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Original Research Article

The Impact of Certain Monetary Variables on Unemployment Rates: Iraq as a Case Study

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Abstract: The research aims to shed light on monetary policy and unemployment in Iraq by measuring the effects of monetary policy on unemployment rates based on monetary variables that represent the Iraqi monetary policy. The study proceeds from a hypothesis stating that the exchange rate of the Iraqi dinar, the money supply, and the interest rate have a positive impact on unemployment rates. The study employs a descriptive methodology to achieve the research objective and validate the hypothesis. The findings confirm that the mentioned variables have a positive effect on unemployment rates, as evidenced by the value of the adjusted coefficient of determination (Adjusted R^2), which reached (0.84) in the short term. The study recommends reducing the interest rate on loans and encouraging investment to open new economic horizons, diversify income sources, create additional job opportunities, reduce unemployment rates, and achieve sustainable growth.

Keywords: Exchange rate, Interest rate, Unemployment rates, Money supply.

INTRODUCTION

Monetary policy plays a significant role in steering economies toward the desired path of development in both advanced and developing nations. A close interrelationship exists between monetary policy and unemployment rates; indeed, unemployment is almost endemic to the economies of developing countries. The measures a state adopts to influence gross domestic product aim to achieve several economic objectives most importantly, raising economic growth rates, attaining full employment of resources, eradicating unemployment, and stabilizing price levels. Monetary policy employs key tools such as the statutory reserve ratio, the rediscount rate policy, and open-market operations to influence economic activity and realize these objectives. Proponents of the monetarist school assert that inflation can lead to economic development and reduce unemployment rates: an increase in the growth rate of the money supply lowers the consumption function and raises the capital-intensity function, which, in turn, elevates the average productivity of labor positively associated with capital intensity. Consequently, higher economic growth rates generate additional job opportunities capable of absorbing unemployed labor and revitalizing the economy.

Research Significance:

The Iraqi government seeks to achieve comprehensive economic and social development by emphasizing monetary policy as one of the key policies with a direct impact on the economy. Therefore, this study attempts to understand the impact of monetary decisions on unemployment rates to enhance policymakers' ability to adopt the appropriate policies.

Research Problem:

Unemployment is one of the major concerns for economic and political decision-makers in Iraq. Accordingly, this research aims to shed light on the effectiveness of monetary policy in addressing the unemployment problem and whether monetary policy can influence unemployment rates.

Research Objective:

The objective of the research is to highlight monetary policy and unemployment in Iraq, and to measure the impact of monetary policy on unemployment rates by relying on selected monetary variables that represent Iraq's monetary policy during the study period.

Research Hypothesis:

The research is based on the hypothesis that monetary policy represented by the exchange rate, money supply, and interest rate as independent variables has a significant and positive effect on addressing the unemployment problem as a dependent variable, whether in the short or long term.

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RESEARCH METHODOLOGY

To achieve the research objective and validate its hypothesis, the study adopts the inductive approach, which starts with specific observations to reach general conclusions that can be applied to countries similar to Iraq. The study employed both analytical and econometric methods to arrive at the desired results.

Previous Studies and Literature Review:

This section presents a number of prior studies that address topics related to the subject of this research. Al-Abbasi (2024) conducted a study titled *"The Impact of Monetary Policy on Reducing Unemployment in Iraq for the Period (2010–2023)"*. The study aimed to determine the effect of monetary policy on reducing unemployment in the Iraqi economy during the specified period. It employed the inductive method and relied on an econometric approach to test the research hypotheses and measure the effect of both independent and dependent variables. The study reached several conclusions, most notably the necessity for monetary policy to enhance economic stability by balancing unemployment and economic growth in a way that supports the labor market and encourages the creation of new job opportunities. The study also emphasized that monetary policy should adopt measures to create an attractive investment environment, promoting investment in sectors with the potential to generate employment. The findings indicated a causal relationship between monetary policy and unemployment, showing that 67% of the changes in unemployment were attributable to monetary policy variables, thereby affirming the policy's influence on unemployment.

Furthermore, Ibrahim & Khalid conducted a study titled *"Measuring the Effect of Some Economic Policy Variables on Reducing Unemployment in Egypt"*. This research aimed to measure the impact of certain economic policy variables, including public expenditure, public revenues, the exchange rate of the Egyptian pound against the US dollar, money supply, real interest rate, and foreign investment. The study found a significant inverse relationship between public expenditure, public revenues, and other variables with unemployment rates in Egypt. It recommended the necessity of enhancing coordination between fiscal, monetary, and trade policies to ensure their collective impact on economic activity in general, and on reducing unemployment in particular.

In addition, Sawsan (2018) carried out a study titled *"Measuring the Impact of Some Economic Variables on Unemployment Rates in Iraq for the Period (1990–2017)"*. The objective was to identify the effect of certain macroeconomic variables on unemployment rates in Iraq and to estimate the relationship between unemployment and the most influential economic variables during the study period. The study concluded that the real factors affecting unemployment rates were non-oil economic growth rate, public expenditure, total population, investment expenditure, and oil prices. The results also highlighted the importance and effectiveness of monetary policy in influencing unemployment rates.

Chapter One: The Theoretical Framework

One of the most significant outcomes of Keynes's general theory on employment, interest, and money lies in the economic gains and economic policies aimed at addressing unemployment and achieving full employment. These policies were essentially a response to the problems of unemployment and underutilization of resources, especially during the Great Depression (1929–1933), after which Western European countries managed to rebuild their economies in the aftermath of World War II (Bassey & Others, 2018, p.124). At that particular time, the problem of inflation began to emerge as unemployment rates declined. On this basis, A.W. Phillips published a seminal study in 1958 in *Economica* journal under the title *"The Relationship Between Unemployment and the Rate of Change of Money Wages in the United Kingdom, 1861–1957."* The study revealed a strong statistical relationship between the unemployment rate as a proportion of the population and the rate of change in hourly wages, concluding that during periods of low unemployment, money wages tend to rise, while during periods of high unemployment, money wages tend to fall (Johnson & Others, 2020, p.13).

Moreover, fluctuations in the level of economic activity commonly referred to as business cycles pose one of the most critical challenges for most economic systems. These fluctuations affect production, employment, and the general price level and may range from mild to severe or even destructive. Each stage of the cycle tends to lead to the next, and each possesses distinct characteristics. For example, during a boom phase, employment, production, prices, money supply, wages, interest rates, and profits generally rise, whereas in a recession phase, the opposite trends are observed. Therefore, each stage requires specific foundations for its explanation and interpretation (Wollie, 2018, p.168).

In capitalist economies, economic activity and its variables do not follow a consistent path over time. Instead, economic activity experiences cyclical fluctuations similar to boom-and-bust movements typically lasting between 3 and 10 years, characterized by periodicity and recurrence. The regularity of these cycles stems from recurring causes. Numerous economists have developed diverse theories to explain these cycles, ranging from those based on monetary factors such as the expansion and contraction of the money supply, to those emphasizing innovation and renewal, to others highlighting psychological conditions, including waves of optimism and pessimism in expectations. Other theories point to reduced consumption resulting from technical classes receiving a large share of income, or to over-investment phenomena (Fosu, 2019, p.24).

Friedman and Schwartz discovered in their research that the troughs in the money supply growth rate tend to precede the troughs in the economic cycle by an average of 12 to 18 months. However, considerable variation was found, with lags ranging between 13 to 19 months at the peak and 4 to 12 months at the trough of economic activity. Friedman concluded that the time lag associated with monetary policy is both long and variable a point that was heavily criticized by many economists, including Robert Solow (AL-Rubaie, 2023, p.315).

After analyzing the causes of inflation in capitalist countries, it becomes evident that such interpretations are not suitable as theoretical frameworks for explaining inflationary pressures in developing countries. Although the latter are an integral part of the global capitalist economy meaning they are subject to the operational mechanisms of objective economic laws the specific conditions of these countries differ significantly. These differences include the nature of their productive structures, distribution relations, the degree of development of their productive laws, the size of their domestic markets, and the unique challenges they face. As a result, the operation of capitalist economic laws in these contexts assumes a distinct character (Bassey, 2018, p.128).

Moreover, for over a quarter of a century, unemployment has evolved into a structural problem, persisting despite periods of economic recovery and growth. In a country like Iraq which relies almost entirely on oil revenues and where the public sector dominates employment opportunities unemployment continues to rise year after year, especially amidst the transition toward a capitalist system. This transition is marked by developmental failures and increasing external debt. Unemployment is considered an inevitable consequence of resource reallocation, a process that necessarily occurs when enterprises are transferred from state ownership to private ownership and undergo restructuring (Sawsan, 2020, p.970).

Chapter Two: Analysis of the Study Variables

This chapter presents an analysis of the study variables through their graphical representation and trend evaluation to identify the causes of observed imbalances, interpret them, and provide appropriate solutions. Accordingly, we will begin by discussing the variables addressed in Chapter Three, in the same sequence, as follows:

1. Unemployment Rates:

Unemployment represents one of the most serious challenges facing the Iraqi economy due to its profound social impacts on Iraqi society. Figure (1) illustrates the general trend of unemployment rates in Iraq during the study period (2004–2025). Following the change in Iraq's political regime, the economic situation deteriorated as a result of the destruction of public sector infrastructure and the limited opportunities available to the private sector. This led to a rise in unemployment rates, as shown in the figure.

After 2006, the government adopted a policy of absorbing workers into state institutions particularly the security apparatus which contributed to a decrease in unemployment rates. This downward trend continued until 2013. However, unemployment began to rise again due to the increasing number of individuals entering the labor force and the decline in global oil prices, which prevented the government from accommodating the growing numbers within the public sector. Additionally, internal migration contributed to further increases in unemployment, a trend that persisted until 2019. The rates then rose again sharply due to the near-complete shutdown of the private sector during the global outbreak of the COVID-19 pandemic.

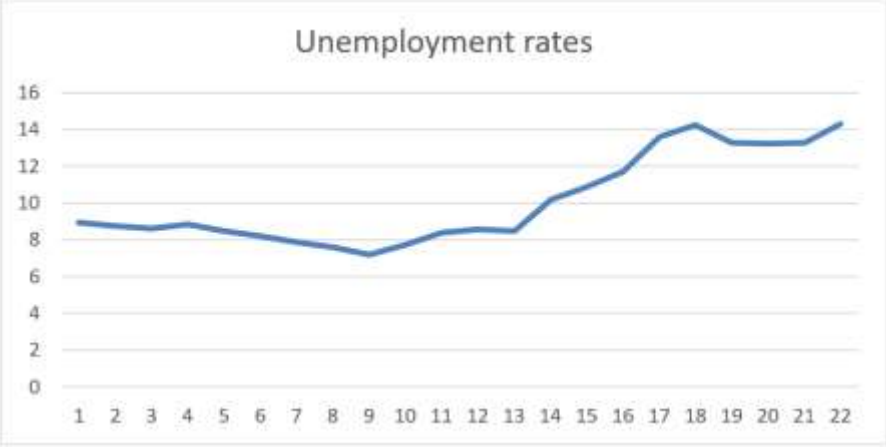

Figure 1: Illustrates the development of unemployment rates in Iraq during the study period (2004–2025)
Source: Figure prepared by the researcher based on data from Appendix (1) using the statistical program Excel.

The unemployment problem in Iraq stems from imbalances in the labour-absorbing sectors, particularly the agricultural, industrial, and service sectors, as well as from distortions in the structure of foreign trade. The

liberalization of trade and the increase in imports, coupled with weak domestic supply, have led to a decline in non-oil exports and pushed the Iraqi economy into what is referred to as "dumping," where foreign countries dominate the local market. All of these factors have contributed to rising unemployment rates.

2. Exchange Rate of the Iraqi Dinar Against the US Dollar:

Figure (2) illustrates the trajectory of the exchange rate of the Iraqi dinar against the US dollar during the study period (2004–2025).

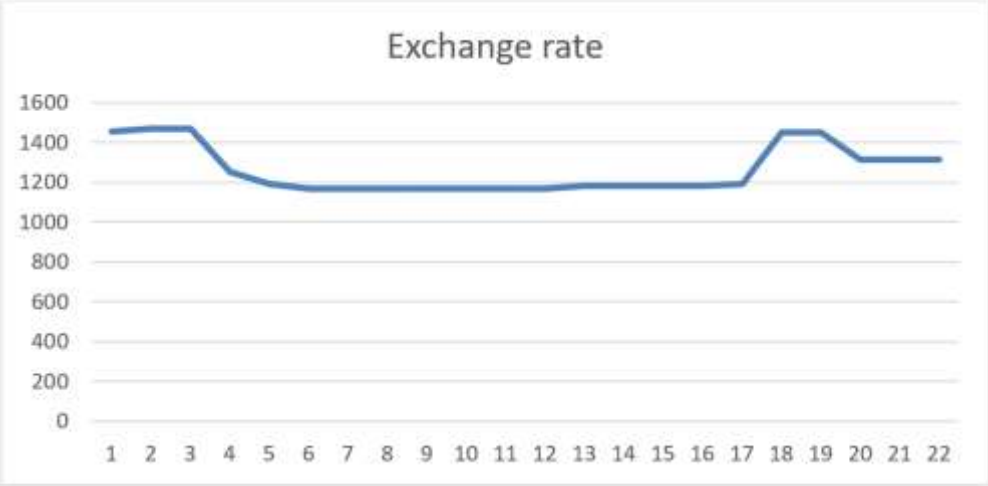

Figure 2: Illustrates the development of the Iraqi dinar exchange rate during the study period (2004–2025)
Source: Figure prepared by the researcher based on data from Appendix (1) using the statistical program Excel

There appears to be overall stability in the exchange rate, with slight fluctuations at the beginning and end of the series. In 2004, the exchange rate stood at 1,453 dinars per US dollar and rose slightly in 2005 to reach 1,467 dinars per dollar. However, from 2007 onward, it experienced relative stability, decreasing to 1,255 dinars per dollar, indicating an appreciation of the local currency against the dollar. In 2012, the value of the local currency further increased, reaching 1,166 dinars per dollar, and remained at similar levels until 2020. This stability in the Iraqi dinar is attributed to the consistent monetary policies adopted by the Central Bank and to the foreign currency reserves it accumulated due to rising oil revenues, which were used to support the dinar's value. However, the dinar's value dropped to 1,450 dinars per dollar in 2021 due to the decline in global oil prices and remained at that level through 2022. It then appreciated again, reaching 1,316 dinars per dollar by 2023 and remaining stable through 2025. This appreciation is attributed to increased oil revenues from rising global oil prices.

3. Broad Money Supply:

The broad money supply in Iraq experienced significant developments during the study period. Figure (3) illustrates this trend, with the general direction line indicating a continuous increase in the broad money supply.

Figure 3: Illustrates the development of broad money supply during the study period (2004–2025)
Source: Figure prepared by the researcher based on data from Appendix (1) using the statistical program Excel

The money supply increased from $8,432 million in 2004 to approximately $66,189 million, indicating economic growth and expansion in banking activity witnessed in Iraq after 2004. This was further

supported by the lifting of sanctions on Iraq and the rise in oil prices, all of which contributed to an increase in banking liquidity in the economy. The money supply continued to rise steadily from 2013 to 2025. After reaching $76,769 million in 2013, it kept increasing to reach $123,434 million in 2025. However, the study period witnessed notable fluctuations. In 2015, the money supply declined to $72,411 million due to a drop in oil revenues and the financial crisis caused by the war against armed groups and the related military expenditures, which led to a decline in net foreign asset reserves. Moreover, broad money supply fell again to $96,473 million as a result of the devaluation of the local currency and the economic consequences of the COVID-19 pandemic, which negatively affected overall economic activity.

4. Interest Rate on Loans:

The interest rate on loans showed clear developments over the course of the study period. Figure (4) presents the changes in interest rates during the period (2004–2025).

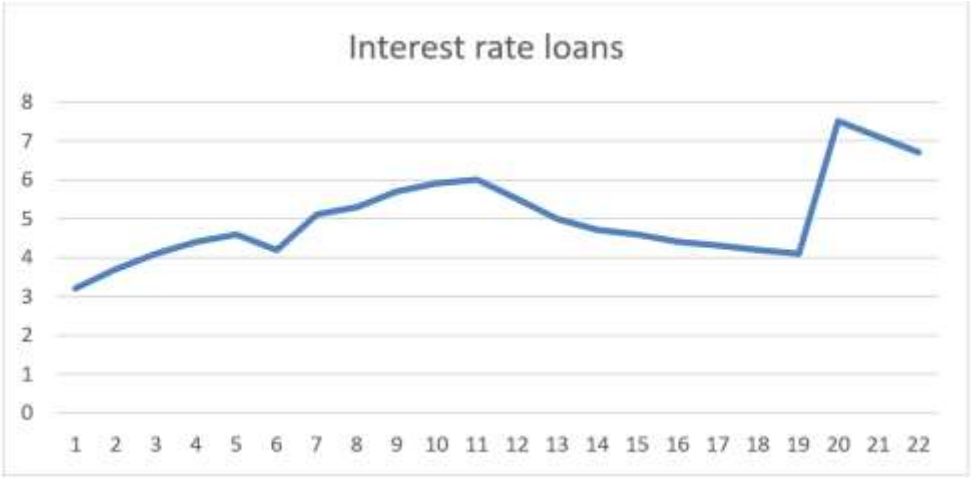

Figure 4: Illustrates the development of the interest rate on loans during the study period (2004–2025)
Source: Figure prepared by the researcher based on data from Appendix (1) using the statistical program Excel

The interest rate on loans was recorded at 3.5% in 2004 and gradually increased to reach 4.2% in 2006. It continued rising until it peaked at 4.7% in 2007, before declining sharply to 4.1% in 2008. It then began to rise again, reaching 6.1% in 2014. This fluctuation in loan interest rates is directly linked to the economic conditions experienced by the Iraqi economy. When oil prices decline, interest rates tend to rise. Similarly, during the COVID-19 pandemic, interest rates also increased due to a lack of sufficient liquidity in the banking sector, in addition to uncertainty, expectations, and fear of the unknown. Since the interest rate is a key factor influencing investment, an increase in interest rates leads to a decrease in investment, and vice versa, due to the inverse relationship between interest rates and investment. Although other factors also impact investment such as economic and security stability the interest rate remains a significant driver of economic activity. The interest rate reached its highest level in 2023 at 7.5%, which was attributed to increased demand for capital for investment purposes as a result of the political and economic stability that Iraq experienced.

Chapter Three: The Impact of Selected Monetary Variables on Unemployment Rates

Monetary variables play a significant role in determining unemployment rates in Iraq. It is essential for monetary policymakers to consider the impact of their instruments on the labor market and to take appropriate measures to strike a balance between economic stability and job creation. This necessitates the formulation of an econometric model that aligns with economic logic. The proper selection of variables is a critical component in achieving accurate results and ensuring that policy decisions are well-suited to address the targeted economic problem (Gengenbach, 2004, p.115). The following equation has been adopted:

$$LN\ Y_t = \beta_0 + Ln\beta_1 X_1 + Ln\beta_2 X_2 + Ln\beta_3 X_3 + \cdots \ldots . . + \mu_t \ldots \ldots \ldots \ldots . (1)$$

Where:

Y = Unemployment rates in Iraq.

X1 = Exchange rate of the Iraqi dinar against the US dollar. Its relationship with unemployment is **positive** in nature; a depreciation of the Iraqi dinar is expected to increase exports and investment, thereby generating additional employment opportunities.

X2 = Broad money supply. According to economic theory, it has a **positive** relationship with the dependent variable (unemployment rates), meaning that an increase in the money supply promotes investment and reduces unemployment rates, especially when the productive sector is flexible.

X3 = Interest rate on loans. Its relationship with unemployment is **positive** according to economic logic, implying that a decrease in interest rates stimulates investment and reduces unemployment, while an increase in interest rates has the opposite effect.

Testing the stationarity of time series data is considered the first and fundamental step in analyzing the characteristics of variables over time. It determines whether the values depend heavily on time. In other words, if a time series is stationary, its statistical properties such as the mean and variance remain constant over time. Table (1) presents the results of the stationarity test.

Table 1: Summary of Augmented Dickey-Fuller Test Results for the Stationarity of Time Series Variables in the Study

Stationarity of the Iraqi Model for the Period 2004–2025						
Levels	**Level**			**First Difference**		
Variables	**None**	**Intercept**	**Intercept and Trend**	**None**	**Intercept**	**Intercept and Trend**
Unemployment Rates	-6.5769 (0.3700)	-4.5522 (0.4001)	-3.7631 (0.057)	-7.4408 (*0.0000*)	-6.9980 (*0.0000*)	-5.8197 (*0.0000*)
Exchange Rate (IQD/USD)	-2.3551 (0.63723)	-2.3679 (*0.45022*)	-4.9025 (0.78713)	-5.5003 (0.0004)	-6.32108 (0.0001)	-7.63220 (0.0006)
Broad Money Supply	-5.4348 (*0.5128*)	-5.3718 (*0.4510*)	-5.3228 (*0.2762*)	-8.21991 (*0.0002*)	-9.86706 (*0.0003*)	-11.4415 (*0.0007*)
Interest Rate on Loans	-12.7611 (*0.0008*)	-10.87107 (*0.0004*)	-9.37811 (*0.0009*)	-	-	-

Source: Table prepared by the researcher based on the results of the statistical program Eviews13

Using the Augmented Dickey-Fuller (ADF) test at both the level and first difference, the unit root test confirms that the stationarity of the variables included in the model varies between level and first difference. The stationarity test results indicate that the independent variable **X3** (interest rate on loans) is stationary at the level, whereas the other variables **Y** (unemployment rate), **X1** (exchange rate), and **X2** (broad money supply) are not stationary at the level but become stationary at the first difference with statistically acceptable significance levels. Since the time series for the study variables achieved stationarity but at different levels, the Autoregressive Distributed Lag (ARDL) model is adopted for estimation and testing. From Table (1), we observe the initial estimation of the study model, which shows the relationship between unemployment rates as the dependent variable and the exchange rate, broad money supply, and interest rate as the independent variables.

Table 2: Presents the initial estimation of the model for the impact of the study variables on unemployment rates in Iraq

Dependent Variable: UNEM			**Method: ARDL**
R-squared	0.861012	Mean dependent var	12.88353
Adjusted R-squared	0.730936	S.D. dependent var	2.029452
S.E. of regression	1.094090	Akaike info criterion	3.270387
Sum squared reside	7.182200	Schwarz criterion	3.809525
Log Likelihood	-16.79829	Hannan-Quinn criter	3.323978
F-statistic	4.905176	Durbin-Watson stat	2.038723
Prob. (F-Statistic)	0.032319		

Source: Table prepared by the researcher based on the results of the statistical program Eviews13.

The coefficient of determination R^2 reached a value of (0.73), representing a good explanatory power for the model. This means that the independent variables have a significant influence on the dependent variable under study, as indicated by the value of the adjusted coefficient of determination. Moreover, the Durbin-Watson (D.W) statistic confirmed the absence of autocorrelation among the residuals, with a value of (2.038), which falls within the acceptable range. Additionally, the value of the calculated F-statistic reflects the overall significance of the model, reaching (4.9), which is statistically significant and acceptable. This allows us to proceed with testing for both short- and long-term relationships based on the ARDL methodology, following the implementation of the bounds test.

After the initial estimation, we perform the bounds co-integration test to determine the existence of a long-run relationship between the dependent variable and the explanatory variables. The results are presented in Table (3).

Table 3: Shows the Bound Test

Critical values	F. Statistic	
	3.988211	
	I (0)	I (1)
10%	2.63	3.34
5%	3.2	3.86
2.5%	3.54	4.39
1%	4.12	5.03

Source: Table prepared by the researcher based on the results of the statistical program Eviews13.

The Bound Test is used to detect the existence of a long-run equilibrium relationship among the model variables by applying the F-test in the context of the Wald Test. The coefficients of the long-run equilibrium relationship in the model are tested, and it was found that the F-statistic value of (3.988211) exceeds the upper critical values at the 5% significance level, which are (3.2) and (3.86). This indicates acceptance of the alternative hypothesis, suggesting the existence of a long-run equilibrium relationship between the dependent variable and the independent variables during the study period. From Table (4)**,** we can obtain the long-run coefficients in the Autoregressive Distributed Lag (ARDL) model by estimating the long-run equilibrium relationship. The results indicate a long-run relationship between the dependent variable and the independent variables, and the estimation outcomes for both the short- and long-run relationships align with the assumption in the model, confirming that the independent variables have a significant impact on unemployment.

Table 4: Shows the estimation of the long-run equilibrium relationship

Variable	Coefficient	Std-Error	T-Statistic	Prob.
X1	0.022314	0.007899	4.63520	0.0032
X2	0.037823	0.002019	3.78271	0.0056
X3	0.041980	0.003115	2.91178	0.0048
C	-13.45765	11.45432	-1.16523	0.2346

Source: Table prepared by the researcher based on the results of the statistical program Eviews13

The results show that variable **X1** (exchange rate) has a significant and positive effect, indicating that an appreciation of the local currency against the US dollar leads to an increase in unemployment rates in Iraq, with an elasticity of (0.0223). Conversely, a depreciation of the currency reduces unemployment by the same elasticity. This finding aligns with economic logic, as a lower exchange rate positively affects economic activity by boosting exports, which in turn supports domestic production. Increased production necessitates more labor, thus helping reduce unemployment in Iraq. The results also show the significance of variable **X2** (broad money supply), with a positive sign. This means that an increase in the money supply reduces unemployment at an elasticity of (0.0378), indicating that the Iraqi economy features a flexible productive system and has not yet reached full employment. This result is consistent with Keynesian economic thought, which supports such a relationship.

Furthermore, the estimation results indicate the significance of variable **X3** (interest rate on loans), also with a positive sign. This suggests that a 1% increase in the interest rate leads to a rise in unemployment rates by an elasticity of (0.00311), while a decrease in interest rates reduces unemployment accordingly due to increased investment and the creation of new job opportunities. This finding is in line with standard economic theory.

Table (5) also shows that all explanatory variables are statistically significant at the 5% significance level. In other words, the independent variables have a statistically significant and positive effect on the dependent variable within acceptable significance levels.

Table 5: Shows the short-run equilibrium relationship

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.025947	0.003105	8.358272	0.0000
X2	0.027766-	0.003161	7.988230-	0.0000
X3	0.038912	0.004116	4.379611	0.0004
R-squared	0.882400	CointEq(-1)	-0.527754	0.0011
Adjusted R-squared	0.845601	Akaike info criterion	2.747507	-
F-statistic	9.4398	Schwarz criterion	2.894545	-
Prob. (F-Statistic)	0.00432	Hannan-Quinn criter	2.762123	-
Durbin-Watson stat	1.9451			

Source: Table prepared by the researcher based on the results of the statistical program Eviews13

According to the results, the error correction coefficient is (-0.527754), and since its absolute value is less than one, this indicates that the return to equilibrium occurs within a short period. In other words, the model's adjustment path is responsive and quickly corrects deviations from equilibrium. The results showed that the study variables have a significant impact, which to some extent aligns with the long-run findings. The exchange rate of the Iraqi dinar was significant with a positive sign, and with an elasticity of (0.0259). This means that a 1% change in the exchange rate leads to a change in the unemployment rate by the stated elasticity, indicating a direct relationship consistent with economic reasoning.

Similarly, the broad money supply variable appeared with a negative sign, indicating an inverse relationship with the dependent variable. In other words, a 1% increase in money supply leads to a reduction in unemployment rates by an elasticity of (-0.02776), suggesting that economic resources in Iraq are not fully utilized. The increase in money supply boosts investment and creates new job opportunities.

The results also confirmed the significance of variable X3 (interest rate on loans) with a positive sign, in accordance with economic logic. A 1% decrease in loan interest rates leads to a decrease in unemployment rates by an elasticity of (0.0389), as lower interest rates encourage borrowing and investment, which in turn creates additional job opportunities that help reduce unemployment.

Diagnostic tests are used to detect the problem of autocorrelation through the Lagrange Multiplier (LM) test, as shown in Table (6).

Table 6: Shows the Lagrange Multiplier (LM) Test to detect autocorrelation among the random variables

F-Statistic	**0.262315**	**Porb. F(1,9)**	**0.7768**
Obs* R-squared	0.938103	Prob. Chi-Square (1)	0.6287

Source: Table prepared by the researcher based on the results of the statistical program Eviews13

This represents the first step of the diagnostic tests, where the Breusch-Godfrey test was used to test the null hypothesis that there is no serial correlation among the residuals. The table below shows that the probability value is not statistically significant at the 5% level, indicating that there is no autocorrelation among the random variable values. There are several tests used to detect the problem of heteroskedasticity, which help determine whether the residuals are homoscedastic or not. Among these is the ARCH test, which revealed that the model does not suffer from heteroskedasticity. This is shown in Table (7).

Table 7: Shows the Heteroskedasticity Test using the ARCH Test

F-Statistic	**0.259861**	**Prob, F (1,9)**	0.82351
Obs* R-squared	0.927102	Prob. Chi-Square (1)	0.71763

Source: Table prepared by the researcher based on the results of the statistical program Eviews13

It was found that the model does not suffer from heteroskedasticity, as the probability value is not statistically significant at the 5% level. This confirms the homoskedasticity of the estimated residuals. From the above, it is evident that the independent variables align with economic theory, thereby confirming the hypothesis on which the study was based. The findings of this research are closely aligned with the study by AL-Abbasi, referenced in the literature review and previous studies, while differing from the results of other studies.

Findings and Recommendations First: Findings

1. After conducting the stationarity test, it was found that all the study variables are stationary but at different levels, which necessitated the use of the ARDL estimation and testing method as the most appropriate in this context.
2. Monetary policy variables in Iraq have an impact on unemployment rates in both the short and long term. This was confirmed by the value of the adjusted coefficient of determination R^2_{adj}, which reached (0.845), indicating that the study variables significantly affect unemployment rates by the mentioned value.
3. The exchange rate has a positive effect on unemployment rates, as it stimulates exports and investment, opening up new economic prospects that contribute to reducing unemployment rates by creating additional job opportunities capable of absorbing individuals within the working-age population.
4. The interest rate on loans also has a positive relationship with unemployment rates. Similarly, the broad money supply variable was found to be statistically significant with a negative sign, meaning that an increase in the money supply leads to a reduction in unemployment rates.
5. Despite the numerous efforts made, reliance on the public sector still dominates over the private sector, a condition often referred to as “crowding out,” which hampers growth rates and adversely affects unemployment levels in Iraq.

Second: Recommendations

1. It is necessary for the Central Bank of Iraq to adopt an expansionary monetary policy and increase the money supply in order to utilize idle resources,

create additional job opportunities, and eliminate unemployment.

2. The Iraqi dinar exchange rate should be lowered to enhance exports, achieve economic growth, and increase investment levels—thereby reducing unemployment rates.
3. Work should be done to reduce interest rates on loans and encourage investment to open new economic horizons, diversify income sources, create additional employment opportunities, reduce unemployment, and achieve sustainable growth.
4. A balanced and sustainable monetary policy should be adopted to ensure real economic stability in Iraq, boost investor confidence, and achieve high levels of employment in the long term.
5. There is a need to diversify income sources, promote the private sector, and increase and diversify investments. This would create new job opportunities, foster competition with the public sector, enable real economic growth, and combat corruption.

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Appendix 1: Presents the data on which the study was based

Years	Exchange rate	Money supply	Interest rate loans	Unemployment rates
2004	1453	8432	3.2	8.916
2005	1469	9998	3.7	8.774
2006	1467	14365	4.1	8.613
2007	1255	21485	4.4	8.861
2008	1193	29268	4.6	8.475
2009	1170	38836	4.2	8.222
2010	1170	51612	5.1	7.876
2011	1170	61691	5.3	7.605
2012	1166	66189	5.7	7.19
2013	1166	76769	5.9	7.759
2014	1166	79750	6	8.405
2015	1167	72411	5.5	8.553
2016	1182	76537	5	8.46
2017	1184	78427	4.7	10.194
2018	1183	80652	4.6	10.894
2019	1182	87514	4.4	11.722
2020	1192	100578	4.3	13.61

2021	1450	96473	4.2	14.23
2022	1450	116063	4.1	13.269
2023	1316	137546	7.5	13.234
2024	1316	116694	7.1	13.258
2025	1316	123434	6.7	14.278

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