

Profitability Analysis of Poultry Farming

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Abstract

The study was undertaken in District Nowshera with the objective to analyze the profitability of poultry farming enterprises of the area. For this purpose 26 farms were randomly selected. Economic efficiency measures of net benefits, benefit-cost ratio and gross margin were used to identify and highlight the bench marks for analyzing the profitability. The impact of non-financial factors like education and experience of farmers on firms' profitability was also analyzed with regression analysis. The regression analysis shows that farmers' education and experience were positively affecting farmers' profitability, whereas mortality of birds was negatively affecting the profitability of farmers. It is recommended that credit facility should be provided to farmers so that they can buy inputs from the cheapest source. Subsidy on feed and one day check can decrease the cost of production significantly which may help in the promotion of broiler industry.

Keyword: Profit; Net Benefit; Benefit Cost Ratio; Gross Margin; Experience; Education; Mortality of Birds.

Introduction

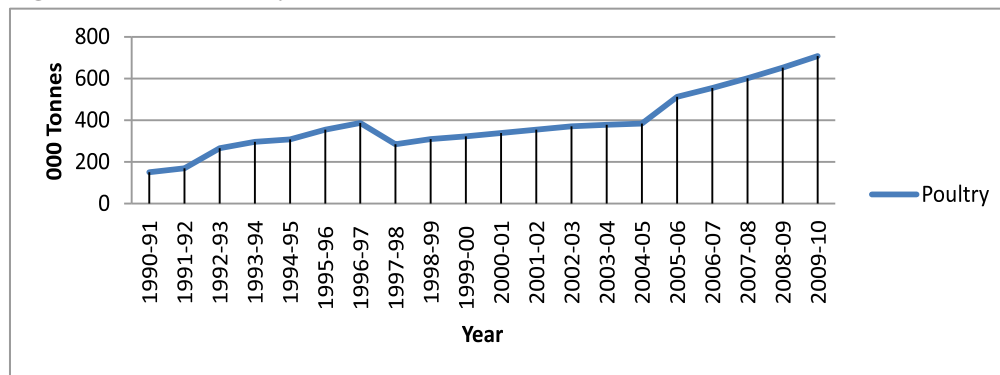
The role of agriculture is diversified and multidimensional in the overall development of middle income agrarian countries. Its contribution in the secondary and tertiary sector as supplier of raw material, employment, and market is significant. Agriculture sector is mainly divided into two segments i.e. crop and livestock. Both of them have historic importance in meeting out basic livelihood of mankind. So these remained the prehistoric professions for man since the inception of human history. Even now both segments have a considerable and countable share in the livelihood through generating employment opportunities and providing food security to mankind. In this regard the role of livestock is revolutionary as far as the developing and agrarian economies are concerned. About 30 to 35 million people from rural population of Pakistan are engaged in this very sub-sector (Idrees *et al*, 2007).

The major products of livestock sector i.e. milk and meat; are the basic components of balanced diet which are pre-requisite of sound health, vigor and productive capacities of mankind (Abdullah and Bukhsh, 2007). Meat availability in form of substitutes like mutton beef and poultry provides different alternates and choices for the mankind to make one which is cheaply available, tasty and economically efficient. Poultry is one of the best and favorite options to entangle the animal protein, this is why it has grown faster than any other meat in the world since 1960s (Chang, 2005). Increasing meat demand and food & nutrition security provides a launching pad for the poultry segment of the livestock industry.

Poultry Sector in Pakistan

Like other countries poultry sector, in shape of domesticated species of bird reared for production of eggs and meat as backyard poultry farm, has been present in the geographical area of Pakistan since the dawn of civilization. Prior to 1963 poultry farming was a cottage industry. However, the modern commercial poultry farming in Pakistan was introduced in 1963 which was further developed by PIA Shaver in 1964-65 with the establishment of Pakistan's first hatchery unit in Karachi (Alam and Khan 2000). Liver Brothers also installed a modern plant for the production of poultry feed the same year. Since then the private sector started investing in the poultry sector and gradually this it became one of the fastest growing subsector of the economy.

Figure 1.1 Poultry Meat Production in Pakistan



Source: GOP, 2010.

According to GOP (2010) poultry farming has grown at a tremendous pace in Pakistan. In the last two decades the meat production of poultry has expanded by more than 450%. The poultry population has also increased from 146.90 million birds to 610

million birds registering expansion of 415% (GOP, 2010). It also shows that the meat production has increased at greater pace than the number of birds and thus indicates improvement of breed and increased productivity of poultry farmers.

Problem Statement

The study will highlight the role of broiler farming in tackling the problem of low rural income and technical and economical constraints and unemployment which will pave the way for making the business more profitable. It will further highlight its role in protein deficiency, meat shortage and instability in the prices of meat.

Significance of the Study

The study is designed to examine the profitability of broiler farming farms, marketing channels of sale of matured birds and highlight the problem faced by the farmers. Recommendations for policy purpose are also suggested on the basis of the findings and conclusions.

Objectives of the Study

Following are the specific objectives of the study area:

To analyze the profitability of broiler poultry farms in the study area.

- i. To highlight the constraints/problems of the poultry industry in the study area.
- ii. To examine the marketing channels of sale of matured broiler birds by the farmers in the study area.
- iii. To suggest policy measure for the development of poultry (broiler) industry in the study area.

Hypothesis

H₀: Poultry Farming is not a beneficial business.

H₁: poultry Farming is a beneficial business.

Review of Literature

Review of literature draws a complete picture of the research already conducted in a particular field. It provides feedback to the research for further addition in the existing body of knowledge. It raises more questions and identifies new dimensions for the researcher. My research questions stem from the following brief review.

Mahaddes and Mazhari (2008) undertook a study on total and input productivity

analysis of poultry production in Khurasan, Iran .This study was conducted for finding out the productivity level of the industry for the development of a sustainable and high productive system by using Transcendental and Cob Douglas production function. It was found that the average productivity for the poultry farm was 1.07.This makes it clear that the income is approximately equal to the variable cost. When the fixed costs were taken into account the profit for the average farm became negative. It was concluded that the feed was used more than the optimal level while pullets were used less than the optimal level. So for increasing the profitability farmers should have used less feed and more pullets fir reducing the cost of production.

Mohsin et al. (2008) conducted a study in district Rawalpindi Pakistan on the profitability of broiler production. For this purpose he used the economic measures of net present worth, benefit cost ratio, gross margin and internal rate of return . He found that most of the framers don't have the formal education, which caused high cost of production. He emphasized the extension services and technical knowhow for the farmers for the improvement of the enterprise.

Abdullah *et al.* (2007) conducted a study on the economics of poultry production and its problems in Faisalabad, Pakistan. The study highlighted the different problems faced by the broiler producers in the study area. They estimated the percentage share of different stakeholders in total profit of the industry. It was observed that inequitable distribution of profit was the major obstacle in the expansion of the poultry industry .Their results recognized that 47% of the total profit is gained by the commission agent, followed by retailers whose share was 28% and the remaining share went to the pocket of producers The other issues highlighted in the study were the marketing of broilers in the hands of few functionaries rapid price fluctuations and high charges of commission.

Mack *et al* (2005) studied demand for animal products, including poultry meat and eggs in Sub Sahara Africa and Asia in order to recognize the contribution of livestock to the incomes and Welfare of the rural poor in the study area. He observed that besides other dairy products backyard poultry farming can play an important role in poverty alleviation, job creation and income support of the farmers in the rural areas. He suggested that participative development programs can overcome the constraints faced by the smallholder poultry producer with significant economic and social benefits.

It is obvious from the above studies that poultry farming is a profitable business and there is a capacity to utilize this core asset in the study area. It can be proved as one of the better substitute for the other sources of meat i.e. beef and mutton and can play a crucial role in bringing balance among their prices. Besides this the broiler meat may be an extra source of protein. If it is developed on priority basis employment opportunities will definitely be created for the people as this area has a lot of potential in this regard due to availability of cheap labor force. Available work force can be utilized as an external economy of scale. Consequently this economy of scale will definitely be a catalyst for reducing the rural poverty in the study area. Through this study the problem of food security might be highlighted and economic conditions of the poor people will definitely be improved. This study will pave the way for more investment induced by increasing demand of meat and it might provide some fruitful guidelines for the investors to inject their capital to exploit and utilize the conditions.

Research Methodology

Description of the Universe of the study

Poultry farm industry of District Nowshera constitute universe of the study. It is situated almost in the centre of the province. To its east is district Swabi; in the west Peshawar and Khyber Agency is situated.

Selection of Sampling Area

Census of the entire universe is impossible in this type of studies; hence sampling techniques are used to select a sample size and area which is representative of the entire universe so that the findings can be generalized with confidence for the entire universe. Selection of sampling area was a difficult task in the present study because the poultry industry is situated almost in all part of the district and is scattered. However concentration of farms was in the rural areas. Hence it was decided to survey that part of the district.

Selection of Sample Size

Selection of suitable and appropriate sample size is of paramount importance in any research study as findings of a study carried out with a representative sample only can be generalized to the universe. Keeping in view the budget and time it was decided to study 26 farms. Convenient sampling technique was applied to determine the sample size. Sample selection of individual farm was done randomly.

Research instrument:

A comprehensive interview schedule covering all aspects of the problem under investigation was designed and used as a research instrument for this study.

Data collection:

Several farms visits were made to the research area for the collection of required data. The data was obtained through face to face interview from the poultry farm managers.

Analysis Techniques:

In order to achieve the specific objective of measuring the profitability of firms different techniques are used. Budgeting technique is a very popular method applied for analyzing the same (Chaudry *et al.*). In this study this method was selected for its feature of simplicity and reliability. In this method the following ratios are calculated:

- i. Benefit Cost Ratio (BCR),
- ii. Gross Margin (GM),

i. Cost Benefit Ratio $\sum_t \frac{B_t}{(1+d)^t} / \sum_t \frac{C_t}{(1+d)^t}$ (Chaudry *et al*1995, Mohsin *et al* 2008)

The benefit cost ratio (BCR) is an important tool for determining the profitability of a project or firm or activity. This ratio compares the stream of benefits and costs of a project in order to see whether the investment in the project is beneficial or not. BCR ratio expresses the net benefit and the capital cost over the life of the investment by using the following formula:

Benefit cost ratio =

d is the discount rate

n is the life of the farm investment

C_t is the cost incurred in t time period

B_t is the value of benefit earned in t time period

PROFITABILITY ANALYSIS OF POULTRY FARMING**ii. Gross margin**

Gross margin will depict that the farm is recovering at least at the variable cost. Its computation will be made by employing the following formula.

$$g_i = r_i - c_i \text{ (Chaudry et al. 1995, Mohsin et al. 2008)}$$

Where

g_i is the gross margin

r_i is the activity's per unit revenue

c_i is the activity's per unit cost

All the above calculations were made in the MS.EXCEL.

Analyzing the Factors Affecting Profit of the Broiler Farmers

In order to analyze the factors determinants of profit of broiler farmers the following econometric model was used

$$P_i = E d_i + E x_i + M_i + e$$

where,

P_i = Profit of i th Farmer,

$E d_i$ = Years of Education of the i th Farmers,

$E x_i$ = Experience of i th Farmer,

M_i = the Mortality of i th Farm,

and

e = the random error term.

Regression of the above model was run with the help of GRET L software which is particularly developed for social science research analysis and is one of the most popular software used in social science research analysis.

Results and Discussion

General Features of the Respondents

General features of the respondents provide valuable information to the researcher. These features include age of respondents, literacy status, years of education, experience. The detail is incorporated in the following lines.

Age of the Respondents:

The respondents were categorized into four age group as given in the table below.

Table Age of Respondents

Age	Number	Percentage
21-30	16	61.54%
31-40	5	19.23%
41-50	3	11.54%
51-60	2	7.69%
Total	26	100

Source: Survey

The data in table shows that 61.54% of the respondents were in the age group 21-30, 19.23% respondents were in the age group of 31-40, 11.54% were in the age group of 41-50 and 7.69% respondents were in the age group of 51-60 years. The data in the table reflects that the age group of 21-30 shares the highest percent age, while age group of 51-60 has the minimum share.

The overall data shows that younger and energetic lot of farmers was in poultry business in the sampled area. It may be because of the fact that the business is very laborious and require more energy and sharpness to run the business efficiently.

Educational Status	Number	Percentage
Illiterate	3	11.54%
Primary	0	0%
Middle	3	11.54%
Matric	8	30.77%
Intermediate	6	23.08%
University Degree	6	23.08%
Total	26	88.46%

Source: Survey

Literacy and Educational Status of Respondents:

It is observed that out of the 26 respondents only 3 were not formally educated. Distributions of the rest of the respondents on the basis of their educational qualification are given below:

Table Educational Status of the Sampled Respondents

Table 4.2.1 Respondents Years of Experience:

Experience	Number	Percentage
1-3	8	30.77%
4-6	5	19.23%
7-9	3	11.54%
10-12	5	19.23%
13-15	4	15.38%
16-18	0	0%
19-21	1	3.85%
Total	26	100%

Source: Survey

The data shows that 11.54% respondents were illiterate. Farmers with 10 years of education have the highest percentage i.e. 30.77%. Middle qualified farmers were 11.54%. In addition 23.08% of the respondents fall in the category of intermediate and university education which is indicative of the fact the opportunity cost of education is quite low. The overall results show that poultry farming in the area is dominated by educated people.

Respondents' Years of Experience

Experience of sampled respondent is categorized into seven groups.

Table 4.2.1 Respondents Years of Experience:

As the data reveals that experience of farmers in the broiler poultry farming ranges from the interval 1 to 21. The highest share of respondents on the basis of experience was observed in the group 1-3 years of experience with 30.77% respondents, followed by 4-6 and 10-12 years of experience with 19.23% respondents. It shows that most of the farmers were having sufficient experience of running poultry farms.

Number of Flocks Operated

The numbers of flocks reflect the farmers' efficiency and total output of the enterprise during the period. Data regarding distribution of respondents by flock size is given in the following table:

No of Flocks	Number	Percentage
3	3	11.54%
4	5	19.23%
5	12	46.15%
6	6	23.08%
Total	26	100%

Source: Survey

The maximum number of flocks operated during 2015 by the respondents was 6 while the minimum flocks were 3. The data shows that 46.15% of the respondents operated 5 flocks during the reported period. 23.08% farmers operated 6 flocks and 19.23% farmers

operated 4 flocks during the same period. In a year maximum 6 flocks can be operated and the data shows that around 53.85% of the farmers have not fully utilized their available capacity.

Procurement and Supply of One-Day-Checks

One day checks were procured by the farmers from different sources. In the sampled area the respondents procured the same from the commission agent and wholesalers. Distribution of respondents by source of procurement of one day check and farm size is given in the following table:

Table: Supply of One-Day-Checks by Source of Supply and Farm Size

Supplier	Mode of Payment	All Farms	
		Number	Percentage
Commission Agent	Cash	3	11.54%
	Credit	7	26.92%
Wholesaler	Cash	6	23.08%
	Credit	10	38.46%
Total		26	100%

Source: Survey

As it is evident from the data wholesalers were the main source of supply of one day check which supplied 61.54% of the total supply to the sampled farmers. Only 38.46% farmers obtained checks from commission agent. Trend of purchase from wholesaler was strongest in Farmers though it was equally popular in other types of farms. Another trend noticed was that most of the farmers buy checks on credit from both sources. On the whole procurement at credit was dominant which shows scarcity of capital and financial assets with the farmers.

Purchase and Supply of Poultry Feed

Supply of feed was also supplied by the two sources i.e. Commission Agent and Wholesalers; both on cash as well as credit. Data regarding feed supply to the respondents grouped on the basis of farm size and source of supply are given next page:

Table: Supply of Feed by Source of Supply and Farm Size:

Supplier	Mode of Payment	All Farms	
		Numbers	Percentage
Commission	Cash	1	3.85%
Agents	Credit	8	30.77%
Wholesalers	Cash	7	26.92%
	Credit	10	38.46%
Total		26	100%

Source: Survey

We can observe that around 34.62% of the feed is supplied by the commission agent out of which only 3.85% was purchased by the farmers on cash the rest was supplied on credit. A major part of Feed i.e. 65.38% was supplied by the wholesalers out of which 38.46% was purchased by the farmers on credit while the remaining 26.92% on cash. Again major procurement of feed was made on credit i.e. 69.23%.

Mortality of Birds

In broiler poultry farming mortality is usually high as these birds are very sensitive and fragile. Mortality of chicks and matured birds is an important feature and is one of the main determinants of profit. Mortality of chicks and birds of the sampled respondents is given in the following table:

Table: Mortality of Birds by Farm Capacity

S. No	All Farms
Average	318
Maximum	600
Minimum	60

The data reveals the reported mortality rate is very high as compared to other studies on the subject in other areas. The average of the Mortality of Birds by Farm Capacity was 318. The Maximum rate was 600 and Minimum rate was 60. Mortality rate is usually calculated as number of birds died out of 1000.

Cost of Production

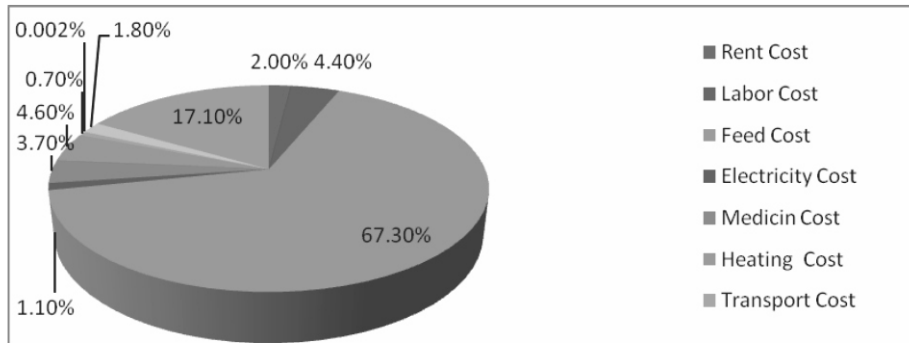
Cost of production of the sampled respondents for different farm size is reported in the following table and figure:

Table: Cost of Production of Broiler by Farm Size (in Pak Rupee)

S. No.	Particulars of Cost	All Farms	Per Bird
1	Feed Cost	56807260	693
2	Check Cost	19267000	235
3	Rent Cost	1675200	20.43
4	Labour Cost	3661500	44.65
5	Medical	3180000	38.78
6	Laboratory	14400	0.18
7	Heat & Light	4735500	58
8	Repair cost	1515400	18.48
9	Transport	613350	7.48
	Total	91469610	1116

The data show that Feed was the major cost component followed by one day check cost and medicine and medication. Feed cost on the average was Rs. 693 for all flock size and accounts for 63% of the total cost of production of all farms during one year. This tendency may be because of better management of farms. One day chick cost is the second largest component of broiler production in the sample area. Its average was Rs. 235 for all the sampled farms and accounts for 21.06% to the total cost of broiler production. Medical cost which includes cost of medicine, laboratory and doctors' fee accounts for 3.5% of the total cost and on average was Rs. 39 per bird sold.

Figure: Cost of Broiler Production (%)



Source: survey

Labour cost was the next highest component of cost which on average was Rs. 45 per bird sold. Fixed cost which includes rent of building/shade, depreciation of tools and plants and equipment etc. It accounts for Rs. 20.43 per check. Fixed cost was high in the farms which may be an indication of the existence of economies of large scale production. Sale commission was another important component of cost of production which was charged on the sale price of birds. Four percent commission is charged on the sale price and usually the commission agents recover the cost of one day checks, feed and medicines etc which were supplied to the farmers.

Sale to Different Marketing Channels

In the broiler industry four marketing channels were used in the sampled area i.e. Sale Direct to Consumers, Sale to Retailers, Sale to Wholesalers and Sale to Commission Agent. Data collected from the respondents is tabulated below:

Table: Distribution of Respondents by Sale of Broiler Birds to Different Sources (%)

S .No.	Marketing Channel	All farms	percentage
1	Direct to Consumer	2	7.69%
2	Retailer	4	15.38%
3	Whole Seller	10	38.46%
4	Commission Agent	10	38.46%
	Total	26	100

Source: Survey

The data reveals that Commission agent and Wholesalers are the major buyer of broiler birds in the sampled area. They bought almost 76.92% of the total output. Retailers get around 15.38% and consumers directly get around 7.69% of the market share. The farmers sell the highest percentage of birds to commission agent and wholesaler i.e. over 76.92%; by farmers. An important reason of this trend may be that the commission agent and wholesalers is the major financier at the stage of supply of one day check and feed.

The overall situation disclosed weak marketing skill of the farmers and monopoly of commission agent who usually serve as supplier of one day check, feed and medicine and sale agent and whole seller. In this system commission agent exploit both farmers and consumers with very limited risk of capital investment.

Sale Price for Live Birds

Sale price of broiler matured birds of the respondents is detailed in the following table:

Table: Per Bird Sales Price of Broiler

Ratio	All Farms
Average	242
Maximum	272
Minimum	220

Source: Survey

Average price of broiler birds of all farms is almost the same with a high variation of 52 rupees per bird (maximum Rs. 272 to minimum Rs. 242). Hence farms can earn both high profit and loss. The highest prices scenario indicates situation of better bargaining power and the lowest price may be due to ill management of broiler production.

Revenue by Farm Size

Sale of live birds, birds manure, and other waste were the main sources of revenue of broiler producers in the sampled area. Data regarding different components of revenue by farm size are tabulated below:

Table: Revenue of Respondents from Poultry Farms

Particulars	All Farms	Percentage	Per Bird Revenue
Sale of Bird	94097575	98%	1147.53
Manure	14,750	1.8%	17.59
Other	3,801	0.2%	1.70
Total	1,660,578	100	1166.82

Source: Survey

The data show that sale of live birds was the main source of revenue which generate 99% of revenue of the farmers. The sale of by-products like birds manure and sale of gunny bags etc. also contribute 1% of the revenue.

Profitability Analysis

In order to analyze the profitability of poultry farms for the present study the following two ratios and a regression was used:

- I. Net Benefits
- ii. Benefit Cost Ratio
- iii. Regression for identifying non financial factors determining profitability of broiler farms.

These analyses are given in the following passage.

Ration Analysis

Net benefit, cost benefit ratio and average margin are very important indicators of profitability analysis of any business. These ratios for the broiler farms for the present study are given in the following table:

Table: 4.3.1. Analysis of Ratios

Type of Ratio/Value	All Farms
Net Benefit	Rs.4211605
Cost Benefit Ratio	1.05

Source: Survey

The analysis shows that the benefits-cost ratio of farms was highest. The net benefit was Rs. 4211605 of all farms during the time period. The Cost Benefit Ratio was 1.05 which is greater than one ($1.05 > 1$) so farmers' business or activity or project is worth to be accepted. The results are similar to the findings of *Imtiaz khan (2010)*, who conducted a similar study in the district Peshawar. The analysis shows that the overall business is profitable.

Regression Analysis

In order to identify and analyze the non financial factors determining profitability of broiler farms in the study area the following econometric model was used

$$P_i = E_{di} + E_{xi} + M_i + e$$

where,

P_i = Profit of *i*th Farmer,

E_{di} = Years of Education of the *i*th Farmers,

E_{xi} = Experience of *i*th Farmer,

M_i = is the Mortality of *i*th Farm,

and

e = is the random error term.

Regression of the above model was run with the help of GRETLE and its results are detailed below:

Regression Results

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>
const	2835.12	1.03531e+06	-0.2738	0.78676
EDU	373766	607379	0.6154	0.04462
EXP	88455.5	66795.8	1.3243	0.00901
MOR	-1153.15	5524.04	-0.2088	0.05656
Mean dependent var	404949.4	S.D. dependent var		1291582
Sum squared resid	3.09e+13	S.E. of regression		1185861
R-squared	0.258167	Adjusted R-squared		0.157008
F(3, 22)	2.552085	P-value(F)		0.081641

The F-ratio statistic shows that the model is overall fit and satisfactory on the basis of statistical standards. R-square and Adjusted R-square are acceptable and shows that around 26% variation in the dependent variable are explained by the explanatory variables.

Results show that all the three independent variables were statistically significant and thus related to the dependent variable. Relation with education and experience are positive which means that increase in these two variables increase profit. Percentage mortality was negatively related which shows inverse relation between the two variable.

A total of Rs. 2835.12 was indicated as constant profit. Profit of Rs. 373766 and Rs. 88455.5 were supposed to be induced by one year of education and experience respectively, whereas; profit amounting to Rs. 1153.15 was supposed to reduce with increase on 1% mortality. To sum up we can say that experience and year of education were important contributors to profit of broiler farmers.

Conclusion and Recommendations

The study was conducted in district Nowshera of the Khyber Pakhtunkhwa province of Pakistan in order to analyze the profitability and structure of the broiler farms. The study was based on the sample of 26 farms. The farmers were randomly selected in order to get away with the selection bias which is common in this type of study. The farmers were interviewed via a structural questionnaire (interview schedule) designed for the study and pretested.

The general features of the sampled respondents show that majority of 61.54% respondents were in the age group 21-30 followed by the age group 31-40 which were 19.23%. On the whole it was observed that the farmers involved in the farming of broiler production in the sampled region were in their golden age; as only 2 was above 50 years of age. It is due to the fact that broiler poultry farming is a very laborious work and farmers need to be energetic enough to do the hard labor of rearing broiler birds.

The data regarding experience shows that the average experience of sampled farmers was 10-12 years. There were a couple of value added farmers with experience of 20 years and a few of very limited experience. The overall picture shows that the farmers interviewed were in business for a reasonable period and understand the terms and stages of poultry farming.

Data regarding the educational qualification of the respondents show that most of the farmers were educated and only 3 farmers were illiterate. The maximum number of the educated farmers has matric and intermediate qualification however there were also 6 numbers of farmers having a university degree. It shows that the farmers were reasonably educated.

Respondents' farms capacity data shows that most of the farms i.e. 8 (30.77%) were of (1000-2000) capacity. Followed by 7 (26.92%) in the interval of (3001-4000) and 6 in the interval of (2001-3000). The remaining 5 fall in the others interval (19.23%) by Farm Capacity.

Data on the number of flocks which shows the operational level of the farms shows that most of the farmers i.e. 12 numbers (46.15% of the respondent); operated 5

flocks. 6 respondents operated 6 flocks and 5 operated 4 flocks and 3 operated 3 flocks during the reported period. It shows that most of the farms operated at full capacity however a 50% of the farms still missed at least one flock in the year 2015 which indicate existence of bearish trend of the industry which is causing inefficiency in the broiler enterprise.

It was observed that one-day-chick, feed and medicine were majorly supplied by the commission agent and wholesaler and mostly on credit basis. The role of commission agent and wholesalers was dominant in the supply of feed where they supplied more than 70% of the feed to farmers and all on credit. Thus the institutions of commission agent and wholesalers played an important role in financing the feed supply to the farmers. Similar role were also observed during the supply of one day chick and medicine. In case of one day chicks around 38.46% of the supply was contributed by the commission agents and the remaining 61.54% was contributed by the wholesalers. 63% of the total chicks supply was made on credit by the commission agents and wholesalers.

Average mortality rate reported by the respondents was 318, Maximum rate was 600 and Minimum rate was 60. The common mortality rate is 100 Birds per 1000.

The respondent's sale data shows that commission agent and wholesalers was main buyer of the matured birds who procured more than 77% of the total salable birds. The Retailers bought around 15.38% of the output and 7.69% of the sale were recorded for the direct to consumers. The commission agent charge 4% commission on the sale price of birds and also recover his dues for feed, and other procurements extended on credit to the farmers. The overall picture shows weak bargaining power of the farmers.

Feed cost was the major contributor of the cost of production which shared more than 63% of the total cost share. One day chick was the second largest cost contributor which contributed 22% of the total cost of matured birds. Other important cost factors were medicine cost, labor cost, fixed cost etc. The overall share of these components of cost was relatively low.

The sale price of matured birds was distributed with a range of 52 (maximum Rs. 272 to minimum Rs. 220) which is indicative of competitive market for broiler produce. The average price of farms was highest i.e. Rs. 242 which may be because of better weight of the birds which indicates that better health of the farms was comparatively high.

Conclusion

As evident from the various ratios computed it is concluded that broiler poultry farming is a profitable business in the sampled area. Net benefit for an average sampled firm was Rs. 4211605 with a gross margin of 51.36 and benefit-cost ratio of 1.05. The lowest benefit cost ratio and gross margin indicate high level losses reported by the sampled farmers of the stratum. These losses may be because of the mismanagement of the farm operators.

The regression results indicate that farmer's education and experience in broiler farming and mortality of chicks were the main determinants of the profitability of broiler firms. Mortality of checks was negatively related to profitability whereas education and experience were positively and significantly related to profitability of broiler farms'. The overall results show that poultry farming is a profitable enterprise and its profitability can be further enhanced by providing credit facility and other incentives to the sector.

Recommendations:

Following are some important recommendations based on the study findings and review:

1. Proper training programs should be arranged for the farmers.
2. The poultry feed industry should be provided with all the incentives in order to provide cheap and better quality feed to the farmers. It will help in reducing the cost and improve the quality and quantity of poultry. Also proper check should be maintained in order to assure quality and fair price to the farmers.
3. Research and development activities in the sector should be strengthened and coordinated in order to help the development of the sector according to modern requirements.
4. Credit facilities should be provided to the farmers on the low interest rate.

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