

Evaluate the Investment Efficiency in Agricultural Sector against other Economic Sectors

Dr. Mohy Zeen Al-Abedeem Mohamed Darwish

Researcher - Agricultural Economics Research Institute, Agricultural Research Center, Egypt.

Email: dr_mohyconsult@yahoo.com

Abstract: Investment is an important factor affecting the growth performance of the economy sectors. Effective investments can improve the efficiency of production resources using, and make an intensive economic growth of the sector as well as to increase the production capacity. The object of the paper is to present indicators designed to measure the effectiveness of investments at the sector level and assess the efficiency of investment in the agricultural sector comparing with other economic sector in Egypt for a period of twenty years. Measuring the effectiveness of investment is different national, public, private and overall sectors level. On the basis of an analysis of available scientific tools, a system of indicators measuring investment effectiveness at sector level was setup. Input data for the analysis was obtained from database of the Central Agency for Public Mobilization and Statistics, website, and Ministry of Planning and Economic Development, website. With annual data on selected economic indicators in different economic sectors for a period of years (2000/2001-2019/2020). Data was used in calculation of individual indicators for evaluating investment effectiveness. Results of analysis showed an insufficient investment in agricultural sector in Egypt. The effects of the implemented investments occur sufficiently in the most important performance indicators.

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1. Introduction:

Although investment is regarded as a key force of economic growth, little studies has been done to measure the Egyptian investment efficiency. Investment plays the main role to face the increasing demand upon development requirements. It is also one of the essential means of implementing comprehensive development programs overall economic sectors at the state level, which distributes investment to each sector for generating appropriate returns. This is through implement the suitable economic programs, which increases the production capacity to decrease imports and increase exports, as well as adding a new employment opportunities to solve the problem of unemployment, improving the trade balance and balance of payments so, increasing the national income, which reflect the high in real income level of individuals.

The problem of the study:

The volume of available investments is one of the most important components of the GDP for implementing, succession of agricultural development programs and its efficient use, but there is a relative decrease in the volume of investments directed to the agricultural sector (public and private sectors), as a result of the imbalance in the volumes and distributed of these investments, which is not commensurate with the importance and magnitude of the sector's contribution to GDP and its role in promoting agricultural development in particular and economic development in general,

compared with other economic sectors, which affected negatively on the performance of the Egyptian agricultural sector and the rates of economic development.

The object of the study:

To identify the development of return on investment in agriculture sector compared with the other economic sectors, through studying the development of national investments implemented in economic sectors, identify the relative importance of national investments implemented, and studying the return of the pound invested in agriculture and other economic sectors. In addition to the share of the agriculture public sector investments and gross domestic product (GDP), to find out the actual reasons for the decrease of investments in the agricultural sector.

2. Methodology and sources of Data:

In order to achieve the objectives, the regression analysis has been used to explain and describe some economic variables to elicit and interpret results, so mathematical and statistical methods are used to determine the nature of the data and research objectives, as linear regression models of the most important variables related to the subject matter, the use of simple regression models in their various forms. (linear, half logarithmic and double logarithmic) of economic variables has been done, for choosing the best of it

according to economic and statistical logic, as well as the return on the invested pound. The research was based on data published on the website of Ministry of Planning and Economic Development, Ministry of Agriculture and Land Reclamation, the Central Department of Economic Affairs, the Central Agency for Public mobilization and Statistics, and other sources mentioned in its place.

Discussion of Results:

1- The national investments carried out in the most important Egyptian economic sectors:

This includes the study of the development of national investments in commodity economic sectors, including investments in public, private and total of the two sectors, including agriculture, industry, Quarrying and mining, petroleum and its products, electricity water, natural gas, as well as the productive services sector, which includes construction, transport, communication and storage.

Table (1) Indicate linear regression of the implemented national investments in Egypt During the period (2000/2001-2019/2020) in which investments in the public, the private and the total of the two sectors, are showed an increase in statistical mean rates of about 1168.7, 614.4, 1783.1 million pounds per year. As for the industry and mining sector, there were a statistically significant increase in national investments carried out in the public sector estimated at 1810.3 million pounds per year, and the private sector estimated at 2403 million pounds per year, and about

4213.5 million pounds per year, for the total public and private sectors, during the period of the study.

In examining the development of national investments in the petroleum sector and its products, it was found that investments in the public sector increased by 916 million pounds annually, which were statistically significance, and that investment in the private sector increased by 378.2 million pounds annually. The increase is statistically significant estimated at 0.1 %.

Investments in the electricity (public sector) also show a statistically significant increase of 4292.1 million pound per year. For the private sector, there is only limited investment. and for the total public and private sectors, the increase in investments carried out is estimated at LE5273.4 million per year, which is statistically significant at 0.1%.

As for the estimated directional relationships of the construction and building of the public, the private and the total sectors together, the public sector has increased by about LE1308.2 million annually, and about LE542.2 million, respectively, for both the private sector and the total sectors, this is statistically significant at 0.1%.

As for the estimated trend relations of national investments in the transport and storage sector during the study period, the increase in investments allocated to the public sector was estimated at LE 2896.6 million per year, the private sector at LE 1213.4 million per year, and the total of the two sectors increased by LE 4110 million per year, and their morale has been statistically significant at 0.1%.

Table (1) Indicate linear regression of the implemented national investments in Egypt During the period (2000/2001-2019/2020)

General trend equations	R ²	T
Agriculture (public) $Y_i = -4487.5 + 1168.7 X_i$ (- 1.19) (3.71)	0.43	3.71
Private sector $Y_i = 880.9 + 614.4 X_i$ (0.62) (5.20)	0.60	5.20
Total Public and Private $Y_i = -3606.6 + 1783.1 X_i$ (- 0.72) (4.28)	0.50	4.28
Industry (Public) $Y_i = -8606.5 + 1810.3 X_i$ (- 1.49) (3.75)	0.44	3.75
Private $Y_i = -2727.6 + 2403.3 X_i$ (- 0.64) (6.71)	0.71	6.71
Total Public and Private $Y_i = -11334.2 + 4213.5 X_i$ (- 1.45) (6.48)	0.70	6.48
Petroleum and its products (public) $Y_i = 1027.6 + 916 X_i$ (0.31) (3.28)	0.37	3.28
Private $Y_i = 5920 + 378.2 X_i$ (2.77) (2.12)	0.20	2.12
Total Public and Private $Y_i = 6947.6 + 1294.2 X_i$ (1.63) (3.63)	0.42	3.63

Electricity (public) $Y_i = -17884 + 4292.1 X_i$ (-1.55) (4.45)	0.52	4.45
Private $Y_i = -6092.7 + 981.3 X_i$ (- 1.19) (2.29)	0.23	2.29
Total Public and Private $Y_i = -23976.7 + 5273.4 X_i$ (- 1.84) (4.86)	0.57	4.86
Construction (public) $Y_i = -7948.1 + 1308.2 X_i$ (- 1.86) (3.66)	0.43	3.66
Private $Y_i = -1425.1 + 542.2 X_i$ (- 1.10) (5.02)	0.58	5.02
Total Public and Private $Y_i = -9373.3 + 1850.4 X_i$ (- 1.75) (4.13)	0.49	4.13
Transport and Storage r (public) $Y_i = -7941.2 + 2896.6 X$ (- 1.34) (5.85)	0.66	5.85
Private $Y_i = -2024.5 + 1213.4 X_i$ (- 1.10) (7.87)	0.78	7.87
Total Public and Private $Y_i = -9965.8 + 4109.9 X_i$ (- 1.37) (6.78)	0.72	6.78
Water sector (public) $Y_i = 1055.5 + 364.8 X_i$ (1.27) (5.24)	0.60	5.24
Natural gas (public) $Y_i = -4213.6 + 1161.6 X_i$ (- 1.10) (3.51)	0.41	3.51
Private $Y_i = -7747 + 3406.9 X_i$ (- 1.17) (6.17)	0.68	6.17
Total Public and Private $Y_i = -11960.6 + 4568.4 X_i$ (- 1.64) (7.49)	0.76	7.49

Where: Y: expresses the national investments made in each sector. i: expresses years 1, 2, 3, ... N, x_i: expresses the variable of time .

Source: Collected and calculated from: Ministry of Economic Development website. www.mop.gov.eg.

Where:

Y_i expresses the national investments made in the private sector. X_i Expresses the national investments carried out in the public sector. R²: Express the coefficient of determinate.

The water sector has no private sector investment, and the increase in public sector investments has been found to be about LE 365 million per year. The increase in gas investment to the public sector has been shown at an annual rate of about LE1161.6 million. As for the private sector, it has been estimated at LE3407 million per year, and the total number of sectors has increased by about LE4568.4 million per year.

2- The relationship of the implement investigation between public & private sectors in the agricultural:

In order to study the relationship between investments carried out in the public and the private sector for agriculture during the period (2000/2001-2019/2020), a positive relationship was found between the two variables, increasing at rate of 0.403 million pounds, it was statistically significant increase 0.1%, as in the following equation:

$$Y_i = 4198.9 + 0.403 X_i$$

$$(7.140) (8.80)$$

$$R^2 = 0.81$$

Table (2) Indicate the most important regression models in half logarithmic form without lag period, and with two and three years lag in national investments where the results of the analysis are shown for a two-year lag (N-2), three-year lag (N-3), The best models used, based on the value of R² coefficient, are the half - logarithmic model of the full series, with a determination factor of about 0.56, and two - years lag of about 0.66, and, in the case of three-years lag, a determination factor of about 0.67.

Table (2): the most important regression in half logarithmic form for national investments implemented in total public and private sectors(2000/2001-2019/2020)

General trend equations	R ²	T
Image half logarithmic (full) Login $Y_i = 3.65 + 0.0386 \text{ Log } X$ (37.99) (4.82)	0.56	4.82
Image half logarithmic (2-year lag) Login $Y_i = 3.60 + 0.0487 \text{ log } x_{n-2}$ (38.3) (5.61)	0.66	5.61
Image half logarithmic (three-year lag) Login $Y_i = 3.61 + 0.0522 \text{ Log } x_{n-3}$ (37.0) (5.49)	0.67	5.49

Source: Collected and calculated from: Ministry of Economic Development website. www.mop.gov.eg.

3 - The relative importance of the national investments carried out in the agricultural sector against the relative average of the rest of the economic sectors:

Studying the relative importance of national investments in agriculture compared with relative importance of the rest of economic sectors during the period (2000/2001-2019/2020).

Table (3) indicated that the relative importance of the agriculture sector fluctuated between a minimum of 1.9 % in 2016/2017 and maximum about 14.2 % in 2001/2002, with an average of about 5.8 %.

As shown in the table, the overall relative importance of the rest of the economy fluctuated from a minimum of 3.35 % during 2016/2017, and maximum of about 7.16 % during 2008/2009, with an average of about 6.12 %.

Table (4) indicated that the relative importance of the agriculture sector for the first period (2005/2006 - 2009/2010), was 4.2 %, industrial and mining 14.4 %, petroleum sector and its products 10.8 % electricity sector 6.4%, construction sector 2.0%, transport and storage 11.7 %, water sector 3.2%, natural gas sector 13 %, of total investment.

Compared the first period (2005/2006-2009/2010) with the second period (2010/2011 - 2015/2016), it found that the relative importance decreased overall sectors.

According to the third period (2016/2017- 2019/2020), the relative importance of investments had increased in agriculture, industry, electricity, construction and transporter & storage sectors. While it decreased in petroleum and its products, water sector and natural gas sector.

Table (3): the relative importance of national investments in agriculture And other economic sectors in Egypt during (2000/2001-2019/2020)

Years	%Agriculture	% other sectors
2000/2001	12.9	5.64
2001/2002	14.2	5.68
2002/2003	9.4	5.62
2003/2004	9.5	5.48
2004/2005	7.7	5.72
2005/2006	6.9	6.39
2006/2007	5.0	6.47
2007/2008	4.0	6.99
2008/2009	3.5	7.16
2009 / 2010	2.9	7.15
2010/2011	3.0	6.32
2011/2012	2.2	5.28
2012 / 2013	3.5	5.87
2013 / 2014	4.4	5.68
2014 / 2015	4.0	5.36
2015 / 2016	2.4	3.62
2016 / 2017	1.9	3.35
2017/2018	6.7	6.33
2018 / 2019	5.3	5.47
2019/2020 *	6.0	5.86
Average period	5.8	6.12

Source: Ministry of Planning and Economic Development website, www.mop.gov.eg.

*Appreciation.

4- The return of pound invested on the national investments implemented in the agricultural sector against the rest of the economic sectors:

The pound returns used to know how efficient the economic sectors in achieving a higher return than other sectors. It calculated from the following equation:

Return of the pound invested = GDP per sector / total investment in the same sector.

Refers to the table number (5), it indicated a fluctuation in return of pound invested in the agricultural sector (public sector), ranged between 0.13 pound in 2017/2018, and 0.82 pound in 2012/2013, with an average by 0.44 pound.

It also indicated a fluctuation of returns of pound invested in the rest of the economic sectors (public sector), ranged between 0.07 pound in 2017/2018, 0.53 pound in 2016/2017, with an average 0.23 pound.

As for private sector it showed that return of the pound invested in the agricultural sector 0.11 pound in 2001/2002 and 0.78 pound in 2011/2012, with an average of 0.32 pound.

The return of pound invested in the rest of the other economic sectors in (private) fluctuated between 0.05 pound in 2007/2008 and 0.22 pound in 2017/2018 with an average of 0.12 pound the period of the study.

Table (6) indicated the return of pound invested in national investments implemented as average in three periods, (2005/2006 – 2009/2010), (2010/2011-2015/2016) and (2016/2017-2019/2020), the average return on pound invested in construction (public sector) has increased from about 0.53 pound in first period, to about 0.62 pound during the second period, and decrease to about 0.11 pound during the third period. While the average return of pound invested in private sector in national investments increased from about 0.13 pound during the first period, to about 0.29 pound during the second period, it fell to about 0.23 pound during the third period.

As for the agriculture, the average pound return for the public and private sectors increased during the first and second periods, while it fell to about 0.17 pound and 0.28 pound for the public and private sectors, respectively, during the third period. As for industry and mining also showed that the average pound return increased during the first and second periods, from about 0.30 pounds to about 0.71 pounds, and then decrease to about 0.20 pound during the third period, this average has increased in the private sector overall the three periods to 0.07, 0.13, 0.17 pound, respectively.

As for the petroleum sector and its products, it found that the average return of pound invested in the public sector decreased during the first period from about 0.07 pounds, to about 0.06 pounds during the second period, and increased to about 0.16 pounds during the third period. The average in the private sector decreased during the first period from about 0.084 pounds, to about 0.083 pounds during the second period, and increased to about 0.23 pounds during the third period. In natural gas sector the average pound return on national investments in the public sector was increased from 0.18 pounds during the first period, to 0.20 pounds during the second period, and to 0.10 pounds during the third period. The average in the private sector during the first period was 0.04 pound, decrease to 0.05 pound during the second period, and 0.04 pound during the third period.

As for electricity, the average of pound return on national public sector investments increased from 0.1 pounds during the first period, to 0.2 pounds during the second period, and then fell to 0.08 pounds during the third period. The average in the private sector increased from zero during the first period, to about 0.23 pound during the second period, and then to 0.04 pound during the third period. The average pound return on national investments in water public sector has increased overall the three periods, 0.06, 0.2, 0.4 pound, respectively..

Table (4): The relative importance of the national investments carried out in the most important economic sectors in Egypt for the average of three periods (2005/2006 - 2009/2010), (2010/2011 - 2015/2016), (2016/2017 - 2019/2020) (Value in million pounds)

Sectors	Item	Agriculture	Industry And mining	petroleum And its products	Electricity	Construction Construction *	Transport Storage *	Water	Natural Gas	Average Investments College (Million pounds)
(2005 / 2006) - (2009 / 2010)	Value	7502.6	25840.1	19387.8	11544.8	3585.5	21127.7	5750.0	23434.8	179916.4
	%	4.2	14.4	10.8	6.4	2.0	11.7	3.2	13.0	
(2010 / 2011) - (2015 / 2016)	Value	10318.1	29741.6	31583.6	16283.2	4820.3	29956.7	5757.1	36058.2	333739.3
	%	3.1	8.9	9.5	4.9	1.4	9.0	1.7	10.8	
(2016 / 2017) - (2019 / 2020)	Value	40933.2	80676.6	21334.2	111082.2	36607.6	82652.6	7087.3	88300.4	840343.3
	%	4.9	9.6	2.5	13.2	4.4	9.8	0.8	10.5	

Source: Collected and calculated from Data: Ministry of Planning and Economic Development Website. www.mop.gov.eg.

* The construction sector includes transport and storage within production services.

** includes agriculture, industry, mining, oil and its products, electricity and natural gas.

The average return on pound invested in public sector in transport and storage increased from 0.3 pound during the first period, to 0.5 pound during the second period, and then fell to 0.4 pounds during the third period.

The average in private sector of return of pound invested in the first period was 0.4 pound increased to about 0.8 pound during the second period, and to about 0.9 pound during the third period. From the above, it is clear that the return on pound invested in the agriculture sector was second, as shown in table (6), and that the third period showed a decline in the pound invested in the majority of sectors as a result of post-revolution conditions during the period (2016/2017-2019/2020).

Table (5): The return on pound invested in the agricultural, and other economic sectors (public and private) in Egypt during (2000/ 2001-2019/ 2020) (value in pounds)

The year of	Agriculture (the public)	the rest of the economic sectors (public)	Agriculture (Privet)	the rest of the economic sectors (privet)
2000/2001	0.20	0.16	0.12	0.08
2001/2002	0.17	0.15	0.11	0.09
2002/2003	0.22	0.22	0.22	0.10
2003/2004	0.21	0.28	0.19	0.17
2004/2005	0.26	0.21	0.19	0.11
2005/2006	0.36	0.23	0.19	0.06
2006/2007	0.47	0.16	0.21	0.06
2007/2008	0.48	0.18	0.26	0.05
2008/2009	0.59	0.19	0.39	0.06
2009/2010	0.66	0.16	0.49	0.07
2010/2011	0.58	0.22	0.53	0.07
2011/2012	0.79	0.32	0.78	0.21
2012/2013	0.82	0.35	0.44	0.14
2013/2014	0.71	0.36	0.39	0.19
2014/2015	0.63	0.32	0.40	0.17
2015/2016	0.70	0.19	0.31	0.14
2016/2017	0.63	0.53	0.34	0.11
2017/2018	0.13	0.7	0.26	0.22
2018/2019	0.15	0.18	0.27	0.15
2019/2020*	0.14	0.09	0.27	0.20
Average period	0.44	0.23	0.32	0.12

Source::website of the Ministry of planning and economic development www.mop.gov.eg . * recitation App .

5 – The development of return on pound invested in economic sectors and in (GDP):

Table (7) indicates the development of return on pound invested in the economic sectors (public. Private, the two sectors) and (GDP) during Period (2000/2001 - 2019/2020), the return on the pound invested in agriculture were 1.04, 1.12, 0.5 pound and 22914.

The returns on the pound invested in industry and mining sector were 1.32, 0.17, 0.14 pound and 39480 million pounds annually.

As for the petroleum sector and its products, the returns on pound invested were 0.08, 1.51, 0.32 pound and 10817 million pounds annually.

Regard to the electricity sector (public and private and the total) the return on pound invested were 0.4, 0.74, 0.06 pound respectively, while the gross domestic product (GDP) was 4137 million pounds annually.

The return on pound invested in construction sector, were 0.26, 1.10, 0.33 pound and 14493 million pounds annually.

As for the transport in public & private sector the total of two sectors and Gross domestic product (GDP) were 0.09, 0.10, 0.06 pound and 11169 pounds, annually respectively.

As for water (just public sectors and GDP the annual rate were 0.14pound and 1461 million pounds annually.

As for natural gas sector the returns were 0.017, 0.074, 0.033 pound and 13079 million pounds annually.

Table (6): The average return on the pound for national investments implemented in the economic sectors as an Average of the three periods (2005/2006 - 2009/2010), (2010/2011 - 2015/2016), (2016/2017 - 2019/2020) (million pound)

Sectors The average period	Agriculture and land reclamation sector				Industry and mining sector				The petroleum sector and its products				Electricity sector			
	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)
The first period: (2005/2006) - (2009/2010)	0.51	0.29	0.19	139970	0.30	0.07	0.06	142197	0.07	0.084	0.30	54333	0010	0.0	0.010	11641
The second period: (2010/2011) - (2015/2016)	0.69	0.42	0.26	268550	0.71	0.12	0.11	336 259	0.06	0.083	0.04	115506	0.02	0.23	0.02	32288
The third period: (2016/2017) - (2019/2020)	0.17	0.28	0.11	429959	0.20	0.17	0.09	729807	0.16	0.23	0.09	201227	0.08	0.04	0.07	74921

Source: Ministry of Planning and Economic Development website, www.mop.gov.eg.**Continued table (6): The average return of the Egyptian pound for national investments implemented in some economic sectors in Egypt for the average of the three periods (2005/2006 - 2009/2010), (2010/2011 - 2015/2016), (2016/2017 - 2019/2020)**

Sectors The average period	The construction sector				Transport and storage sector				The water sector		The natural gas sector			
	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)	public sector (pound)	gross domestic production (million pound)	public sector (pound)	Private sector (pound)	The total of the two sectors (pound)	gross domestic production (million pound)
The first period: (2005/2006) - (2009/2010)	0.53	0.13	0.11	37471	0.03	0.04	0.17	35474	0.06	3282	0.18	0.04	0.03	70628
The second period: (2010/2011) - (2015/2016)	0.62	0.29	0.20	95602	0.05	0.08	0.30	87641	0.02	11599	0.20	0.05	0.04	136531
The third period: (2016/2017) - (2019/2020)	0.11	0.23	0.07	265500	0.04	0.09	0.25	205155	0.04	25397	0.10	0.04	0.02	231835

Source: Ministry of Planning and Economic Development website, www.mop.gov.eg.**Table (7): the estimated directional relationships for the development of the invested pound return for some economic sectors in Egypt during the period (2000/2001-2019/2020)**

General trend equations	R ²	T
Agriculture (Public sector) $Y_i = 33.424 + 1.043 x_i$ (2.99) (1.12)	0.07	1.12
private sector $Y_i = 19.993 + 1.122 x_i$ (2.86) (1.92)	0.17	1.92
total public and private sectors $Y_i = 12.967 + 0.466 x_i$ (3.10) (1.33)	0.09	1.33
gross domestic product $Y_i = - 21617.0 + 22913.5 x_i$ (- 1.48) (18.85)	0.95	18.85
Industry and mining sector (public sector) $Y_i = 41.579 + 1.319 x_i$ (2.05) (0.78)	0.03	0.78
private sector $Y_i = 17.693 - 0.171 x_i$ (5.34) (- 0.62)	0.02	- 0.62
Total public and private sectors $Y_i = 12.579 - 0.137 x_i$ (- 0.70) (5.33)	0.03	- 0.70
gross domestic product $Y_i = - 112916.9 + 39480 x_i$ (- 2.49) (10.44)	0.86	10.44
Petroleum sector and its products (public sector) $Y_i = 15.274 - 0.075 x_i$ (2.59) (- 0.15)	0.001	- 0.15
private sector $Y_i = - 3.540 + 1.512 x_i$ (- 0.57) (2.93)	0.32	2.93
Total public and private sectors $Y_i = 1.486 + 0.321 x_i$ (1.30) (3.36)	0.39	3.36
gross domestic product $Y_i = - 18512.6 + 10816.9 x_i$ (- 1.59) (11.10)	0.87	11.10
Electricity sector (public sector) $Y_i = 1.241 + 0.042 x_i$ (2.74) (1.11)	0.06	1.11
private sector $Y_i = 1.494 + 0.737 x_i$ (0.25) (1.46)	0.11	1.46
Total public and private sectors $Y_i = 0.937 + 0.058 x_i$ (2.25) (1.67)	0.13	1.67
gross domestic product $Y_i = - 14264.9 + 4136.7 x_i$ (- 2.78) (9.66)	0.84	9.66

Construction sector (public sector)	$Y_i = 55.474 + 0.258 x_i$	(3.31) (0.18)	0.002	0.18
private sector	$Y_i = 12.851 + 1.103 x_i$	(1.70) (1.75)	0.15	1.75
Total public and private sectors	$Y_i = 12.088 + 0.331 x_i$	(2.48) (0.81)	0.04	0.81
gross domestic product	$Y_i = - 56635.5 + 14492.5 x_i$	(- 2.67) (8.20)	0.79	8.20
Transport and storage sector (public sector)	$Y_i = 2.646 + 0.088 x_i$	(5.41) (2.16)	0.21	2.16
private sector	$Y_i = 6.449 + 0.098 x_i$	(5.73) (1.05)	0.06	1.05
Total public and private sectors	$Y_i = 1.768 + 0.055 x_i$	(5.99) (2.24)	0.22	2.24
gross domestic product	$Y_i = - 36430.4 + 11168.8 x_i$	(- 2.62) (9.61)	0.84	9.61
Water sector (public sector)	$Y_i = 0.472 + 0.135 x_i$	(1.28) (4.39)	0.52	4.39
gross domestic product	$Y_i = - 5545.2 + 1461.3 x_i$	(- 3.25) (10.3)	0.85	10.3
Natural gas sector (public sector)	$Y_i = 23.869 + 0.017 x_i$	(3.30) (0.03)	4.55	0.03
private sector	$Y_i = 3.145 + 0.074 x_i$	(5.30) (1.50)	0.11	1.50
Total public and private sectors	$Y_i = 2.795 + 0.033 x_i$	(5.53) (0.79)	0.034	0.79
gross domestic product	$Y_i = - 28092.1 + 13078.8 x_i$	(- 1.71) (9.52)	0.83	9.52

Where: Y: It expresses the national investments implemented for each sector. X1: Express the time variable, i: Express years 1, 2, 3, ..n. Source: Collected and calculated from: Table No. (5) in the appendix.

6- Table (8) indicate the participate of the agricultural public sector (government) investments and other economic sectors:

The participate of the agricultural sector from public sector investments and other economic sectors as average of three periods, it were 2740.9, 38824.9, 25538.2 million pounds, representing about 5.8 %, 5.5 % and 9.9 % of the total national government investments for the three periods, respectively.

The cross domestic productions of agricultural sector to the total GDP were 39.4 % , 32.9 % and 24.8 % in the three period, respectively.

Although the less investments directed to agricultural sector its participate , in non-oil exports, estimated at 8.7%, 10.9%, and 10.5%, as an average of the three periods, respectively, also it participate in labor force, with 30.5 % , 27.2 % and 21.3 % , respectively.

Table (8): The participate of the public agricultural sector from public sector investments (government) and other economic sectors as average of the three periods (2005/2006 - 2009/2010), (2010/2011 - 2015/2016), (2016/2017 - 2019/2020) (in million pounds)

The statement The average period	Government investment in Agriculture	National government investments	% agricultural of Total National investments	GDP of the agricultural sector	GDP all sectors	% agricultural of total local production
The first period: (2005/2006) - (2009/2010)	2740.9	47424.0	5.8	139970.0	355025.8	39.4
The second period: (2010/2011) - (2015/2016)	3882.9	70686.4	5.5	268549.5	815425.2	32.9
The third period: (2016/2017) - (2019/2020)	25538.2	256783.4	9.9	429959.5	1733842.0	24.8

Source: Data collected and calculated from: The website of the Ministry of Planning and Economic Development. www.mop.gov.eg.

Table (9): The participate of the public agricultural sector from public sector exports (government) and other economic sectors as average of the three periods (2005/2006 - 2009/2010), (2010/2011 - 2015/2016), (2016/2017 - 2019/2020) (in million dollars)

The statement The average period	Agriculture share of Exports (In million dollars)	Total national exports is Petroleum (In million dollars)	% To Share To grow from exports Non-oil nationalism	Agriculture's share of running Employment (Thousand workers)	Total employment or (employment) (Thousand workers)	% For the agricultural sector Of national employment
The first period: (2005/2006) - (2009/2010)	1607	17804	8,7	8107	26543	30,5
The second period: (2010/2011) - (2015/2016)	2918	27216	10.9	8022	29506	27,2
The third period: (2016/2017) - (2019/2020)	2747	26510	10,5	6571	30895	21,3

Source: Data collected and calculated from: The website of the Ministry of Planning and Economic Development. www.mop.gov.eg

Conclusions:

Investment is regarded as a key force of economic growth, little studies has been done to measure the Egyptian investment efficiency. Investment plays the main role to face the increasing demand upon development requirements.

It is also one of the essential means of implementing comprehensive development programs overall economic sectors at the state level, which distributes investment to each sector for generating appropriate returns. This is through implement the suitable economic programs, which increases the production capacity to decrease imports and increase exports, as well as adding a new employment opportunities to solve the problem of unemployment, improving the trade balance and balance of payments so, increasing the national income, which reflect the high in real income level of individuals.

Agricultural was able to increase value added in the GDP. The most important results were:

- 1- The relative importance of the agriculture sector for the first period (2005/2006 - 2009/2010), was 4.2 %, industrial and mining 14.4 % , petroleum sector and its products 10.8 % electricity sector 6.4%, construction sector 2.0%, transport and storage 11.7 %,, water sector 3.2%, natural gas sector 13 % , of total investment.
- 2- The return of pound invested in the agricultural sector (public sector), ranged between 0.13 pound

in 2017/2018, and 0.82 pound in 2012/2013, with an average by 0.44 pound.

- 3- The return of pound invested in the rest of the other economic sectors (private) were 0.05 pound in 2007/2008 and 0.22 pound in 2017/2018 with an average of 0.12 pound the period of the study the return on pound invested in the agricultural sector were 0.11 pound in 2001/2002 and 0.78 pound in 2011/2012, with an average of 0.32 pound.
- 4- The participate of the agricultural sector from public sector investments and other economic sectors as average of three periods, were 2740.9, 38824.9, 25538.2 million pounds, represented 5.8 %, 5.5 % and 9.9 % of the total national government investments for the three periods, respectively.
- 5- The cross domestic production of agricultural sector to the total GDP were 39.4 % , 32.9 % and 24.8 % in the three period, respectively.
- 6- Although the less investments directed to agricultural sector its participate, in non-oil exports, estimated at 8.7%, 10.9%, and 10.5%, as an average of the three periods, respectively, also it participate in labor force, with 30.5 %, 27.2 % and 21.3 %, respectively.

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