

## **THE IMPACT OF POULTRY PRODUCTION SYSTEMS ON THE ECONOMIC EFFICIENCY OF PRODUCTION PREVAILING IN THE RURAL SECTOR**

### **"A CASE STUDY IN FAYOUM GOVERNORATE"**

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### **ABSTRACT**

This study aims to draw the criteria of efficiency of production and economic systems of the poultry production sector in the rural province of Fayoum way analysis of envelope data according to the methodology of Farrell (1957) methodology, a specific non-standard border The Deterministic Non-Parametric Approach and sports programming method used to reach the standards of competencies. The use of cost data in the cost of food and other costs (the costs of medicines, the costs of mattress, the cost of water and electricity, the price of chickens, the cost of family employment) kidneys inputs, and total income for the Output whiting and chicken fattening per bird.

#### **The study found:**

**First:** the results of the use of cost data and revenue for the production of eggs / hen for the traditional education system and without the acquisition of agricultural and between centers and villages of the Fayoum Governorate, a way-coated DEA data

- The results of the analysis of efficiency of the system of production of eggs / hen for the traditional (Traditional Poultry Production Systems), and without the acquisition of agricultural land (Landless Poultry Production Systems) systems that is fully efficient in terms of return on the fixed capacity or variable dividend capacity and economies of scale fixed, and there is no surplus increases in the use of inputs (nutrition - other expenses), and the potential for increased production in these inputs.
- The change in the productivity of all factors, Total factor productivity change (tfpch) of chickens in the whiteness of the traditional system of 1022 and thus the rate of productivity growth, technological Productivity Growth 2.2% in the traditional education system, while in the education system without possession of a lack of much change in the productivity of all the factors the rate of - 0.2%.
- That the most efficient stations in the province of Fayoum in the production of eggs / hen are Fayoum, Elsdiek is the efficiency of fully understanding both in terms of revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses) and the potential for increased production in these inputs.
- The rate of productivity growth, technological Productivity Growth for the production of eggs / chicken 65.6%, 14%, 7.5% for each of the Center Tamia, Senores, Atsah, respectively, in the positive direction, increasing, while at the center of the Fayoum, Yousef El-Sdiek much a lack of change all the factors in the productivity rate - 14.9% - 22.7%, respectively.
- That the most efficient Fayoum villages in the production of eggs / hen is the angle Kerdasa-Corner, Kafr Mahfouz, Batn-haried understanding is efficient both in terms of total revenue capacity of a fixed or variable dividend capacity and the economics

of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - expenses other) and the potential for increased production in these inputs.

- The villages, El-Azab, Senhor-Elkiblia, Gordo efficient full capacity depending on the dividend variable is in the process of decreasing the size of economies drs for each of the El-Azab, Senhor-Elkiblia, Gordo village, while in the process of increasing the size of the economy irs.
- The rate of productivity growth, technological Productivity Growth for the production of egg / hen was 76.5%, 51.6%, 49.3%, 30.9%, 21.5%, 19'2%, 14% each from the village of Bandar-Tamia, Kafr Mahfouz, Senhor-Elkiblia, Abu-denkash, Gordo, El-Kaby, El-Gafra, respectively, in the growing positive trend, while in the village, the point of view El-Azab Kerdasa-Corner, Qasr El-Gabali, Batn-haried, Abu-Kesah with the lack of clothing in the change in the productivity of all factors, the rate of - 4% - 15.3% - 18.9% - 26.7% - 37.8%, respectively.

**Second:** the results of the use of cost data and revenue for the production of the bird / fattening of the traditional education system and without Agricultural holdings and the townships and villages in the province of Fayoum, a way of data-coated DEA: --

- That the most efficient system for the production of the bird / fattening is without Landless agricultural holdings in that it is very efficient both in terms of revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses), nor the possibility to increase production in these inputs.
- Traditional, while the traditional system is evident in the lack of economic efficiency in the revenue capacity of a firm with a 64.4% or that the lack of efficiency of 35.6% that there is any opportunity to increase the economic efficiency of the traditional system of Traditional as it is the largest economies in the process of increasing the size of irs .
- The change in the productivity of all factors, Total factor productivity change (tfpch) in the system of traditional education (Traditional) 1.023 and therefore the rate of productivity growth, technological Productivity Growth 2,3%, while in the education system without the acquisition of agricultural (Landless) is also much increased and the rate of technology to productivity growth rate 0.2% less than the traditional education system, the rate of 2.1%.
- That the most efficient center for the production of the bird / fattening Ebshawi It is a full economic efficiency, both in terms of revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses), nor the possibility to increase production in the these inputs.
- The Center Senores, economic efficiency is Atsah full capacity depending on the return variable is in the process of increasing the size of the economy irs.
- The rate of productivity growth, technological Productivity Growth for the production of the bird / fattening was 9.6%, 2.9% for both Tamia, Atsah respectively in the positive direction, increasing, while at the center of Ebshawi, Fayoum, Senores much a lack of change in the rate of productivity of all factors - 0.5% - 5%, 15.2%.
- That the most efficient El-Kaby village it is economically efficient, both in terms of total revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses) and the potential for increased production in these inputs.
- The villages of Bandar-Tamia, Abu-denkash, Abu-Kesah, economic efficiency is Gordo full capacity depending on the return variable is in the process of decreasing the size of the economy of each of the drs Abu-Denkash, Abu-Kesah, Gordo, while the village Gordo in the growing economies of the size of irs.
- The rate of productivity growth, technological Productivity Growth for the production of the bird / fattening was 65.9%, 31.5%, 23.1%, 20.5%, 13.8%, 9.4% for each

village El-Gafra, Kafr Mahfouz, Qasr El-Gabali, Abu-denkaash, Kerdasa-Corner angle, Senhor-Elkiblia tribal, respectively, in the growing positive trend, while in the village of Bandar-Tamia, Batn-Haried, Abu-Kesah, El-Kaby, Azab, Gordo much a lack of change in the productivity of all factors, the rate of - 4.6%, -- 13.6% - 16.7% - 19.8% - 22.4%, 23.5%, respectively.

**Keywords:** Poultry Economic efficiency, Productivity growth, Technological Productivity Growth, Traditional Poultry Production Systems, Landless Poultry Production Systems, Fayoum governorate.

## INTRODUCTION

Statistics indicate the level of the Republic in 2005 (Economic Affairs Sector - October 2006), Hassan and others (2006) and Magdi and others (2007) that the wealth of Egypt's poultry production is the outcome of the commercial sector and the rural sector has reached the production of the rural sector of the chicken fattening, 16.7% of the total chicken fattening product at the republic and that the production of table eggs in the rural sector represents approximately 28.6% of the total product at the republic level, and that actual production in the rural sector of the ducks was 4.8 million birds, turkey 0.84 million birds, rabbits, 0.46 million animals. Hence, to study the current situation in the rural sector of the Egyptian poultry production systems within the various sector and the impact of these systems on economic efficiency.

### **Objectives of the study:**

The primary objective of the study is to analyze the economic efficiency of poultry production systems of the current status of the two most common in the rural sector in the province of Fayoum, namely:

- 1 - the traditional system of poultry production (Traditional Poultry Production Systems).
- 2 - the system of poultry production, without the acquisition of agricultural land (Landless Poultry Production Systems).

So that whichever is more efficient and which suffers from a lack of efficiency and, consequently, the results will be in the hands of decision makers to take from the productive and economic policies that contribute to raising the economic efficiency of this sector.

### **Data sources and research methodology:**

Adopted in this study mainly on the initial data obtained through field survey which was conducted in some villages at the level of all centers, the Fayoum governorate, where is ranked sixth among the provinces of the Republic for the production of poultry, the study sample included all the field centers to maintain a six-Fayoum, Senores, Tamia, Ebshawi, Yousef El-Sdiek, Atsah villages have been selected from each of the random sampling method and therefore the number of selected villages about 12 villages, were selected as sample items of the same way an average of 10 educators in all the village, so was the total number of sample items selected to maintain approximately 120 poultry farmers to the rural sector, and points table (1) to the centers, villages and the number of educators who are included in the sample field study.

**Table (1): The number of educators who are included in the study sample selected centers in the villages of Fayoum Governorate**

Centers	Village	No. of farmers
Fayoum	Kerdasa-Corner	9
	El-Azab	10
Senores	El-Kaby	10
	Senhor-Elkiblia	10
Tamia	Kafr-Mahfouz	11
	Bandr-Tamia	10
Ebshawi	Abu-Denkash	11
	Abu-Kesah	10
Yousef El-Sdiek	Qasr El-Gabali	9
	Batn-Haried	10
Atsah	El-gafra	10
	Gordo	10
Total no. of farmers		120

Source: field study sample Fayoum governorate in 2007.

Accordingly, the study selected a sample can be classified within the multi-stage random sampling or cluster sampling, and adopted the field study and analysis of data on the technical report, unpublished study that was conducted in coordination between the Academy of Scientific Research and Technology and Animal Production Research Institute in 2007 entitled "Development of the poultry production systems in the rural sector to transform the production of young educators to the systematic market-oriented "Having participated in the preparation of the study the team-based research, and a questionnaire designed to obtain the data necessary to achieve the objective of the study included data on production costs and income and marketing of poultry by educators to maintain the education which is chicken fattening for the teacher (150 days) and laying hens teacher for one year production (12 months).

Adopted in this study to achieve its objectives on the analysis of data obtained from the costs of nutrition educators and other costs, which include (the cost of medicines, the costs of mattress, the cost of water and electricity, the price of chickens, the cost of family labor), has codified the requirements of any input analysis methodology border outposts It is the most important inputs to the analysis of inputs that affect the production and productivity and economic efficiency of Educators, also used the values of production (gross revenue) only way out for analysis.

The analytical method used is the border approach (methodology Farrell Approach 1957), a specific non-standard methodology. The Deterministic Non-Parametric Approach and methodology Farrell is a systematic and realistic with what is being, and an accident. The concept of efficiency depends on the analysis of the data-coated Data Envelopment Analysis (DEA) to estimate the economic efficiency of various criteria (Norman, and Stoker, 1991), in accordance with the hypotheses concerning

the nature of the productive activity of the farm. In general, DEA relies on the use of linear programming method for the establishment of an envelope or the area containing the data is known as Non-parametric Piecewise Surface so that the efficiency of the farm can be estimated according to the relationship of a combination of resources used from this area (the envelope), and study Ali, and Seiford, 1993, There are three trends in the analysis of this type of data (Seiford, 1996) can be summarized as follows: --

1 - Use the DEA method in accordance with the concept of fixed-income returns and the capacity of CRS to VRS variable capacity which allows the assessment of technical competence of Technical Efficiency (TE), capacity and efficiency of Scale Efficiency (SE), according to a study (Fare, Grosskopf, and Lovell, 1994).

2 - Used in the method of extraction tfpch intended by Malmquist productivity tfp College unexplained factors other than those contained in any model (for example the influence of management - the experience - the air the sun was not all the factors that can be measured in addition to the time that the impact of technology. And that the use of the DEA program CEPA University of New England, Australia.

**The results of the analysis and discussion: --**

**First: the results of the use of cost data and revenue for the production of egg / hen for the traditional education system and without the acquisition of agricultural and between centers and villages of the province of Fayoum, a way-coated DEA data**

1 - The results of the use of cost data and revenue for the production of egg / hen for the traditional education system and without the acquisition of farm: --

- The results of the analysis of efficiency in the table (2) that the two systems is very efficient in terms of return on the fixed capacity or variable dividend capacity and economies of scale fixed, and there is no surplus of any increases in the use of inputs (nutrition - other expenses), nor the possibility to increase production In view of these inputs

**Table (2): Results of the analysis of drain-coated way of DEA data Egg / Hen production systems of the rural province of Fayoum**

Systems	Return on capacity		Scale		Surpluses		The possibility of an increase in the value of production
	crsEE	vrsEE			Nutrition	Other expenses *	
<b>Traditional</b>	1	1	1		---	---	---
<b>Landless</b>	1	1	1	-	---	---	---
<b>Average</b>	1	1	1	-	---	---	---

crsEE = Economic efficiency from constant return to scale

vrsEE = Technical efficiency from variable return to scale

scale = scale efficiency = crsEE / vrsEE

There is no possibility of an increase in production under the user's input to the study of the two systems.\* Other expenses = cost of drugs + Brush costs + cost of water and electricity + price chicks + family labor costs).

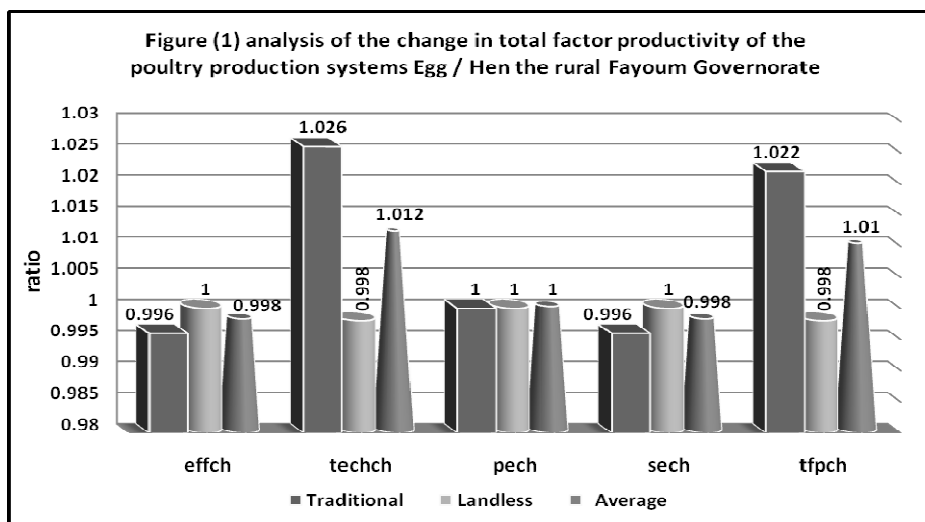
- The results of changes in the competencies of the two systems and using the DEA CEPA University of New England, Australia, the following output analysis of the change in total factor productivity of Total Factor Productivity Change (TFPCH) Schedule No. (3) and Fig (1), which consists of two basic components:

1 - A change in the functional efficiency Technical efficiency change (effch) and when the capacity of a fixed return crs is the result of the change in technical efficiency (unexplained) due to external factors Exogenous inputs without a change in the quantity and quality of Inputs.

**Table (3): The results of the analysis of changes in the competencies and technological change, a way for the DEA data-coated Egg / Hen rural production systems in Fayoum Governorate**

Education system	effch	techch	pech	sech	tfpch
Traditional	0.996	1.026	1.000	0.996	1.022
Landless	1.000	0.998	1.000	1.000	0.998
Average	0.998	1.012	1.000	0.998	1.01

effch = Technical efficiency change  
 techch = Technological change  
 pech = Pure technical efficiency change  
 sech = Scale efficiency change = effch / pech  
 tfpch = Total factor productivity change = effch \* techch



2 - Technological change (techch), which reflects the technological change, without change in the quantity of inputs, ie, reflect the qualitative change in the inputs, and the relocation of function to the highest, in the sense that the impact of technological change and expressed a positive number greater than one, and vice versa if the figure is less than one is true, the negative influence of technological change function of any transmission to the bottom, we find in the traditional system of education (Traditional)

technological change and thus amounted to 1.026 the proportion of the change amounts to 2.6%, while in the education system without the acquisition of agricultural (Landless) the total change 0.998 Technological Change and therefore amounted to - 0.2%, while the change in the productivity of all factors, Total factor productivity change (tfpch) in 1.022 the traditional education system and thus the rate of productivity growth, technological Productivity Growth 2,2%, while in the education system without possession of much a lack of change in the productivity of all factors, the rate of - 0.2%.

- While the change in scale efficiency change (sech) amounted to (0.996 – 1.000) for each of the traditional education system and without the possession of the arrangement.

2 - The results of the analysis of efficiency of the egg / hen centers in the province of Fayoum, (4) and Fig (2) the following:

- That the most efficient centers are Fayoum, Yousef-Elsdiek is the efficiency of fully understanding both in terms of revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses) and the potential for increased production in these inputs .

- The Center Ebshawi efficient return to full capacity depending on the changing economy is in the process of increasing the size of irs.

- Center Atsah and Senores Is evident in the lack of economic efficiency in the revenue capacity of a firm with a 76.4%, 88.3% from the lack of efficiency of 23.6%, 11.7% respectively, there is no opportunity to increase economic efficiency Center for Atsah more as it is in the phase of increasing the size of the economy, while the status of irs Senores in the process of decreasing the size of economies drs, while the Center and Tamia, Ebshawi economic efficiency reached 91.7%, 91.6% of any lack of efficiency of 8.3%, 8.4 % on any arrangement that could increase the economic efficiency of both as they are in the process of increasing the size of the economy irs.

- According to the criterion of return on capacity of variable we find that the Center and Tamia and Atsah Senores economic efficiency reached 99.9%, 94%, 91.6% from the lack of economic efficiency was 0.1%, 6%, 8.4% respectively of any that there is an opportunity to increase the economic efficiency of the Center for Senores more central Atsah and Tamia with the observation that in the declining stage of production economics and the status of Atsah and Tamia in the process of increasing production.

- There is more use of the feeding of any increases in food by 1863 pounds / Senores the status of the birds, as well as Atsah by the increase in the use of other expenses amounted to £ 2547 / for the birds they represent a lack of economic efficiency in the waste of any production requirements.

- With regard to the possibility of an increase in the value of production for chickens in the Center and the Center for Atsah, Tamia amounted to 6.52, 0.52 pounds / bird of the order and this means a lack of economic efficiency.

Table (4): Results of the analysis of drain-coated way of DEA data centers chickens Egg / Hen Fayoum Governorate

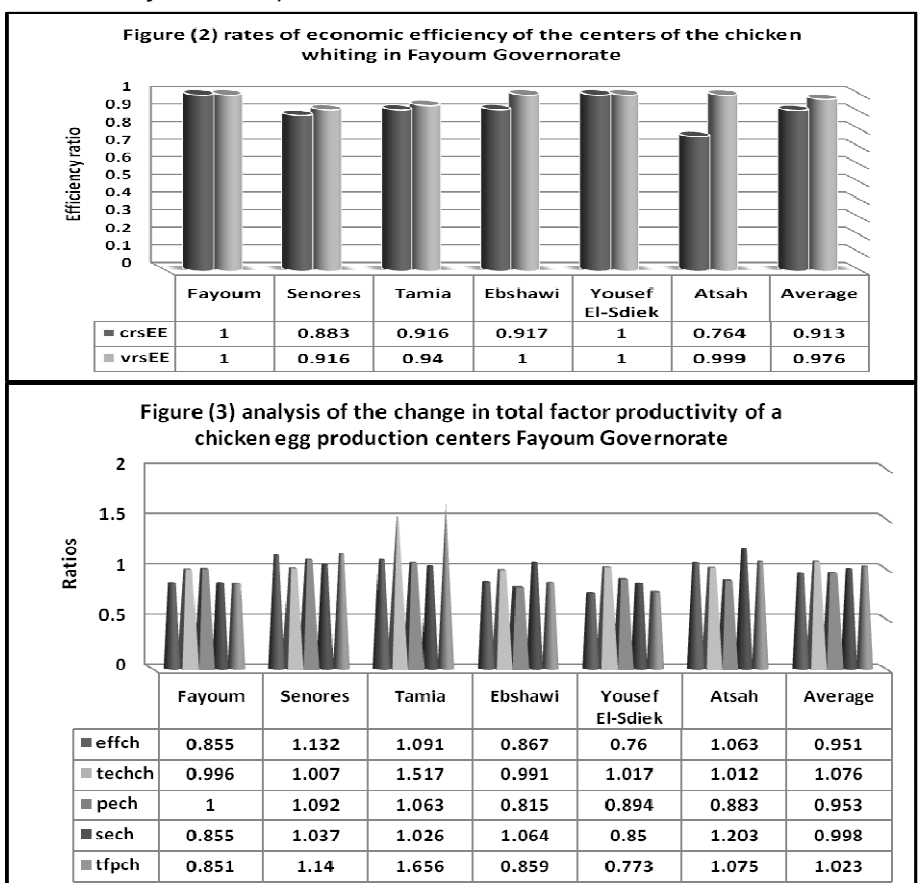
Centers	Return on capacity		Scale	Surpluses		The possibility of an increase in the value of production
	crsEE	vrsEE		Nutrition	Other expenses *	
Fayoum	1	1	1	---	---	---
Senores	0.883	0.916	0.965	drs	1.863	---
Tamia	0.916	0.940	0.974	irs	---	0.517
Ebshawi	0.917	1	0.917	irs	---	---
Yousef El-Sdiek	1	1	1	---	---	---
Atsah	0.764	0.999	0.765	irs	---	2.547
Average	0.913	0.976	0.937	---	0.310	0.425

crsEE = Economic efficiency from constant return to scale

vrsEE = Technical efficiency from variable return to scale

scale = scale efficiency = crsEE / vrsEE

\* Other expenses = cost of drugs + Brush costs + cost of water and electricity + price chicks + family labor costs).





**Table (5): Results of the analysis of drain-coated way of DEA data Egg/Hen**

Village	Return on capacity		Scale	Surpluses		The possibility of an increase in the value of production
	crsEE	vrsEE		Nutrition	Other expenses *	
Kerdasa-Corner	1	1	1	---	---	---
El-Azab	0.977	1	0.977	drs	---	---
El-Kaby	0.881	0.883	0.997	irs	---	---
Senhor-Elkiblia	0.827	1	0.827	drs	---	---
Kafr-Mahfouz	1	1	1	---	---	---
Bandr-Tamia	0.771	0.884	0.872	irs	---	8.434
Abu-Denkash	0.764	0.959	0.797	irs	---	14.233
Abu-Kesah	0.957	0.975	0.981	irs	---	1.246
Qasr El-Gabali	0.888	0.896	0.991	drs	---	---
Batn-Haried	1	1	1	---	---	---
El-gafra	0.609	0.715	0.853	irs	---	10.378
Gordo	0.977	1	0.977	irs	---	---
Average	0.888	0.943	0.939	---	---	2.858

crsEE = Economic efficiency from constant return to scale

vrsEE = Technical efficiency from variable return to scale

scale = scale efficiency = crsEE / vrsEE

- The results of changes in the competencies of the centers of the egg / hen province of Fayoum, and using the following output DEA analysis of the change in total factor productivity of Total Factor Productivity Change (TFPCH) form No. (3), which consists of two basic components:

1 - A change in the functional efficiency Technical efficiency change (effch) and when the capacity of a fixed return crs is the result of the change in technical efficiency (unexplained) due to external factors Exogenous inputs without a change in the quantity and quality of Inputs per 1.132% 1.091% 1.063 % 0.867% 0.855% 0.760% each from the Center Tamia, Senores, Atsah Ebshawi, Fayoum, and Yosuef-Elsdiek Ali arrangement of any change in technical efficiency increasing trend only in the case of the Center and Tamia, Senores, Atsah and change the rest of the centers of technical competence decreasing trend in the negative.

2 - Technological change (techch), which reflects the technological change, without change in the quantity of inputs, ie, reflect the qualitative change in the inputs, and the relocation of function to the highest, in the sense that the impact of technological change and expressed a positive number greater than one, and vice versa if the figure was less than the true one, the negative impact of technological change function of any transmission to the bottom, we find that the rate was 1.517% 1.017% 1.012% 1.007% 0.996% 0.991% each from the Center Tamia, Yosuef-Elsdiek, Atsah, Senores, Fayoum, and Ebshawi respectively, and that any technological change in the positive direction in the case of increasing the status of Yosuef-

Elsdiek, Tamia, Atsah, Senores, and The Center for Ebshawi Fayoum and technological change in the direction decreasing the negative.

- While the change in the productivity of all factors, Total factor productivity change (tfpch) centers in 1.656%, 1.140% 1.075% 0.859% 0.851% 0.773% each from the Center Tamia, Senores, Atsah, Ebshawi, Fayoum, Yosuef-Elsdiek respectively and thus the rate of productivity growth, technological Productivity Growth 65.6%, 14%, 7.5% for each of the Center Tamia, Senores, Atsah, respectively, in the positive direction, increasing, while at the center of the Fayoum, Yousef El-Sdiek much a lack of change in productivity rate of all the factors - 14.9% - 22.7%, respectively.

- Net change in efficiency Pure technical efficiency change (pech) Senores centers, Tamia, Fayoum, Yousef El-Sdiek, Atsah, Ebshawi has reached about 1.092%, 1.063%, 1%, 0.894% 0.883% 0.815% respectively, ie Net change in efficiency in the positive direction, increasing only in the case of the Center Senores, Tamia for the rest of the centers, the net change in efficiency in decreasing the negative direction.

- While the change in scale efficiency change (sech) was L.E 1.203 per% 1.064% 1.037% 1.026% 0.855% 0.850% each from the Center for Atsah, Ebshawi, Senores, Tamia, Fayoum, Yousef-Elsdiek arrangement of any that the change in the efficiency of scale in the positive direction, increasing only in the case of the Center Atsah, Ebshawi, Senores, The Center Tamia, Fayoum, friend Joseph, the change in the efficiency of scale in the negative trend of declining.

3 - The results of the analysis of efficiency of the chickens whiteness of the villages in the province of Fayoum, (6) and Fig (4) the following:

- That the most efficient angle Kerdasa-Corner villages, Kafr Mahfouz, Batn-haried understanding is efficient both in terms of total revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses), nor the possibility to increase production In view of these inputs.

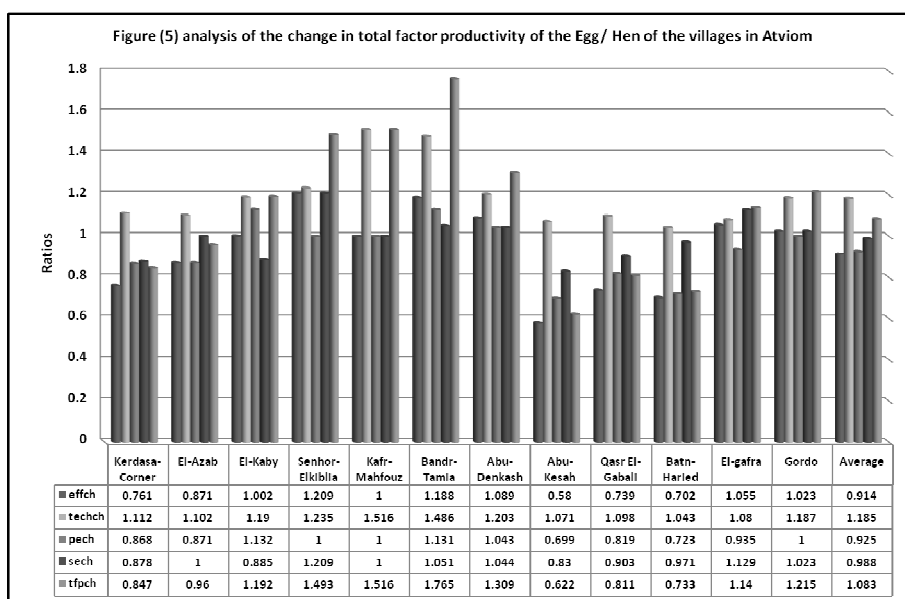
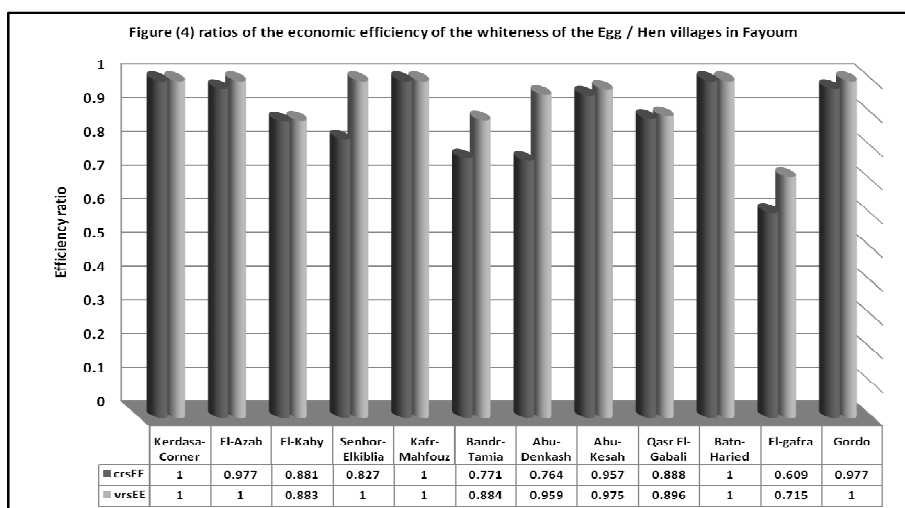
- The El-Azab villages, Senhor-Elkiblia, Gordo efficient full capacity depending on the dividend variable is in the process of decreasing the size of economies drs for each of the El-Azab, Senhor-Elkiblia Gordo tribal village, while in the process of increasing the size of the economy irs.

- Village El-Gafra, Abu-denkash, Bandar-Tamia, Senhor-Elkiblia tribal El-Kaby, Qasr El-Gabali, Gordo, is evident in El-Azab distinct lack of economic efficiency in the revenue capacity of a firm with a 60.9%, 76.4%, 77.1%, 82, 7%, 88.1%, 88.8%, 97.7%, 97.7% from the lack of efficiency of 39.1%, 23.6%, 22.9%, 17.3%, 11, 9%, 11.2%, 2.3%, 2.3% respectively, there is no opportunity to increase the economic efficiency of the largest village El-Gafra, Abu-denkash, Bandar-Tamia, El-Kaby, Gordo where they are in the process of increasing the size of the economy, while the village of irs Senhor-Elkiblia tribal, Qasr El-Gabali, in the El-Azab phase decreasing the size of economies drs.

- According to the criterion variable dividend capacity of the village El-Gafra, El-Kaby, Bandar-Tamia, Qasr El-Gabali, Abu-denkash, Abu-Kesah economic efficiency reached 71.5%, 88.3%, 88.4%, 89.6%, 95.9 %, 97.5%

from the lack of economic efficiency was 28.5%, 11.7%, 11.6%, 10.4%, 4.1%, 2.5% respectively, there is no opportunity to increase economic efficiency the largest of the village of El-Gafra, El-Kaby, Bandar-Tamia, Abu-denkash, Abu-Kesah in the process of increasing production economics irs Qasr El-Gabali and the village economy in the process of declining production drs.

- Found that there is no surplus of productive inputs in the twelve villages.



**Table (6): Results of the analysis of drain-coated way data DEA of the bird / fattening production systems for the rural province of Fayoum**

Systems	Technical efficiency		Scale efficiency		Returns to scale		The possibility of an increase in the value of production
	crsEE	vrsEE	Scale	irs	Nutrition	Other expenses *	
Traditional	0.644	0.698	0.922	irs	---	0.918	1.200
Landless	1	1	1	---	---	---	---
Average	0.822	0.849	0.961		---	0.459	0.600

There is a possibility of an increase in production under the user's input to the study of the traditional system.

\* Other expenses = cost of drugs + Brush costs + cost of water and electricity + price chicks + family labor costs).

- With regard to the possibility of an increase in the value of production for chickens in the village of Abu-denkaish, El-Gafra, Bandar-Tamia, the father of clothing amounted to 14233, 10378, 8434, 1246 pounds / bird of the order and this means a lack of economic efficiency.

- The results of changes in the competencies of the chicken cow Eggs / Hen province of Fayoum, and using the following output DEA analysis of the change in total factor productivity of Total Factor Productivity Change (TFPCH) as No. (5), which consists of two basic components:

1 - A change in the functional efficiency Technical efficiency change (effch) and when the capacity of a fixed return crs is the result of the change in technical efficiency (unexplained) due to external factors Exogenous inputs without a change in the quantity and quality of Inputs per 1.209% 1.188% 1.055 % 1.089% 1.023% 1.002% 1% 0.871% 0.761% 0.739% 0.702% 0.580% each from the village of Kafr Mahfouz, Bandar-Tamia, El-Gafra, Abu-denkaish, Gordo, El-Kaby, Kafr Mahfouz, El-Azab, Kerdasa-Corner, Qasr El-Gabali, Batn-haried, Abu-Kesah to any arrangement to change the technical competence in the increasing trend only in the case of the village of Kafr Mahfouz, Bandar-Tamia, El-Gafra, Abu-denkaish, Gordo, El-Kaby The rest of the villages in the technical efficiency change the negative trend of declining .

2 - Technological change (techch), which reflects the technological change, without change in the quantity of inputs, ie, reflect the qualitative change in the inputs, and the relocation of function to the highest, in the sense that the impact of technological change and expressed a positive number greater than one, and vice versa if the figure was less than the true one, the negative impact of technological change function of any transmission to the bottom, we find that the rate was 1.516% 1.486% 1.235% 1.203% 1.190% 1.187% 1.112% 1.102% 1.098% 1.080% , 1.071% 1.043% each from the village of Kafr Mahfouz, Bandar-Tamia, Senhor-Elkiblia tribal, Abu-denkaish, El-Kaby, Gordo, Kerdasa-Corner angle, El-Azab, short-Jabali, El-Gafra, Abu-Kesah, Batn-haried on any arrangement that technological change in the positive direction, increasing the preservation of all the villages.

- While the change in the productivity of all factors, Total factor productivity change (fpch) in the villages 1.765% 1.516% 1.493% 1.309%

1.215% 1.192% 1.140% 0.960% 0.847% 0.811% 0.733% 0.622% in the village of Bandar-Tamia, Kafr Mahfouz, Senhor-Elkiblia, Abu-denkaash, Gordo, El-Kaby, El-Gafra, El-Azab, angle Kerdasa-Corner, Qasr El-Gabali, Batn-haried, Abu Ali clothing arrangement and therefore the rate of productivity growth, technological Productivity Growth 76,5% , 51.6%, 49.3%, 30.9%, 21.5%, 19.2%, 14% each from the village of Bandar-Tamia, Kafr Mahfouz, Senhor-Elkiblia, Abu-denkaash, Gordo, El-Kaby, respectively El-Gafra growing in positive direction, while in the El-Azab village, the point of view Kerdasa-Corner, Qasr El-Gabali, Batn-haried, Abu-Kesah with the lack of clothing in the change in the productivity of all factors, the rate of - 4% - 15.3% - 18.9% - 26.7 % - 37.8%, respectively.

- Net change in efficiency Pure technical efficiency change (pech) El-Kaby villages, Bandar-Tamia, Abu-denkaash, Kafr Mahfouz, Senhor-Elkiblia tribal Gordo, El-Gafra, El-Azab, angle Kerdasa-Corner, Qasr El-Gabali, Batn-Haried, the father of clothing would have been about 1.132%, 1.131% 1.043% 1% 1% 0.935% 0.871% 0.868% 0.819% 0.723% 0.699% respectively, meaning that the net change in efficiency in the positive direction, increasing only in the case of the village El-Kaby , Tamia Bandar, Abu-denkaash As for the village El-Gafra, El-Azab, angle Kerdasa-Corner, Qasr El-Gabali, Batn-Haried, the father of clothing, the net change in efficiency in decreasing the negative direction.

- While the change in scale efficiency (sech) was L.E 1.209 per% 1.129% 1.051% 1.044% 1.023% 1% 1% 0.971% 0.903% 0.885% 0.878% 0.830% each of the tribal village Senhor-Elkiblia, El-Gafra, Bandar-Tamia, Abu-denkaash, Gordo, Azab, Kafr Mahfouz, Batn-haried, Qasr El-Gabali, El-Kaby, Kerdasa-Corner the point of view, the father of clothing on the arrangement of any change in the efficiency of scale in the positive direction, increasing only in the case of the village Senhor-Elkiblia tribal El-Gafra, Bandar-Tamia, Abu-denkaash, Gordo The village Batn-Haried, Qasr El-Gabali, El-Kaby, Kerdasa-Corner angle, the father of clothing, the change in the efficiency of scale in the negative trend of declining.

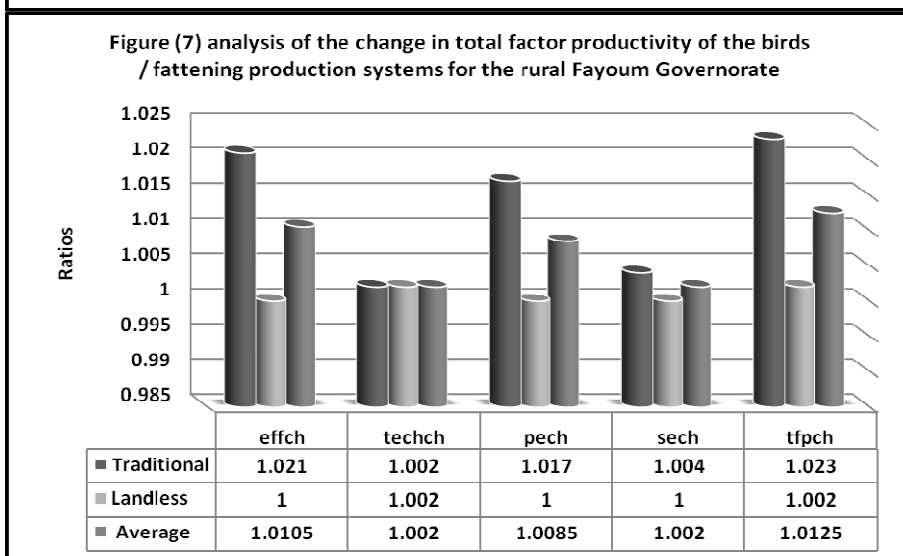
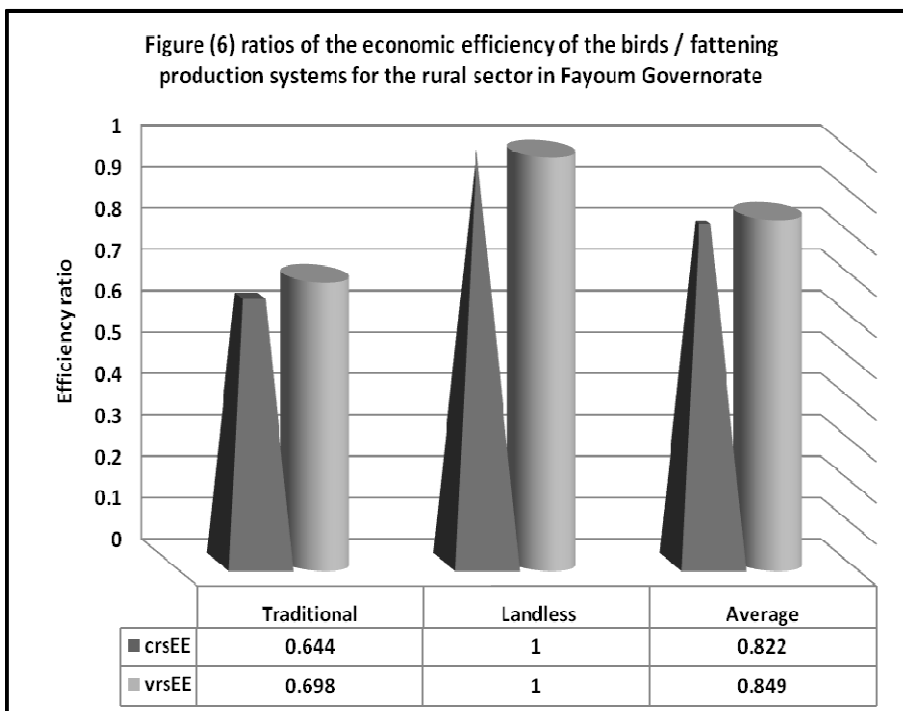
**Second: the results of the use of cost data and revenue for the production of the bird / fattening of the traditional education system and without the acquisition of agricultural and between centers and villages of the province of Fayoum, a way-coated DEA data:**

1 - the results of the use of cost data and revenue for the production of the bird / fattening of the traditional education system and without the acquisition of farm: --

The results of the analysis of efficiency of the systems on the agenda (6) and Fig (6) as follows:

- That the most efficient system is without Landless agricultural holdings in that it is very efficient both in terms of revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses) and the potential for increased production in these inputs.

- Traditional, while the traditional system is evident in the lack of economic efficiency in the revenue capacity of a firm with a 64.4% or that the lack of efficiency of 35.6% that there is any opportunity to increase the economic efficiency of the traditional system of Traditional as it is the largest economies in the process of increasing the size of irs .



**Table (7): Results of the analysis of drain-coated way of the bird data DEA / fattening centers Fayoum Governorate**

Centers	Return on capacity		Scale		Surpluses		The possibility of an increase in the value of production
	crsEE	vrsEE			Nutrition	Other expenses *	
Fayoum	0.927	0.986	0.939	irs	1.225	---	0.910
Senores	0.996	1	0.996	irs	---	---	---
Tamia	0.898	0.976	0.920	irs	---	---	1.180
Ebshawi	1	1	1	---	---	---	---
Yousef El-Sdiek	0.938	0.985	0.952	irs	---	---	0.435
Atsah	0.939	1	0.939	irs	---	---	---
Average	0.950	0.991	0.958		0.204	---	0.421

**crsEE = Economic efficiency from constant return to scale**

**vrsEE = Technical efficiency from variable return to scale**

**scale = scale efficiency = crsEE / vrsEE**

**\* Other expenses = cost of drugs + Brush costs + cost of water and electricity + price chicks + family labor costs).**

- According to the criterion of return on capacity of variable, we find that the traditional system Traditional economic efficiency reached 69.8% from the lack of economic efficiency was 30.2%, there is no opportunity to increase economic efficiency, noting that in the growing phase of production economics irs.

- There is more use in other expenses of the traditional system was 0918 pounds Traditional / of birds representing a lack of economic efficiency in the waste of any production requirements.

- With regard to the possibility of an increase in the value of production for chickens in the traditional amounted to 1.2 pounds / the birds and this means a lack of economic efficiency.

- The results of changes in the competencies of the two systems and using the DEA CEPA University of New England, Australia, the following output analysis of the change in total factor productivity of Total Factor Productivity Change (TFPCH) as No. (7), which consists of two basic components:

1 - A change in the functional efficiency Technical efficiency change (effch) and when the capacity of a fixed return crs is the result of the change in technical efficiency (unexplained) due to external factors Exogenous inputs without a change in the quantity and quality of Inputs.

2 - Technological change (techch), which reflects the technological change, without change in the quantity of inputs, ie, reflect the qualitative change in the inputs, and the relocation of function to the highest, in the sense that the impact of technological change and expressed a positive number greater than one, and vice versa if the figure is less than one is true, the negative influence of technological change function of any transmission to the bottom, we find in the traditional system of education (Traditional), and the system of education without the acquisition of agricultural (Landless)

technological change and thus amounted to 1.002 the proportion of the change amounts to 0.2%, while the change in the productivity of all factors,

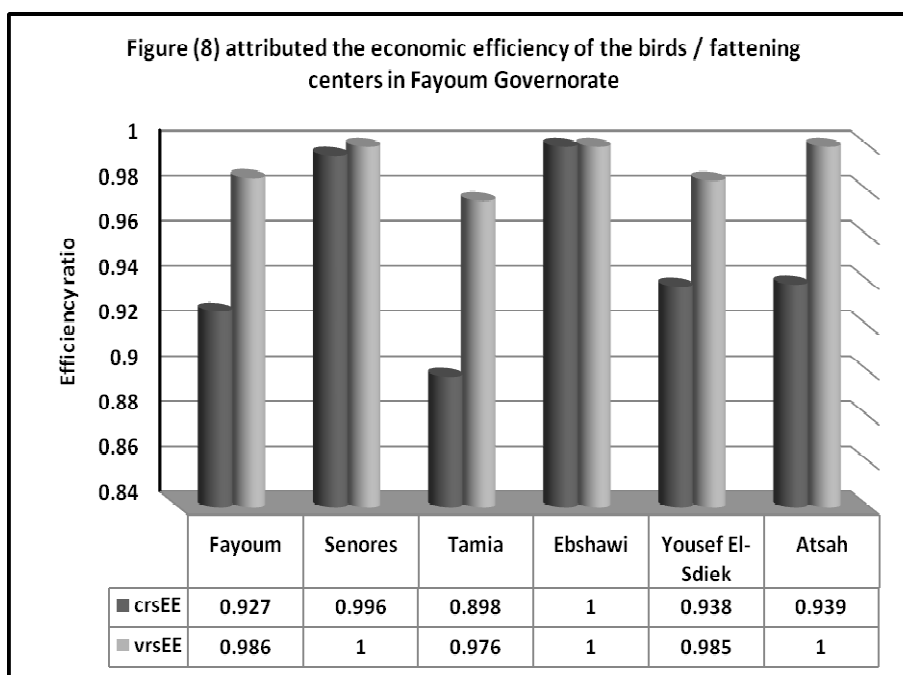
Total factor productivity change (tfpch) in 1.023 the traditional education system and thus the rate of productivity growth, technological Productivity Growth 2,3%, while in the possession of the system of education without much further increase in the rate of technological growth rate of productivity 0.2%, less than the traditional education system, the rate of 2.1%.

- Net change in efficiency Pure technical efficiency change (pech) to the traditional ( education system Traditional) and the system of agricultural education, without tenure would have been about 1.017, 1%, respectively, meaning that the net change in efficiency in the growing positive trend.

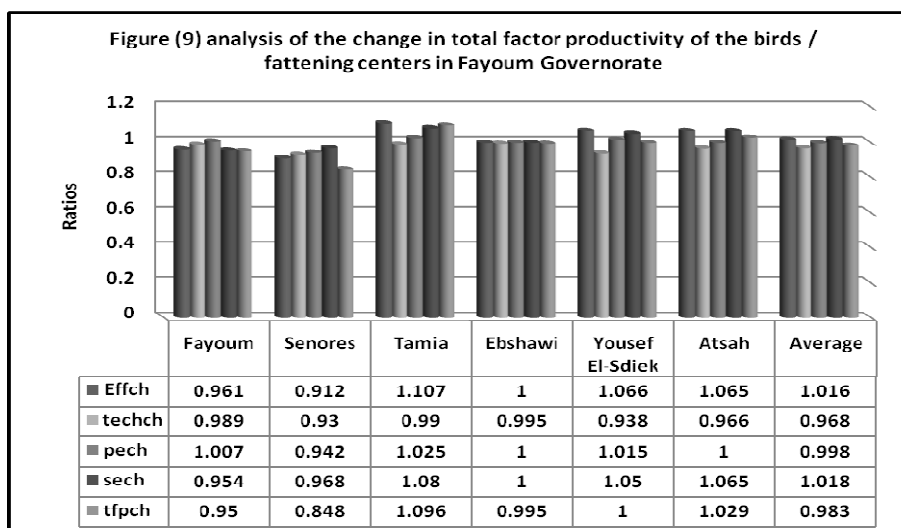
- While the change in scale efficiency (sech) amounted to (1.004 – 1.000) for each of the traditional education system and without the possession of the arrangement.

2 - The results of the analysis of efficiency of the birds / fattening centers in the province of Fayoum, (7) and Fig (8) as follows:

- The Center is the most efficient Ebshawi it is economically efficient, both in terms of total revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses) and the potential for increased production in these inputs.







**Table (8): results of the analysis of competencies DEA data-coated way to the bird / cow fattening Fayoum Governorate**

Village	Return on capacity		Scale		Surpluses		The possibility of an increase in the value of production
	crsEE	vrsEE			Nutrition	Other expenses *	
Kerdasa-Corner	0.817	0.830	0.984	irs	2.645	---	---
El-Azab	0.966	0.993	0.973	irs	---	---	0.257
El-Kaby	1	1	1	---	---	---	---
Senhor-Elkiblia	0.556	0.568	0.980	irs	---	0.123	0.300
Kafr-Mahfouz	0.654	0.704	0.929	irs	---	0.021	1.050
Bandr-Tamia	0.975	1	0.975	irs	---	---	---
Abu-Denkash	0.949	1	0.949	drs	---	---	---
Abu-Kesah	0.964	1	0.964	drs	---	---	---
Qasr El-Gabali	0.641	0.654	0.980	irs	---	0.383	0.300
Batn-Haried	0.829	0.938	0.883	irs	---	---	1.653
El-gafra	0.602	0.606	0.878	irs	---	---	1.788
Gordo	0.866	1	0.866	drs	---	---	---
Average	0.818	0.864	0.947		0.220	0.044	0.446

crsEE = Economic efficiency from constant return to scale

vrsEE = Technical efficiency from variable return to scale

scale = scale efficiency = crsEE / vrsEE

- The Center Senores, economic efficiency is Atsah full capacity depending on the return variable is in the process of increasing the size of the economy irs.

- Center Senores, Atsah, Yousef El-Sdiek, Fayoum, Is evident Tamia in a clear lack of economic efficiency in the revenue capacity of a firm with a

99.6%, 93.9%, 93.8%, 92.7%, 89.8% no The lack of efficiency of 0.4%, 6.1%, 6.2%, 7.3%, 10.2% respectively, there is no opportunity to increase the economic efficiency of the status of the former as it is in the process of increasing the size of the economy irs.

- According to the criterion of return on capacity of variable we find that the status of Senores, Yousef-Elsdiek, Tamia at the economic efficiency 98.6%, 98.5%, 97.6% from the lack of economic efficiency was 1.4%, 1.5%, 2, 4% respectively, there is no opportunity to increase the economic efficiency of the Center Tamia Senores more centralized, with friend Yusuf noted are in the process of increasing production economics irs.

- There is more use of the feeding of any increases in food by 1.225 pounds / Fayoum status of birds representing a lack of economic efficiency in the waste of any production requirements.

- With regard to the possibility of an increase in the value of production for the birds in the Center Tamia, Fayoum, Yousef El-Sdiek has reached 1.180, 0.910, 0.435 pounds / bird of the order and this means a lack of economic efficiency.

- The results of changes in the competencies of the birds / fattening centers and the province of Fayoum, using the following output DEA analysis of the change in total factor productivity of Total Factor Productivity Change (TFPCH) form No. (9), which consists of two basic components:-

1 - A change in the functional efficiency Technical efficiency change (effch) and when the capacity of a fixed return crs is the result of the change in technical efficiency (unexplained) due to external factors Exogenous inputs without a change in the quantity and quality of Inputs per 1.107% 1.066% 1.065 %, 1%, 0.961% 0.912% each from the Center Tamia, Yousef El-Sdiek, Atsah, Ebshawi, Fayoum, respectively Senores any change in technical efficiency increasing trend only in the case of the Center Tamia, Yousef El-Sdiek, Atsah The rest of the centers change efficiency art in the negative trend of declining.

2 - Technological change (techch), which reflects the technological change, without change in the quantity of inputs, ie, reflect the qualitative change in the inputs, and the relocation of function to the highest, in the sense that the impact of technological change and expressed a positive number greater than one, and vice versa if the figure was less than the true one, the negative impact of technological change function of any transmission to the bottom, we find that the rate was 0.995% 0.990% 0.989% 0.966% 0.938% 0.930% each Ebshawi Center, Tamia, Fayoum, Atsah, Yousef-Elsdiek, respectively Senores any technological change in the direction decreasing the negative.

- While the change in the productivity of all factors, Total factor productivity change (tfpch) centers in 1.096%, 1.029%, 1%, 0.995%, 0.950%, 0,848% for each of the Center Tamia, Atsah, Yousef El-Sdiek, Ebshawi, Fayoum, Senores respectively and thus the rate of productivity growth, technological Productivity Growth 9,6%, 2,9% for each of the Tamia, Atsah, respectively, in the positive direction, increasing, while at the center of Ebshawi, Fayoum, Senores much a lack of change in the rate of productivity of all factors - 0 , 5%, - 5%, 15.2%.

- Net change in efficiency Pure technical efficiency change (pech) of the centers Tamia, Yousef El-Sdiek, Fayoum, Ebshawi, Atsah, Senores has reached about 1.025% 1.015% 1.007%, 1%, 1%, 0.942%, respectively, ie the Net change in efficiency in the positive direction, increasing only in the case of the Center Tamia, Yousef El-Sdiek, Fayoum As for the rest of the centers, the net change in efficiency in decreasing the negative direction.

- While the change in scale efficiency change (sech) was L.E 1.080 per% 1.065% 1.050% 1% 0.968% 0.954% each from the Center Tamia, Atsah, Yousef El-Sdiek, Ebshawi, Senores, respectively Fayoum any that the change in the efficiency of scale in the positive direction, increasing only in the case of the Center Tamia, Atsah, Yousef-Elsdiek The Center Senores, Fayoum, the change in the efficiency of scale in the negative trend of declining.

3 - The results of the analysis of efficiency of the birds / fattening of the villages in the province of Fayoum, (8) and Fig (10) as follows:

- That the most efficient El-Kaby village it is economically efficient, both in terms of total revenue capacity of a fixed or variable dividend capacity and the economics of fixed size, as there is no surplus of any increases in the use of inputs (nutrition - other expenses) and the potential for increased production in these inputs.

- The villages of Bandar-Tamia, Abu-denkash, Abu-Kesah, economic efficiency is Gordo full capacity depending on the return variable is in the process of decreasing the size of the economy of each of the drs Abu-Denkash, Abu-Kesah, Gordo, while the village Gordo in the growing economies of the size of irs.

- Village Senhor-Elkiblia tribal El-Gafra, Qasr El-Gabali, Kafr Mahfouz, angle Kerdasa-Corner, Batn-haried, Gordo, Abu-denkash, Abu-cover, El-Azab, Bandar-Tamia Is evident in the lackof economic efficiency in the revenue capacity of a firm with a 55.6% 60 , 2%, 64.1%, 65.4%, 81.7%, 82.9%, 86.6%, 94.9%, 96.4%, 96.6%, 97.5% from the lack of efficiency of 44.4%, 39.8%, 35.9%, 34.6%, 18.3%, 17.1%, 13.4%, 5.1%, 3.6%, 3, 4%, 2.5% respectively, there is no opportunity to increase the economic efficiency of the largest village El-Gafra Senhor-Elkiblia tribal El-Gafra, Qasr El-Gabali, Kafr Mahfouz, angle Kerdasa-Corner, Batn-Haried, where they are in El-Azab phase irs economies while increasing the size of the village of Abu-denkash, Abu-Kesah, Gordo economies in the process of decreasing the size of drs.

- According to the criterion variable dividend capacity of the tribal village Senhor-Elkiblia, Qasr El-Gabali, El-Gafra, Kafr Mahfouz, angle Kerdasa-Corner, Batn-haried, El-Azab economic efficiency reached 56.8%, 65.4%, 68.6%, 70.4%, 83.0%, 93.8%, 99.3% from the lack of economic efficiency was 43.2%, 34.6%, 31.4%, 29.6%, 17.0%, 6.2%, 0.7% respectively, there is no opportunity to increase economic efficiency, because the villages in the process of increasing production economics irs.

- There is more use of the feeding of any increases in food by 2645 pounds / bird to the point of view of the village Kerdasa-Corner representing a lack of economic efficiency in the waste of any production requirements, and there is more use of other expenses by 0.383, 0.123, 0.021 pounds / each of

the birds from the village of Qasr-Gabali, Senhor-Elkiblia tribal, Kafr Mahfouz respectively.

- With regard to the possibility of an increase in the value of production for the birds in the village of El-Gafra, Batn-haried, Kafr Mahfouz, Senhor-Elkiblia, Qasr El-Gabali, El-Azab hit 1.788, 1.653, 1.050, 0.300, 0.300, 0.250 pounds / bird of the order and this means a lack of economic efficiency.

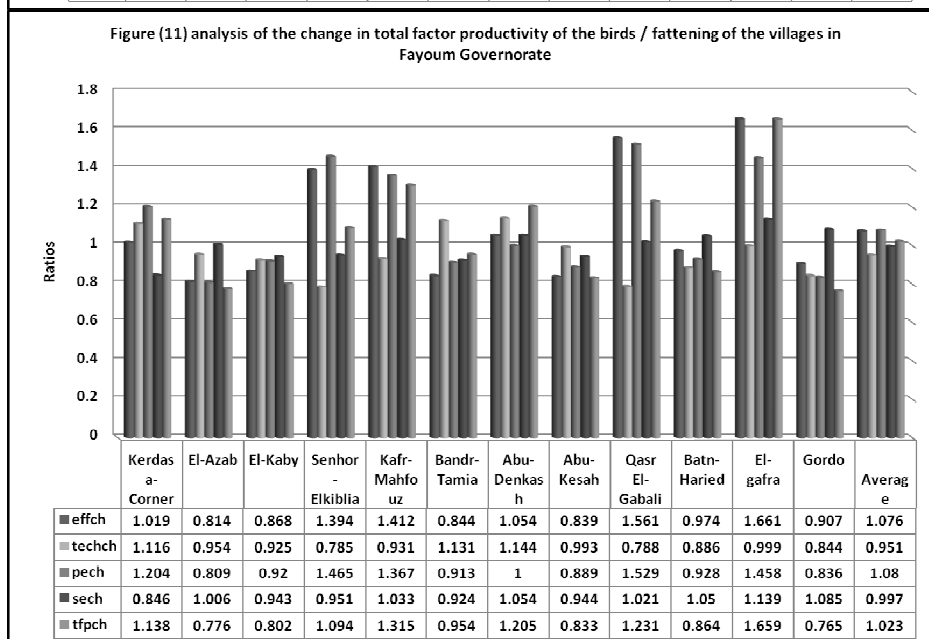
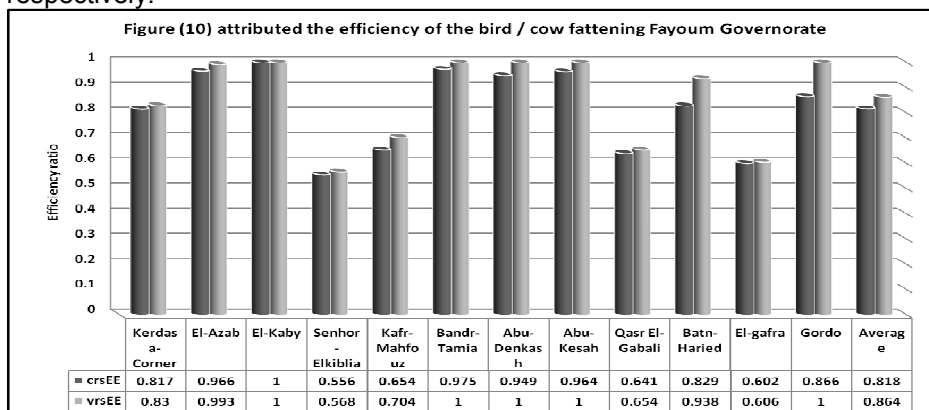
- The results of changes in the competencies of the bird / cow fattening and the province of Fayoum, using DEA analysis the following outputs of the change in total factor productivity of Total Factor Productivity Change (TFPCH) as No. (11), which consists of two basic components:

1 - A change in the functional efficiency Technical efficiency change (effch) and when the capacity of a fixed return crs is the result of the change in technical efficiency (unexplained) due to external factors Exogenous inputs without a change in the quantity and quality of Inputs per 1.661% 1.561% 1.412 % 1.394% 1.054% 1.019% 0.974% 0.907% 0.868% 0,844% 0.839% 0.814% each from the village of El-Gafra, Qasr El-Gabali, Kafr Mahfouz, Senhor-Elkiblia, Abu-denkash, Kerdasa-Corner the point of view, the Batn-Haried , Gordo, El-Kaby, Bandar-Tamia, the father of clothing, the arrangement of any El-Azab change in technical efficiency increasing trend only in the case of the village El-Gafra, Qasr El-Gabali, Kafr Mahfouz, Senhor-Elkiblia tribal, Abu-denkash, the point of view of the rest of the villages Kerdasa-Corner The change in the direction of technical competence diminishing the negative.

2 - Technological change (techch), which reflects the technological change, without change in the quantity of inputs, ie, reflect the qualitative change in the inputs, and the relocation of function to the highest, in the sense that the impact of technological change and expressed a positive number greater than one, and vice versa if the figure was less than the true one, the negative impact of technological change function of any transmission to the bottom, we find that the rate was 1.144%, 1.131%, 1.116, 0.999% 0.993% 0.954% 0.931% 0.925% 0.886% 0.844% 0.788% 0.785% each from the village of Abu-denkash, Bandar-Tamia, Kerdasa-Corner angle, El-Gafra, Abu-Kesah, El-Azab, Kafr Mahfouz, El-Kaby, Batn-haried, Gordo, Qasr El-Gabali, Senhor-Elkiblia tribal arrangement means that the technological change in the positive direction, increasing only In the case of the village of Abu-denkash, Bandar-Tamia, the point of view Kerdasa-Corner The rest of the villages the impact of technological change in the direction decreasing the negative.

- While the change in the productivity of all factors, Total factor productivity change (tfpch) in the villages 1.659% 1.315% 1.231% 1.205% 1.138% 1.094% 0.954% 0.864% 0.833% 0.802% 0.776% 0.765% for each village El-Gafra, Kafr Mahfouz, Qasr El-Gabali, Abu-denkash, Kerdasa-Corner angle, Senhor-Elkiblia tribal, Bandar-Tamia, Batn-Haried, Abu-Kesah, El-Kaby, Azab, Gordo respectively and thus the rate of productivity growth, technological Productivity Growth 65,9% , 31.5%, 23.1%, 20.5%, 13.8%, 9.4% for each village El-Gafra, Kafr Mahfouz, Qasr El-Gabali, Abu-denkash, Kerdasa-Corner angle, Senhor-Elkiblia tribal, respectively, in the positive

direction, increasing , while in the village of Bandar-Tamia, Batn-Haried, Abu-Kesah, El-Kaby, Azab, Gordo much a lack of change in the productivity of all factors, the rate of - 4.6% - 13.6% -16.7% - 19.8% , - 22.4%, 23.5%, respectively.



- Net change in efficiency Pure technical efficiency change (pech) Qasr El-Gabali of the villages, Senhor-Elkiblia, El-Gafra, Kafr Mahfouz, angle Kerdasa-Corner, Abu-denkash, Batn-haried, El-Kaby, Bandar-Tamia, the father of clothing, Gordo, El-Azab would have been about 1.529%, 1.465% 1.458% 1.367% 1.204% 1% 0.928% 0.920% 0.913% 0.889% 0.836% 0.809% respectively, meaning that the net change in efficiency in the positive direction, increasing only in the case of the village of Qasr El-Gabali, Senhor-Elkiblia tribal El-Gafra, Kafr Mahfouz, angle Kerdasa-Corner, Abu-denkash

while the net change in efficiency in decreasing the negative direction of the village Batn-Haried, El-Kaby, Bandar-Tamia, the father of clothing, Gordo, El-Azab.

- While the change in scale efficiency change (sech) was L.E 1.139 %, 1.085%, 1.054%, 1.050%, 1.033%, 1.021%, 1.006%, 0.951%, 0.944%, 0.943%, 0.924%, 0.846% for each village El-Gafra, Gordo, Abu-denkaash, Batn-haried, Kafr Mahfouz, Qasr El-Gabali, El-Azab, Senhor-Elkiblia tribal, Abu-Kesah, El-Kaby, Bandar-Tamia, Kerdasa-Corner angle on the order of any change in the efficiency of scale in the positive direction, increasing only in El-Gafra the case of the village, Gordo, Abu-denkaash, Batn-haried, Kafr Mahfouz, Qasr El-Gabali, El-Azab Senhor-Elkiblia The tribal village, the father of clothing, El-Kaby, Bandar-Tamia, Kerdasa-Corner point of view of the change in the efficiency of scale in the negative trend of declining.

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### أثر نظم إنتاج الدواجن علي الكفاءة الإقتصادية في ظل الإنتاج السائد بالقطاع الريفي " دراسة حالة بمحافظة الفيوم "

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تهدف هذه الدراسة لاستخلاص معايير الكفاءة الإنتاجية والإقتصادية لنظم إنتاج الدواجن بالقطاع الريفي في محافظة الفيوم بطريقة تحليل مغلف البيانات تبعاً لمنهجية Farrell (1957) وهي منهجية حدودية محددة غير قياسية The Deterministic Non-Parametric Approach ويستخدم أسلوب البرمجة الرياضية للوصول إلي معايير الكفاءات . وتم الاستعانة ببيانات التكاليف المتمثلة في تكاليف التغذية والتكاليف الأخرى ( تكاليف الأدوية ، تكاليف الفرشة ، تكاليف المياه والكهرباء ، ثمن الكتاكيت ، تكاليف العمالة العائلية ) كإدخال للإنتاج Inputs ، وإجمالي الإيرادات كمخرجات Output للدجاجة البيض وللطائر التسمين الواحد . وتوصلت الدراسة إلي :

أولاً : نتائج استخدام بيانات التكاليف والإيرادات لإنتاج البيض / للدجاجة لنظام التربية التقليدي وبدون حيازة زراعية وبين المراكز والقرى لمحافظة الفيوم بطريقة مغلف البيانات DEA

- أن نتائج تحليل الكفاءة لنظام إنتاج البيض / للدجاجة التقليدي ( Traditional Poultry Production Systems ) ، وبدون حيازة أرض زراعية ( Landless Poultry Production Systems ) أن النظامين ذو كفاءة تامة من ناحية عائد السعة الثابت أو عائد السعة المتغير وإقتصاديات الحجم الثابتة ، كما لا يوجد فوائض أي زيادات في استخدام المدخلات ( التغذية - المصروفات الأخرى ) ، ولا إمكانية لزيادة الإنتاج في ظل هذه المدخلات.
- بلغ التغير في إنتاجية كل العوامل Total factor productivity change (tfpch) للدجاجة البيض في نظام التربية التقليدي ١,٠٢٢ وبالتالي يكون معدل النمو التكنولوجي للإنتاجية Productivity Growth ٢,٢% في نظام التربية التقليدي ، بينما في نظام التربية بدون حيازة فحدث نقص في التغير في إنتاجية كل العوامل بمعدل - ٠,٢% .
- أن أكفاً مراكز في محافظة الفيوم في إنتاج البيض / دجاجة هي الفيوم ، يوسف الصديق فهم ذو كفاءة تامة سواء من ناحية عائد سعة ثابت أو عائد سعة متغير وإقتصاديات حجم ثابتة ، كما لا يوجد فوائض أي زيادات في استخدام المدخلات ( التغذية - المصروفات الأخرى ) ولا إمكانية لزيادة الإنتاج في ظل هذه المدخلات .
- بلغ معدل النمو التكنولوجي للإنتاجية Productivity Growth لإنتاج البيض / دجاجة ٦٥,٦% ، ١٤% ، ٧,٥% لكل من مركز طامية ، سنورس ، أطسا علي الترتيب في الاتجاه الموجب المتزايد ، بينما في مركز الفيوم ، يوسف الصديق فحدث نقص في التغير في إنتاجية كل العوامل بمعدل - ١٤,٩% ، - ٢٢,٧% علي الترتيب .
- أن أكفاً قري بمحافظة الفيوم لإنتاج البيض / دجاجة هي زاوية الكرديسة ، كفر محفوظ ، بطن هريد فهم ذو كفاءة تامة سواء من ناحية عائد سعة ثابت أو عائد سعة متغير وإقتصاديات حجم ثابتة ، كما لا يوجد فوائض أي زيادات في استخدام المدخلات ( التغذية - المصروفات الأخرى ) ولا إمكانية لزيادة الإنتاج في ظل هذه المدخلات .
- وتعتبر قري العزب ، سنهور القبليّة ، جردو ذو كفاءة تامة تبعاً لعائد السعة المتغير وهي في مرحلة إقتصاديات حجم متناقصة drs لكل من العزب ، سنهور القبليّة بينما قرية جردو في مرحلة إقتصاديات حجم متزايدة IRS .

- معدل النمو التكنولوجي للإنتاجية Productivity Growth لإنتاج البيض / دجاجة بلغ ٧٦,٥ % ، ٥١,٦ % ، ٤٩,٣ % ، ٣٠,٩ % ، ٢١,٥ % ، ٢١,٩ % ، ١٤ % لكل من قرية بندر طامية ، كفر محفوظ ، سنهور القبليّة ، أبو دنقاش ، جردو ، الكعابي ، الجعافرة علي الترتيب في الاتجاه الموجب المتزايد ، بينما في قرية العزب ، زاوية الكرداسة ، قصر الجبالي ، بطن هريد ، أبو كساء فحدث نقص في التغيير في إنتاجية كل العوامل بمعدل - ٤ % ، - ١٥,٣ % ، - ١٨,٩ % ، - ٢٦,٧ % ، - ٣٧,٨ % علي الترتيب .

ثانياً : نتائج استخدام بيانات التكاليف والإيرادات لإنتاج الطائر / تسمين لنظام التربية التقليدي وبدون

- حيازة زراعية وبين المراكز والقرى لمحافظة الفيوم بطريقة مغلف البيانات DEA :-**
- أن أكفاً نظام لإنتاج الطائر / تسمين هو بدون حيازة زراعية Landless حيث أنه ذو كفاءة تامة سواء من ناحية عائد سعة ثابت أو عائد سعة متغير وإقتصاديات حجم ثابتة ، كما لا يوجد فوائض أي زيادات في استخدام المدخلات ( التغذية - المصروفات الأخرى ) ولا إمكانية لزيادة الإنتاج في ظل هذه المدخلات .
  - بينما النظام التقليدي Traditional يتسم بنقص واضح في الكفاءة الإقتصادية في ظل عائد سعة ثابت حيث بلغ ٦٤,٤ % أي أن نقص الكفاءة يبلغ ٣٥,٦ % أي أنه يوجد فرصة لزيادة الكفاءة الإقتصادية للنظام التقليدي أكبر حيث أنها في مرحلة إقتصاديات حجم متزايدة irs .
  - بلغ التغيير في إنتاجية كل العوامل (tfpch) Total factor productivity change في نظام التربية التقليدي (Traditional) ١,٠٢٣ وبالتالي يكون معدل النمو التكنولوجي للإنتاجية Productivity Growth ٢,٣ % ، بينما في نظام التربية بدون حيازة زراعية (Landless) فحدث أيضاً زيادة وكان معدل النمو التكنولوجي للإنتاجية بمعدل ٠,٢ % أي أقل من نظام التربية التقليدي بمعدل ٢,١ % .
  - أن أكفاً مركز لإنتاج الطائر / تسمين هو أبشواي فهو ذو كفاءة إقتصادية تامة سواء من ناحية عائد سعة ثابت أو عائد سعة متغير وإقتصاديات حجم ثابتة ، كما لا يوجد فوائض أي زيادات في استخدام المدخلات ( التغذية - المصروفات الأخرى ) ولا إمكانية لزيادة الإنتاج في ظل هذه المدخلات .
  - ويعتبر مركز سنورس ، أطسا ذو كفاءة إقتصادية تامة تبعاً لعائد السعة المتغير وهو في مرحلة إقتصاديات حجم متزايدة irs .
  - معدل النمو التكنولوجي للإنتاجية Productivity Growth لإنتاج الطائر / تسمين بلغ ٩,٦ % ، ٢,٩ % لكل من طامية ، أطسا علي الترتيب في الاتجاه الموجب المتزايد ، بينما في مركز أبشواي ، الفيوم ، سنورس فحدث نقص في التغيير في إنتاجية كل العوامل بمعدل - ٠,٥ % ، - ٥ % ، - ١٥,٢ % .
  - أن أكفاً قرية الكعابي فهي ذو كفاءة إقتصادية تامة سواء من ناحية عائد سعة ثابت أو عائد سعة متغير وإقتصاديات حجم ثابتة ، كما لا يوجد فوائض أي زيادات في استخدام المدخلات ( التغذية - المصروفات الأخرى ) ولا إمكانية لزيادة الإنتاج في ظل هذه المدخلات .
  - وتعتبر قري بندر طامية ، أبو دنقاش ، أبو كساء ، جردو ذو كفاءة إقتصادية تامة تبعاً لعائد السعة المتغير وهي في مرحلة إقتصاديات حجم متناقصة drs لكل من أبو دنقاش ، أبو كساء ، جردو ، بينما قرية جردو في مرحلة إقتصاديات حجم متزايدة irs .
  - معدل النمو التكنولوجي للإنتاجية Productivity Growth لإنتاج الطائر / تسمين بلغ ٦٥,٩ % ، ٣١,٥ % ، ٢٣,١ % ، ٢٠,٥ % ، ١٣,٨ % ، ٩,٤ % لكل من قرية الجعافرة ، كفر محفوظ ، قصر الجبالي ، أبو دنقاش ، زاوية الكرداسة ، سنهور القبليّة علي الترتيب في الاتجاه الموجب المتزايد ، بينما في قرية بندر طامية ، بطن هريد ، أبو كساء ، الكعابي ، العزب ، جردو فحدث نقص في التغيير في إنتاجية كل العوامل بمعدل - ٤,٦ % ، - ١٣,٦ % ، - ١٦,٧ % ، - ١٩,٨ % ، - ٢٢,٤ % ، - ٢٣,٥ % علي الترتيب .