



## Economic efficiency of projects raising broiler chickens in Mahawil city, Iraq

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### Abstract

Raising broiler projects play an important role in providing foods for a large part of the peoples of the world because chicken meat provide high-protein quality and this kind of meat consumption increased in recent years because of its nutritional value, and also to lower prices compared with other protein sources, the objective of this research is to analyze revenues and costs to get economic efficiency through the application of some economic efficiency indicators and that by taking a random sample of 25% of the farms in the province of Babylon season production in 2012 in the city of Mahawil through a questionnaire prepared for this purpose, and the results of applied economic criteria showed a (net profit, net cash income, variable capital productivity, return dinar investor, gross value added, net value added) It's rewarding projects of the product reaching almost (6362103.072, 7424794.46 , 1.8, 1.6, 6728094.46 and 6596794.46), respectively, also showed the existence of a direct correlation between the high level income with the size of the project.

Keywords: broiler chickens, Economic efficiency, Net cash income, Gross value added, Net value added, Iraq.

### Introduction

The poultry meat from protein-rich animal sources, since the proportion of protein in chicken meat 19%, sheep meat 17% and beef 18.7 (Jawad, 1984). Poultry very efficient to convert diet to meat which it reached (1:2) while in cattle of (1:8) (Khalifa, 1978) means that every 2 kg feed give one kg chicken meat and 8 kg of feed give one kg of meat cattle. And projects raising broiler chickens a major role in providing food security for a large part of the peoples of the world because they provide him with protein animal, as per kgm of chicken meat contains 195 grams of protein and 1496 calories (Ali, 2002) has increased this type consumption of meat in recent years because of lower prices compared to other meat as well as a high nutritional value and improve the purchasing power of consumers (Hamza, 2015). The increase in demand for poultry meat and low domestic production volume levels forced the state to allow the import of large quantities than the national food security presents a serious risk occurs imbalance continuing in the Iraqi trade balance, so it requires increased attention of the state on the subject of agricultural investment and to provide the required national agricultural products Support and to make them able to compete with imported agricultural products and secure the people's livelihood self. Hence the importance of establishing the production of poultry

meat projects which occupies an important and essential place in the livestock because of their effective role in achieving food security.

### Materials and Methods

Failure to achieve high levels of production came from the low use of available economic resources and the difficulty of access to other economic resources has led to a decline in agricultural income level, which farthest the level of economic efficiency away from the required level, economic efficiency means the use of sources of wealth form in which it is possible to achieve two things. First Previous more productivity with itself produce costs. The second is the same for the past production costs less productivity (Izzi, 1989). According to economic concepts to measure the efficiency of the use of the resources necessary to achieve the optimal level of production on the one hand and to achieve the level of efficiency in general is only a piece of the intersection of the marginal value of resources and with the cost line is achieved. The calculation of total costs and revenue and net revenue items and the application of the financial assessment of the reality of the production fields of poultry (Hameed, 2011) indicators and financial evaluation indicators that were used are net farm cash income, which is equal to the total from minus the variable costs (Iskandar, 2009) and economic profit, which equals total revenue minus the total

cost (Maida, 2011) and productivity of a variable capital which is equal to the total revenue divided by the total variable costs, and return investor dinar which is equal to the quotient of total revenue to total costs (Muhammed, 2012), and value-added total net value added (Asatifan, 2008). The study aims to analyze the revenue and cost items and identify the economic merit of projects raising broiler chickens through the application of some economic efficiency indicators. The data obtained from the questionnaire prepared for this purpose and collected personal interviews through field visits and randomly made up of a sample of 60 projects poultry farming accounted for almost 25% of the breeding broiler chickens operating in Babylon province, projects for the year 2012 to see the economic efficiency of such projects and a comparison the result of the different field capacity (volumes). The sample was divided into seven categories so that we can analyze production and cost items and each class represents a field capacity of chicken.

### Results and Discussion

Total production reached in the research sample 5604.15 tons of meat and occupied the fourth category the largest proportion of the sample produce an estimated 2721.55 tones, equivalent to 48.56% of the sample production, due to the occurrence of most of the projects covered by the questionnaire in this category, followed by the second category then sixth, research sample achieved revenues Collect of 16812450 thousand dinars acquired fourth category at the highest revenue while seventh category on the highest average revenue for the project amounted to 532630 thousand dinars (Table 1).

It was the study of the fixed and variable costs of production in broiler chickens breeding projects to highlight the importance of each item These costs follows:

**Fixed costs:** It costs that do not change with change of element production (Maida, 2011) which amounted in the sample studied 1062691 thousand dinars, distributed between the vertebrae permanent work which accounted for most of the fixed costs by about 45.70%, while the other ratios were distributed between the interest on capital 22.08% and rent the ground with 19.84% and depreciation 12.36 attributed acquisition work permanent on such a high percentage and reduce other ratios that workers permanent representing family members of the poultry farmers are the ones who are with most of the business in these projects and shown in Table (2) that 19% of the fixed costs went to the class fixed.

**Variable costs:** It costs borne by the product when it is produced and include (temporary work, the cost of chicks, the cost of feed, other costs variable such as the cost of medicines, transport, fuel, maintenance, bedding, etc.) and Table 3 shows that the largest proportion of variable costs went to feed and which it accounted for (65.15%) of the total variable costs on the sample level and there was a discrepancy between the group and the other was for the fourth largest share class and this shows the disparity experience in the management of these projects. Comes after the feed in terms of relative importance the costs of chicks and other costs where it formed (% 21.85 and % 9.97), respectively, comes the interim A temporary work cost and suggest low proportion (3.3%), which refers to rely heavily on permanent work for much of the chicken breeding projects meat in the study sample.

**Averages costs:** A unit cost of output which is the average cost per unit of production is extracted by dividing the total , fixed and variable costs in order to total units produced that the average total costs are high when production started then take to decrease with the increase of production and the average variable costs are is directly proportional to the amount of output and inversely with the average fixed costs that go down with increased production (Table 4).

Notes from the table that the average total cost of production per project reached (174172.4) thousand dinars, and the average variable costs production per project costs (156460.9) thousand dinars, the average fixed costs production costs per project (17711.5) thousand dinars, it is worth mentioning that the variable costs accounted for about 90% of the sample total cost.

**Indicators Conference of economic efficiency:**

**Profit:** It is the difference between total revenue and total costs (Al-Mashhadani, 2002) sample achieved a total net profit was estimated at (6362103) thousand dinars and have the amount from another class to the above in the fifth category amplitude variation (8001 – 9000) pullet.

**Net cash income:** It is a measure of the ability of the farm boiling cash-generating is also the starting point of showing the farm to pay its debts ability It represents the difference between cash farm income and cash costs (Qaisi, 2009), shown studies that net cash income depends primarily on the size of the farm where came from fourth class rank the first (3718086) thousand dinars and achieved sample total net cash income as much about (7424794) thousand dinars (Table 5).

Table (1): Total production and revenue and profit per thousand dinars for projects in the production of broiler chickens sample

Number of projects Categories	Number of Projects	the amount of production (tons)	Revenue (thousand dinars)	Profit (thousand dinars)	Average Revenue (thousand dinars)
Less than or equal to 5000	3	88	264000	88177.44	88000
6000-5001	19	1047.8	3143400	1104794	165442.1
7000-6001	5	458.56	1375680	605231.2	275136
8000-7001	25	2721.55	8164650	3188782	326586
9000-8001	1	167.25	501750	165474.8	501750
-900110000	4	588.36	176080	581061.8	441270
10001 or more	3	532.63	1597890	628581.9	532630
Total	60	5604.15	16812450	6362103	2330814.1

Source: prepared by the researcher, depending on the form of a questionnaire.

Table (2): Fixed cost items and the relative importance ability thousand dinars

Number of projects Categories	permanent work	Percentage % rent	Annual Percentage	Percentage % rent	caducity	Interest on capital	Fixt cost	Percentage %
Less than or equal to 5000	9800	2.02	4500	2.14	3539	3853.26	21692.26	2.04
6000-5001	94700	19.50	38500	18.25	24091	45885.72	203176.7	19.13
7000-6001	25000	5.14	15000	7.11	3939	17586.73	66979.73	6.30
8000-7001	259700	53.47	100000	47.39	58440	111164.1	529304.1	49.80
9000-8001	14500	2.99	5000	2.37	2090	7675.25	29265.25	2.75
10000-9001	38000	7.82	24000	11.37	14271	27018.23	103289.2	9.72
10001or more	44000	9.06	24000	11.37	19476	21508.10	108984.1	10.26
Total	485700	100	211000	100	131300	234691.4	1062691	100
Percentage of total TFC %	45.70	--	19.8	--	12.36	22.08	100	---

Source: prepared by the researcher, depending on the form of a questionnaire.

Table (3): Variable costs and the relative importance of the terms of the ability of thousand dinars

Number of projects Categories	temporary work	Percentage %	Cost chicks	Percentage %	Cost of feed	Percentage %	Other costs	Percentage %	Total variable costs	Percentage %
Less than or equal to 5000	9000	3.16	31875	1.55	90405.3	1.48	22850	2.44	154130.3	1.64
6000-5001	66700	23.44	393175	19.17	1138194	18.61	237360	25.36	1835429	19.55
7000-6001	26200	9.21	160077.7	7.80	446441.4	7.30	70750	7.56	703469.1	7.49
8000-7001	113000	39.70	979237.1	47.74	2986481	48.83	367840	39.31	4446564	47.37
9000-8001	3500	1.23	101910	4.97	175900	2.88	25700	2.65	307010	3.27
10000-9001	38400	13.49	201575	9.83	716869	11.72	123885	13.24	1080729	11.51
10001or more	27800	9.77	183400	8.94	561724	9.18	87400	9.34	860324	9.17
Total	284600	100	2051250	100	6116021	100	935785	100	9387656	100
Percentage of TVC%	3.03	----	21.85	---	65.15	---	9.97	---	100	--

Source: prepared by the researcher, depending on the form of a questionnaire.

Table (4): total and fixed and variable costs and averages for the production of broiler chickens ability thousand dinars

Number of projects Categories	TVC	AVC	TFC	AFC	TC	AC For the production of broiler chickens
Less than or equal to 5000	154130.3	51376.77	21692.26	7230.753	175822.6	58.60752
6000-5001	1835429	96601.52	203176.7	10.693.51	2038606	107295
7000-6001	703469.1	140963.8	66979.73	13395.95	770448.8	154089.8
8000-7001	4446564	177862.6	529304.1	21172.16	4975868	199034.7
9000-8001	307010	307010	29265.3	29265.25	1184018	336275.3
10000-9001	1080729	270182.3	103289.2	25822.3	969308.1	296004.6
10001or more	860324	286774.7	108984.1	36328	336275.3	323102.7
Total	9387656	1330502	1062691	143908	10450347	1474409
Average	156460.9	--	17711.5	--	174172.4	--

Source: prepared by the researcher, depending on the form of a questionnaire.

Table (5): Profit indicators and net cash income for the research sample in thousand dinars

Number of projects Categories	Profit	per project Percentage%	average net cash income Earnings	average net cash income	Percentage of net cash income%	Average net cash income per project
Less than or equal to 5000	88177.4	1.4	29392	109869.7	1.5	36623
6000-5001	1104794	17.3	58147	1307971	17.6	68841
7000-6001	605231	9.5	121046	672211	9	134442
8000-7001	3188782	50.1	127551	3718086	50	148723
9000-8001	165475	2.6	165475	194740	2.6	194740
10000-9001	581062	9,1	145265	684351	9.2	171088
10001or more	628582	9.9	209527	737566	10	245855
Total	6362103	100	106035.051	7424794	100	1000312

Source: prepared by the researcher, depending on the form of a questionnaire.

Return of the dinar investor and capital productivity variable: It is an important economic criteria, which is equal to the quotient of total revenue to total costs (Arhomh, 1998) and the results showed that return of the dinar in studied project was rewarding as the average return of the dinar invested in the research sample (1.6) dinars ranged per minimum stood at 1.51 to the category of the first united the highest was (1.76) for the third category (Table 6), either standard productivity of a variable capital of the field on the sample reached (1.79) thousand dinars per thousand dinars invested in the sample as a whole between a minimum amount (1.6) thousand dinars per thousand dinars investor for the sixth class and a high total (2) thousand dinars per thousand dinars investor latter category.

Gross value added: It is obtained from the sum of the (net profit + wages + interest on capital + depreciation) (Ismail, 2008) and amounted to gross value added total of the sample (6728094.46) thousand dinars and an average of (112134.9) per project and trading at an average value-added total

between end the lowest was (31856.6) thousand dinars for the first class was found higher (872194.2) thousand dinars for the fifth category.

Value-added net: It is obtained from gross value added minus depreciation (Izzi, 1989) The total net value added of the research sample (6596794.46) thousand dinars and an average of (109946.57) thousand dinars, and the top rated seventh category (216696.1) thousand dinars (Table 6).

Note that the most prevalent categories were fourth category, which can accommodate to (70018000) chicken meat, and the cost of feed the bulk of the total variable costs, which accounted for most of the total costs either fixed costs the work permanent have larger ones ratio, and showed efficiency indicators that most of the projects have good economic efficiency and found that the latter category were the best of the total criteria used to differentiate. It is therefore recommended the expansion of broiler chickens breeding projects to achieve a level of self-sufficiency in poultry meat and provides entry rewarding for educators.

Table (6): The economic efficiency of the research sample thousand dinars indicators

Number of projects Categories	return dinar investor	Antegehras money variable return	average value added total	Average net value added
Less than or equal to 5000	1.51	1.72	31856.6	30676.9
6000–5001	1.53	1.7	61830.1	60562.1
7000–6001	1.76	1.93	107117	124563.6
8000–7001	1.65	1.86	130529.8	131997.8
9000–8001	1.49	1.63	196490	173150
10000–9001	1.5	1.63	163409	152020
10001or more	1.72	2	180961.7	216696.7
Average	1.6	1.79	112134.9077	109946.5743

Source: prepared by the researcher, depending on the form of a questionnaire.

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