

Measuring the impact of commercial banks on economic development for the duration (2004-2019)

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Abstract

Commercial banks are of great importance in an economy where they contribute effectively to its further growth, are a fundamental pillar of the economy as well as its driving source, and the importance of commercial banks is linked to the rate of increase in the development process through commercial banks.

Introduction

Commercial banks are one of the fundamental pillars of a country's economic and financial development and reflect its economic and financial systems as the basis and centerpiece of the economy, States do not progress or develop without an effective and healthy banking system because of its potential through its activities, Since the process of building the economy of any country, whatever it may be, banks occupy a special part of it, According to above , the research structure consists of the following four axes:

1. methodology of research
2. the theoretical aspect
3. Standard Practical Aspect
4. Conclusions and Recommendations

Methodology Of Research

1. Research Problem: - The abnormal conditions that Iraq has experienced have led to many constraints that have affected the role of commercial banks in economic development.
2. Research hypothesis:- Commercial banks play an important role in driving economic development in the Iraqi economy.
3. methodology of research:- The study was based on the descriptive and standard curriculum
4. search limits :- The temporal boundary of 2004-2019, and the spatial boundary of the research sample of state and private commercial banks in Iraq.

The Theoretical Aspect

- **firstly** :- Concept of Commercial banks . Commercial banks "are those that normally accept deposits paid on demand or for limited periods and conduct and service internal and external financing in order to achieve the objectives of the development plan, State policy and national

economic support, The development of savings and financial investment at home and abroad, including contributions to the creation of enterprises and required banking, commercial and financial operations, shall be undertaken in accordance with the conditions established by the Central Bank. "

- **Secondary:-** Concept of economic development . Definition of development as "representing the structural evolution or change of society in its economic, social, intellectual and organizational dimensions in order to provide a decent life for all members of society."

Standard aspect

The concept and definition of econometrics. The literal interpretation of the meaning of econometrics is “economic measurement” And although measurement is the main element of econometrics, the widespread econometrics make us know "econometrics "It's the result of a certain empirical view of the role of economics to include an application of mathematical statistics and economic data that would lead to empirical support for models shown using mathematical economics and obtain numerical results.

- **Firstly :-** The standard aspect of studying the impact of loans on (Gross Domestic Product (GDP)).

Table (11) is the descriptive statistic of the study variables for banks of the sample (loans and Gross Domestic Product (GDP)), the sample size (n = 16).

Table (11) Descriptive Statistics of Study Sample Bank Variables.

Descriptive Statistics		
	Mean	Standard Deviation
Gross Domestic Product	179859904.3688	74771270.59548
Rafidain Bank Loans	5686314878.3750	5654594094.99909
Rasheed Bank Loans	4805020513.2438	13664669591.39953
Trade Bank Of Iraq Loans	2066689688.2875	1904265223.44124
Khaleeji Commercial Bank Loans	70674352.7500	91418647.08724
Iraqi Investment Bank Loans	72767928.3125	46503578.08413
Middle East Bank Loans	61765714.1875	42943995.59422

and through the results of table (12), which shows the correlation factor between the dependent variable (Gross Domestic Product (GDP)) and the independent variable (loans) It was noted that the relationship of loans to GDP was strong and for all the banks under study, and the higher the volume of loans, the higher the GDP, As shown in the table below, this is identical from economic theory, and we note that, in terms of loans granted, the most impact on the value of Gross Domestic Product (GDP) was on the “Iraqi Investment Bank” at an impact value (0.837), while the “Rashid Bank” at the last degree came with an impact value (0.104).

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Table (12) represents Pearson's correlation factor between variables of capital and Gross Domestic Product (GDP).

	Gross Domestic Product	Rafidain Bank Loans	Rasheed Bank Loans	Trade Bank Of Iraq Loans	Khaleeji Commercial Bank Loans	Iraqi Investment Bank Loans	Middle East Bank Loans
Gross Domestic Product	1.000	0.718	0.104	0.468	0.472	0.837	0.777
Rafidain Bank Loans	0.718	1.000	0.368	0.483	0.585	0.703	0.496
Rasheed Bank Loans	0.104	0.368	1.000	0.077	0.095	0.092	0.157
Trade Bank Of Iraq Loans	0.468	0.483	0.077	1.000	0.850	0.309	0.291
Khaleeji Commercial Bank Loans	0.472	0.585	0.095	0.850	1.000	0.411	0.174
Iraqi Investment Bank Loans	0.837	0.703	0.092	0.309	0.411	1.000	0.791
Middle East Bank Loans	0.777	0.496	0.157	0.291	0.174	0.791	1.000

Table (13) shows a test of correlation coefficients.

	Gross Domestic Product	Rafidain Bank Loans	Rasheed Bank Loans	Trade Bank Of Iraq Loans	Khaleeji Commercial Bank	Iraqi Investment Bank Loans	Middle East Bank Loans
Gross Domestic Product	.	0.001	0.351	0.034	0.032	0.000	0.000
Rafidain Bank Loans	0.001	.	0.080	0.029	0.009	0.001	0.025
Rasheed Bank Loans	0.351	0.080	.	0.388	0.363	0.367	0.280
Trade Bank Of Iraq Loans	0.034	0.029	0.388	.	0.000	0.122	0.137
Khaleeji Commercial Bank Loans	0.032	0.009	0.363	0.000	.	0.057	0.260
Iraqi Investment Bank Loans	0.000	0.001	0.367	0.122	0.057	.	0.000
Middle East Bank Loans	0.000	0.025	0.280	0.137	0.260	0.000	.

From the results of the above analysis containing tests of correlation coefficients between the study variables and from the (P-value) values of the test we note that all values are smaller than the semantic level, which means the morale of the relationship between Gross Domestic Product (GDP) and loans to all banks under study.

Table (14) represents the identification factor for the banking sector.

CORRELATION COEFFICIENT	THE COEFFICIENT OF DETERMINATION	CORRECTED DETERMINATION COEFFICIENT	ESTIMATED STANDARD ERROR	Durbin-Watson
.897^{a0}	.8050	.6750	42636219.65948	1.110

The identification factor (r-square) is clearly (0.805) and represents the ratio of interpretation of the phenomenon under study by the standard model that represents the role of banks' loans (sample study) on domestic output.

Table (15) represents the estimate of the standard model under study.

	B	STD-ERROR	T	P-VALUE
(Constant)	74836073.011		3.192	0.011
Rafidain Bank Loans	0.004	0.284	9.078	0.025
Rasheed Bank Loans	-0.001	-0.100	-8.583	0.035
Trade Bank Of Iraq Loans	0.004	0.102	10.294	0.026
Khaleeji Commercial Bank Loans	0.032	0.040	11.105	0.019
Iraqi Investment Bank Loans	0.483	0.301	9.812	0.049
Middle East Bank Loans	0.656	0.377	11.196	0.029

$$\hat{Y}_1 = 74836073.011 + 0.004X_{i1} + -0.001X_{i2} + 0.004X_{i3} + 0.032X_{i4} + 0.483X_{i5} + 0.656X_{i6}$$

from the results of the assessment described above is that each of the six banks under consideration has a positive impact on domestic output in varying proportions, by testing (t) all the parameters of the above model, it is clear that (p-value) the values of loans and Gross Domestic Product are below an indicative level (0.05 =), that is, there is a moral impact on Gross Domestic Product for the variables of loans for each of the above banks.

Table (16) represent Contrast analysis (ANOVA model test).

SOURCES OF DIFFERENCE	SUM SQUARE	DF	MEAN SQUARE	F	P-VALUE
REGRESSION	67500518555280896	6	11250086425880150	3.975	.032^{b0}

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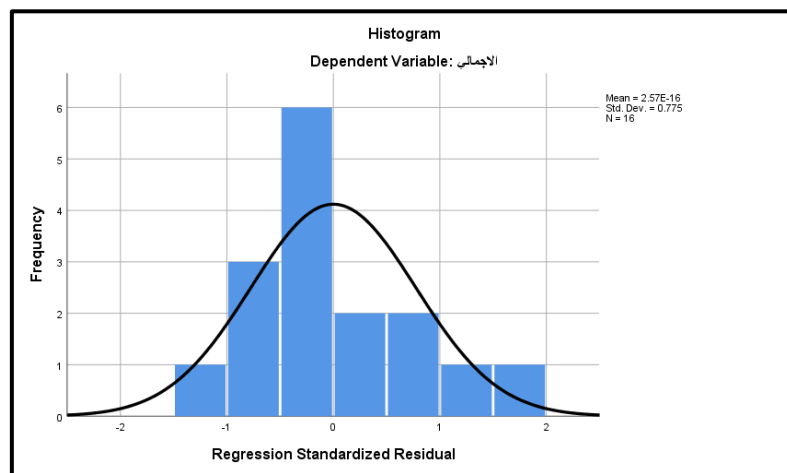
ERROR	16360625041665 860	9	1817847226851762. 200		
TOTAL	83861143596946 752	1 5			

We note from the (16) table that the (F) value calculated for the regression model test is (3.975) with a probability value (p-value = 0. 032 b) that is less than the moral level (0.05 =) of the standard model.

Table (17) represents the descriptive statistics of errors

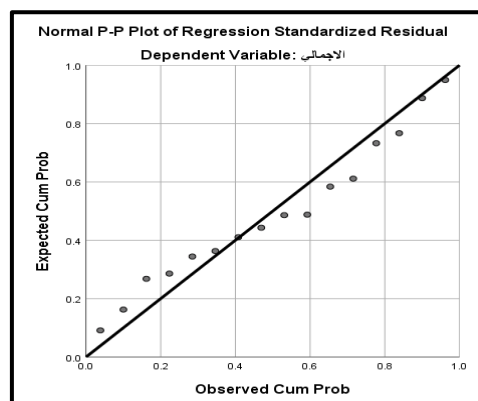
Predicted Value	Min	Max	Mean	Standard Deviation
	85804368	290320928	179859904.368 7	67082296.99669
Residual	-56874040	69831632	.00000	33025873.73728
Std. Predicted Value	-1.402	1.647	.000	1.000
Std. Residual	-1.334	1.638	.000	.775

figure (7) represents the normal distribution of standard model errors.



Source/ researcher , based on spss25.

figure (8) illustrates the linear decline and the spread of the values of the study variable (loans).



Source/ Researcher, based on spss25.

From the above figure it is clear that there are no anomalous or extreme values for the data of the variable of loans and Gross Domestic Product.

Secondary: - The standard aspect of studying the impact of loans on inflation.

Table (18) is the descriptive statistic of the study variables for banks of the sample (loans and inflation), the sample size (n = 16).

Table (18) is the descriptive statistic of the study variables for banks of the sample

Descriptive Statistics		
	Mean	Standard Deviation
Inflation	11.9437	16.11339
Rafidain Bank Loans	5686314878.3750	5654594094.99909
Rasheed Bank Loans	4805020513.2438	13664669591.39953
Trade Bank Of Iraq Loans	2066689688.2875	1904265223.44124
Khaleeji Commercial Bank Loans	70674352.7500	91418647.08724
Iraqi Investment Bank Loans	72767928.3125	46503578.08413
Middle East Bank Loans	61765714.1875	42943995.59422

The results of table (19) show the correlation factor between the dependent variable (inflation) and the independent variables (loans) It has been noted that the relationship of loans to inflation is strong and for all the banks under study, where the higher the loans, the higher the rate of inflation, and as shown in the table below, this corresponds to economic theory.

Table (19) represents Pearson's correlation factor between the variables of loans and inflation.

	Inflation	Rafidain Bank Loans	Rasheed Bank Loans	Trade Bank Of Iraq Loans	Khaleeji Commercial Bank Loans	Iraqi Investment Bank Loans	Middle East Bank Loans
Inflation	1.000	- 0.612	- 0.233	- 0.534	- 0.393	- 0.585	- 0.699
Rafidain Bank Loans	- 0.612	1.000	0.368	0.483	0.585	0.703	0.496
Rasheed Bank Loans	- 0.233	0.368	1.000	0.077	0.095	0.092	0.157
Trade Bank Of Iraq Loans	- 0.534	0.483	0.077	1.000	0.850	0.309	0.291

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Khaleeji Commercial Bank Loans	- 0.393	0.585	0.095	0.850	1.000	0.411	0.174
Iraqi Investment Bank Loans	- 0.585	0.703	0.092	0.309	0.411	1.000	0.791
Middle East Bank Loans	- 0.699	0.496	0.157	0.291	0.174	0.791	1.000

Table (20) shows a test of correlation coefficients

	Inflation	Rafidain Bank Loans	Rasheed Bank Loans	Trade Bank Of Iraq Loans	Khaleeji Commercial Bank Loans	Iraqi Investment Bank Loans	Middle East Bank Loans
Inflation	.	0.006	0.193	0.017	0.066	0.009	0.001
Rafidain Bank Loans	0.006	.	0.080	0.029	0.009	0.001	0.025
Rasheed Bank Loans	0.193	0.080	.	0.388	0.363	0.367	0.280
Trade Bank Of Iraq Loans	0.017	0.029	0.388	.	0.000	0.122	0.137
Khaleeji Commercial Bank Loans	0.066	0.009	0.363	0.000	.	0.057	0.260
Iraqi Investment Bank Loans	0.009	0.001	0.367	0.122	0.057	.	0.000
Middle East Bank Loans	0.001	0.025	0.280	0.137	0.260	0.000	.

From the results of the above analysis containing tests of correlation coefficients between the study variables and from the (P-value) values of the test we note that all values are smaller than the semantic level, meaning the morale of the relationship between the loan variable and the inflation under study.

Table (21) represents the identification factor for the banking sector

CORRELATION COEFFICIENT	THE COEFFICIENT OF DETERMINATION	CORRECTED DETERMINATION COEFFICIENT	ESTIMATED STANDARD ERROR	Durbin-Watson
.814^{a0}	.6630	.4390	12.06877	1.573

It is clear from table 21 that the identification factor (r-square) is equal to 0.66, i.e., an explanation of the phenomenon under study (loans and their relation to inflation), which is what the stylistic variables of the model have explained.

Table 22 represents the estimate of the standard model under study

	B	STD-ERROR	T	P-VALUE
(Constant)	31.739		4.783	0.001
Rafidain Bank Loans	-1.003E-9	-0.352	-7.016	0.026
Rasheed Bank Loans	-2.221E-11	-0.019	-8.084	0.032
Trade Bank Of Iraq Loans	-3.724E-9	-0.440	-6.966	0.009
Khaleeji Commercial Bank Loans	4.013E-8	0.228	10.460	0.017
Iraqi Investment Bank Loans	4.547E-8	0.131	9.270	0.003
Middle East Bank Loans	-2.013E-7	-0.537	-11.296	0.024

$$\hat{Y}_i = 31.739 + -1.003E - 9X_{i1} + -2.221E - 11X_{i2} + -3.724E - 9X_{i3} + 4.013E - 8X_{i4} + 4.547E - 8X_{i5} + -2.013E - 7X_{i6}$$

One of the results of the assessment described above is that the impact of each of the six banks under consideration has a negative impact on inflation in varying proportions and through a test (t) of all features of the higher model It is clear that (p-value) inflation loan values are below an indicative level (0.05 =), i.e., there is a moral impact on inflation of the variables of loans to each of the above banks.

Table 23 represents contrast analysis (ANOVA model test)

SOURCES OF DIFFERENCE	SUM SQUARE	DF	MEAN SQUARE	F	P-VALUE
REGRESSION	2583.722	6	430.620	2.956	.007^b0
ERROR	1310.898	9	145.655		
TOTAL	3894.619	15			

We note from table (23) that the F value calculated for the regression test is (2.956) with a probability value (p-value =0.007^b), less than the moral level (0.05 =) of the morale of the standard model.

Table (24) represents descriptive statistics of errors or remainders

Predicted Value	Min	Max	Mean	Standard Deviation
	-8.2728	31.9510	11.9437	13.12433
Residual	-16.49596	21.04897	.00000	9.34843
Std. Predicted Value	-1.540	1.524	.000	1.000
Std. Residual	-1.367	1.744	.000	.775

Figure (9) represents the normal distribution of standard model errors.

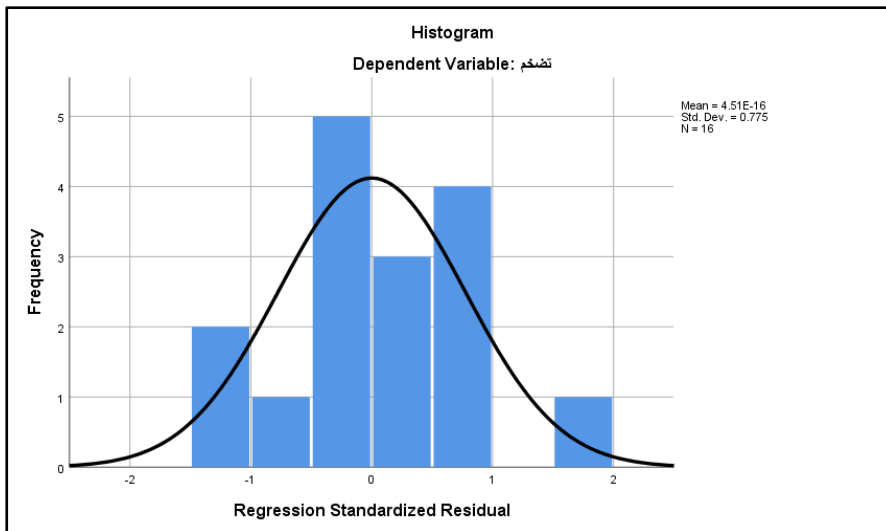
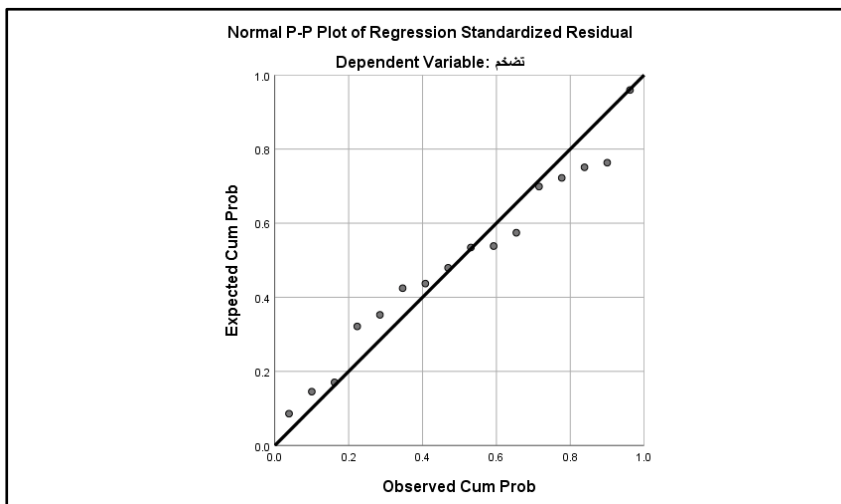


Figure (10) shows linear decline and prevalence of variable study values (inflation)



From the above figure it is clear that there are no anomalous or extreme values for the data of the inflation variable.

- **Thirdly:-** The impact of the loans granted by the sample bank on unemployment.

Table (25) Descriptive Statistics of Sample Banking Variables.

Descriptive Statistics		
	Mean	Standard Deviation
Unemployment	15.8875	4.54927
Rafidain Bank Loans	5686314878.3750	5654594094.99909
Rasheed Bank Loans	4805020513.2438	13664669591.39953
Trade Bank Of Iraq Loans	2066689688.2875	1904265223.44124

Khaleeji Commercial Bank Loans	70674352.7500	91418647.08724
Iraqi Investment Bank Loans	72767928.3125	46503578.08413
Middle East Bank Loans	61765714.1875	42943995.59422

While, through the results of table 26 showing the correlation factor between dependent variable (unemployment) and independent variables (loans), it was noted that the relationship of loans to unemployment was strong and that all banks under study had a strong inverse relationship, as loans increase, this is offset by a significant reduction in unemployment rates, and as shown in the table below, this is identical to economic theory.

Table (26) represents Pearson's correlation factor between the variables of loans and unemployment.

	Unemployment	Rafidain Bank Loans	Rasheed Bank Loans	Trade Bank Of Iraq Loans	Khaleeji Commercial Bank Loans	Iraqi Investment Bank Loans	Middle East Bank Loans
Unemployment	1.000	-.062	-.171	.120	.262	-.204	-.346
Rafidain Bank Loans	-.062	1.000	.368	.483	.585	.703	.496
Rasheed Bank Loans	-.171	.368	1.000	.077	.095	.092	.157
Trade Bank Of Iraq Loans	.120	.483	.077	1.000	.850	.309	.291
Khaleeji Commercial Bank Loans	.262	.585	.095	.850	1.000	.411	.174
Iraqi Investment Bank Loans	-.204	.703	.092	.309	.411	1.000	.791
Middle East Bank Loans	-.346	.496	.157	.291	.174	.791	1.000

Table (27) shows a test of correlation coefficients

	Unemployment	Rafidain Bank Loans	Rasheed Bank Loans	Trade Bank Of Iraq Loans	Khaleeji Commercial Bank Loans	Iraqi Investment Bank Loans	Middle East Bank Loans
Unemployment	.	0.410	0.263	0.329	0.163	0.224	0.095
Rafidain Bank Loans	0.410	.	0.080	0.029	0.009	0.001	0.025

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Rasheed Bank Loans	0.263	.080	.	0.388	0.363	0.367	0.280
Trade Bank Of Iraq Loans	0.329	.029	0.388	.	0.000	0.122	0.137
Khaleeji Commercial Bank Loans	0.163	.009	0.363	0.000	.	0.057	0.260
Iraqi Investment Bank Loans	0.224	.001	0.367	0.122	0.057	.	0.000
Middle East Bank Loans	0.095	.025	0.280	0.137	0.260	0.000	.

From the results of the above analysis containing the tests of the correlation coefficients between the variables studied and from the (P-value) values of the test we note that all values are smaller than the semantic level, meaning the morale of the relationship between the variables under study.

Table (28) represents the identification factor for the banking sector

CORRELATION COEFFICIENT	THE COEFFICIENT OF DETERMINATION	CORRECTED DETERMINATION COEFFICIENT	ESTIMATED STANDARD ERROR	Durbin-Watson
0.7906	0.625	0.604	5.01544	1.179

Table (29) represents the estimate of the standard model under study

	B	STD-ERROR	T	P-VALUE
(Constant)	18.158		6.585	0.000
Rafidain Bank Loans	1.954E-11	0.024	7.048	0.023
Rasheed Bank Loans	-5.781E-11	-0.174	-8.525	0.012
Trade Bank Of Iraq Loans	-8.240E-10	-0.345	-8.515	0.019
Khaleeji Commercial Bank Loans	3.465E-8	0.696	7.955	0.025
Iraqi Investment Bank Loans	-2.786E-8	-0.285	-10.398	0.030
Middle East Bank Loans	-1.332E-8	-0.126	-9.206	0.041

One of the results of the assessment described above is that the impact of each of the six banks under consideration has on unemployment in varying proportions and through a test (t) of all the features of the top model, It is clear that (p-value) the values of loans and unemployment are below a significant level (0.05 =) i.e. there is a moral impact on unemployment of the variables of loans for each of the above banks.

Table 30 represents contrast analysis (ANOVA model test)

SOURCES OF DIFFERENCE	SUM SQUARE	DF	MEAN SQUARE	F	P-VALUE
REGRESSION	194.046	6	32.341	.5012	.755 ^{b0}
ERROR	116.392	9	12.932		
TOTAL	310.437	15			

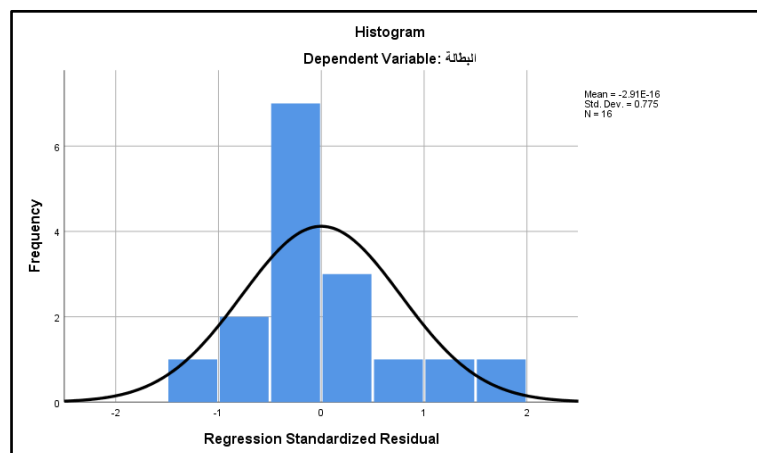
$$\hat{Y}_i = 18.158 + 1.954E - 11X_{i1} - 5.781E - 11X_{i2} - 8.240E - 10X_{i3} + 3.465E - 8X_{i4} - 2.786E - 8X_{i5} - 1.332E - 8X_{i6}$$

We note from a table (30) that the (F) value calculated for the regression model test is (.5570) with a probability value (p-value = 0.755b) that is less than the moral level (0.05 =) of the morale of the standard model.

Table (31) represents descriptive error statistics

Predicted Value	Min	Max	Mean	Standard Deviation
	12.1046	20.0684	15.8875	2.36707
Residual	-6.26835	9.91029	.00000	3.88494
Std. Predicted Value	-1.598	1.766	.000	1.000
Std. Residual	-1.250	1.976	.000	.775

Figure (11) represents the normal distribution of standard model errors



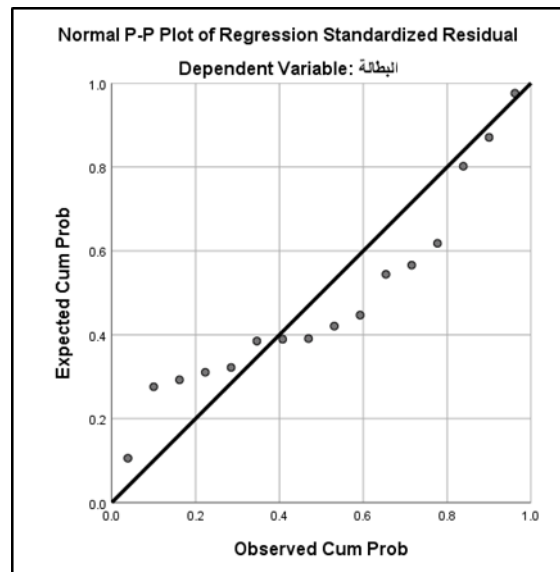


Figure (12) illustrates linear regression and the spread of the values of the study variable

Source/ Researcher, based on spss25.

From the above figure it is clear that there are no anomalous or extreme values for the data of the variable of loans and Gross Domestic Product.

Conclusions and Recommendations

▪ Firstly:- Conclusions.

1. The hypothesis of the study on which this research was based demonstrates that commercial banks are instrumental in the development process, And that's through the volume of loans that increases year after year, which contributes to the process of economic enterprise development, and productivity expansion, which in turn will work to reduce unemployment and absorb purchasing power, thereby reducing inflation rates.
2. By analysing the data for the banks under study (Rafidain, Rashid, Iraq Trade, Gulf Trade, Iraqi Investment, Middle East) Shown in the standard models, which represent the impact of loans, capital and deposits on all variables (gross domestic product, inflation, unemployment). The main conclusions were reached:
 - 1) It was noted that the highest impact on GDP was from Iraqi investment bank loans, which applied to the realistic labor market theory.
 - 2) As for the model illustrating the impact of loans on inflation, it was noted that the biggest impact had been on the Iraqi investment bank.

▪ Secondary:- Recommendations

1. It is absolutely necessary for the Central Bank to play a greater role in increasing banking activity, and the trend towards increasing the role of commercial banks in economic development is achieved by directing their financial resources towards investment projects, since most loans are directed towards non-investment purposes.
2. The construction of a random standard model that illustrates some of the known and unknown variables of governmental and private banks and their individual impact on certain variables such as gross domestic product, inflation and unemployment.

3. To keep pace with developments in the banks of the outside world (foreign banks) from an electronic transaction and to provide the best and fastest services.
4. Consideration of the banking sector's determinants and factors, whether external or internal, that may have an impact on the bank's performance through the provision of oversight and through an efficient body characterized by its qualitative characteristics in the oversight process.

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