### Measuring the impact of entrepreneurial projects on unemployment rates in Iraq: An applied study for the period (2019-2004)

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#### Abstract:

This paper aimed to know the impact of pilot projects in addressing the problem of unemployment in Iraq for the period (2004-2019) using both the number of projects and the number of workers in them as independent variables and unemployment rates as a dependent variable, and that there is an inverse relationship between the number of projects and the number of workers on the one hand, and unemployment rates on the one hand. other, and that any increase in the number of projects and the number of workers in them leads to a decrease in unemployment rates, and the joint integration model was used based on the method (ARDL), Where it was found that there is a relationship of joint integration between the pilot projects and the unemployment rate, as well as the existence of a long-term inverse relationship that moves from the number of workers in the pilot projects towards unemployment rates.

**Key words:** entrepreneurial projects, unemployment rates, Iraqi economy, ARDL model

#### First, the introduction:

The concept of leader ship Entrepreneurship At the beginning of the twentieth century with the concept of innovation, which spread widely in the business world, especially Japanese business, but in recent times, leadership has become a precedent in the field, either through boldness, courage, determination, achieving success, courage, bearing risks and achieving excellence.(Robert & Michael, 2002:10), And it refers the concept of leadership to a new process to create something of value and the allocation of time and effort and money required to establish the management of this project and assume the risks associated with the profits that increase the accumulation of wealth (Rachman et al, 2001:145), And is the pilot projects of the cornerstones of developing countries and an important factor of factors that address many of these problems

countries, particularly unemployment and dependency ratio problem and others, and given the circumstances that once the Iraq and in order to achieve economic development and address the problems faced can for pilot projects to play a role Great in order to achieve economic development and address most of the economic problems, especially that the economic system is oriented towards the application of the free economic system, which targets economic openness with the outside world, which will work to achieve greater benefits for these projects by transferring innovations to the inside and marketing their products abroad.

The Iraqi economy witnessed a slight development in the establishment and development of pioneering projects after 2004, but there are many obstacles that still prevent access to the level that makes these projects take their true position to work on achieving economic development. developing products and contributing to addressing the economic problems that the economy suffers from. Therefore, the impact of these projects and their real role in tackling the problem of unemployment should be considered. Therefore, the importance of this paper stems from the importance of the pilot projects and their economic role, as the pioneering projects are distinguished from others that they are projects targeting sustainable economic development through their use of means and methods that carry an innovation that differs radically from traditional projects. Which adopts traditional methods and random imitation and cloning of projects without scientific studies, as this paper started from the assumption that there is a significant economic, social and political impact of pilot projects on unemployment rates, crime level and achieving political stability.

#### **S**econd: the reference review:

Many studies dealt with the issue of the relationship between entrepreneurial projects and unemployment. These studies differed among themselves in terms of time and place, as well as the model used to measure that relationship. Among these studies is the study (Dvouletý, a 2017) in which he emphasized the verification of the dynamic relationship between unemployment and entrepreneurial projects in the Czech state, where a model was used (VAR) With impulse response hypotheses, and the study proved that there is an increase in the activity of entrepreneurial projects after two years of a shock in the unemployment rate, as confirmed by a study (da and Joao, 2021) On finding differences between the entrepreneurial projects established by unemployed individuals and the projects that established individuals working in Canada. The study showed that the unemployed are more than others in establishing these projects, indicating that they usually fail due to their small size, as well as the lack of subsidy provided for projects initiated by the unemployed. work which stimulates the re - allocation of resources, And finally the study found that the work paid more in response to the wages of the unemployed in their decision to establish the project, in return has

proved a study (Oyelola, at. el, 2014) That teach entrepreneurship port works well as one of the most important factors that help to solve the problem of unemployment among young people in Nigeria, where the study emphasized that the knowledge and skills development enhance entrepreneurship and that support skills through teaching in all education systems and to provide information and advice Training, guidance and easy access to finance, as well as providing the infrastructure that supports the start of pioneering projects and alleviating the problem of unemployment among young people by facilitating the way to the labor market. (Elimam, 2017) to the role of small entrepreneurial projects to alleviate unemployment in the Kingdom of Saudi Arabia, and the study concluded that there is a significant impact of entrepreneurial projects on the unemployment rate.

I submitted a study (Dvouletý ,b 2017) A question about the relationship between entrepreneurial projects and unemployment in a group (V4) (Czech Republic, Hungary, Poland and Slovakia), prove studies that there If is a direct relationship between entrepreneurial projects and unemployment rates during the period 1998-2015, between (Dvoulery at.el, 2018) In his study of young entrepreneurs from unemployment to self-employment, where the study noted that people who are excluded from work and included in the unemployed category often get rid of that by engaging in selfemployment, as this result was reached based on the survey of young people in 10 European countries, a study focused on (Nyamunda and Van Der. 2018) On the role of education transformation in making young entrepreneurs, this study discussed the complex relationship between self and actual entrepreneurship, and the study concluded that female participation in the following dimensions of entrepreneurship selfefficacy is statistically significant, except after attending the training program (SHAPE) The selfefficacy of male entrepreneurship has improved in their identification of job opportunities, and finally the study concluded that it is the training program (SHAPE) Males and females showed an equal tendency towards entrepreneurship selfefficacy (Soto-Simeone and Kautonen, 2021), In their study to senior post-unemployment entrepreneurship for individuals aged 50 years or more, as some governments have promoted selfemployment and reduced dependence on advertisements among the elderly who cannot find work. The study collected through 21 interviews with senior entrepreneurs in the Kingdom United receiving support from the organization dedicated to the adoption of activity older unemployed adventurers and the study found that levels of income that meet the basic needs of this class are not motivated to enter into this business, and is seeking Laura independence and self - fulfillment and the desire and a sense of activity for senior entrepreneurs who started Their actions under adverse conditions as this exploration has resonated widely with the European Commission (Promoting Active Aging Policy) and in conclusion that there are non-monetary objectives that must be included in any development of entrepreneurial self-interest.

# Third: The economic role of the entrepreneurial projects:

Entrepreneurial projects play a prominent role in the development of economic sectors, which makes them a tool that actively contributes to the process of achieving the set economic goals. This can be clarified through the following: Source: Anbar University Journal.

1. Effective contribution to achieving a real increase in economic growth and a rise in the GDP index by increasing the number of goods and services produced in addition to developing the quality and improvement of these goods and services (Al-Maghari and Naima, 2011:10)

2. Creating a job opportunity by absorbing part of the unemployed labor force to contribute to solving the problem of unemployment (Al-Mughri, and Naima, 2011:10)

3. Pilot projects working to achieve integration with other projects and each project will generate innovative projects and other innovative which leads to the integration of projects in general, which in turn will develop all projects in the economic (Ali, and Sayel, 2018: 183). 4. Improving the situation of the economy externally by increasing exports and achieving a surplus in the balance of payments (Ammar, 2010: 174).

5. Efficient use of economic resources by increasing the productivity of entrepreneurial projects, which leads to achieving an economic surplus (Khalil and Adel, 2011: 9).

6. Innovative entrepreneurial projects work to achieve economic diversification and structural change in economic sectors and achieve a broad production base for the country (Al-Asraj, 2007: 6).

7. Entrepreneurial projects help reduce the disparity in the distribution of projects between governorates and regions (Salman, 2009: 37).

8. Successful investment for local economic resources which makes them a way to support local products, which rely on local interventions also (Ali, and Sayel 0.2018: 183).

9. Pioneering projects contribute to developing talents and innovations and employing them in a way that ensures the success of workers' scientific and technical capabilities and practical experience for the benefit of their entrepreneurial projects (Al-Anbari, 2001: 6).

10. Kafua's use of a lot of idle inputs available to young savers who do not use the banking system but have a desire to invest it directly (Ali and Sayel, 2018: 184).

# Fourth: Analyzing the reality of the pilot projects in Iraq:

The entrepreneurial projects operating in Iraq witnessed a clear development after the abandonment of the socialist system and the shift towards a market economy. The number of pilot projects increased from (17,691) projects in 2004 to (26,992) projects in 2019 as shown in Table (1) despite the decrease The number of them in some years and their stopping the practice of their economic activities, which is due to the security conditions that the country lived in as well as the economic conditions. The years that Iraq lived and in which it suffered from the deterioration of the

security conditions, whether what happened in 2005 and what followed or what happened in 2013 and what Then, in addition to the years 2008 and 2009 and the solutions of the global financial crisis, a clear decrease in the number of

entrepreneurial projects operating in Iraq, which was reflected in the growth rate of projects operating in Iraq, as it recorded a negative growth rate for some years.

Table (1) The development of pilot projects and the number of workers in Iraq during the period
(2019-2004)

employee growth rate	Enterprise growth rate	Number of employees	number of projects	the years
		66006	17691	2004
-0.428	-0.425	37,776	10164	2005
0.256	0.148	47454	11672	2006
0.155	-0.703	54796	3463	2007
-0.239	0.993	41724	6902	2008
-0.313	0.498	28651	10340	2009
0.320	0.082	37821	11187	2010
2.908	3.241	147816	47440	2011
0.012	-0.075	149567	43887	2012
-0.413	-0.364	87797	27,920	2013
-0.213	-0.247	69083	21018	2014
-0.006	0.074	68648	22572	2015
0.229	0.158	84369	26145	2016
0.140	0.072	96165	28038	2017
-0.106	-0.075	85999	25945	2018
0.059	0.040	91083	26992	2019

Source: Prepared by the researcher based on the data of the Central Bureau of Statistics in the Ministry of Planning for the years.(2019-2004)



Figure (1) The evolution of the number of pilot projects and the number of workers in Iraq for the period 2004-2019

Source: From the researcher's work based on the data in Table.(1)

The development of the pilot projects operating in Iraq was accompanied by a clear development in the number of workers, who moved from unemployed people to people working in projects that provide goods and services. The reason is due to the relative stability that was achieved in that year, while the year 2009 recorded the lowest level of preparation of workers in pilot projects, which amounted to approximately (28,651) workers, which may be due to the impact of the global financial crisis that swept the world at that time

Fifth: Motives of interest in developing pilot projects in Iraq:

A motivated group led to the interest in the pilot projects in Iraq, which are summarized as follows:

1. Increasing rates of inflation, where the phenomenon of unemployment constitutes a social weight in addition to the economic performance. The Iraqi economy has suffered from an imbalance in the labor market resulting from the increase in the population corresponding to the decrease in the demand for the labor force (Ahmed, 2009: 8), where Figure (2) shows unemployment rates in Iraq (U) for 2003-2019 and its relationship to the number of pilot projects (NP) and the number of manpower (NF) where it is noted that there is a clear inverse relationship between them.



**Source :**Prepared by the researcher based on the data of the Central Statistical Organization, Ministry of Planning, for the years (2019-2004)

#### appearance) 2The relationship between entrepreneurial projects and the unemployment rate in Iraq for the period (2019-2004)

2. The increase in the number of immigrant citizens and the exposure of Iraq to the migration phenomenon of and forced displacement, where Iraq has witnessed since the eighties of the last century this phenomenon for political reasons as well as economic migration that was the result of economic conditions, which made matters worse and led to an increase in this phenomenon, which is what resulted from the American occupation of Iraq and the deterioration Security Situation Confirmation of The International Migration Agency estimates in January 2007 that the number of migrants during the past five years has reached (2.2) Million Iragis inside Iraq (2.5) One million Iraqis outside Iraq because the total number is up to (4.75) million Iraqis, which must be addressed and found solutions to this dangerous phenomenon. Pilot projects may help reduce this phenomenon and limit its repercussions (Sharif, 2015: 20).

3. Economic policies in Iraq, targeting the transition to a market economy has different economic order in Iraq after 2003 to move from a planned economy center and free - based economy on the supply and demand mechanisms and the existence of a sophisticated private sector that meets the needs of the market, which the disease to increase interest in entrepreneurship and considering it a primary source for the development of the private sector (Ali and Sayel, 2018: 187).

4. The flight of capital abroad to the extent that the Iraqi economy witnessed after 2003 the flight of many capital abroad in search of investment opportunities as a result of the lack of security, political and economic stability, which led to the interest of the competent authorities in sports projects and the provision of facilities, especially financing ones, especially the Tamkeen initiative that he launched The Central Bank of Iraq and other initiatives aimed at supporting and enabling entrepreneurial projects to be an element of attracting Iraqi capital working abroad (Braihi, 2011: 42).

### Sixth: Obstacles to Entrepreneurial Projects in Iraq:

1. The financial obstacles facing these projects, as most of them suffer from this problem, as studies indicate that the financing of many pilot projects is self-fulfilling, despite some initiatives to address these obstacles, indicating that they were shy in front of the large numbers of these projects. On the other hand, there was a clear deterioration in the volume of credit granted to such projects. These projects are by banks, as the loans granted by commercial banks, including Rafidain Bank, amounted to 30% of the total farewells, in addition to the high cost of these loans, and the placement of strict guarantees by the banking system, especially the real estate guarantee (Awwad and Sundus, 2012: 148).

2. The instability of the exchange rate, which prompted banks to deal in short-term loans, in addition to the shocks that occurred in the exchange rate during the past period or period and the devaluation of the currency (Arab Labor Conference, 2011: 43-46).

3. The existence of regulatory and legislative obstacles, whereby its policies in the pilot projects entailed more procedures for establishing the project and the length of time required to obtain licenses and other procedures, which leads to restricting and limiting the possibility of development and maximizing the role of these projects. The Arab Labor Conference reports indicated that projects in Iraq need (150) A day to start its work compared to 35, twenty-four, and seventeen days in Kuwait, Algeria and Syria, respectively, in addition to the weak legislation related to entrepreneurial projects and the multiplicity of supervisory bodies without coordination between them (Arab Labor Conference, 2011: 43-46).

4. Weak support for pioneering projects, as the entrepreneurial projects suffer from the lack of government support for them. The change in the economic system after 2003 had a clear impact on these projects, the government's legacy, all projects of the private sector, which was entrusted with the task of economic development (Ali and Ayser, 2013: 23).

5. The Iraqi economy was exposed to the problem of economic closure by most of the neighboring countries, which led to the closure of most of the existing projects, as well as considering the problem of economic closure as one of the obstacles facing any sports project in the future (Ali, and Isser, 2013: 23).

6. The deterioration and obsolescence of infrastructure and basic services for the private sector, especially the weak supply of electric power, which led to the halt due to the high production costs, which constituted a major obstacle to new pioneering projects (Manhal, 2006: 199).

7. The absence of a stable political system the security situation, the market has increased the lack of information on PAL projects and the lack of a central point of documents as well as information about the decline in banking culture for most of the owners of pilot projects and the different information in the credit market with a decline in the number of commercial banks that promote banking services, which the disease Due to the decrease in dealers in relation to the population (Salibi, 2012: 8).

#### Seventh: Methodology

Co-integration models will be based on the independent variables represented in the number of pilot projects, the number of employees in them, on the one hand, and the dependent variable, represented in the unemployment rate in Iraq for the period 2004 - 2019 using quarterly data, Therefore, stationary tests should be conducted, which will rely on the Duke-Fuller test and the Phillips-Peron test to find out the integration of time series and determine the appropriate model for them, as well as model integrity tests from econometrics problems.

#### 1- Stationary tests:

The data sedation test is one of the necessary tests that should be conducted for any study that uses econometrics models, and many unit root tests can be applied in order to determine the sedation degree of the time series used in the analysis .Fuller general 1976It is the most widely used because of its clarity, But subsequently it developed to address the problem of self - limiting random link to become a test Dickey- Fuller augment (DFA) (Alimi, 2014:107):

$$\Delta X_t = p x_{t-1} - \sum \phi_j \Delta x_{t-j+1} + \varepsilon_t \dots (1)$$

$$\Delta x_{t} = px_{t-1} - \sum \phi_{j} \Delta x_{t-j+1} + C$$
  
+  $\varepsilon_{t} \dots (2)$   
$$\Delta x_{t} = px_{t-1} - \sum \phi_{j} \Delta x_{t-j+1} + C + b_{t}$$
  
+  $\varepsilon_{t} \dots (3)$ 

P :degree of delay,  $p = \emptyset - 1$ 

As well as a test Peroon-Phillips (PP) (Al-Qadir ,210:2005):

$$\Delta Y_t = a_0 + a_1 y_{t-1} + a_2 t + e_t \quad \dots \quad (4)$$

After the extended Dickey-Fuller test was performed (ADF) and the Phelps-Beron test (PP) And to find out if the time series of the variables (the number of workers in the pilot projects (NF), the number of pilot projects (NP) and the unemployment rate (U)) Static or no results can be seen in Tables (2) and (3).

UNIT ROOT TEST TABLE (ADF) At Level					
		NF	NP	U	
With Constant	t- Statistic	- 2.7212	- 2.2586	-2.3953	
	Prob.	0.0762	0.1885	0.1478	
		*	nO	nO	
With Constant & Trend	t- Statistic	- 3.6444	- 2.4982	-2.2996	
	Prob.	0.0342	0.328	0.4269	
		**	n0	nO	
Without Constant & Trend	t- Statistic	- 0.8408	- 0.8706	-0.0558	
	Prob.	0.3477	0.3349	0.6597	
		n0	n0	nO	
At First Difference		L	L		
		d(NF)	d(NP)	d(U)	
With Constant	t- Statistic	- 3.6466	- 4.0739	-3.221	
	Prob.	0.0074	0.0021	0.0241	
		***	***	**	
With Constant & Trend	t- Statistic	- 3.6057	- 4.0342	-2.9313	
	Prob.	0.0374	0.0124	0.1612	
		**	**	nO	
Without Constant & Trend	t- Statistic	- 3.6707	-4.104	-3.4458	

Table (2) Test Results (ADF)

	Prob.	0.0004	0.0001	0.0009
		***	***	***
Notes: (*) Significant Significant at the 1%. a	at the 10% and (no) N	6; (**) Si ot Signifi	gnificant cant	at the 5%; (***)

The results presented in Table (2) and (3) confirm that the time series have differed in their degree of stability, as part of them have stabilized at the original level of the data .I(0) While the other part settled after taking the first difference I(0) These results were identical in the three tests, whether they were in the absence of a

categorical and directional or with the presence of a categorical or their presence together, which necessitates that we use the model (ARDL) as one of the modern models that are used in the analysis of time series and to show the integrative relationships and short- and long-term equilibriums.

UNIT ROOT TEST TABLE (PP) At Level					
		NF	NP	U	
	t-	-	-		
With Constant	Statistic	2.0744	1.7993	-6.5345	
	Prob.	0.2555	0.3776	0	
		n0	n0	***	
With Constant &	t-		-		
Trend	Statistic	-2.489	2.2796	-5.3483	
	Prob.	0.3325	0.4385	0.0002	
		n0	n0	***	
Without Constant &	t-	-	-		
Trend	Statistic	0.8327	0.7913	-2.7048	
	Prob.	0.3513	0.3694	0.0076	
		n0	n0	***	
At First Difference					
		d(NF)	d(NP)	d(U)	
	t-	-	-		
With Constant	Statistic	3.7158	4.0938	-4.6433	
	Prob.	0.0061	0.002	0.0003	

Table (3) Test Results (PP)

		***	***	***
With Constant &	t-	-	-	
Trend	Statistic	3.6762	4.0549	-4.794
	Prob.	0.0315	0.0117	0.0013
		**	**	***
Without Constant &	t-	-	-	
Trend	Statistic	3.7457	4.1248	-4.6651
	Prob.	0.0003	0.0001	0
		***	***	***

#### 2- Co-integration Test:

The time series is a series of statistical data related to time, and the series is the values of a specific phenomenon that changes over time, and the final purpose of it is to predict the future by using data related to the past, and to know the number of repeated cycles in the data as a traffic jam occurs every five hours, in order to predict these cycles, it is necessary to analyze the components and components of this time series (Alimi, 2014: 105).

be seen Pesaran The boundary test method can be applied regardless of the properties of the time series, whether it is static of degree (Zero) Or static about the first difference or a mixture of the two, as the previous tests required that the time series be static of the same degree (Al-Baldawi and Al-Hani ,2017: 1746), But there is only one condition for this test is that the time series is not stationary at the second difference I (2), as well as another advantage of this approach is that the model takes a sufficient number of slowdowns to capture the data generation process within the general modeling framework, and the dynamic error correction model can (ECM) to be derived (ARDL) Through а from simple linear transformation that integrates (ECM) Shortrun dynamics with long-run equilibrium without long-term information loss .It is also said that using the form (ARDL) avoids problems caused non-stationary bv time series data (Al -Qadir, 12:2005), And the general form of the model (ARDL) be as follows:

#### $Y_{1} = \mathcal{E} + \mathcal{E}_{0x1} + \mathcal{E}_{1xt-1} + \dots + \mathcal{E}_{qx1-q}$ $+ \mathscr{O}_{1}y_{t-1} + \dots + \mathscr{O}_{p}y_{t-p}$ $+ V_{t} \dots \dots (5)$

as it represents  $(x_t)$  Independent variable slowdown intervals, and  $(y_t)$  The slowdown periods of the dependent variable, and Figure (2) indicates the results of the test (AIC) which shows the best estimate of the model by the optimal slowdowns.



#### Figure (3) The results of the optimum slow intervals test (AIC)

indicator (AIC) which shows that the best estimate is the slowest estimate (2,1,1).

Figure (3) shows the results of estimating the optimal slowdown periods according to the

ARDL Long Ru								
Dependent Variable: D(U)								
Selected Model:	Selected Model: ARDL(2, 1, 1)							
Case 2: Restricte	ed Constant an	d No Trend						
Sample: 2004Q1	2019Q4							
Included observa								
Conditional Erro								
Variable	Coefficient	t-Statistic	Prob.					
С	1.91843	0.588004	3.262617	0.0019				
U(-1)*	-4.57399	0						
NF(-1)	0.4094							
NP(-1)	NP(-1) -2.14E-05 2.47E-05 -0.86849							
D(U(-1))	0.285861	0.089602	3.190345	0.0023				

#### Table (4) Co-integration test results

D(NF)	-7.41E-05	2.00E-05	-3.70614	0.0005
D(NP)	0.000228	5.96E-05	3.819639	0.0003
* p-value incom	patible with t-	Bounds distr	ibution.	
Levels Equation				
Case 2: Restricte	ed Constant ar	nd No Trend		
Variable	Coefficient	std. Error	t-Statistic	Prob.
NF	4.70E-05	5.96E-05	0.787866	0.4342
NP	-0.00014	0.000166	-0.83603	0.4068
С	12.45536	1.677375	7.425507	0
EC = U - (0.000)	0*NF -0.0001	*NP + 12.45	54)	
F-Bounds Test		Null Hy relationship	pothesis:	No levels
Test Statistic	Value	Signify.	I(0)	I(1)
			Asymptotic	:: n=1000
F-statistic	6.841295	10%	2.63	3.35
k	2	5%	3.1	3.87
		2.50%	3.55	4.38
		1%	4.13	5
Actual Sample Size	62		Finite Sample: n=65	
		10%	2.74	3.455
		5%	3.285	4.07
		1%	4.538	5.475
			Finite Samp	ole: n=60
		10%	2.738	3.465
		5%	3.288	4.07
		1%	4.558	5.59

It is evident from the results contained in Table (4) that there is a co-integration relationship between the entrepreneurial projects and the unemployment rate through the value of (F-Bounds Test) which amounted to (6.841295) which is greater than the lower and higher critical values, in addition to the existence of an inverse relationship that stems from the number of workers in the pilot projects towards unemployment rates, as the increase in the number of workers in the pilot projects leads to a decrease in the unemployment rate. In order to know the validity of the model used and its freedom from econometrics problems, several tests will be adopted for its approval in predicting the relationship between the variables.

A **-Test Autocorrelation:** Figure shows (4) The model free of problem Autocorrelation Where it turns out that the residuals are stable within the lower limits and upper limits.

#### 3- Form Validity Tests:

Included observation Autocorrelation	s: 62 after adjustmer Partial Correlation	nts	AC	PAC	Q-Stat	Prob*
I 🔲 I	🔲	1	-0.094	-0.094	0.5740	0.449
I 🔲 I	I 🛛 I	2	-0.086	-0.096	1.0613	0.588
1 🔲 1	I 🔲 I	3	-0.111	-0.131	1.8928	0.595
· 🗖		4	0.335	0.311	9.5586	0.049
I 🔲 I	I 🛛 I	5	-0.109	-0.081	10.380	0.065
I 🔲 I	I I I I	6	-0.105	-0.087	11.161	0.084
I 🔲 I	וםי	7	-0.086	-0.050	11.692	0.111
I 🛄 I	I    I	8	0.210	0.079	14.927	0.061
1 🛛 1		9	-0.057	-0.010	15.173	0.086
I 🔲 I	ום ו	10	-0.091	-0.049	15.807	0.105
1 🗐 1	[]	11	-0.083	-0.054	16.339	0.129
ı 🔲 i	I    I	12	0.186	0.073	19.083	0.087
i 🔲 i	[]	13	-0.070	-0.050	19.477	0.109
I 🔲 I		14	-0.072	-0.028	19.904	0.133
1 🔲 1	I I I	15	-0.057	-0.015	20.179	0.165
i 🗖 i	[]	16	0.096	-0.037	20.975	0.179
I 🔲 I	I <b> </b> I	17	-0.053	-0.026	21.225	0.216
1 🛛 1		18	-0.050	-0.016	21.448	0.257
I 🛛 I		19	-0.035	-0.015	21.564	0.307
i 🗖 i	I    I	20	0.136	0.067	23.301	0.274
1 🔲 1		21	-0.048	-0.027	23.525	0.317
I 🚺 I		22	-0.051	-0.026	23.782	0.359
1 🔲 1	וםי	23	-0.059	-0.042	24.130	0.397
I 🔲 I		24	0.100	-0.004	25.173	0.396
I 🚺 I		25	-0.056	-0.029	25.508	0.434
I 🔲 I	[]	26	-0.057	-0.039	25.871	0.470
I 🔲 I		27	-0.058	-0.042	26.249	0.505
i 🗐 i	I    I	28	0.105	0.021	27.537	0.489

\*Probabilities may not be valid for this equation specification.

#### Figure (4) The results of the normal distribution of the residuals of the estimated model

Source: From the researcher's work based on the results of the analysis using a program EViews.12.

estimated model, as shown in Figure (5) which shows the normal distribution of the residuals of the estimated model.

**B** - Test Jarque-Bera: This test indicates that the random errors are normally distributed in the



Figure (5) test results Autocorrelation

**C- Boundary independence test (no sequential autocorrelation):** In order to test the non-correlation hypothesis of errors, a test is used: (Breusch-Godfrey Serial Correlation LM Test) For autocorrelation, and after

conducting and applying this test, it was found that the model does not suffer from a problem of autocorrelation between variables and the independence of limits, and this is what is shown by the value of (2.828071) which is greater than (1.266544), The results proved the safety and quality of the used model of econometrics problems, and this is shown in Table (5)

Table (	test results Breusch-Godfrey Serial Correlation LM Test border indepen	dence
	Prough Godfroy Social Correlation I M Tost:	

Breusch-Godfrey Serial Correlation LM Test:						
Null hypothesis: No serial correlation at up to 2 lags						
F-statistic         1.266544         Prob. F(2,53)         0.2902						
Obs*R-squared2.828071Prob. Chi- Square(2)0.2432						

Source: From the researcher's work based on the results of the analysis using a program EViews.12.

**D** - Stability test variation limits of error (ARCH): There are a number of tests used to detect whether or not the residual is homogeneous, including the test (ARCH) As the test results shown in Table (6) were that this model used does not suffer from the problem of homogeneity of variance, as the value of (F) calculated extreme (0.527438) which is less than its table value

(0.540486) This means that the model is not significant and that the model is sound from this problem.

Heteroskedasticity Test: ARCH					
F-statistic         0.527438         Prob. F(1,59)         0.4706					
Obs*R-squared	0.540486	Prob. Chi- Square(1)	0.4622		

 Table (6) results of the test results for the condition of stability of the variance of the error limits (homogeneity of variance)

Source: From the researcher's work based on the results of the analysis using a program EViews.12.

#### Ninth: Conclusion:

The results showed that the time series data that was used in this paper, which expressed the pilot projects with two variables (the number of projects and the number of employees) and the variable of the unemployment rate in Iraq for the period 2004-2019 are stable at different levels, which requires the use of a model (ARDL), On the other hand showed the results of the model used that there is a joint between the pilot projects the unemployment rate as well as and the integration of a relationship for a long - term inverse relationship is moving from the number of employees in the pilot projects towards unemployment rates and there is no short relationship means term, which that entrepreneurship is still its role is very simple in The Iraqi economy, especially dealing with the problem of unemployment, and this result applies with most of the previous studies that dealt with this topic, especially the study of (Dvouletý, a 2017) and (Oyelola, at. el, 2014) and (Elimam, 2017) and (Dvouletý, b 2017) Finally, the safety tests of the used model showed that it is free from economic problems.

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