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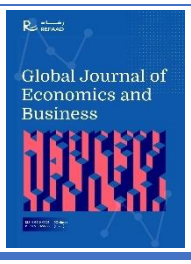

The Impact of Public Spending on Unemployment: A Study on the Iraqi Economy for the Period 2004-2021

أثر الانفاق العام في البطالة: دراسة تطبيقية على الاقتصاد العراقي للمدة 2004-2021

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Abstract:

Objectives: The study Objective is to show the effect of public spending on unemployment rates in the economy of Iraq. Basically, the study aims to determine whether the public spending carried out by the government, affects negatively or positively the unemployment rates.

Methods: (ARDL) an autoregressive distributed lag model was used. It is based on quarterly time series data for the period 2004-2021. The data were obtained from the Iraqi Central Bank, and the Eviews program was used to find out the impact of public spending on unemployment.

Results: The results showed that there is a co-integration correlation of public spending on the unemployment rates in Iraq during the research period. Results also showed a significant and inverse effect of public spending on the unemployment rates during long period. The increase of the public spending rate by 1% leads to a decrease in the unemployment rate by 3%.

Conclusions: This study provides enough information for decision-makers regarding public spending that increasing public spending will decrease the unemployment rates, and vice-versa.

***Keywords**: public spending; unemployment; Autoregressive distributed lag model; Iraqi economy.*

الملخص:

الأهداف: تهدف هذه الدراسة إلى بيان أثر الانفاق العام في معدلات البطالة في الاقتصاد العراقي، من أجل معرفة تأثير الانفاق العام الذي تقوم به الحكومة هل يؤثر سلبًا أم إيجابًا على معدلات البطالة.

المنهجية: تم استخدام نموذج الانحدار الذاتي ذو فترات الابطاء الموزعة، وذلك اعتمادًا على بيانات سلسلة زمنية ربع سنوية للمدة 2004-2021. إذ تم الحصول على البيانات من البنك المركزي العراقي، وتم استخدام برنامج Eviews لإيجاد أثر الانفاق العام في البطالة.

النتائج: أظهرت نتائج التحليل وجود علاقة تكامل مشترك للإنفاق العام في معدل البطالة في العراق خلال مدة البحث، فضلًا عن وجود أثر معنوي وعكسي للإنفاق العام في معدل البطالة في الأجل الطويل، فكلما ارتفعت نسبة الانفاق العام بنسبة (1%) يؤدي ذلك إلى انخفاض معدل البطالة بنسبة (3%) .

الخلاصة: توفر هذه الدراسة معلومات كافية لمتخذي القرار فيما يخص الانفاق العام بأن زيادة هذا الانفاق سيؤدي إلى خفض معدلات البطالة، وفي حال تم تخفيض الانفاق العام فان معدلات البطالة سترتفع.

***الكلمات المفتاحية:** الانفاق العام؛ البطالة؛ نموذج الانحدار الذاتي ذو فترات الابطاء الموزعة؛ الاقتصاد العراقي.*

Introduction:

Unemployment is one of the serious economic problems that affect most countries' economies as a result of the lack of optimal investment in the human Labor component, and the consequent loss of production, which affects negatively the well-being of the individual and society. Unemployment has psychological and social repercussions that affect the psychological state of the unemployed. Unemployment is a fertile ground and a direct cause of various diseases and serious social ills. The most serious consequence of that is the low standard of living and the spread of poverty. Because affliction with the disease of unemployment is always accompanied by undesirable symptoms, including the lack of income, along with the injustice felt by the unemployed in both distribution of income and wealth. Thus, the effects of unemployment are not limited to the unemployed individual, but extend to all society classes. The fiscal policy of encouraging public spending is the only and optimal solution for oil developing countries in facing employment and creating opportunities of jobs that would absorb part of unemployment. Because, developing countries lack a strong industrial base through which they can pursue tax policies to finance their projects. Rather, developing countries' budgets depend to a large extent on the revenues of the energy and fuel sector. They spend these revenues in financing government projects and institutions in order to create new job positions that achieve stability and balance in the labor markets.

Research problem:

The research problem can be formulated in the following question: *Is there an effect of public spending on unemployment?*

Research hypothesis:

Public spending correlates inversely with unemployment rates in the economy of Iraq.

Literature Review:

Study by (Fosu, 2019) examined the impact of authority spending on unemployment in some African countries. The study divided public spending into two types: investment and consumption spending. Using the panel data model for a time series for the period 1990-2017. Results indicated the presence of an inverse positive correlation between consumption spending and unemployment.

In contrary to the results of the (Fosu, 2019), (Obisike et al., 2020) found that public spending, whether consumption or investment, had no significant statistical effect on unemployment in Nigeria. The relationship between public spending and unemployment in Nigeria was studied for the period (1981-2019), using method of ordinary least squares (OLS).

(Saraireh, 2020) conducted a study on the effect of public spending on unemployment in Jordan for the period (1990-2019). The study used the test of ARDL. The conclusion showed that there is a positive and significant effect of public spending on unemployment in the short term. study However, in the long run, the relationship is inverse and statistically significant between public spending and the unemployment rate.

Furthermore, (Nepram et al. 2021) studied public spending impact on unemployment in India using the panel data model. The study found that there is a direct correlation between public spending and unemployment. The unemployment rates rise with the rise in PS, no matter whether this spending is consumption or my investment.

Study by (Abouelfarag and Qutb 2021) aimed to find out the public spending impact on the unemployment rate in Egypt from 1980 to 2017, using the Johansen co-integration test to validate the long-term equilibrium connection between variables. They also used (VECM) the vector error correction model to explore short dynamic effects on short and long term. The study found a direct correlation between public spending and unemployment. The increase in public spending increases in the unemployment rate too.

The relationship between public spending and unemployment:

The relationship between public spending and unemployment will be analyzed through the views of different economic schools (classical, Keynesian, monetary). (Zakkan & Rabeh, 2011)

- **Classical economists' view**

Classical economists neglect the public spending relation with and unemployment, because their opinion presented that the economy is just operating at full capacity. Classical economy provides creates jobs to all jobless individual who wishes to work.

Associated with this classically optimistic view of unemployment is another significant and curious belief which states that balanced classical economy is in a state of complete use without the intervention of the government. In hence, classicism neglects the function of the government in achieving balance and effect the economic outputs activity. Classical economists see those financial policies of expansionary just impacted the state's general budget, and that political expansionary monetary does not result in increasing the production and employment, but to an increase in prices instead.

- **Keynes' view**

Keynes believes that unemployment does not contradict equilibrium. The economical equilibrium may be achieved at the macro level and this equilibrium is accompanied by the presence of unemployment in the workforce. Such unemployment may be devastative, but the authority can, through its major expansionary fiscal policies that lead to recession, through the important role and fiscal policy influence, that is, spending and the production tax multiplier in increasing production and creating job opportunities. Thus, public spending has inverse correlation with unemployment. The higher the government expenditures, the more the job opportunities and the fewer the unemployment rate.

- **Monetaries and the relationship of unemployment to public spending**

The pioneers of this school, led by Milton Friedman, who believe that policy of monetary has strong effect in stabilizing economy, confronting unemployment and inflation, and creating job opportunities. They also believe that the excessive application of expansionary fiscal policies costs the state a huge cost represented by the budget deficit and problems incurred that affect the economy caused by public debt.

Theoretically, public spending is the main engine through which the state can be able to make job opportunities by absorbing part of the unemployment and alleviating its severity. This shows that public spending has an inverse relationship with unemployment. The more the government increases the volume of its public spending, the lower unemployment rates and sizes. Fiscal policy is regarded one of the best tools that address underutilization cases or deflationary gaps. Therefore, the government projects work on generating job opportunities for subsequent years, and the multipliers of fiscal policy are more powerful than monetary policy multiplier.

Development of public spending in Iraq:

Public spending is one of the public budget items whose objectives are derived from government policy, the national development plan and the anti-poverty strategy. The general lines of fiscal policy focused on intensifying the government's efforts to diversify non-oil revenues and rationalize public spending, taking into account the increase in spending on basic social services such as education and health to improve the human element.

At the same time, fiscal policy strives to achieve a balance between revenues and expenditures and increase investment expenditures for the purpose of expanding reconstruction operations and developing infrastructure and continuing to subsidize ration card prices in order to provide basic foodstuffs to the citizen. The fiscal policy also aims to emphasize the policy of economic reform and achieve social welfare and fight poverty and increase per capita income to secure a standard of living. Furthermore, it gives the private sector importance to raise its level of performance in achieving economic development (Al-Dulaimi, 2017). Table 1 indicates the volume of public spending in Iraq for the period (2004-2021).

Table (1): public spending in Iraq for the period (2004-2021) (million Iraqi dinars)

Years	Current spending 1	Investment spending 2	General spending 3	public spending growth rate %	1/3 percentage	2/3 Percentage
2004	13874756	18242734	32117491	____	43.2	56.8
2005	12554583	13820591	26375175	−17.8	47.6	52.4
2006	28263768	5224108	33487877	26.9	84.4	15.6
2007	27909559	5635584	33545144	0.1	83.2	16.8
2008	41582362	17821012	59403375	77	70	30
2009	41159980	11407044	52567025	−11.5	78.3	21.7
2010	64351000	19472000	83823000	59.4	76.8	23.2
2011	56017000	13623000	69640000	−16.9	80.4	19.6
2012	69619000	20756000	90375000	29.7	77	23
2013	72226000	34647000	106873000	18.2	67.6	32.4
2014	77986200	35487400	113473600	6.1	68.7	31.3
2015	51832840	18564670	70397510	−37.9	73.6	26.4
2016	51173430	15894000	67067430	−4.7	76.3	23.7
2017	59025600	16464500	75490100	12.5	78.1	21.9
2018	67052900	13820300	80873200	7.1	82.9	17.1
2019	87301000	24422600	111723600	38.1	78.1	21.9
2020	72873500	32089000	76082400	−31.9	95.7	4.3
2021	89526700	13322700	102849700	35.2	87.1	12.9

Source: Table from the work of researchers based on the Central Bank of Iraq (2004-2021), Annual Statistical Bulletin, General Directorate of Statistics and Research, Baghdad.

Table (1) explore that public spending during the year 2004 recorded the amount of (32,117,491) Iraqi dinars. Table (1) indicates that percentage of current and investment expenditures from public spending was (43.2%) and (56.8%), respectively, then the public spending fluctuated for the duration of the research due to what the Iraqi economy has been exposed to in terms of political conflicts, terrorism, international financial crises, administrative and financial corruption. Table 1 shows that financing public spending depends on crude oil exports and not directing and controlling public spending to achieve its goals.

Table (1) shows that in 2021, the money amount is (102849700) Iraqi dinars, and a growth rate 35.2% if compared with the year (2020), and the percentage of current expenditures was (87.1%) and investment expenditures by 12.9%. As the Iraqi economy depends on the revenues of natural resources, represented by the revenues obtained from crude oil exports, which constituted a percentage of its contribution to public revenues 87.3% for 2021.

Development of Unemployment Rates in Iraq:

Unemployment is one of the devastative problems that affects the Iraqi economy due to the repercussions overlapping between the economy, politics and society at the same time. Furthermore, many reasons led to the exacerbation of the numbers of the unemployed and the high rates of unemployment, directly and indirectly. Among these reasons to Hassan (2012) are:

- The increase in the supply side of the Labor force as a result of the increase in the annual growth rate of the Iraqi population.
- The Iraqi occupation in 2003 exacerbated the problem of unemployment due to the dissolution of the Iraqi army and internal security forces. Besides, more than 20,000 small and medium industrial projects stopped due to the interruption of electrical power, the high prices of raw materials and the influx of foreign commodities, all of which led to an increase in the numbers of the unemployed.
- The real imbalance in the structure of the labour force. Hence, the outputs of higher education are not commensurate with the needs of the Labor market, as there are tens of thousands who hold university and higher degrees in various academic specializations, but they do not find jobs that suit their academic qualifications. This has led to an increase in the number of Jobless.
- The low contribution of private sector to the GDP.
- The rentier nature of the Iraqi economy, which depends on revenues from selling or exporting natural resources, especially oil, which do not need to employ large numbers of workers, and thus the importance of other economic sectors has diminished and has been neglected by the government.

It can be seen in Table (2), which shows the unemployment rate in the Iraqi economy for the period (2004-2021).

Table (2): Unemployment at age 15 years and over in Iraq for the period (2004-2021)

Years	Unemployment Rate %	Years	Unemployment Rate %
2004	26.8	2013	8.8
2005	17.9	2014	10.5
2006	17.5	2015	16.8
2007	19.2	2016	10.8
2008	15.3	2017	14.4
2009	14.9	2018	13.5
2010	12.8	2019	13.5
2011	17.4	2020	15.7
2012	14.3	2021	15.9

Source: Iraqi Ministry of Planning and Development Cooperation (2004-2021) Unemployment, Population and Labor Force Statistics, Central Organization for Statistics and Information Technology, Statistical Group, Baghdad.

Table (2) shows that it is possible to identify the unemployment rate in the Iraqi economy during (2004-2021). The unemployment rate was 26.8% in 2004 of the total Labor force aged 15 years and over. So, this percentage continued to increase and decrease until it reached 15.9% in 2021 of the total labor force. as a result of the Corona pandemic that occurred throughout Iraq, which prompted most workers in the informal sector to leave their jobs and were forced to fall into forced unemployment (Amis et al., 2022).

The problem solution of unemployment in Iraq is not possible in the short term because. Unemployment is linked to the composition and structure of the Iraqi economy, which suffers from many and complex distortions. Despite the writin of many economists in the development of treatments for unemployment, they collide with the reality of this economy. However, providing a suitable climate for domestic and foreign investment is able to absorb a large part of the unemployed workforce, this is lead to a reduction in unemployment rates in Iraq (Al-Dulaimi, 2017).

Material and Methodology:

The researchers apply the ARDL model in order to explore the impact of public spending on unemployment in Iraq for the period (2004-2021), and this will be done according to the standard program outputs (EVIEWS) for the time series of the included variables in the model.

Drafting the model:

Autoregressive Distributed Lag Model ARDL model is composed of a dependent variable K and of the explanatory variables (X1, X2,….Xi). The model is written in the following formula (P, q1, q2, …, qk) (Pesaran et al, 2001).

The nature of the research data:

Time series data for the research variables were converted from occurring once every year (annual) data to quarterly data to apply econometric techniques that provide more valid and objective effects for long time series. Likewise, the data of the independent variable (public spending) was converted to the logarithmic formula for the sake of smoothing the data variables. The independent variable (public spending) is symbolized by (LX) and the dependent variable (unemployment rate) is symbolized by (Y).

Results and Discussion:

Unit root tests:

Both tables (3) and (4) shows the results that related with the tests of unit root by using the extended Dickey-Fuller and the Phillips-Peyron tests for the variables at difference level with a fixed limited general trend, and without a fixed limit general trend.

Table (3): Results of the unit root tests of the extended Dickie Fuller test

UNIT ROOT TEST TABLE (ADF)			
At Level			
		Y	**LX**
With Constant	t-Statistic	-2.2197	-1.9004
	Prob.	0.2015	0.3303
		n0	n0
With Constant & Trend	t-Statistic	-1.6681	-2.1329
	Prob.	0.7538	0.5181
		n0	n0
Without Constant & Trend	t-Statistic	-1.2284	-0.3908
	Prob.	0.1991	0.5395
		n0	n0
At First Difference			
		d(Y)	**d(LX)**
With Constant	t-Statistic	-5.4426	-7.8953
	Prob.	0.0000	0.0000
		***	***
With Constant & Trend	t-Statistic	-5.6391	-7.8317
	Prob.	0.0001	0.0000
		***	***
Without Constant & Trend	t-Statistic	-5.3914	-7.9373
	Prob.	0.0000	0.0000
		***	***

***** Denote significance levels at 1 % respectively.**
Source: Prepared by researchers based on the Eviews.

Table (3) which exhibits the expanded Dickie Fuller test ADF shows that series of time for variables are not constant at the original level of the data. This means null hypothesis accepting (H0) that states the series of time is not stationary at its original level and refusing the alternative hypothesis (HI) that regards the series of time constant at its originality level. Then, that time series it can be said is probably not invariant of the order [(0)[I] and contains the unit root and became static after taking the first difference for them at the level of significance of 1%.

Table (4): Phillips-Peron unit root tests

At Level			
		Y	**LX**
With Constant	t-Statistic	-3.3453	-1.9751
	Prob.	0.0164	0.2969
		**	n0
With Constant & Trend	t-Statistic	-3.277	-2.2317
	Prob.	0.0785	0.4644
		*	n0
Without Constant & Trend	t-Statistic	-1.5657	-0.3908
	Prob.	0.1097	0.5395
		n0	n0
At First Difference			
		d(Y)	**d(LX)**
With Constant	t-Statistic	-5.4426	-7.8953
	Prob.	0.0000	0.0000
		***	***
With Constant & Trend	t-Statistic	-5.6391	-7.8317
	Prob.	0.0001	0.0000
		***	***
Without Constant & Trend	t-Statistic	-5.3914	-7.9373
	Prob.	0.0000	0.0000
		***	***

Note: ** and *** denote significance levels at 5% and 1 % respectively.
Source: Prepared by researchers based on the Eviews.

Table (4) which exhibits the Phillips-Peyron test (PP) that the time series of the dependent variable (Y) is static at the data of original level, while we note that the time series of the independent variable (LX) is not static at data of the original level. Data became static after taking the first difference at the significant level of 1%.

Initial estimation according to ARDL model:

Initial estimation results are displayed in Table (5) of the of ARDL model for the correlation between public spending and the unemployment rate.

Table (5): Results of the initial estimation of the ARDL model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y(-1)	0.645997	0.132264	4.884166	0.0000
Y(-2)	1.46E-14	0.160748	9.10E-14	1.0000
Y(-3)	-6.56E-15	0.160748	-4.08E-14	1.0000
Y(-4)	-0.08622	0.117177	-0.73584	0.4653
LX	-0.9903	0.648033	-1.52816	0.1328
LX(-1)	0.331603	0.835956	0.396675	0.6933
LX(-2)	1.20E-12	0.837271	1.43E-12	1.0000
LX(-3)	-9.41E-13	0.837271	-1.12E-12	1.0000
LX(-4)	-0.68225	0.656645	-1.03899	0.3038
R-squared	0.678404	Mean dependent var		14.368
Adjusted R-squared	0.620517	S.D. dependent var		2.769393
S.E. of regression	1.706006	Akaike info criterion		4.057199
Sum squared reside	145.5228	Schwarz criterion		4.406256
Log likelihood	-111.716	Hannan-Quinn criter.		4.193734
F-statistic	11.71942	Durbin-Watson stat		1.589189
Prob(F-statistic)	0.00000			

Source: Prepared by researchers based on the Eviews.

Table (5) displays that the determination coefficient was (67%), and that the corrected determination coefficient was (62%). This indicates that the independent variable public spending explains (67%) of the changes that occur in the dependent variable (unemployment rate). It is also clear from the results that the (F) value is statistically significant, which means the significance of the model. Table 5 also shows that the optimal delay periods that chosen to suit the ARDL model; they are of the order (4, 4), according to the applied features in the model, for the variables (Y, LX, respectively), and the period of optimal delay is selected that gives the minimum score for these criteria.

Limits test for the relationship between variables:

The (F) value is calculated to show the co-integration relationship between the independent variable public spending and the dependent variable (unemployment rate). Yet if the calculated (F) scored higher than the upper limit of the critical values, then the null hypothesis will be rejected which states that there is no long-term co-integration relationship. Yet the alternative hypothesis will be accepted instead which states the presence of a long-term cointegration correlation between the variables. Furthermore, the null hypothesis will be accepted whenever the calculated (F) value is lower than the minimum critical values, then the alternative hypothesis will be rejected. Still, if the statistical calculated (F) fall between the two extremes, it is located in the area of doubt, and it is not possible to know the existence of the co-integration relationship or not, except after conducting a test for estimating the short-term and long-term parameters and the error correction parameter, to ensure the existence of the cointegration or not. Table 6 shows the limits test results of ARDL model, the (F) value is calculated (Aruoba et al, 2016).

Table (6): Limit tests

Test Statistic	Value	K
F-statistic	13.04809	1
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	4.040	4.780
5%	4.940	5.730
2.5%	5.770	6.680
1%	6.840	7.840

Source: Prepared by researchers based on the Eviews.

Table (6) show that the calculated (F) statistic value is equal to (13.04809), which is greater than the critical (F) value at its upper limit at the (1%) level, which is equal to (7.840). This accepts the alternative and rejects the null hypothesis. This value shows the cointegration between the public spending and unemployment rate during research period.

Estimating the short-term and long-term parameters and the error correction parameter

After confirming the existence of a cointegration between public spending and unemployment rate, the short and long-term estimations of the error correction and estimated model parameters be applied. Table 7 display this.

Table (7): Results of the short-term and long-term parameters

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Y(-1))	0.086223	0.117177	0.735837	0.4653
D(Y(-2))	0.086223	0.117177	0.735837	0.4653
D(Y(-3))	0.086223	0.117177	0.735837	0.4653
D(LX)	-0.9903	0.648033	-1.52816	0.1328
D(LX(-1))	0.0000	0.837271	0.00000	1.0000
D(LX(-2))	0.0000	0.837271	0.00000	1.0000
D(LX(-3))	0.682247	0.656645	1.038988	0.3038
CointEq(-1)	-0.44023	0.087248	-5.04569	0.0000
Cointeq = Y - (-3.0460*LX + 68.6933)				
Long Run Coefficients				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
LX	-3.04603	1.046762	-2.90995	0.0054
C	68.69334	18.76847	3.66004	0.0006

Source: Prepared by researchers based on the Eviews.

Table (7) shows that there is a long-term cointegration between public spending and the unemployment rate, because the parameter of error correction (-0.44023) is negative, yet has significant at the level less than (1%). Hence, the error correction coefficient expresses the speed of adjustment from the short term to the long-term. It is required to be negative and important in order to provide evidence of the existence of a cointegration relationship between the variables. The value of the error correction coefficient appears to be significant and has a negative value, which displays that the statistical significance has been achieved. Yet, the fault correction parameter takes the negative mark by means of statistics significant grade of less than 1%, and 0.44 short-term errors caused by shocks of the independent variable.

A- Short term correlation

The short-term parameters explore that there are no statistically significant relationships between the variables, and this is due to a lot of reasons, the most prominent of which is the poor distribution of public spending. The current spending constitutes more than 75% of public spending, and this indicates that public spending is directed towards current spending and not investment spending which absorbs an important part of the labor force, besides to the reluctance and stumbling in investment projects. Furthermore, the large strategic projects need a long period in order to accumulate and show their impact on the economy. So that, their impact does not appear in the short term.

B- Long term correlation

The results of the long-term relationship explain the existence of an inverse significant correlation at the probability level (1%) between public spending and the unemployment rate. To make it simply, public spending has a significant effect on the unemployment rate during the research period assuming that other factors remain constant. Likewise, public spending is associated with an inverse relationship with the unemployment rate in the long term. Whenever the public spending rate increases by 1%, this leads to a decrease in the unemployment rate by 3%. This finding is consistent with the economic theory that states that there is an inverse correlation between spending and the unemployment rate assuming. Despite the direction of public spending in Iraq to current spending, it contributes to reducing the unemployment rate, because part of this spending contributes to the creation of new jobs estimated at tens of thousands if not hundreds of thousands annually. In the same line, such procedure contributes to absorbing part of the labor force and reducing the unemployment rate. However, there are some investment projects, they absorb part of the unemployed individuals, all of which contribute to reducing the unemployment rate.

Standard model quality tests:

After estimating the tests of the ARDL model, it is substantial to ensure the kind of the model's achievement and its unlikely to cause danger from standard problems, through the use of the following tests:

- **Test for heterogeneity of variance**

Table (8) shows that the model never suffers from heterogeneity of variance; because the calculated (F) rate amounted to (1.339722) at the nearly level (0.2118) which was not worthy of attention at the (5%) level. This shows that the estimated model is free from heterogeneity of variance.

Table (8): Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.202078	Prob. F (2,64)	0.1189
Obs*R-squared	4.313751	Prob. Chi-Square (2)	0.1157

Source: Prepared by researchers based on the Eviews.

- **LM test for serial correlation**

Table (9) shows that the LM serial correlation results prove the validity and reliability of the approximate model. Because the calculated value (F) amounted (0.124961) at the probability level (0.8828), which was non-significant at the 0.5 level, estimating that the model is free from the serial correlation problem between the remnants.

Table (9): LM test for serial correlation

F-statistic	0.124961	Prob. F (2,189)	0.8828
Obs*R-squared	0.268992	Prob. Chi-Square (2)	0.8742

Source: Prepared by researchers based on the Eviews.

- **Ramsey test for validity**

Table (10) indicates that the calculated t value amounted (0.536715) and its probability value (0.5934), which was not significant at the 0.5 level. Furthermore, the calculated (F) value amounting to (0.288064) and its

probability value (0.5934), which does not have signification at 0.5 level, which shows that the functional form of the estimated model is valid.

Table (10): Validity of the functional form

Ramsey RESET Test Equation: UNTITLED Omitted Variables: Squares of fitted values			
	Value	**Df**	**Probability**
t-statistic	0.536715	63	0.5934
F-statistic	0.288064	(1, 63)	0.5934

Source: Prepared by researchers based on the Eviews.

To checking whether the coefficients of the full model are stable over the sample period, we carried out the CUSUM and CUSUM SQUARE tests of structural stability. As shown in figure 1 CUSUM and CUSUM SQUARE plots indicate parameters stability in the model over the sample period.

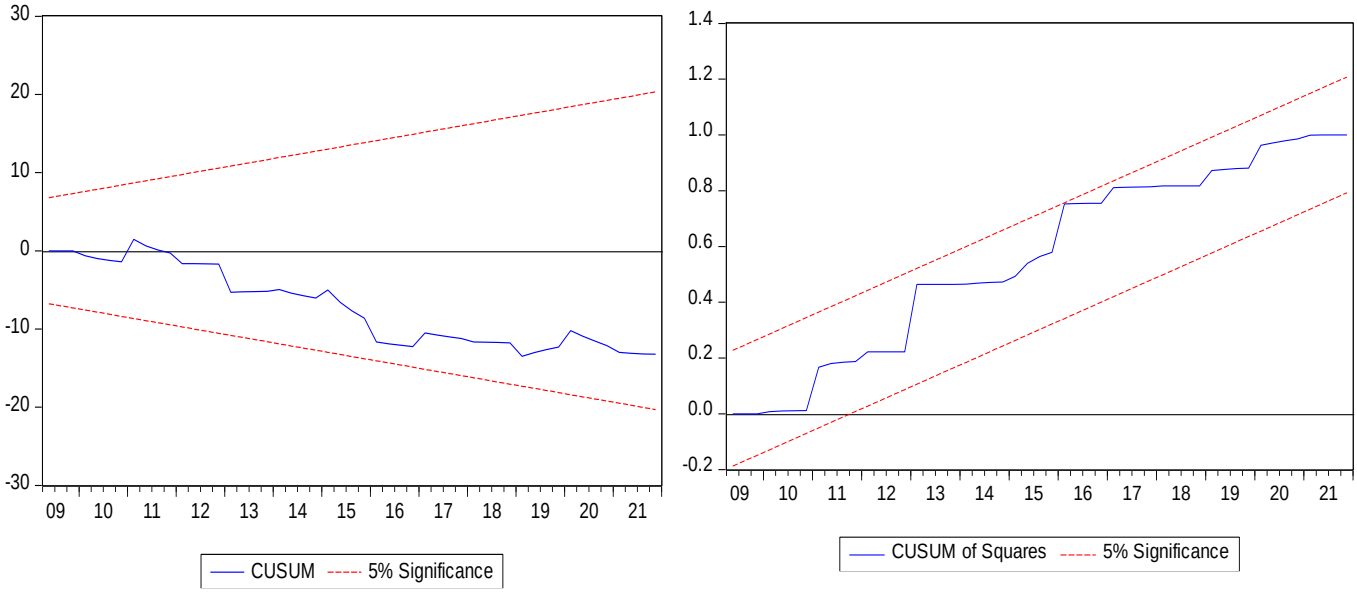

Figure (1): Test the structural stability of the model

Conclusions:

Accepting the study hypothesis which states the presence of reverse correlation between public spending and unemployment rates during the study period. The results of ARDL model showed that the calculated (F) value of the statistic is bigger than the critical (F) value at its upper limit, which shows that there is a co-integration correlation for public spending in the unemployment rate in Iraq during the research period, as indicated by the quality tests of the model and it is free of standard problems. The results of measuring the correlation between public spending and the unemployment rate explained that there is a significant inverse effect of public spending on the unemployment rate in the long term, as an increase in public spending contributes to a decrease in the unemployment rate. Conversely, the decrease in public spending contributes to an increase in the unemployment rate during research period.

The researchers recommend rationalizing public spending and directing the great public amounts towards investment spending, by addressing administrative sluggishness in government institutions. And activating the role of the General Authority for Investment and its branches in the governorates, giving them more independence, providing the necessary protection for local and foreign investors, supporting the private sector and activating its role because of its great importance in increasing the investment rate. And The need to take realistic and serious steps to reform the fiscal policy in Iraq because of its impact on directing public spending towards investment spending and reducing the proportion of operational spending. It is also necessary that public spending to be subjected to monitoring, and accountability, in order to reduce waste, which contributes to providing the necessary funds for investment.

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