributed to the low growth of the money supply, which leads to a decrease in cash spending, so prices fall, and purchasing power increases as a result of the rise in real wages, which indicates the high costs of factors of production (). Hence, business owners are reluctant to employ production elements, and thus production decreases, so the aggregate supply curve moves to the left from (AS) to (AS1).) as in Figure (5), leading to higher prices and low real GDP, causing a negative shock and contraction of the business cycle.

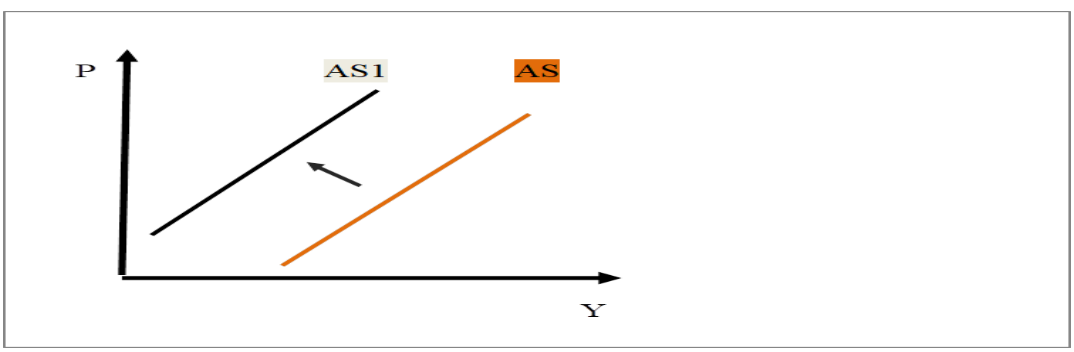


Figure (5) Negative Overall Display Shock.
Source: Frederic S . Mishkin Economics of money and financial markets 8th Ed, New York, 2007, p .570.

[1]Mohamed Abdel Hamid, Macroeconomics, op. cit., p. 371.

4. Third Requirement: - Analysis of Business Cycle Shocks in the US Economy According to a Monetary Approach

After analyzing the real and monetary variables, it is necessary to know the impact of monetary variables in the business cycle after an analysis that collects the annual change index in monetary variables indicating the cyclical movement within the economy with the annual change index of fundamental variables that indicate the business cycle.

First: - Comparison of Broad Money Supply, GDP, and Inventory Change from 2007-2021.

The annual growth of the money supply in the broad sense is an indicator of the cyclical movement within the economy of the actual GDP growth index and to know the status of real output we use in the data of Table (1), it is noted that the annual growth of the money supply in 2007 achieved a positive rate as it reached (5.66%) and coincided with a positive annual growth rate of actual output as it reached (2.10%) When using Figure (33) we find the increasing growth of the money supply coincided with the growth of actual output with the decrease in inventory change to (33.95) billion dollars, which reflects the directing of the money supply to actual output despite achieving favorable growth rates in the production of goods and services, but not at the required level, meaning that cash spending is more significant than actual output and evidence of the decrease in inventory change during this period due to the increase in sales of inventory and the recovery of the economy, as well as investment business [1]

Table (1). Money Supply and GDP From 2007-2021.

Years	Presentation of criticism in the broad sense	% Change	Gross Domestic Product (GDP)	Percentage change %	Real GDP Status
2007	7514.2	5.66	62495.4	2.10	
2009	8527.1	3.18	60945.0	-2.95	
2010	8874.8	4	62595.9	2.70	
2020	19260.6	24.73	74036.5	-2.76	
2021	21698.6	12.65	78439.2	5.94	

Source:- - Federal Reserve Economic Data. Link: https://fred.stlouisfed.org.

The year 2009 witnessed a positive but low annual growth rate in the money supply, reaching (3.18%) and coinciding with the decline in the annual growth of output, reaching (-2.95%) with the decline in the change in inventory to (-29.24) billion dollars, the use of figure (6) is apparent that they are at the lower end, which indicates that the growth of the money supply on the side of open market purchases to alleviate the severity of the US crisis in financial institutions, and the decline in demand, which leads to a decrease in the volume of sales, production and inventory.

The year 2010 also achieved an annual rate of change for the money supply, as it reached (4%) coinciding with the increase in the annual change in actual output to (2.70%) while the change

[1])- Economic Report of the president, Transmitted to congress ,January ,2006 ,p 370 .)

in inventory amounted to about (53.91) billion dollars, when using Figure (6), it is clear that the cyclical movement of money supply growth slowly led to an increase in real output growth more reflects the recovery of the US economy after the adoption of uncharted monetary policies that cast a shadow on actual output1.

2020 witnessed a high money supply growth rate, reaching (24.73%). The great end coincided with the decline in the actual output growth rate to (-2.76%) and at the small end with a decrease in inventory change to (-55.82) billion dollars, as this indicated that the cyclical movement of the money supply is moving upwards led to the trend of the actual output growth rate downwards, because monetary spending did not go towards the actual output of goods and services of more excellent value within the output The trend of the structure and volume of demand towards medical and preventive requirements to confront the Corona crisis, as well as unemployment compensation and other social repercussions, and Figure (6) shows the depth of the relationship between the growth of the money supply and the growth of real GDP.

As for the year 2021, it achieved a positive growth rate for the money supply, as it reached (12.65%) at the small end, coinciding with the increase in real output growth, as it reached (5.94%), and in the great end, and the use of Figure (6), it is clear that the growth of the money supply at rates consistent with the increase in actual output and the recovery of the US economy.

Second: Private Bank Lending, Investment, and Nominal Interest Rate (2007-2021)

It is clear from Table (2) that the year 2007 witnessed favorable growth rates, as the annual growth rate of bank credit was about (%6.50) and the nominal interest rate (%5.02) and coincided with an annual investment growth rate of (%1.51). When using Figure (7), it is clear that they have reached the great end despite the high nominal interest rate. But the real interest rate is higher than it, as it has attracted direct investment to American companies in the real estate and construction sectors, as well as the recovery of the US economy, which Hawtry addressed in his monetary theory about the recovery of the business cycle when banks expand in granting credit with the synchronization of the increase in bank deposits by increasing the money supply, so cash spending increases and the interest rate decreases, increasing in business owners' demand for borrowing. To finance and expand investment and thus increase production, as well as stimulate and attract capital by (%57) Directed to the private sector [(2)], consumer credit.

Bank credit also achieved a negative annual growth rate as it reached (-12.31%) in 2009 with a decrease in the interest rate to (0.16%) and coincided with the low annual growth of investment about (-13.17%) When using Figure (7), it turns out that they are at the end of the minor, when tracking the periodic movement of investment, it decreases due to the decline in bank credit granted to the private sector after The fluctuations of US financial institutions and the loss of cash liquidity, including Wall Street, as shown by Feblen in his monetary theory [()3] that these institutions expand the granting of credit to increase the production of capital goods against the decline in the production of consumer goods and over time credit grows at an unstable rate in the short and long term results in a mismatch between the current cash value of the

[1]Shuwaish and Abdul Bari, Quantitative Easing and a Course in Monetary Policy, Kirkuk University Journal for Administrative and Economic Sciences, Volume (4), Issue (2), Jordan, 2014, p. 124.

[2]Jans Farr and Vaques, The Global Minotaur, America, Europe and the Future of the Global Economy, translated by: Imad Al-Ahmad, and reviewed: Rashid Oraz, Mediterranean Publications, Italy, p. 77.

[3]Robert HelbroNer, Leaders of Economic Thought, translated by Rashid Al-Barawi, Al-Nahda Al-Masrya Library for Printing and Publishing, Cairo, 2002, p. 267.

guarantor and the value of capital capital goods owned as revenues of the company in the future and thus liquidation or bankruptcy of these institutions, including (faith Brothers – Merrill Lynch), as well as the decline in capital flowing into America that was directed as loans to local American companies from $500 billion in 2006 to $50 billion in 2011[1].

Table (2). Private Bank Lending, Investment, and Nominal Interest Rate (2007-2021).

Years	Private bank credit	% Change	Nominal interest rate	Investment	Percentage change %	Investment Status
2007	37.30	6.51	5.02	3231	1.51	
2009	32.91	-12.91	0.16	2723	-13.17	
2010	32.84	-0.21	0.18	2756	1.20	
2019	39.54	2.30	0.16	4485	4.43	
2020	40.26	1.82	0.38	4489	0.08	
2021	39.53	-1.81	0.08	4939	10.03	

Source:- - Federal Reserve Economic Data. Link: https://fred.stlouisfed.org.

In 2010 it also achieved a growth rate of bank credit, reaching (-0.20%). A nominal interest rate of (0.18%) coincided with the increasing annual growth of investment, amounting to (1.20%) When using Figure (7), it is clear that the level of investment in the great end is increasing despite the decline in bank credit and the nominal interest rate, because most of the long-term investments in America, as well as the recovery of the US economy from the financial crisis.

In 2019, we witnessed an annual growth rate of bank credit of (2.29%). A nominal interest rate of (0.16%) coincided with an annual growth of investment, as it reached (4.43%) when using Figure (7), it is clear that the level of investment in the great end as a result of the expansion of direct investment in Africa, as the number of investment businesses reached (30,000) thousand, of which small and average business to develop its economy and direct investment in the continent of Africa, as well as reducing customs duties for (48) countries from Africa against Opening new markets for US investments [2].

2020 witnessed a high annual growth rate for bank credit, reaching (1.83%). An interest rate of (0.38%) coincided with the decline in the annual investment growth, reaching (0.08%). When using Figure (7), it is clear that bank credit is at the top of the great end, while investment is at the bottom, the lower end due to the health crisis that stopped short-term investment, as well as the increasing severity of the double deficit in America after the cessation of exports and financing the public budget deficit [3].

In 2021, we also witnessed an annual growth rate for bank credit, reaching (-1.82%). A nominal interest rate of (0.08%) coincided with an investment growth rate of (10.03%) when using Figure (7), it is clear that investment is at its great end due to the low nominal interest rate, which reflects the recovery of the US economy, and Figure (7) shows the depth of the relationship between bank credit granted to the private sector and the nominal interest rate and investment.

[1] Jans Farr and Vakes, The Global Minotaur, America, Europe and the Future of the Global Economy, op. cit., p. 77.
[2] Al-Hassan Al-Hasnaoui, International Competition in Africa, Goals and Means, Hassan II University of Mohammedia, Arab Journal of Political Science, Issue (45-46), Dar Al-Broda, Morocco, 2020, p. 115.
[3] Al-Hassan Al-Hasnawi, International Competition in Africa, previous source, p. 115.

Third: - Average Wage, Inflation, and Unemployment from 2007-2021

It is clear from Table (3) that 2007 achieved favorable growth rates for both the inflation rate as it reached (4.01%). The growth of the average wage reached (1.89%). It coincided with a decrease in the unemployment rate to (4.62%) When using Figure (8) it is noted that the cyclical movement of the growth of the average wage and the inflation rate in high led to a decrease in the unemployment rate and in the small end that reflects the recovery of the US economy, as well as proving the inverse relationship in the short term between unemployment and inflation ([1] When the goal of monetary policy is to contribute to reducing the unemployment rate to its average level by increasing the money supply, the nominal interest rate decreases, investment and production increase and the business cycle enters a wave of expansion.

As for the year 2009, it achieved a positive annual growth rate but with low rates for both the growth of the average wage, which reached (1%) and the inflation rate reached (2.69%) coinciding with the high unemployment rate of (9.26%), when using Figure (8), it is clear that the growth rate of the average wage at the end of the minor and the unemployment rate in the great end due to the real estate crisis, which produced large numbers of unemployed labor, as well as the decline in the inflation rate as a result of the decline in real estate prices, stock prices, and bonds.

Table (3). The Link between Inflation, Average Pay Growth, and Unemployment from 2007 to 2021.

Years	Average wage	% Change	Inflation	Unemployment rate	Unemployment status
2007	62241.95	1.89	4.01	4.62	
2009	62711.30	1.00	2.69	9.26	
2019	68842.30	1.74	2.26	3.62	
2020	72806.75	5.75	1.35	8.17	
2021	74737.84	2.65	6.82	5.33	

Source:- Oecd Data Economics 2022. **–**

The year 2019 also witnessed a growth rate of the average wage, as it reached (1.74%) with a decrease in the inflation rate to (2.26%) and coincided with a decrease in the unemployment rate to (3.62%), when using Figure (8), is clear that the unemployment rate at the lower end when tracking the cyclical movement of the growth of the average wage in an upward trend and the low inflation rate, which reflects the recovery of the US economy to provide job opportunities after the success of the US administration in implementing new programs in construction using renewable energy, as well as financing U.S. consumers and business owners billions of dollars a year to achieve economic growth. [2]

As for the year 2020, it achieved an increase in the growth rate of the average wage to (5.75%) with a decrease in the inflation rate to (1.35%) and coincided with the rise in the unemployment rate to (8.17%), when using Figure (8), it is clear that the average wage and the unemployment rate are at the great end, while the inflation rate is at its minimum end, due to the adoption of the inflation targeting policy, which worked to raise the real average wage with the stability of the cash wage, while the unemployment rate began to rise as a result of the forced layoffs of workers after health repercussions COVID-19 to implement preventive distancing measures, as well as reduce working hours for some essential work[3].

[1]Abdel Qader Attia and Ramadan Ahmed Makled, Macroeconomic Theory, Faculty of Commerce, Alexandria, 2005, p. 261.
Saad[2] Shaker Al-Shibli, The American Strategy towards the Middle East, Dar Al-Hamid for Publishing and Distribution, First Edition, Amman, 2013, p. 116.
[3])) - Mohamed Zein Milas, The Impact of Corona on the Global Economy, Algerian Journal of Legal and Political Sciences, Volume (58), Issue (4), 2021, p. 254.

While the year 2021 witnessed a decrease in the growth of the average wage, as it reached (2.65%) and the high inflation rate reached (6.82%) and coincided with the decrease in the unemployment rate to (5.33%), when using Figure (8), it is clear that inflation at the great end and the actual average wage in the minor end, which proves Friedman's proposals, as the US economy was able to reduce the unemployment rate for a limited period after the Corona crisis when adopting a monetary policy in an upward direction and at low interest rates to stimulate the business cycle, so it increases Employment, production and investment with the high inflation rate, as the unemployment rate is consistent with the actual average wage in the short term until unemployment and average wage return to its original level, Friedman called it the term (non-accelerated inflation or the natural rate of unemployment)[1] () and Figure (8) shows the relationship between the growth of the average wage and the inflation rate and the unemployment rate.

Fourth: - Business Cycle in America for the Period (2007-2022)

The use of quarterly data for the actual output and its rate of change to know the occurrence of the business cycle in America after identifying the data in Table (4), it is clear that there are two business cycles in America as follows:

A – The First Business Cycle in America (2007-2009)

It is clear from the quarterly data in Table (4) that the fourth quarter of 2007 achieved a positive growth rate of (0.60%), as we see in Figure (9) that it is the first point of the business cycle in the US economy and at the end of the extraordinary summit.

Table (4). Quarterly GDP in America for the Period (2007-2021).

Years	Gross Domestic Product QoQ				Annual Change %			
	Q1	Q2	Q3	Q4	%Q1	%Q2	%Q3	%Q4
2007	15478.9	15577.7	15671.6	15767.2	0.29	0.07	0.60	0.60
2008	15702.9	15792.7	15709.6	15366.6	-0.40	0.57	-0.52	-2.18
2009	15187.4	15161.7	15216.7	15379.2	-1.16	-0.16	0.36	1.06
2019	18835.5	18962.2	19130.9	19215.6	0.54	0.67	0.88	0.44
2020	18989.8	17378.7	18743.7	18924.3	-1.17	-8.48	7.85	0.96

Source: -- Federal Reserve Economic Data. Link: https://fred.stlouisfed.org.

The US economic contraction began in the first quarter of 2008, as the actual output growth rate reached (%-0.40), while the second quarter achieved a slight positive growth rate of (0.57%), while the third quarter took a declined with a growth rate of (-0.52%), while the fourth quarter witnessed a significant contraction as it reached (-2.18%), which represents the lower end of the bottom, most economists acknowledged that the US economic contraction, as well as the financial crisis, began in the fourth quarter of 2008. (2)

The U.S. economy began to decline and continued to be in recession in the first quarter of 2009 as its growth rate reached (%-1.16). As for the second quarter, its growth rate reached (%-0.16), which reflects the discontent of the American people over the crisis, as well as the growing public debt, the budget deficit, and the sharp reduction in the allocation of social programs in the budget. (3) The third quarter witnessed a slight improvement, as it achieved a

[1])) – Thomas Mayer et al., Money, Banking and Economics, op. cit., p. 423.
[2]Fawad Qasim Al-Amir, Neoliberal Capitalism (Neoliberalism), reviewed by Majid Allawi, Dar Al-Ghad Publishing, 2019, p. 325.
[3]Farid Hatem Al-Shahf, The Internet is the weapon of capital-global-American against the culture of the Arab world, Dar Aladdin Publishing, first edition, 2015, p. 37.

quarterly growth rate of about (%0.36) and began to increase until the fourth quarter, as it achieved a growth rate of (%1.06), which reflects the great end of the summit due to monetary doses stimulated by the American system to revive the economy and to narrow the crisis.

B – The Second American Business Cycle (2019-2020)

It is clear from Table (4) that the third quarter of 2019 achieved a positive growth rate of (0.88%), as we see in Figure (10) the first point of the business cycle and, at its great end, the summit. It began to decline in the fourth quarter, and as its growth rate reached (0.44%), it reflects the stability of the US economy in 2019 because the growth of the money supply (cash spending) is consistent with the real GDP.

It witnessed an economic decline and recession in the first quarter of 2020, as its growth rate reached (%-1.17), and it began to decline until the second quarter, as its growth rate reached (%-8.48), as we see in Figure (10) that the business cycle is at the end of the minor bottom due to the cessation of operation, production, exchange and investment as a result of health preventive work after the worsening of the Corona epidemic, which resulted in a US economic decline.

While the third quarter of the same year was increasing, as it achieved a positive growth rate of (7.85%), as we see in Figure (10) that the American business cycle is at the top end as a result of monetary expansion to accommodate the health crisis and revive the US economy in employment, production, and social benefits.

In summary, two business cycles have occurred in the US economy, noting that the first session resulted from an internal shock represented by the US derivatives crisis, which led to a decrease in domestic liquidity and an economic contraction. In contrast, the second cycle results from an external health shock represented by Covid-19. It almost wholly stopped economic life after the decline in investment, employment, aggregate demand, income, and actual output.

Conclusions and Discussion

The successful management of the Federal Reserve in the millennium has contributed to restoring stability to the US economy, increasing output and investment growth, raising productivity rates, and providing an environment conducive to growth and forecasting through new monetary policies. The analytical side showed that the US economy is more advanced and open to the outside world and a source of crises the more it is affected and affected in the business cycle and faster as a result of the trading partner when tracking the path of the US GDP trend. A positive shock in the money supply leads to a shock in overall spending, leading to a shock in the US business cycle. The research hypothesis was reached that there is a relationship between objective indicators and monetary indicators that the US economy is affected by shocks. The natural business cycle is reflected in the indicators of the US economy during the study period. The analytical side reached the occurrence of two business sessions during the study period after knowing the economic changes in monetary and fundamental indicators and linking these indicators in the same direction to see the extent of the impact of monetary indicators on accurate indicators within the US economy. The U.S. economy entered recession from the cycle in the fourth quarter of 2007 as a result of declining output and investment growth and turmoil in financial markets, and continued to decline until the bottom of the cycle in the fourth quarter of 2008 and then took the rise until the fourth quarter of 2009, leading to the first business cycle. The US economy suffered from a recession in the first quarter of 2020, leading to the bottom of the second business cycle in the second quarter, and the US economy began to grow in the third quarter of the same year. The Federal Reserve's successful management in the millennium restored stability to the US economy, increased output and investment growth, raised productivity rates, and provided a favorable environment for growth and forecasting through new monetary policies. Real investment growth, GDP, and the unemployment rate can be adopted as essential indicators of fluctuations in actual economic activity. The possibility of adjusting economic policies in response to the fluctuations of economic variables (GDP, level of use, investment) and limiting speculation in Financial derivatives, as they negatively affect the real economy and deepen volatility trends. The zero interest rate index is the essential tool for monetary authority in the US economy, and the US economy worked to activate this tool during the recession in 2008 with three payments to enable the economy to achieve growth rates and address the crisis. The private bank credit index is one of the monetary indicators that stimulate the internal real economy because it supports the private sector.

References

Ahmed Assaf, Alaa Al-Din Sadiq, Macroeconomics, Dar Al-Fikr Publishers Distributors, First Edition, Amman, 2013.

Robert Hall, Marc Lieberman Economics: Principles and Applications, sixth edition, Cengage Learning, South – Western, U.S.A, 2012, p 849.

Saad Shaker Al-Shibli, The American Strategy towards the Middle East, Dar Al-Hamid for Publishing and Distribution, First Edition, Amman, 2013.

Shuwaish and Abdul Bari, Quantitative Easing and a Course in Monetary Policy, Kirkuk University Journal for Administrative and Economic Sciences, Volume (4), Issue (2), Jordan, 2014.

Saleh Al-Khasawneh, Principles of Macroeconomics, second edition, Dar Wael Publishing, Amman, 2000, p. 14.

Salah El-Din Hassan El-Sisi, Financial Markets (Financial Crises - Causes and Repercussions - Ways of Confrontation) in the World Trade Organization and the Liberalization of Financial Services, Dar Al-Fikr Al-Arabi, Cairo, 2008.

Abdul Razzaq Bani Hani, Principles of Macroeconomics, Dar Wael Publishing, Third Edition, Jordan, 2014.

Farid Hatem Al-Shahf, The Internet is the weapon of capital-global-American against the culture of the Arab world, Dar Aladdin for Publishing, first edition, 2015.

Fawad Qasim Al-Amir, Neoliberal Capitalism, reviewed by Majid Allawi, Dar Al-Ghad Publishing, 2019.

Mohamed El-Zein Milas, The Impact of Corona on the Global Economy, Algerian Journal of Legal and Political Sciences, Volume (58), Issue (4), 2021.

Muhammad Abdul Hamid Shehab, Macroeconomic Analysis, Arabic Library, First Edition, Egypt, 1440-1441 AH.

Moaz Al-Sharfawi and Hussein Qabalan, Macroeconomics, Syrian Virtual University Publications, Syrian Arab Republic, 2021.

Ahmed Mohamed El-Mandour and others, Macroeconomic Theory, Alexandria, 2004.

Economic Report of the President, Transmitted to Congress, January,2006,p 370.

Hoshyar Maarouf, Macroeconomic Analysis, Dar Al-Safa for Publishing and Distribution, Amman, 2005.

Yasser Mohamed Gadallah, Mohamed Gharsuddin, Economic Fluctuations, Al-Israa Press, Cairo, 2005.

Jans Farr and Fakis, The Global Minotaur, America, Europe and the Future of the World Economy, translated by Imad Al-Ahmad, and reviewed: Rashid Oraz, Mediterranean Publications, Italy.

Abdel Qader Attia and Ramadan Ahmed Makled, Macroeconomic Theory, Faculty of Commerce, Alexandria, 2005.

Frederic S. Mishkin Economics of money and financial markets 8th Ed, New York, 2007, p .570.

Ismail Muhammad Dais, Economic policies between theory and practice, Dar Al-Yazouri, first edition.

Al-Hassan Al-Hasnaoui, International Competition in Africa, Goals and Means, Hassan II University of Mohammedia, Arab Journal of Political Science, Issue (45-46), Dar Al-Broda, Morocco, 2020.

August Swanenberg, Macroeconomics, translated by Khaled Al-Ameri, Dar Al-Farouk for Cultural Investments, first edition, Cairo, 2008, pp. 275-276.

Paul Mason, The Collapse of the World Economy at the End of the Age of Greed, translated by Antoine Bassil, Publications Company for Distribution and Publishing, Second Edition, Lebanon, 2012.

Khaled Wassef Al-Wazni, Ahmed Hussein Al-Rifai, Principles of Macroeconomics between Theory and Practice, Tenth Edition, Wael Publishing House, Amman, 2009.

Robert Heilbroner, Leaders of Economic Thought, translated by Rashid Al-Barawi, Egyptian Renaissance Library for Printing and Publishing, Cairo, 2002.

Zainab Abdullah Mankash, US-China relations after the Cold War and their political and economic dimensions, Dar Al-Academiyoun for Publishing and Distribution, first edition, Amman, 2020.