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Economic Factors Influencing Agricultural Investment Allocation in Iraq (1990-2017).

Abstract

In this study, a comprehensive analysis of investment allocation for rural land restoration in Iraq spanning from 2017 to 1990 was conducted to assess its impact. The research aimed to identify key factors influencing agricultural land revival in the country's early period. Economic analysis determined investment size for revival and identified influential factors such as gross domestic product (GDP), agricultural output, and restored lands. Utilizing EViews 9, the study ensured the robustness of time series variables through statistical testing before employing customized regression modeling. The autoregressive distributed lag (ARDL) approach was applied for investment allocation analysis. Results indicate that the agricultural output variable exhibits a positive correlation, signifying that a 1% increase in agricultural production results in a 20.85% increase in short-term investment allocation and a 10.97% increase in the long term. Conversely, GDP shows a negative and significant impact in both short and long terms, with a 0.90% decrease in allocation in the short term and a 0.22% decrease in the long term per unit increase in GDP. The variable representing restored regions initially has a negative effect in the short term but becomes positive in the long term, with a 1% increase in restored areas leading to a 0.0066% increase in short-term investment and a 0.0279% increase in the long term. The error equation demonstrates critical significance, indicating a long-term adjusted relationship between the variables.

Keywords: *Economic, Investment, Agricultural Revitalization. Analysis*

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Introduction

The agricultural sector is one of the vital and significant components of the economy, ranking third in terms of contributing to the gross domestic product (GDP) after the oil and services sectors. The significance of the rural division in national generation (23%) amid the think-about period is vital. Investment in the agricultural sector enhances productivity, promotes agricultural development, creates new job opportunities, modernizes agricultural structures and institutions, and expands land resources through revitalization, utilizing agricultural and farming mechanization in innovative ways. It also involves the development of the potential for both animal and plant agricultural production. Investment in expanding capital savings is considered one of the elemental components of financial development and tending to basic lopsided characteristics by expanding the rate share of profitable sectors, including the rural division, within the GDP, plays a significant part (Hamza et al., 2017). Investment serves as the primary driver and foundational engine for economic circulation and development in any society. Consequently, countries worldwide, with diverse political and economic systems, closely monitor the economic progress level and capital accumulation through investments. They constantly strive to achieve high and sustained investment rates. The continuity of investment, coupled with increasing rates, is the catalyst for societal growth and the pursuit of economic and social aspirations, especially concerning the expansion of production bases and the acceleration of overall production. As a result, national income levels and per capita income averages increase to fulfill individual or group aspirations for improvement and an overall enhancement in quality of life (Morakchi, 2011: 19).

Investment in the revitalization of lands is one of the activities undertaken by the public sector in most countries globally. Significant amounts are allocated and spent for the development of national production in various economic sectors. In 1992, the reclaimed land area managed by the Ministry of Irrigation and the Agriculture Ministry in Iraq reached 2.5 million hectares, contributing to the agricultural land development (Al-Samurai, 1995: 1). The overall land area of Iraq is 438,320 square kilometers. The alluvial plain, formed between the Tigris and Euphrates rivers, surrounded by mountains with an elevation of 3,550 meters above sea level, encloses the plain in the east and north, with the presence of desert lands comprising 40% of agricultural lands and over 90% of the country's lands in semi-arid and arid regions (Gharishi et al., 1394). The total geographical area of Iraq is 45 million hectares, with approximately 34 million hectares (78%) currently unfit for cultivation. According to estimates by the country's Food and Agriculture Organization, the cultivated lands in Iraq cover 6 million hectares, with 50% of these lands located in northern Iraq, relying on rain and other water sources. Surface irrigation methods on a large scale are employed for crop irrigation (Food and Agriculture Organization, 2012).

Importance of Research

Investing strategically in the agricultural lands revitalization in Iraq signifies precedence among the fundamental priorities for economic development and the key structural growth in the agricultural sector, whether through vertical, horizontal, or both forms of development. The objective of horizontal development is to increase cultivated lands by adding new lands capable of producing crops. Vertical development entails enhancing the fecund superiority of cultivated lands by improving the soil quality and achieving productivity higher rates and soil desalination in Iraqi lands.

Problem Statement

The decline in the contribution of the agricultural sector to the national gross domestic product (GDP) and the reduction in agricultural productivity rates in Iraq, along with a decrease in the efficiency of land use, indicate a diminishing investment rate. This reduction in investment plays a pivotal role in achieving the stated objective, involving the accumulation of necessary materials for agricultural production.

Research Objectives

1- Identify the influencing factors during the study period to evaluate the impact of investment allocation in the revitalization of agricultural lands in Iraq (1990-2017).

2- To conduct economic and econometric analysis of the size of investment in revitalization and determine some influential factors such as gross domestic product, agricultural production, and reclaimed lands.

Research Hypothesis

The independent variables of agricultural products with constant prices and revitalized lands (in hectares) negatively affect the allocation of investment for agricultural land recovery projects. Additionally, the independent variables of gross domestic product with constant prices have a negative impact on investment allocation.

Research Methodology

Utilizing Autoregressive Distributed Lag (ARDL) regression distribution after testing the time series stability of research variables using statistical software (EViews9). Conducting statistical tests and standard economic tests related to considering the allocation of investment in agricultural land recovery projects as the dependent variable (Y) and independent factors as follows:

X1 = Value of agricultural product with constant prices (million dinars).

X2 = Gross domestic product with constant prices (million dinars).

X3 = Reclaimed lands (hectares).

Materials and Methods

Concept of Investment

Investment is the utilization of funds in various assets to generate increased financial flows in the future. These flows represent returns that the investor receives instead of using the funds elsewhere by other investors for the period during which the investor leaves the capital unused. Considering the achievement of a return that covers the required compensation value and also addresses the uncertainties in obtaining expected future cash flows beyond the inflation rate, investment is defined as the deployment of resources towards productive use through directing savings towards expenditures. This leads to the generation of products or administrations that meet the financial needs of society and contribute to its welfare. Hence, it is a portion of income that has not yet been consumed and is reinvested in productive operations to enhance, expand, or maintain the product, adding value to the country's economy (Shabib, Duraid Kamel, 2009: 15-17). Investment, based on sacrifice, involves deferring the consumer's desires temporarily to achieve greater satisfaction in the future or abandoning excesses accumulated during a specific period. Time is dedicated to obtaining a sum of funds that reimburses for the recent invested capital value and, by providing sensible returns in exchange for bearing the risk component illustrated within the probability of their non-existence, compensates for the anticipated obtaining power loss due to inflation (Mohammed, Matar, 2013: 22).

Revitalization of Agricultural Lands

This concept encompasses a set of actions and measures aimed at improving soil, preserving it, and enhancing soil fertility. The agricultural land revitalization aims to utilize the soil as a foundation for the growth of agricultural products and address soil challenges to increase agricultural productivity and the cultivability of the soil. The revitalization of lands is essential for expanding agricultural areas through vertical or horizontal expansion of cultivated lands (Al-Zubaidi, Ahmad Haider, 1994: 26). The revitalization projects of agricultural lands in Iraq began in the 1950s with the Construction Council establishment in 1950, and a comprehensive revitalization project was implemented for the Al-Musayyib project (Ministry of Water Resources, 2007).

Results and Discussion

Time Series Stability Test: Time series are classified into two categories based on their stability characteristics:

1. Stable Chains: Chains that change over time without a significant change in the average over a relatively long period, meaning there is no overall trend of increase or decrease (does not include unit roots).
2. Unstable Chains: Chains whose normal is constantly changing, either expanding or diminishing (contains unit roots).

To estimate the ARDL model, the following steps can be followed:

Testing the time series stability and determining the integration order. Various methods (tests) can be employed for this test,

and the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests have been selected. In practical experimentation, reliance is placed on the Schwartz Information Criterion (SIC) to choose the best criterion for the stability test.

Initial testing of the short-term ARDL model using Ordinary Least Squares (OLS).

Conducting a test to determine whether there is a long-run cointegration relationship using (the Bound Test) in the (ARDL) sample, (Gebrehiwot, 2014: 70).

Estimating long-term and short-term coefficients (error correction model) using the following estimable form (Pradhan, R., et al., 1392: 914):

$$\Delta(Y_t) = c + \beta\lambda Y_{t-1} + \beta X_{t-1} + \sum_{i=1}^{n} a_1 \Delta((Y)_{t-1}) + \sum_{i=0}^{m} a_2 \Delta(X_{t-i}) + \mu_t$$

whereby:

Δ: represents the first difference

c: represents the constant limit

m, n: indicates the highest limit of the time delay periods of the independent variables and the dependent variable.

λ: indicates the coefficient (sign) of error correction (correction or adaptation) ((−1) Eq Coin), which is a percentage of Defects of a short-term type that can be corrected in a unit of time so that the situation returns to balance. There are two conditions for this coefficient (sign) to correct short-term defects, which is a negative value and mean It is a sufficient and necessary condition.

β: indicates long-term coefficients (signs).

α_1 ... α_2: sample of long-term coefficients (signs)

i: Time

μ_t: represents the random error

5. Testing a model for the absence of autocorrelation issues through the Breusch-Godfrey Serial Correlation LM Test.
6. Performing a non-comparative contrast test using the Heteroskedasticity Test: Breusch-Pagan-Godfrey.
7. Ensuring the robustness and stability of the model through the CUSUM Squares test (Gebrehiwot, 2014: 70).

Overview of Study Variables Using the ARDL Model

In this analysis, a multiple regression model has been employed as a dependent factor for capital allocation. (Figure 1) In this model, independent variables such as agricultural production, gross domestic product (GDP), and rejuvenated regions are considered to be influential. The general form of this model is outlined as follows:

$$b_3x_3 + u_i + Y_2 = a_0 + b_1x_1 + b_2x$$

In the given context:

Y represents the dependent variable (investment allocation).

The independent variables are:

X_1 represents the value of agricultural products (in million dinars).

X_2 represents the gross domestic product (in million JD).

X_3 represents the revitalized areas (in dunums).

Ui represents the random variable (error constraint).

Table 1: Extended Dickey-Fuller Test Results for Time Series Stability

The expanded test otDikj Foler (ADF)									
Vector	Testing	At the nrst difference				At the levei			
		x,	x.		Y	x,			
inten-upting	t-Statistic	82149	7.c»ss	69232	7.4122	3.S61		25732	1.6032
	Prob.t	o.oooo	o.oooo	o.oooo	o.oooo	0.0130	o.SIS7	0.1107	0.40
	Stationanty								
Segmentation and general direction	t-Statistic	S.0754	6.955?			3.901	3.752		20066
	Prob.t	o.oooo	o.oooo	o.oooo	o.oooo	0.0561	00340	o.S402	
	Stationarity							No	NO
Wlthout cutting and general direction	t-Statistic	83751	64268	69308	7.966	0.7741	0.5937	o.S4S4	05621
	Prob.t	o.oooo	o.oooo	o.oooo	o.oooo	03710	o.S3S4	o.S277	0.4639
	Stationanty						no	No	NO
Source Prepared by the researcher dependmg on the outputs of the Vogam (Evtews.9) Note C) At a significant levei of 10%. C') at a significant levei of 5%. at a significant levei of (no) is msagntficant.									

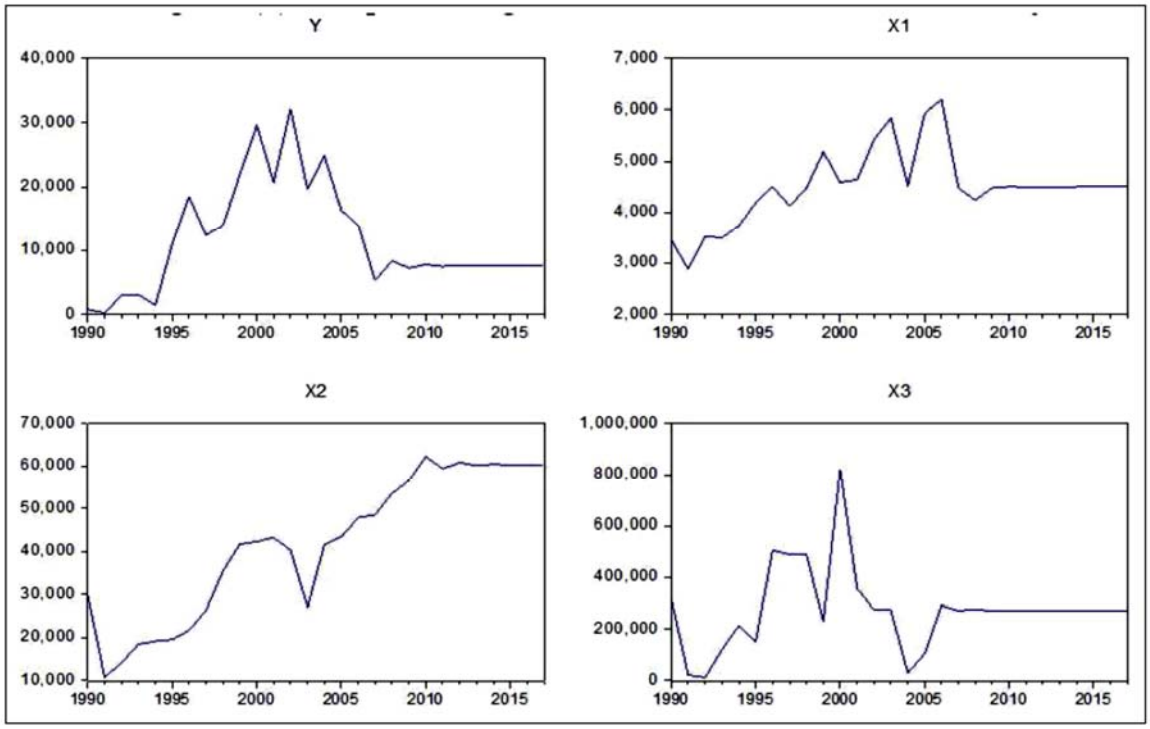

Figure 1: Graphical representation of study variables.

Source: Compiled by the researcher based on the outputs of the Eviews.9 program; Note: The vertical axis represents the dependent variable (Y) and the independent variables (X3, X2, X1) for the variables under study, and for the four figures, respectively, from top left to bottom right, and the horizontal axis indicates the years in the range (1990-2017).

Table 2: Preliminary Results of the ARDL Model for the Variables Under Study.

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y(-1)	-0.685179	0.215918	-3.173324	0.0192
Y(-2)	-1.393726	0.212386	-6.562224	0.0006
Y(-3)	-1.539537	0.186765	-8.243184	0.0002
X1	20.85461	2.272066	9.178702	0.0001
X1(-1)	8.631198	1.559819	5.533463	0.0015
X1(-2)	13.85577	1.690782	8.194888	0.0002
X1(-3)	7.348850	0.960939	7.647572	0.0003
X2	-0.900916	0.151513	-5.946126	0.0010
X2(-1)	-0.013846	0.138087	-0.100269	0.9234
X2(-2)	-0.062415	0.143241	-0.435733	0.6783
X2(-3)	0.210941	0.121067	1.742343	0.1321
X2(-4)	-0.286099	0.070854	-4.037852	0.0068
X3	-0.006645	0.004634	-1.433988	0.2016
X3(-1)	0.019810	0.005500	3.601816	0.0113
X3(-2)	0.043910	0.004600	9.545597	0.0001
X3(-3)	0.015235	0.003969	3.838985	0.0086
X3(-4)	0.056546	0.006026	9.384265	0.0001
C	-164821.1	19586.98	-8.414827	0.0002
R-squared	0.996191	Mean dependent var		13260.78
Adjusted R-squared	0.985399	S.D. dependent var		8072.730
S.E. of regression	975.4744	Akaike info criterion		16.71743
Sum squared resid	5709302.	Schwarz criterion		17.60097
Log likelihood	-182.6092	Hannan-Quinn criter.		16.95183
F-statistic	92.30614	Durbin-Watson stat		2.212851
Prob (F-statistic)	0.000008			

a_0 = constant limit

b_1, b_2, b_3= form parameters

One: Stability Test of Variables:

1. Graphical chart of Time Arrangement: Sometime recently before synonyms subjecting the time arrangement to any test, it is essential to display it graphically over time to get the sort and nature of this dataset. The time arrangement graphical bend is considered an introductory marker of the potential nature of the arrangement. For illustration, on the off chance that this bend portrays an in general slant (upwards or downwards), it demonstrates that the time arrangement is unsteady and changes cruelly over time.
2. Augmented Dickey-Fuller Test (ADF): The results in Table 1 underneath demonstrate that two factors (recovered lands and net national item) are stabilized at a certain level. From a cutter, the presence of a cutter and a common drift at a noteworthy level (5% and 10%) and within the to begin with distinction at a noteworthy level (1%) are put, both within the nearness of a slant and a cutter. Additionally, two factors (investment allocation and agrarian generation) are steady at the primary distinction at a critical level (1%), whether there's a directional and common move or no break and overall trend.

"Step Two: Initial Model Testing (ARDL):

After guaranteeing the steadiness of the time arrangement of factors at the level and within the, to begin with distinction, we estimate the variables under study using Autoregressive Distributed Lag (ARDL). Table 2 shows the results of the initial ARDL model test for the variables under study, indicating an R-squared value of 0.99. This means that the independent variables explain approximately 99% of the observed variations. In the dependent variable;

the remaining 1% represents random errors that the model did not consider. Regarding the overall significance of the model, the statistical value (F) is 92.3 with a significance level of 0.000, which is less than 1%. This implies that the model is significant, and important, and may be relied upon for future predictions, as indicated in the following mathematical equation:"

$$Y = -164821.1+20.85461X_1-0.900916X_2-0.006645X_3$$

$$t=(-8.414827)\ (9.178702)\ (-5.946126)\ (-1.433988)$$

$$R^2=0.996;\ \bar{R}^2=0.985;\ F=92.306;\ D.W=2.212$$

3. Testing the Common Counteraction Relationship and Long-Term Relationship Using the Bounds Test:

Following the short-term testing of the (ARDL) model among the study variables, we examine the bounds to uncover the common cointegration relationship among these variables using the Bounds Test. Table 3 presents the results of the bounds tests to reveal the common cointegration relationship among the study variables. It was found that the statistical value (F) has reached (52.6), exceeding the critical value in the table (5.61) at a significant level of (1%). This signifies a robust common cointegration relationship among the study variables in the long term.

Table 3: Results of the Common Counteraction Relationship Among Study Variables.

K (Number of independent variables)	Value	Test Statistic
3	52.66091	F-statistic
I1 Bound	I0 Bound	Significant level
3.77	2.72	10%
4.35	3.23	5%
4.89	3.69	2.5%
5.61	4.29	1%
Source: Prepared by the researcher depending on the outputs of the program (Eviews.9)		

• Four: Estimation of the Error Correction Model and Short-Term and Long-Term Relationship (ARDL):

After confirming the existence of a long-term equilibrium relationship (common counteraction) among the study variables, the next step is to determine the long-term and short-term relationship between these variables by estimating the error correction model. In the (ARDL) tests, the error rectification parameter (Coint Eq(-1)) is vital, demonstrating the redress of the relationship between short-term and long-term. In case the error redress parameter (Coint Eq(-1)) is negative and critical, it suggests the presence of a common counteraction relationship among the variables, with deviations within the brief term being adjusted or focalizing to the long-term balance values within the same year.

Table 4: Short-Term and Long-Term Relationship and Error Correction Equation Among the Study Variables.

(Short-term relationship) Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	PIDb.
	2933263	0.335197	8.750874	0.0001
	1.539537	0.186765	8.243184	0.0002
D(XI)	20.854613	2272066	9178702	0.0001
D(X1(-1))	-13.855766	1.690782	-s. 194888	0.0002
D(X1(-2))	-7.348850	0960939	-7.647-572	0.0003
D(X2)	-0.900916	0.151513	-5.946126	0.0010
D(X2(-1))	0062415	0.143241	0435733	0.67S3

D(X2(-2))	-0.210941	0.121067	-1.742343	0.1321
D(X2(-3))	0286099	0.070854	4037852	0.0068
D(XA)	-0.006645	0.004634	-1.433988	02016
D(X3(-1))	-0043910	0.004600	-9545597	0.0001
D(X3(-2))	-0.015235	0.003969	-3.838985	0.00S6
D(X3(-3))	-0.056546	0.006026	-9.384265	0.0001
comt Eq(-l)	-4.618442	0.449159	-10.282415	o.oooo
Comteq Y -(10.9757XX1 -0.2279xx2+0.0279xx3 -35687.5967) Correct enor equation				
(Long-term relationship) Long Run Coefficients				
Valiable	Coefficient	std. Error	t-Statistic	Prob.
	10.975656	0222253	49.383535	o.oooo
	-0.227855	0.004630	-49.217800	o.oooo
	0027900	0.001365	20.443710	o.oooo
c	-35687.527	1042.057123	-34.247256	o.oooo
Soume: Prepal?d by the researcher depending on the outputs of the progmm (Eviews_9)				

The table above demonstrates the results of the short-term and long-term relationship and the error correction equation. As indicated for the short-term relationship, the independent variable (X1 agricultural product) shows a significant and positive association with the dependent variable (Y investment allocation). This means that an increase of one unit in the independent variable (X1) leads to a short-term increase in the dependent variable (Y) by (20.85) units. Regarding the relationship between the autonomous variable (X2 net national item) and the subordinate variable (Y investment allotment), it is converse and significant, suggesting that an increment of one unit within the autonomous variable (X2) results in a short-term diminish within the subordinate variable (Y) by (-0.90). The relationship between the free variable (X3 adjusted lands) and the subordinate variable (Y investment allocation) is converse but not significant, indicating that an increment of one unit within the autonomous variable leads to a diminish within the subordinate variable (Y) by (-0.00664), becoming critical after one year. It means that an increase of one unit in the independent variable leads to a decrease of (0.043) in the dependent variable. “In the same way as it is done for the error correction equation."(coinEq(-1) It is negative and critical that the adequate and vital condition be met. This implies that there's a long-term balance relationship between the think-about variables, as shown within the following short-term equation:"

$$Y = -4.618442 + 20.85461X_1 - 0.900916X_2 - 0.006645X_3$$
$$t = (-10.282415)\ (9.178702)\ (-5.946126)\ (-1.433988)$$

Table 5: Results of the Autocorrelation and Heteroscedasticity Test for the Relationship between Study Variables.

Breusch-Godfrey Serial Correlation LM Test			
0.8833	Prop . F	0.128021	F- statistic
0.4858	Prob. Chi-Square	1.443835	Obs*R-squared
Heteroscedasticity Test: Breusch-Pagan-Godfrey			
0.9883	Prob. F	0.252695	F-statistic
0.9030	Prob. Chi-Square	10.01373	Obs*R-squared
Source: Prepared by the researcher depending on the outputs of the program(Eviews.9)			

In the long-term relationship, the independent variable (X1, agricultural product) is directly associated with the dependent variable (investment allocation, Y). An increase of one unit in the independent variable leads to an increase in the dependent variable by (10.9), considering the role of agricultural policy in employing economic production concepts and using economic resources scientifically. This involves examining them to maximize agricultural product volume. Meanwhile, the relationship between (X2, gross national product) and (Y, investment allocation) in the long term is inverse and significant. This implies that an increase of one unit in the independent variable (X2) results in a decrease (-0.22) in the dependent variable (Y). This indicates a reduction in investment allocation due to the impossibility of allocating the determined resources in the plans, the low efficiency of executive bodies, and limited absorption capacity in this sector. Regarding the relationship between the independent variable (X3, reclaimed lands) and the dependent variable (investment allocation, Y), it is direct and meaningful. An increase of one unit in the independent variable leads to an increase of (0.20) in the dependent variable. This suggests that increased investment allocation for the revitalization of agricultural lands results in more reclaimed lands. As explained in the long-term equation below:

$$Y=-35687.527+10.975656X_1-0.227855X_2+0.027900X_3$$
$$t=(-34.2472)\,(49.383535)\,(-49.217800)\,(20.443710)$$

Five: Testing Autocorrelation and Heteroscedasticity in the ARDL Model: The estimated models, using the Breusch-Godfrey Serial Correlation LM Test and the Heteroscedasticity Test (Breusch-Pagan-Godfrey), ensure that there is no autocorrelation issue. At the 5% significance level for the relationship between the research variables. Table 5 shows that the estimated ARDL models for the relationship between the study variables, considering the Breusch-Godfrey Serial Correlation LM Test, are free from autocorrelation issues. This means that we accept the null hypothesis that there is no autocorrelation issue, as evidenced by the insignificant values of Prop. F and, for example, Chi-Square at the 5% significance level. All models and alternative hypotheses are rejected. Additionally, the estimated ARDL models do not have heteroscedasticity issues, and the values of Prop. F and Prob. Chi-Square was not significant at the 5% level based on the Heteroscedasticity Test (Breusch-Pagan-Godfrey).

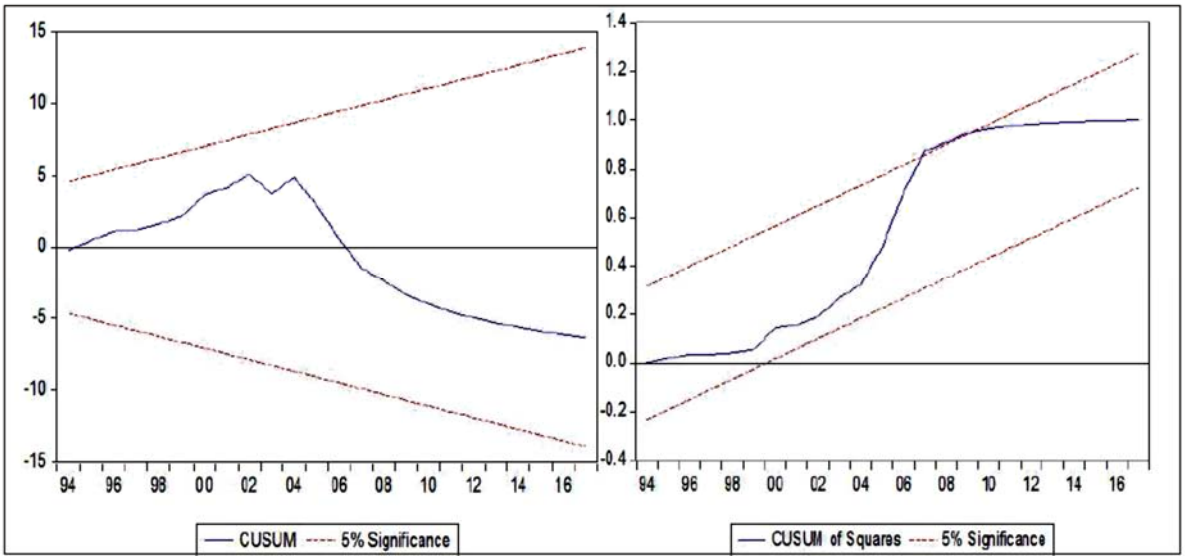

Figure 2: Stability Test Results for the Estimated Model Among Study Variables. Source: Compiled by the researcher based on the outputs of the Eviews 9 program.

Six: Stability Test of Estimated Models Using CUSUM and CUSUM Squares Tests:

The stability test of the estimated ARDL model is a crucial examination to ensure the robustness of the data used in the study against any structural changes. This is performed using the Cumulative Sum (CUSUM) test and the Cumulative Sum of Squares test (CUSUM SQ). These two tests are among the most important in this field as they address two critical issues: detecting whether there is any structural change in the data and assessing the stability and coherence of long-term parameters with short-term ones. Such tests are always associated with the ARDL method. If the graph of both CUSUM and CUSUM SQ tests falls within the critical bounds at the 5% significance level, it implies that all estimated parameters are stable, and there are no structural changes, and vice versa, as illustrated in Figure 2.

Conclusion:

1. The agricultural product variable was positively and significantly related, meaning that with a 1% increase in agricultural product, capital allocation increases by

20.85% in the short term and 9.10% in the long term. This aligns with the economic theory, highlighting the role of agricultural policies in employing productive economic concepts, ensuring the guided use of agricultural economic resources to maximize agricultural product volume.

2. The value of gross national product showed a significant and noteworthy negative impact. A 1% increase in gross national product led to a decrease of 0.90% in capital allocation in the short term and a decrease of 0.22% in the long term. This suggests a reduction in capital allocation due to the inability to meet the allocated budget in projects, low efficiency of executive bodies, and limited capacity in this sector.
3. The revitalized region variable exhibited a negative and statistically insignificant effect in the short term but became significant one year later. Capital allocation decreased by 0.043% in the short term, and in the long term, it had a positive and significant impact consistent with economic logic. Increased capital allocation for agricultural land recovery led to an increase in revitalized areas.
4. The error correction equation was found to be negative and significant, indicating the existence of a long-term equilibrium relationship between the studied variables. It has sufficiently met the necessary conditions, confirming the presence of a long-term equilibrium relationship among the study variables.
5. The time series values of the variables were found to be unstable with the Augmented Dickey-Fuller test. First differences should be used to stabilize them before analysis. It was revealed that a strong co-integration relationship exists among the study variables in the long term, validating the selection of independent variables influencing capital allocation.

Based on the findings of this study, the following recommendations are suggested:

1 .It is essential to embrace modern technological styles in meeting the requirements of modern production, such as the utilization of innovative irrigation systems, alongside expanding the use of mechanization, fertilizers, pesticides, and various high-ranking agricultural practices. This plays a pivotal role in increasing the agricultural productivity rate.

2 .Reclaiming agricultural lands, desalinating them, and establishing irrigation networks and water drainage systems significantly contribute to expanding arable lands and, consequently, enhancing crop yields.

3 .Conduct technical and economic feasibility studies before initiating investments and cultivating salt-resistant varieties. Some crops exhibit resistance to soil salinity, making them suitable for cultivation in such soils.

4 .Increase investment in agricultural revitalization by allocating more funds to the public sector in the agricultural industry and employing them in projects that serve the improvement of agricultural lands, such as land reclamation and the development of rural roads, rural electrification, and other projects contributing to the agricultural sector's development.

5 .Utilize organic soil enhancers to enhance the chemical and physical properties of the soil, conduct chemical and laboratory analyses, implement soil ventilators, and evaluate their effectiveness.

6. Have knowledge of soil classification and assess lands before embarking on agricultural investments, ensuring the appropriate and low-salinity use of irrigation water.

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"Conflict of Interest:
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None.

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