

# The Impact of Economic Spending on Investment in Iraq for the Period 2005-2020

Ali Shawket Alobaidy

Department of Accounting, Cihan University-Erbil, Kurdistan Region, Iraq

**Abstract**— The Iraqi agricultural sector suffers from a package of challenges that require the state to intervene, direct and indirect, financial, informational and technological support, and direct more investments for the purpose of its development and facing those challenges. Public and private direct investments witnessed a significant decline due to a number of economic, social and political factors, which led to a deterioration in production and a decrease in its contribution to the gross domestic product. Iraq became dependent on global markets to provide its food security at very high rates, which constitutes a threat to national security. The problem of research is summarized by the fact that government and private agricultural investments are weak in Iraq, which negatively affected the overall agricultural development process, given that investment is the driving dynamic of economic and social activity. However, the volume of governmental and private investments is still very low, due to the fact that the agricultural environment repels investment due to a group of factors, including the destroyed infrastructure, administrative and financial corruption, the legal environment, agricultural land problems, environmental problems, desertification, water, poor performance of financial, monetary and commercial policies, stalled development, and so on. As a result, the deterioration of agricultural production, which led to Iraq losing billions of dollars annually to import food, and the accompanying import of damaged, adulterated or expired food. This research studies the impact of two important factors affecting the subject of investment in the agricultural sector, namely the volume of government investment spending and the amount of loans granted to farmers during the period 2005-2022.

**Keywords**—Economic spending, Agriculture, Investment, Iraq.

## I. INTRODUCTION

Investment plays an important and prominent role in expanding the capabilities of society and increasing and developing productive capacities in various fields in order to develop the economic sectors in a way that serves the process of growth and development that faces many obstacles that are difficult for investors to overcome, in addition to the weakness of the flexibility of the productive apparatus of economic sectors, especially the agricultural sector, which needs to huge capital due to the high coefficient of capital to output in the

early stages of economic development.

Investment policy for the agricultural sector in Iraq is concentrated on the following:

Giving advanced priority in the country's investment policy to the agricultural sector, both plant and animal, and securing the necessary water for agricultural uses. The investment program of the plan must distribute the investments of the agricultural sector fairly according to the governorates, in a manner commensurate with the comparative advantage of each governorate and the agricultural capabilities available in it, and invest these capabilities and comparative advantages in a manner efficient and balanced.

Supporting the private sector to invest in the agricultural sector, as follows:

Encouraging and supporting the local and foreign private sectors to invest in integrated plant and animal production projects.

Encouraging the establishment of shareholding agricultural companies through the development of capital markets.

Adopting credit policies that encourage the private sector to rehabilitate its stalled projects and to establish new ones. (Khalkaf, 2014)

In the long run, returns and costs must consider the time factor and the use of an appropriate cost of invested capital. (Ronald, 2008)

### **Problem of research**

The problem of low agricultural production in Iraq is due to a weakness in agricultural investment, which leads to an impact on economic development policy, which in turn leads to a food security deficit that is caused by public investment spending and government loans. These factors were the reason for the decline in agricultural production and the extent to which it contributed to the formation of national income in Iraq.

### **Research hypothesis**

Public investment spending and government loans have a significant impact on agricultural investment.

### **Research objectives**

The research aims to identify agricultural investment in Iraq and its role in achieving the required agricultural development, and to identify trends in the development of agricultural loans, public spending, and total capital formation, using statistical analyses.

### **Importance of research**

The importance of agricultural investment lies in the process

of economic development, which is linked to government lending and public spending in increasing agricultural production and growth rates.

## II. LITERATURE REVIEW

Al-Hayali presented an econometric study on the growth of national income in Iraq in which he showed that the gross domestic product had an impact on national income of up to 100%. (Al-Hayali,1991)

Wadi, used the standard analysis of the role of agricultural investment in the growth of agricultural production for the years 1970-1990 using statistical tools to estimate the total investment function in the agricultural sector. (Wadi, 1996)

Zaidan conducted a study to identify the impact of agricultural investment on the growth of the agricultural sector for the period 1980-2000. The study concluded that there is a negative relationship between the growth rate of agricultural production and agricultural investment. (Zaidan,2005)

Al-Wadi presented a study aimed at identifying the impact of investment allocations and government lending on the total agricultural investment in Iraq for the period 1974-1994, in which he showed that there is an imbalance in the existing economic policy, foremost of which are spending and lending policies (Wadi,2007). A study by Massoudi & Ahmed, (2018) stated that there is a statistical relationship between the government investment and the private investment.

Khalaf (2014) concluded that there is a package of agricultural challenges in Iraq represented by land problems, environmental pollution, water and desertification. The low investment, the problems of the technology and infrastructure, and the weak effectiveness of macroeconomic policies. In addition to the financial, monetary and commercial problems, the Iraqi agricultural investment environment is repelling to

investment for economic, legal and legislative reasons.

Al-delawi, (2015), published a research proved the ability to activate accounting information system in light of electronic trade in business organizations in Iraq. Mohammed (2018) stated that the agricultural loans play an important role in the growth and stimulation of agricultural investment opportunities in Iraq, as well as the sustainability and development of existing agricultural projects. The agricultural sector is characterized by the specific conditions of seasonal production and fluctuations in production conditions, which makes the situation of uncertainty more acute in this sector, the need for any agricultural project for financing is urgent and continuous if it wants to continue production and development at all stages.

Albujari, presented research aims to study the influence of the most important factors that reflect on the agricultural investment in Iraq (1995-2015) and its impact on the agricultural sector in general. For this, the research is based on the hypothesis that the fluctuation and decline in agricultural investment to several economic factors vary in their effect. According to this hypothesis. (Albujari, 2019)

## III. METHODOLOGY

Data of research

Table No. (1) shows the data related to agricultural investment in Iraq, along with the volume of public spending and agricultural bank loans provided to farmers, at constant prices for the period 2005-2020, in Million Iraqi Dinars.

Table (1): Public spending, Banking loans, and Agricultural Investment in the Iraqi agricultural sector at constant prices for the period (2005-2020) in Billion Iraqi Dinars

Year	Agricultural Investments (Y)	Agricultural Loans (X <sub>1</sub> )	Public Investment Spending (X <sub>2</sub> )
2005	51840	99517	51760
2006	19430	229764	19350
2007	107740	319164	107670
2008	92360	391929	92280
2009	102850	167284	102790
2010	138690	249138	138620
2011	287400	545267	186620
2012	228200	554495	227570
2013	119150	340445	119000
2014	11700	230478	10800
2015	71030	18420	560
2016	288900	184222	213700
2017	301100	432444	300000
2018	221700	471000	210700

2019	220400	468900	225000
2020	376800	574300	375920

Source:

Ministry of Planning, Iraq

It is clear from the table that agricultural investments fluctuated during these years, the lowest in 2014, perhaps due to the abnormal conditions the country went through, but it rose again in the following year and then almost stabilized in subsequent years. As for public spending data, it generally increased during the first period of the research years, then declined sharply in the years 2014 and 2015, and returned to rise in the subsequent years. Thus, the data of loans granted to investors, which rose in the first four years, then decreased in the four years that followed, and returned to rise in the subsequent years. This indicates that the conditions experienced by the Iraqi agricultural sector in general had a significant impact on investors' desire to obtain loans and invest in agricultural production.

#### IV. STATISTICAL ANALYSIS

Multiple linear regression is about finding a mathematical equation that expresses the relationship between variables and is used to estimate previous values and to predict future values. Therefore, it is used to predict the changes of the dependent variable that is affected by several independent variables. So multiple linear regression is used to explain the relationship between a continuous dependent variable and two or more independent variables. Independent variables can be continuous or discrete.

The linear equation in the multiple linear regression is:

Where:

$Y$  - is the dependent variable (The Agricultural Investments),

$\alpha$  - is the constant or intercept value,

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + e$

$\beta_1$  - the slope of  $y$  regression on the first independent variable (The Agricultural Loans),

$\beta_2$  - the slope of  $y$  regression on the second independent variable (The Public Investment Spending). (Kadhim, & Suslim, 2002 p.17-90).

Discussing the results

By using the SPSS packages for statistical analysis, the following equation is given:

$Y = 15496.278 + 1.897 X_1 + 1.237 X_2$

$t = (1.205) \quad (3.602) \quad (7.958)$

The results of the statistical analysis indicate that 89.8% of the changes in agricultural investments are explained by the independent variables, which are the volume of loans granted, and the public investment spending, and that 11.2% of the changes are due to other factors that were not considered.

The calculated value of ( $t=1.205$ ) of the Granted Loans variable is greater than the tabular value at a significant level

of 1%, which indicates a significant relationship between the volume of loans and the volume of agricultural investments. An increase in loans by 100% leads to increase in agricultural investments by 189.7%, all other variables are constant.

Also, the calculated value of ( $t=7.958$ ) of the Public Investment Spending variable is higher than the tabular value at a significant level of 1%, which indicates a significant relationship between the volume of public investment spending. An increase in the public investment spending by 100% will leads to increase in agricultural investments by 123.7%, all other variables are constant

The significance of the function as a whole has been proven at a statistical level of 1% based on the F-test (12.978). The value of Durbin-Watson ( $dw=1.937$ ) indicates that there is no autocorrelation problem in the estimated model at a level of 5%, as the calculated value is higher than  $du$  (1.740) and less than  $du-2$  (2.260).

#### V. CONCLUSIONS

Iraq suffers from a widening food gap as a result of the deterioration of agricultural production on the one hand, the increase in demand due to the increase in population, the change in consumption pattern and the increase in purchasing power on the other hand, which revealed on the dangers of food security in Iraq.

Investment spending and agricultural loans positively affect agricultural investment. The results of the statistical analysis showed that an increase in investment spending by one unit leads to an increase in agricultural investments by 1%. An increase in agricultural loans by one unit leads to an increase in agricultural investments by 100%.

Recommendations

1. The need for the state to legislate several laws necessary to activate the investment law, such as anti-dumping laws, protection of national product, export support and trade laws.
2. The need for the state to provide all forms of support to research centers to produce the technological package, given that production
3. Productivity is a dependent variable for the independent variable represented by the technological factor.
4. The need for the state to restore the agricultural infrastructure, such as electricity, irrigation projects, drainage, dams, reservoirs, and roads.rural areas, reservoir energies, combating desertification and land reclamation.
5. Work by all means possible to eliminate the phenomenon of administrative and financial corruption.
6. Improving the performance of financial, monetary and commercial policies in a way that serves the

- agricultural economy.
7. Creating a state of political stability while providing a state of security.
  8. The need to allocate an annual percentage of the state budget of not less than 5% for the agricultural sector.

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