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THE ROLE OF SPECIALIZED BANKS IN SUPPORTING SMALL AND MEDIUM ENTERPRISES IN BABIL GOVERNORATE FOR THE PERIOD (2005-2020) THE AGRICULTURAL BANK AS A MODEL

Sura Alaa Jawad, Prof. Khaled Hussein Al-Marzouk
Faculty of Administration and Economics, University of Babylon, Iraq

Abstract
The study aims to shed light on the Agricultural Cooperative Bank as an independent variable and how it affects the dependent variables represented by small and medium enterprises, as an applied research in the Agricultural Cooperative Bank / Babylon branch based on the data received in the bank during the research period. The study also seeks to give a clear picture of the reality and role the agricultural bank in the province and how it supports the agricultural projects that are held in it through the stages of loans that the bank went through during the research period. Economic and social problems, the most prominent of which is the unemployment problem faced by the governorate and improving the standard of living for the individual, especially if it is given appropriate support and addressing the financing obstacles it faces.), in light of the hypothesis (that the specialized banks / the agricultural bank - Babylon branch has a positive role in supporting small and Hence, the Agricultural Bank / Babylon branch was chosen as a sample for research based on the objective of the study during the period (2005-2020), which reached a set of conclusions, the most important of which are (Todayamato causality was used in measuring and analyzing the impact of (small farmers loans, wealth loans). Animal mechanization loans, agricultural mechanization loans, orchards construction loans (as independent variables on (small and medium-sized projects) as dependent variables), and the most prominent recommendations (that the Agricultural Bank establish a correct and effective mechanism for disbursing the amounts of these loans by dividing them into several stages that correspond to the stages of establishment or development Or operating agricultural projects or developing livestock, thus ensuring that the borrower implements the development projects to which these loans were directed.

Keywords: specialized banks, agricultural bank, small and medium enterprises

Introduction

It is known that specialized (developmental) banking institutions play a major role in solving the problems faced by the economic sectors by providing financial support to them, which required developing these institutions and providing them with the necessary funds allocated from the state's general budget. The Cooperative Agricultural Bank is one of these institutions financed by Before the government and it is the focus of our study in terms of its support and provision of loans necessary for agricultural projects during the stage that the agricultural project reaches from establishing, completing or operating the project, as the process of securing capital for agricultural producers is very important because they do not have the costs and requirements of investment in the field of agricultural production that Because they are subject to the conditions of this sector that distinguish it from the rest of the sectors, the most important of which is the seasonality of production, which is followed by the seasonality of

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income, and consequently the limited savings to complete projects to the fullest. Including the agricultural sector in previous years.

Research problem: Is there a role for specialized banks / agricultural bank - Babylon branch in supporting and financing small and medium enterprises in the governorate?

The aim of the research: Defining the importance of the role of the Agricultural Bank / Babylon branch in supporting projects and its positive effects on the Iraqi economy. With an indication of the impact of the loans granted on the number of those projects.

Research hypothesis: The research is based on the hypothesis that "the specialized banks / agricultural bank - Babylon branch have a positive role in supporting small and medium enterprises in the province".

The importance of the research: The importance of the study is reflected in the analysis of the role of (the Agricultural Bank / Babil Branch as a model) in financing small and medium projects that contribute to solving economic and social problems, most notably the problem of unemployment faced by the governorate.

Spatial and temporal boundaries: The study included the Agricultural Bank / Babylon Branch, and the study period extended from 2005 to 2020.

Research Methodology: The analytical-standard approach was relied on the data represented in the volume of loans granted by the Agricultural Bank / Babylon branch in various details during the research period, as well as a statement of the number of small and medium projects, in order to achieve the goal of the study.

Research Structure: For the purpose of supporting the research hypothesis, it was divided into three sections. The first section included the theoretical and conceptual framework for specialized banks and small and medium enterprises. The second topic was devoted to the analytical aspect of the research variables, analyzing the reality of agricultural initiative loans with the preparation of projects financed through two axes: the first is a small fund The farmers and the second livestock fund, and the third topic included measuring and analyzing the impact of the agricultural initiative loans granted by the Agricultural Bank, Babylon branch, on the number of small and medium projects for the Small Farmers and Livestock Fund.

The first topic: the theoretical framework for specialized banks and small and medium enterprises

First: What are specialized banks?

The concept of specialized banks: they are a type of banking institution that specializes in financing certain economic sectors and that it deals with certain categories as well, where credit facilities are granted on easy terms because they are sectors that constitute major pillars in the national economy, including the agricultural sector, industry, housing, and small craftsmen, and municipalities

Specialized banking jobs

1. Establishing projects and projectsArk in its creation.
2. Financing projects through medium and long-term lending

Second: Small and medium enterprises

The concept of small and medium enterprises

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small enterprises in Iraq have been defined as the independent establishment in ownership and management and acquires a limited share in the market. Towards informality and directives are mostly verbal without the need for significant documentation, as defined by the Central Bureau of Statistics as establishments in which less than (10) employees work, and the value of machinery and equipment is less than (100) thousand Iraqi dinars

Characteristics and advantages of small and medium enterprises

A. Ease of establishment: This is represented in the relatively low capital required for its establishment, because it depends on attracting savings to achieve the benefit and interest through which it meets the local needs in the various activities within the economic field
B. The small project bears a personal character and is effectively managed by its owners and relies on its internal sources to finance capital for its growth
C. The pioneering spirit of the owners of small and medium enterprises, as they are pioneers in the field in which they are active, and the most prepared to face financial risks and personal responsibility

The second topic / analysis of the reality of agricultural initiative loans and the preparation of small and medium enterprises that finance them in the province of Babylon

Agricultural Initiative Funds

The agricultural initiative resorts to specialized credit activity through the effective role of the government, and the bank's reliance on an effective system is the system of specialized lending funds, where these funds grant loans according to programs and plans prepared by the Ministry of Agriculture through the Ministry of Finance to raise the standard of living. These funds include:

First: Small Farmers Fund (amounts in Iraqi dinars)

Table (1) Preparation of projects financed by loans to small farmers for the period (2008-2020)

%change rate	Average number of projects	% change rate	The number of small projects	%change rate	loan amount	the year
-	0	-	1	-	26875000	2008
-	6	700	8	388,899	131391668	2009
50	9	62.5	13	146.412	323765002	2010
55.55	14	46.15	19	-96.166	12411668	2011
28.57	18	42.10	27	16553.818	2067016668	2012
-5.55	17	-3.70	26	9.385	2261016668	2013
-17.64	14	-3.84	25	3.441	2338816668	2014
-21.42	11	12	28	3.420	2418816668	2015
90.90	21	25	35	0.826	2438816668	2016
0	21	0	35	0.820	2458816668	2017
0	21	0	35	0	2458816668	2018

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0	21	0	35	0	2458816668	2019
0	21	0	35	0	2458816668	2020

Source: Cooperative Agricultural Bank data / Babel.

The percentage of change was calculated by the researcher

A- The rates of change of loans granted to small farmers with the rates of change in the number of small projectsFollowing up on Table (1), we find that the period (2008-2011) increased in the amounts of loans granted by the bank, as the percentage change amounted to (388,899%, 146,412%) respectively for the years 2009 and 2010. We also note a decline in the loan amount in 2011, where the rate of change was (- 96.166%) As a result of these increases in loan amounts since the launch of the initiative was accompanied by an increase in the number of small projects, where the rates of change for that period in the number of small projects were (700%, 62.5%) for the years 2009 and 2010, respectively, as we note, despite the decrease in the size of the loan Granted in 2011, however, it did not record a decrease in the number of small projects in that year, as it recorded a rate of change (46.15%), and the reason for this may be that those projects in that year had their completion rates approaching the final stages, as well as providing financial liquidity from previous years. The period (2012-2015) the amounts of loans continued to increase as shown in the table above, and we note that the increase in 2012 was large due to an increase in the size of the loan than it was in 2011. As a result of this increase in the amounts of loans granted, it was accompanied by an increase in the number of small projects financed by those loans during The period when it reached Change rates (42.10%, -3.70%, -3.84% and 12%) respectively, but we note that there is a decline in the number of projects in 2013 and 2014, as the increase in the number of projects was very little, as it was by one project per year, except The number of projects increased to (28) projects in 2015, with a change rate of 12% compared to the years 2013 and 2014, in which Iraq witnessed military operations due to the terrorist attack of ISIS. Finally, the period (2016-2020) we note that the amounts of loans are increasing dramatically Less than it was at the beginning of the initiative until the amount of the loan was fixed in 2017, and it did not witness an increase after that year in the size of the loan, as the change rates for that period amounted to (0.826%, 0.820%, 0%, 0% and 0%), respectively, and this is due to Weak demand for loans by applicants for the purpose of establishing small projects, as it was noticed that their numbers were stable, as the change rates in 2016 amounted to (25%), while the change rates for subsequent years amounted to (0%) as a result of the stability of the number of projects.

B - The rates of change in loans granted to small farmers with the rates of change in the number of medium enterprisesIt is evident from Table (1) during the period (2008-2011) that the amounts of loans granted by the bank increased, as the percentage change amounted to (388,899%, 146.412%) respectively for the years 2009 and 2010. 96.166%) As a result of these increases in loan amounts since the launch of the initiative was accompanied by an increase in the number of medium projects, where the rates of change for that period in the number of medium projects were (50% and 55.5%) for the years 2010 and 2011, respectively, and we also note that despite the decrease in the size of the loan Granted in 2011, however, it did not record a decrease in the number of medium projects in that year. As for the period (2012-2015), the

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amounts of loans continued to increase, as the change rates for that period amounted to (16553.818%, 9.385%, 3.441% and 3.420%), respectively. Despite this increase in the amounts of loans granted, there is a decrease in the growth rate of the number of medium-sized projects financed by those loans during the period when the numbers began to rise in 2012 to increase the size of the loan in this year, and then the growth of the numbers gradually decreased, as the change rates reached (28.57%, 5.55%, 17.64 -, 21.42%) respectively, and perhaps due to a lack of demand Customers on the loan due to their adherence to the security situation in the country. In the recent period (2016-2020) the growth of loan amounts was small until the amount of the loan was proven in 2017, and there was no increase in the size of the loan after that year, as the rates of change for that period were (0.826% and 0.820% And 0%, 0% and 0%) respectively due to the weak demand for loans by its applicants for the purpose of establishing medium projects. There is also stability in the number of medium projects, as the change rates in 2016 amounted to (90.90%) and the change rates for the rest of the years were recorded (0%).) As a result of the stability of the number of projects.

Second: Livestock Fund

Table (2) Preparation of projects funded by the Livestock Fund for the period (2008-2020)

% change rate	Average number of projects	% change rate	The number of small projects	% change rate	loan amount	the year
-	22	-	38	-	309425000	2008
-13.63	19	-13.15	33	266.311	1133460000	2009
10.52	21	21.21	40	22,903	1393060000	2010
9.52	23	5	42	59.193	2217659998	2011
-21.73	18	-4.76	40	17.101	2596915554	2012
-11.11	16	-7.50	37	29.834	3371693333	2013
25	20	21.62	45	17,053	3946693332	2014
-15th	17	4.44	47	10.420	4357959998	2015
29.41	22	4.25	49	0.956	4399626665	2016
-4.54	21	2.04	50	0.947	4441293331	2017
9.52	23	-4	48	0	4441293331	2018
17.39	27	-2.08	47	0.938	.4482959997	2019
-3.70	26	4.25	49	0	.4482959997	2020

Source: Cooperative Agricultural Bank data / Babel.

The percentage of change was calculated by the researcher.

A- Rates of change of loans granted to livestock with the percentages of change in the number of small projects When looking at Table (2), we find that the period (2008-2011) there has been a continuous growth in the amounts of the Livestock Fund since the launch of the agricultural initiative granted by the Iraqi government, and the rates of change were (266.311%, 22.903%, 59.193%) for 2009, 2010 and 2011, respectively On the other hand, it is noticed that there is a decline in the number of small projects for the year 2009 because the amount of funding at the

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beginning of the period is not sufficient for the requirements of completing projects, and rates of change amounted to (13.15%-), but the number started to rise again and recorded a change rate (21.21%, 5%) for the year 2010 and 2011, respectively. Growth continued for the period (2012-2015). The growth in loan amounts continued, and their rates of change during the period respectively reached (17.101%, 29.834%, 17.053%, 10.420%), but the number of projects varies, during the years 2012 and 2013 It was (-4.76%, -7.50%) respectively, then returned to the increase as a result of the continuous financing by the bank for the years 2014 and 2015 and the percentage change amounted to (21.62%, 4.44%). The loan amounts are not the same as before, the growth is slightly in 2016 and 2017, after which the loan amount was fixed for the year 2018 and then increased slightly in the year 20 19 He referred to the stability in 2020 and the change rates for that period (0.956%, 0.947%, 0%, 0.938%, 0%) respectively for the year (2016, 2017, 2018, 2019 and 2020), and as a result the instability of the number of small projects ranging from increase to decrease Thus, the rates of change were (4.25%, 2.04%, 4%, -2.08%, 4.25%) respectively for the mentioned period.

B- The rates of change of loans granted to livestock with the rates of change in the number of medium-sized projects Through table (2), we find that the period (2008-2011) witnessed a good increase in the amounts of the Livestock Fund, and the change rates were (266.311%, 22.903%, 59.193%) for the years 2009, 2010 and 2011, respectively, and this is accompanied by a good growth in the number of projects The average for the same period, except for 2009, recorded a negative rate of change and was (13.63%), then the number started to rise in 2010 and 2011, and its change rates were (10.52%, 9.52%), respectively. The growth continued during the period (2012-2015), as the percentage changes during the period respectively amounted to (17.101%, 29.834%, 17.053%, 10.420%), but there was a decline in the number of medium projects at the beginning and end of that period and its percentages were (-21.73) -11.11%, 25%, 15%) for the year (2012, 2013, 2014 and 2015) and 2014 witnessed a good launch of medium projects as they support the military operations in the governorate and the bank continues to finance them and facilitate the imposition of conditions when granting the loan to meet all the needs of the governorate at that time . As for the period from (2016-2020), and looking at the data in the table, we find that the increase in loans started to decrease little by little until it remains stable in the year 2020, and the percentages are as follows (0.956%, 0.947%, 0%, 0.938%, 0%), respectively, offset by instability Growth in the number of medium-sized projects and their percentages were (29.41%, -4.54 - 9.52%, 17.39%, -3.70%) respectively for the year (2016, 2017, 2018, 2019 and 2020). The fluctuation of the possibility of insufficient loan amount to complete the project.

The third topic / measuring and analyzing the impact of agricultural initiative loans granted by the Agricultural Bank of Babylon branch / on the number of medium and small projects

First: Measure and analyze the impact of loans to small farmers granted by the Agricultural Bank / Babil Branch on the number of medium and small projects

Stability

Through table (2-3), we notice that the independent variable (SFL) stabilized at the first difference, in the presence of a categorical trend, and at the level of morality (1%), and through

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Table (3-3) we notice that the dependent variable (NSP1) stabilized at the first difference. Also, when there is no definite and no general trend, the level of morale is (1%) as well. As for the table (4-3), we notice that the dependent variable (NAP2) stabilized at the second difference and with the presence of a definite only and at the level of morale (1%)

Table (2-3) Results of the Extended Dickey-Fuller Test for Stability of the Independent Variable (SFL)

	Null Hypothesis: D(SFL) has a unit root			
	Exogenous: Constant, Linear Trend			
Lag Length: 3 (Automatic - based on SIC, maxlag=9)				
Prob.*	t-Statistic			
0.0107	-4.158696	Augmented Dickey-Fuller test statistic		
	-4.186481		1% level	Test critical values:
	-3.518090		5% level	
	-3.189732		10% level	
	*MacKinnon (1996) one-sided p-values.			
	Augmented Dickey-Fuller Test Equation			
		Dependent Variable: D(SFL,2)		
		Method: Least Squares		
		Date: 07/13/22 Time: 14:32		
	Sample (adjusted): 2009Q3 2020Q1			
	Included observations: 43 after adjustments			
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0002	-4.158696	0.151760	-0.631124	D(SFL(-1))
0.0528	2.001129	0.154873	0.309920	D(SFL(-1),2)
0.0528	2.000604	0.154863	0.309820	D(SFL(-2),2)
0.0529	2.000078	0.154854	0.309721	D(SFL(-3),2)
0.0382	2.149627	43566392	93651472	C
0.1118	-1.628896	1365270.	-2223882.	@TREND("2008Q1")
-1118450.	Mean dependent var		0.318820	R-squared
1.18E+08	S.D. dependent var		0.226768	Adjusted R-squared
39.87900	Akaike info criterion		1.04E+08	S.E. of regression
40.12474	Schwarz criterion		3.97E+17	Sum squared resid
39.96962	Hannan-Quinn criter.		-851.3984	Log likelihood
1.757373	Durbin-Watson stat		3.463498	F-statistic
			0.011466	Prob(F-statistic)

Table (3-3) Results of the Extended Dickey-Fuller Test for Stability of the Independent Variable (NSP1)

	Null Hypothesis: D(NSP1) has a unit root	
		Exogenous: None

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Lag Length: 0 (Automatic - based on SIC, maxlag=9)				
Prob.*	t-Statistic			
0.0471	-1.975113	Augmented Dickey-Fuller test statistic		
	-2.616203		1% level	Test critical values:
	-1.948140		5% level	
	-1.612320		10% level	
	*MacKinnon (1996) one-sided p-values.			
	Augmented Dickey-Fuller Test Equation			
		Dependent Variable: D(NSP1,2)		
		Method: Least Squares		
		Date: 07/13/22 Time: 14:35		
	Sample (adjusted): 2008Q4 2020Q1			
	Included observations: 46 after adjustments			
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0544	-1.975113	0.062788	-0.124014	D(NSP1(-1))
-0.038043	Mean dependent var		0.074006	R-squared
0.485819	S.D. dependent var		0.074006	Adjusted R-squared
1.338652	Akaike info criterion		0.467497	S.E. of regression
1.378405	Schwarz criterion		9.834907	Sum squared resid
1.353544	Hannan-Quinn criter.		-29.78899	Log likelihood
			1.920565	Durbin-Watson stat

Table (4-3) Results of the Dickey Fuller Expanded Stability Test for the Independent Variable (NAP2)

	Null Hypothesis: D(NAP2,2) has a unit root			
		Exogenous: None		
Lag Length: 0 (Automatic - based on SIC, maxlag=9)				
Prob.*	t-Statistic			
0.0000	-6.633250	Augmented Dickey-Fuller test statistic		
	-2.617364		1% level	Test critical values:
	-1.948313		5% level	
	-1.612229		10% level	
	*MacKinnon (1996) one-sided p-values.			
	Augmented Dickey-Fuller Test Equation			
		Dependent Variable: D(NAP2,3)		
		Method: Least Squares		
		Date: 07/14/22 Time: 15:12		
	Sample (adjusted): 2009Q1 2020Q1			
	Included observations: 45 after adjustments			
Prob.	t-Statistic	Std. Error	Coefficient	Variable

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0.0000	-6.633250	0.150756	-1.000000	D(NAP2(-1),2)
0.000000	Mean dependent var		0.500000	R-squared
0.941469	S.D. dependent var		0.500000	Adjusted R-squared
2.046073	Akaike info criterion		0.665719	S.E. of regression
2.086222	Schwarz criterion		19.50000	Sum squared resid
2.061040	Hannan-Quinn criter.		-45.03665	Log likelihood
			2.000000	Durbin-Watson stat

Co-integration test

Through Table (5-3), we note the presence of three integrative vectors in the trace test, as well as the presence of two integrative vectors in the Maximum Eigenvalue test, which indicates the existence of a long-term integrative relationship between the standard model variables.

Table (5-3) results of the Johansen co-integration test.

		Date: 07/13/22 Time: 14:43		
		Sample (adjusted): 2008Q4 2020Q1		
	Included observations: 46 after adjustments			
	Trend assumption: Linear deterministic trend			
		Series: NAP2 NSP1 SFL		
	Lags interval (in first differences): 1 to 1			
	Unrestricted Cointegration Rank Test (Trace)			
	0.05	Trace		Hypothesized
Prob.**	Critical Value	Statistic	Eigenvalue	No. of CE(s)
0.0001	29.79707	49.09993	0.517145	None *
0.0481	15.49471	15.61011	0.194474	At most 1 *
0.0173	3.841466	5.662164	0.115816	At most 2 *
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
	**MacKinnon-Haug-Michelis (1999) p-values			
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
	0.05	Max-Eigen		Hypothesized
Prob.**	Critical Value	Statistic	Eigenvalue	No. of CE(s)
0.0006	21.13162	33.48982	0.517145	None *
0.2154	14.26460	9.947949	0.194474	At most 1
0.0173	3.841466	5.662164	0.115816	At most 2 *
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
	**MacKinnon-Haug-Michelis (1999) p-values			

Determining the optimal number of deceleration times for the standard model Through Table (6-3), we note that the optimal number of deceleration periods for the standard model are two

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time periods based on the criteria of Swartge (SC), the Akaik criterion (AIC) and the Henan Quinn criterion (HQ)

Table (6-3) Determining the optimal number of deceleration periods for the standard model

				VAR Lag Order Selection Criteria		
			Endogenous variables: NAP2 NSP1 SFL			
				Exogenous variables: C		
				Date: 07/13/22 Time: 14:45		
				Sample: 2008Q1 2020Q4		
				Included observations: 44		
HQ	SC	AIC	FPE	LR	LogL	Lag
53.21488	53.29142	53.16977	2.48e+19	NA	-1166.735	0
42.76412	43.07026	42.58366	6.27e+14	439.8079	-924.8405	1
41.58611*	42.12187*	41.27032*	1.70e+14*	63.72996*	-886.9471	2
41.87587	42.64123	41.42474	2.01e+14	8.658923	-881.3442	3
42.14835	43.14332	41.56188	2.38e+14	8.430463	-875.3613	4
			* indicates lag order selected by the criterion			
		LR: sequential modified LR test statistic (each test at 5% level)				
				FPE: Final prediction error		
				AIC: Akaike information criterion		
				SC: Schwarz information criterion		
			HQ: Hannan-Quinn information criterion			

Personality tests

A - Autocorrelation test

Through table (7-3), we note that the (LM) test showed a (P. value) of (0.5700) which is greater than (0.05), which indicates that the standard model is free of the problem of self-correlation between the variables of the standard model.

Table (7-3) Autocorrelation test (LM)

VAR Residual Serial Correlation LM Tests		
Null Hypothesis: no serial correlation at lag order h		
Date: 07/13/22 Time: 14:47		
Sample: 2008Q1 2020Q4		
Included observations: 46		
Prob	LM-Stat	Lags
0.5700	7.647276	1
0.9335	3.639268	2
Probs from chi-square with 9 df.		

b- Test for the heterogeneity of variance inconsistency

Through the table (8-3), we note that the value of (P.value) appeared by (0.000000) which is

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less than (0.05), which indicates that the standard model is free from the problem of inconsistency of homogeneity of variance.

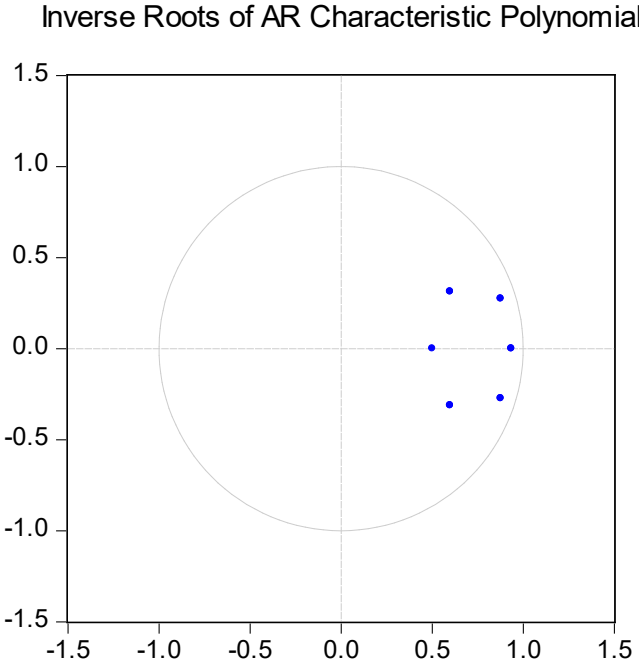
Table (8-3) Test for stability of homogeneity of variance count

VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)					
			Date: 07/13/22 Time: 14:48		
			Sample: 2008Q1 2020Q4		
			Included observations: 46		
				Joint test:	
			Prob.	Df	Chi-sq
			0.0000	72	169.4796
			Individual components:		
Prob.	Chi-sq(12)	Prob.	F(12,33)	R-squared	Dependent
0.0002	37.48861	0.0000	12.11243	0.814970	res1*res1
0.0001	38.55463	0.0000	14.24043	0.838144	res2*res2
0.0012	32.47961	0.0000	6.606239	0.706078	res3*res3
0.0038	29.06769	0.0002	4.720923	0.631906	res2*res1
0.0157	24.82242	0.0038	3.223298	0.539618	res3*res1
0.0002	37.76749	0.0000	12.61591	0.821032	res3*res2

Test the stability of the model as a whole

Through Figure (1-3), we notice that all the roots are located within the unit circle, which indicates the stability of the standard model as a whole.

Figure (1-3) test the stability of the model as a whole



Toda Yamootou causal test

A- Statistical analysis:- Through Table (9-3), we note the independent variable (SFL), which

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represents (small farmers' loans) causing the dependent variable (NAP2), which represents (number of medium projects), because the value of (P.value) appeared by (0.0001) which is less than (0.05). As we note through Table (9-3), we note the independent variable (SFL), which represents (small farmers loans) causes the dependent variable (NSP1), which represents (number of small projects), because the value of (P.value) appeared by (0.0074), which is less than (0.05)

B - Economic analysis: We have noticed through Table (9-3) that the loans to small farmers provided by the Agricultural Bank / Babil Branch have had a direct and direct effect on the increase in the number of projects (medium and small) in the province of Babylon, and this matter is consistent with the logic of the theory The economic, because these loans are specialized loans and target a specific economic sector (the agricultural sector) and by a specialized bank (the Agricultural Bank) and with conditions that are mostly suitable, administrative facilities and soft guarantees, ..., etc.), all of these things lead to stimulating Owners of small and medium enterprises in the agricultural sector to open such projects in the province of Babylon quickly.

Table (9-3) Toda Yamootou causality test

VEC Granger Causality/Block Exogeneity Wald Tests			
	Date: 07/13/22 Time: 14:51		
	Sample: 2008Q1 2020Q4		
	Included observations: 45		
	Dependent variable: D(NAP2)		
Prob.	Df	Chi-sq	Excluded
0.0000	2	20.39870	D(NSP1)
0.0001	2	18.66789	D(SFL)
0.0003	4	21.24311	All
	Dependent variable: D(NSP1)		
Prob.	Df	Chi-sq	Excluded
0.0477	2	6.085544	D(NAP2)
0.0074	2	9.799412	D(SFL)
0.0423	4	9.893583	All
	Dependent variable: D(SFL)		
Prob.	Df	Chi-sq	Excluded
0.9984	2	0.003110	D(NAP2)
0.9305	2	0.143960	D(NSP1)
0.9676	4	0.558090	All

Second: Measuring and analyzing the impact of livestock loans granted by the Agricultural Bank / Babylon branch on the number of medium and small projects

Stability

Through table (10-3), we notice that the independent variable (APL) stabilized at the second difference and with the presence of a categorical only and at the level of significance (1%), and

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through table (11-3) we notice that the dependent variable (NSP3) stabilized at the first difference and when There is no definite or general trend in the level of morale (1%). As for the table (12-3), we notice that the dependent variable (NAP4) stabilized at the second difference and in the presence of a definite only and at the level of morality (1%)

Table (10-3) Results of the Extended Dickey-Fuller Test for Stability of the Independent Variable (APL)

	Null Hypothesis: D(APL,2) has a unit root			
		Exogenous: Constant		
Lag Length: 3 (Automatic - based on SIC, maxlag=9)				
Prob.*	t-Statistic			
0.0000	-8.035817	Augmented Dickey-Fuller test statistic		
	-3.596616		1% level	Test critical values:
	-2.933158		5% level	
	-2.604867		10% level	
	*MacKinnon (1996) one-sided p-values.			
	Augmented Dickey-Fuller Test Equation			
		Dependent Variable: D(APL,3)		
		Method: Least Squares		
		Date: 07/13/22 Time: 14:58		
	Sample (adjusted): 2009Q4 2020Q1			
	Included observations: 42 after adjustments			
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0000	-8.035817	0.206098	-1.656168	D(APL(-1),2)
0.0005	3.799448	0.171279	0.650767	D(APL(-1),3)
0.0000	4.593793	0.138920	0.638169	D(APL(-2),3)
0.0000	6.409967	0.097594	0.625572	D(APL(-3),3)
0.2796	-1.097250	4183570.	-4590423.	C
0.000000	Mean dependent var		0.763530	R-squared
51871286	S.D. dependent var		0.737966	Adjusted R-squared
37.13849	Akaike info criterion		26552525	S.E. of regression
37.34536	Schwarz criterion		2.61E+16	Sum squared resid
37.21432	Hannan-Quinn criter.		-774.9083	Log likelihood
2.054738	Durbin-Watson stat		29.86706	F-statistic
			0.000000	Prob(F-statistic)

Table (11-3) Results of the Extended Dickey-Fuller Test for Stability of the Dependent Variable (NSP3)

	Null Hypothesis: D(NSP3) has a unit root	
		Exogenous: None
Lag Length: 0 (Automatic - based on SIC, maxlag=9)		

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Prob.*	t-Statistic			
0.0053	-2.852989	Augmented Dickey-Fuller test statistic		
	-2.616203		1% level	Test critical values:
	-1.948140		5% level	
	-1.612320		10% level	
	*MacKinnon (1996) one-sided p-values.			
	Augmented Dickey-Fuller Test Equation			
		Dependent Variable: D(NSP3,2)		
		Method: Least Squares		
		Date: 07/13/22 Time: 14:59		
	Sample (adjusted): 2008Q4 2020Q1			
	Included observations: 46 after adjustments			
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0065	-2.852989	0.101505	-0.289593	D(NSP3(-1))
0.038043	Mean dependent var		0.150681	R-squared
0.709004	S.D. dependent var		0.150681	Adjusted R-squared
2.008269	Akaike info criterion		0.653408	S.E. of regression
2.048022	Schwarz criterion		19.21239	Sum squared resid
2.023161	Hannan-Quinn criter.		-45.19019	Log likelihood
			1.776843	Durbin-Watson stat

Table (21-3) Results of the Dickey Fuller Expanded Stability Test for the Dependent Variable (NAP4)

	Null Hypothesis: D(NAP4,2) has a unit root			
		Exogenous: Constant		
Lag Length: 7 (Automatic - based on SIC, maxlag=9)				
Prob.*	t-Statistic			
0.0000	-5.809238	Augmented Dickey-Fuller test statistic		
	-3.615588		1% level	Test critical values:
	-2.941145		5% level	
	-2.609066		10% level	
	*MacKinnon (1996) one-sided p-values.			
	Augmented Dickey-Fuller Test Equation			
		Dependent Variable: D(NAP4,3)		
		Method: Least Squares		
		Date: 07/13/22 Time: 15:01		
	Sample (adjusted): 2010Q4 2020Q1			
	Included observations: 38 after adjustments			
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0000	-5.809238	0.477784	-2.775563	D(NAP4(-1),2)

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0.0003	4.111438	0.432026	1.776246	D(NAP4(-1),3)
0.0001	4.599508	0.386076	1.775759	D(NAP4(-2),3)
0.0000	5.317208	0.333873	1.775272	D(NAP4(-3),3)
0.0162	2.552981	0.266759	0.681031	D(NAP4(-4),3)
0.0055	3.001241	0.226890	0.680952	D(NAP4(-5),3)
0.0010	3.670167	0.184992	0.678951	D(NAP4(-6),3)
0.0000	5.176528	0.130773	0.676949	D(NAP4(-7),3)
0.8105	0.242007	0.070695	0.017109	C
0.000000	Mean dependent var		0.845830	R-squared
0.974333	S.D. dependent var		0.803300	Adjusted R-squared
1.363190	Akaike info criterion		0.432125	S.E. of regression
1.751039	Schwarz criterion		5.415227	Sum squared resid
1.501184	Hannan-Quinn criter.		-16.90061	Log likelihood
2.005428	Durbin-Watson stat		19.88798	F-statistic
			0.000000	Prob(F-statistic)

Co-integration test

Through the table (13-3), we note the presence of one integrative vector in the trace test, and one integrative vector in the Maximum Eigenvalue test, which indicates the existence of a long-term integrative relationship between the variables of the standard model.

Table (13-3) Johansen Cointegration Test Results

		Date: 07/13/22 Time: 16:23		
		Sample (adjusted): 2008Q4 2020Q1		
	Included observations: 46 after adjustments			
	Trend assumption: Linear deterministic trend			
		Series: NAP4 NSP3 APL		
	Lags interval (in first differences): 1 to 1			
	Unrestricted Cointegration Rank Test (Trace)			
	0.05	Trace		Hypothesized
Prob.**	Critical Value	Statistic	Eigenvalue	No. of CE(s)
0.0345	29.79707	30.47204	0.328451	None*
0.2021	15.49471	11.15629	0.153437	At most 1
0.0616	3.841466	3.494045	0.073144	At most 2
Trace test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
	**MacKinnon-Haug-Michelis (1999) p-values			
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
	0.05	Max-Eigen		Hypothesized
Prob.**	Critical Value	Statistic	Eigenvalue	No. of CE(s)
0.0185	21.13162	22.31575	0.328451	None*

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0.4141	14.26460	7.662243	0.153437	At most 1
0.0616	3.841466	3.494045	0.073144	At most 2
Max-eigenvalue test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
	**MacKinnon-Haug-Michelis (1999) p-values			

Determining the optimal number of deceleration times for the standard model

Through Table (14-3), we note that the optimal number of deceleration periods for the standard model is two time periods based on the criteria of Swartge (SC), the Akaik criterion (AIC) and the Henan Quinn criterion (HQ)

Table (14-3) Determining the optimal number of deceleration periods for the standard model

				VAR Lag Order Selection Criteria		
			Endogenous variables: NAP4 NSP3 APL			
				Exogenous variables: C		
				Date: 07/13/22 Time: 16:25		
				Sample: 2008Q1 2020Q4		
				Included observations: 44		
HQ	SC	AIC	FPE	LR	LogL	Lag
53.68700	53.76353	53.64188	3.97e+19	NA	-1177.121	0
43.23918	43.54533	43.05873	1.01e+15	439.6898	-935.2921	1
41.52202*	42.05777*	41.20623*	1.59e+14*	83.67898*	-885.5370	2
41.93211	42.69747	41.48097	2.13e+14	4.567681	-882.5814	3
42.20013	43.19510	41.61366	2.51e+14	8.568682	-876.5004	4
			* indicates lag order selected by the criterion			
		LR: sequential modified LR test statistic (each test at 5% level)				
				FPE: Final prediction error		
				AIC: Akaike information criterion		
				SC: Schwarz information criterion		
			HQ: Hannan-Quinn information criterion			

Personality tests

A - Autocorrelation test Through the table (15-3), we note that the (LM) test showed a (P. value) of (0.8438), which is greater than (0.05), which indicates that the standard model is free of the problem of self-correlation between the variables of the standard model.

Table (15-3) Autocorrelation test (LM)

VAR Residual Serial Correlation LM Tests
Null Hypothesis: no serial correlation at lag order h
Date: 07/13/22 Time: 16:26
Sample: 2008Q1 2020Q4
Included observations: 46

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Prob	LM-Stat	Lags
0.8438	4.890428	1
0.9979	1.383496	2
Probs from chi-square with 9 df.		

Test for the inconsistency of homogeneity of variance

Through the table (16-3), we note that the (P.value) appeared by (0.0000) which is less than (0.05), which indicates that the standard model is free from the problem of inconsistency of homogeneity of variance.

Table (16-3) Test for heterogeneity instability

VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)					
			Date: 07/13/22 Time: 16:28		
			Sample: 2008Q1 2020Q4		
			Included observations: 46		
				Joint test:	
			Prob.	df	Chi-sq
			0.0000	72	134.3152
			Individual components:		
Prob.	Chi-sq(12)	Prob.	F(12,33)	R-squared	Dependent
0.0557	20.65159	0.0332	2.240452	0.448948	res1*res1
0.0008	33.61017	0.0000	7.459990	0.730656	res2*res2
0.1128	18.09773	0.0931	1.783681	0.393429	res3*res3
0.0016	31.58223	0.0000	6.023897	0.686570	res2*res1
0.0315	22.58558	0.0132	2.652653	0.490991	res3*res1
0.0130	25.40996	0.0026	3.393748	0.552390	res3*res2

Test the stability of the model as a whole:

Through Figure (2-3), we notice that all the roots are located within the unit circle, which indicates the stability of the standard model as a whole.

Figure (2-3) Test the stability of the model as a whole

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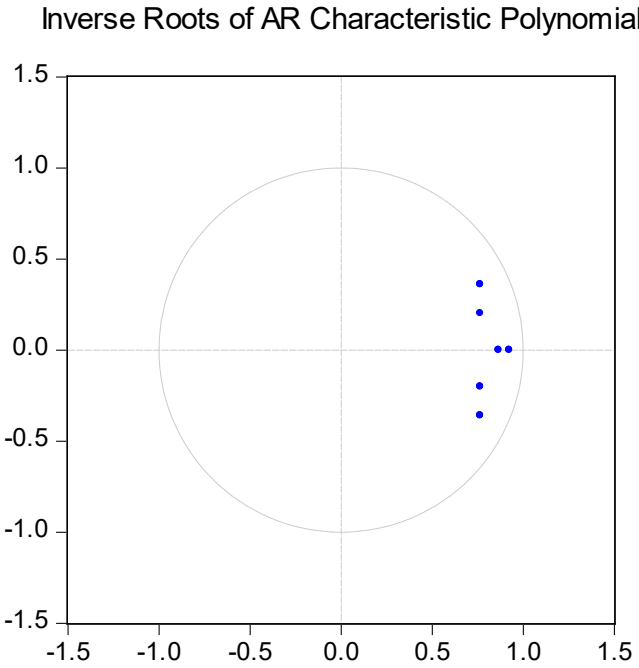

Toda Yamootou causal test

A- Statistical analysis: - Through table (17-3), we note the independent variable (APL), which represents (livestock loans), does not cause the dependent variable (NAP4), which represents (number of medium projects), because the value of (P.value) appeared by (0.3224) which is more than (0.05) As we note through Table (17-3), we note the independent variable (APL), which represents (livestock loans), does not cause the dependent variable (NSP3), which represents (the number of small projects), because the value of (P.value) appeared by (0.3385) It is more than (0.05)

B - Economic analysis: - We noticed through Table (17-3) that the livestock loans provided by the Agricultural Bank / Babylon branch did not directly and directly affect the increase in the number of projects (medium and small) in the province of Babylon, and this matter does not agree with the logic of the theory The economic, because these loans are specialized loans and target a specific economic sector (the agricultural sector) and by a specialized bank (the Agricultural Bank) and with conditions that are often appropriate, administrative facilities and soft guarantees and without interest rates), all of these things lead to motivating owners of small and medium enterprises In the field of livestock sector to open such projects in the province of Babylon and quickly. However, reality proved the opposite in the province of Babylon, and this is due to the fact that the loans were withdrawn from the Agricultural Bank and on concessional terms, but they did not go to the purposes directed to them, such as developing, expanding or establishing livestock development projects.

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Table (17-3) results of the causal test of Toda Yamoutou

VEC Granger Causality/Block Exogeneity Wald Tests			
	Date: 07/14/22 Time: 16:30		
	Sample: 2008Q1 2020Q4		
	Included observations: 45		
	Dependent variable: D(APL)		
Prob.	df	Chi-sq	Excluded
0.6584	2	0.835866	D(NAP4)
0.2392	2	2.861321	D(NSP3)
0.5759	4	2.892650	All
	Dependent variable: D(NAP4)		
Prob.	df	Chi-sq	Excluded
0.3224	2	2.263627	D(APL)
0.9030	2	0.203982	D(NSP3)
0.6370	4	2.542716	All
	Dependent variable: D(NSP3)		
Prob.	df	Chi-sq	Excluded
0.3385	2	2.166305	D(APL)
0.6636	2	0.820266	D(NAP4)
0.4974	4	3.373165	All

Conclusions: By looking at measuring the impact of agricultural initiative loans on the preparation of projects, the research ended with several conclusions that are matched by several appropriate recommendations, which are as follows:

1. Todayamato causality was used in measuring and analyzing the effect of (small farmers loans, livestock loans) as independent variables on (small and medium projects) as dependent variables.
2. According to the Todayamato causal model, we have a direct causal relationship between the independent variable (loans to small farmers) granted by the Agricultural Bank / Babylon branch and the dependent variables of small and medium enterprises
3. According to the Todayamato causal model, we did not show a causal relationship between the independent variable (livestock loans) granted by the Agricultural Bank / Babylon branch and the dependent variables (small and medium enterprises(
4. Based on the above, the research hypothesis was denied, which states (The specialized banks / agricultural bank - Babylon branch have a positive role in supporting small and medium enterprises in the governorate)

Recommendations

1. The necessity for the Agricultural Bank to take a real and effective role in the field of granting specialized loans, by setting up a correct diagnostic mechanism that estimates the actual need for those loans and for the people who will be granted those loans - and

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this is done by choosing specialized committees in the agricultural and livestock fields, thus ensuring These specialized loans go to the purposes for which they are directed.

2. That the Agricultural Bank put in place a correct and effective mechanism for disbursing the amounts of these loans by dividing them into several stages that correspond to the stages of establishing, developing or operating agricultural projects or developing livestock, and thus ensuring that the borrower implements the development projects to which these loans were directed.

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