

Performance of Broiler Farmer in Partnerships System at Surakarta, Indonesia

Sudi Nurtini, Mujtahidah A. U. Muzayyanah, F. Trisakti Haryadi, and Abdul Hakim
Faculty of Animal Science, Universitas Gadjah Mada, Yogyakarta, Indonesia
Email: nurtini@ugm.ac.id

Abstract—The research was conducted to evaluate the performance of broiler chicken farmer with partnership system. The research was conducted using survey method to broiler chicken farmer who joining partnership system. Descriptive explanative method was using to analyze data. This research used descriptive explanatory method using a quantitative approach. The result showed that income of the broiler farmer received from the core-breeder Rp 13,836,594.08 /head/ period, while net-income of the famers is amounted to Rp 7,864,326.24 / head/period. It is concluded that the net income received by farmers was only half.

Index Terms—business performance, broiler breeders, the partnership system, the core company

I. INTRODUCTION

A. Background

Currently, Indonesian population is about 250 million people. The average growth of Indonesian population rises approximately 1.49% per year or 3–4 million people increase each year. This population explosion surely will be an interesting market for businessman.

Discussing about business, one of the promising business chances in Indonesia is food business. Poultry production is one of the food businesses that will be continuously needed. It is because of poultry products (chicken and egg) is the animal protein supply for human life. In 2013, the broiler consumption of Indonesian people still reached 8kg per capita while egg consumption was 110 eggs per year. This small number of broiler meat and egg consumption becomes a big chance for businessman especially for poultry production. Poultry industry that is dominated with broiler chicken production is the food product that has a very promising market prospect. Further, the demand for poultry products especially broiler meats will always increase because of some factors, namely a). Population growth, increasing income, increasing number of middle class society, urbanization, life style change, greater life expectancy, and elderly people; b). The demand for foods that are ready to cook and ready to eat is increasing, especially in the downtown; c). Many Quick Service Restaurant (QSR) that offer various kinds of poultry products; d) Many consumer who change over consuming red meats into

chicken meats for health reason and e). This commodity has a role as the cheapest animal protein supply among the other kind of meats [1].

The broiler farming in Indonesia started developing in 1970 and widely spread in 1980. The broiler farming develops in line with the population growth, life style shift, and income level, development of economy and politic situation, and also safety condition.

Currently, the majority of broiler farmers is not working independently but united with integrated partner companies. This partnership scheme is a partnership between the partner farmer and partner companies. The partner farmer groups act as plasma, while the partner companies act as the core. In the broiler partnership that is currently running, the partner or core companies provide farming production facilities such as DOC, feed, medicines, vitamins, vaccines, technical supervising, and products marketing, while the plasma provide the chicken house and worker. The aim of this partnership scheme is to help the broiler farmers who have limited funds. However, essentially partnership is business cooperation for certain objectives and each party should have equal interest and position [2]. During its journey, the broiler partnership experience an up and down. It because of the system of broiler raising management should be well conducted to reach optimum results as broiler age is relatively short between 32 to 36 days of raising period. According to [3] broiler harvesting is carried out at 32-36 days, when the chicken have average weight 1.75kg/head. Stated by [4] that as the harvesting time increased, it will cause the increasing FCR.

B. Broiler Partnership (Contract Farming)

The partnership scheme is a kind of cooperation between businessmen with the farmers in term of livestock business management. In the partnership system, the businessman and the farmer should have equal position so that the aim of the partnership can be obtained where the company absolutely set the calculation of production cost that has been agreed by the farmer. Essentially, partnership is business cooperation for certain objectives and each party should have equal interest and position.

The journey of the development of poultry industry in Indonesia has experienced ups and downs. In 1997, the monetary crisis in Indonesia had caused the poultry industry especially broiler chicken farms crashed. After the economic crisis passed, the poultry farms business

started to rise again. The broiler and layer chicken could be well controlled and profitable for the farmers, though the majority of them especially broiler farmers did not run the business independently but incorporated with integrated partner companies.

Before starting a livestock business system, plasma farmers should approve the contract given by the core company. As for the contract price is the price of harvested alive chicken per kg, DOC price, medicines, and feed. Feed is the important factor for the production of broilers because the nutrient content and quality of feed ingredient can influence the performance of broilers. The core companies recommend the plasma farmers to use three kinds of feed: starter phase feed, grower phase feed, and finisher phase feed. The main duty of the plasma farmer is to maintain the health of the chicken so that the harvesting results will be much more, and FCR is lower. Stated by [5] that FCR is the important factor contributing to the profitability of broiler production.

As there is duty for the farmers to produce healthy chicken, plasma farmers should always follow the recommendation from the company field officer so that their income will be greater [6].

Concluded that contract farming have helped the farmers to improve the information technology [7]. According to [8], contract farming has great potential to increase agriculture sector to be comparable to others sector which is exist in an economy.

According to [9], estimated that contract farming could dominate chicken meat production by way of the efficient integrated production, yet there are issues preventing this system especially relating to contract farming agreement, deposit, marketing freedom, effectiveness of extension services, prices of input-output, risk of losses, technical performance, and impact on farmer life's well-being. This evidence is supported by [10] stating about partnership scheme, in one hand partnership is one of the ways to solve lack of resources (fund, technology, and human resources) in the development of livestock sub sector, but on the other hand, the partnership that is applied today has caused some problems: (1) the plasma farmer shows great dependence symptoms to the partner company, (2) the plasma farmers have a weak bargaining position to the core company, (3) the distribution and marketing of broiler distribution system cannot always be accepted by the rural community, (4) the small-scale farmers should have sufficient readiness to face the broiler markets.

II. MATERIALS AND METHODS

The study was conducted in Surakarta, Indonesia. The research materials consisted of 255 broiler farmers who become plasma at partnership system in the research area that is taken randomly. Research instrument was a questionnaire guide already prepared containing about aspect of input and output in the partnership broiler farming. The analysis consisted of descriptive analysis and quantitative analysis. Data were then statistically descriptive analyzed, as average and percentage.

III. RESULTS AND DISCUSSION

The performance of plasma farmers who became respondent in this research are presented in the Table I. Table I showed that the mean of the chicken decrease per period were 261.53 heads or 5.57%. The decrease of number was caused by dead and flawed chicken, for social costs (given to the people around the chicken house). According to the illustration of Feed Conversion Ratio (FCR), the farmers' performance has reached the standard of FCR by Core Company. FCR is used to assess the efficiency of feed in both number and quality. FCR is determined by number of feed use as increasing of chicken weight [11] (North, 1984).

TABLE I. AVERAGE OF FARMING CHARACTERISTICS

Parameters	Mean	Standard deviation
Education of farmer (year)	11.20	3.22
Experience raising broiler (year)	7.43	5.06
Labor (man)	1.23	0.58
Chick-in (Head)	4,697.66	3,242.42
Feed (kg/period)	276.56	170.84
FCR	1.72	3.03
Standard of FCR core company	1.74	
Harvesting age (market age) (days)	35.77	2.06
Total weight of harvest (kg)	8,053.98	6,073.88
Total number of Harvest (Head)	4,436.12	2780.4
Total Revenue	14,446,803.00	12,404,300.00
Total Cost	6,582,476.00	4,408,718.00
Total income	7,864,326.00	9,135,049.00

Based on Table I, farmers reached better FCR or its value smaller than that of its core company standard which is 1.74. Farmers, as plasma, can save the feed or they only need 1.72kg to produce 1kg weight of chicken. Total harvest 8,053.98kg, while the total number of harvest is 4,436.12 heads or average harvest is 1.83kg per head in 35.77 days. As [12] Sumarno (2013) found that harvest weight is about 1.7-1.8kg per head after 35 days.

By using this FCR indicator, it can be said that on the average, the farmers gain the profits.

Fig. 1 shows that the lower of FCR the higher of income per head per period, as well as Fig. 2 that the more increase of harvesting age (market age) the lower of the income per head per period.

This result agree with [13], stating that higher market age would narrow the margin between total gross income and net profit per broiler.

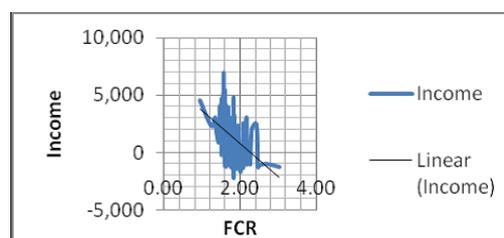


Figure 1. Effect of FCR on income

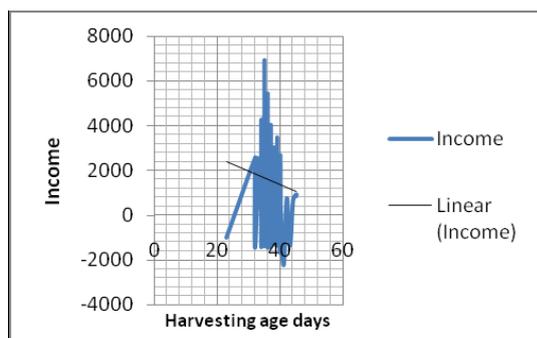


Figure 2. Effect of harvesting age on income

However, from the research result, it was found that there were some farmers who are loss and did not receive any income as much as 9.4% from the core company. Especially, if all the production costs are calculated, such as for chicken house rent, worker, equipment depreciation, electricity, and water, the farmers get loss as much as 12.5%. The number of loss farmers is quite serious, even though on the average is profitable. The cause of this loss is the loss farmers have quite bigger FCR deviation than the standard. It happened due to the high depletion caused by the disease outbreak or chicken heat stress, less maximum handling and rising management. Beside from harvesting results, the farmers also receive income from selling the dirt. The production cost is not only covered by the core company, the farmers also pay the expenses for chicken house rent, land rent, equipment depreciation, electricity, and water, Table II presented the profit of plasma farmers either from the core company or profits after subtract all capitals to all production costs.

TABLE II. AVERAGE PROFITS (FARMERS/HEAD/PERIOD)

Detail	Profits mean (IDR/head/period)
Profits received from the core	2875.64
Real profits	1617.63

From the Table II, it shows that on the average the farmers get profits. The average of rising based on number of harvested chicken as much as 4396 heads or total harvested weight as much 8053.98kg or average harvested weight as much as 1.83kg per head, it provides real income for farmers 7,864,326.24 IDR/period. Comparing to the regional minimum salary in the research area per month, the profit is satisfactory. The most important thing is the real profits compared to that of from the core company decreases almost a half or 43.75%. This condition may be caused by 2 possibilities; first, some of farmers have not had good knowledge about farming so that they haven't fulfilled the standard of good farming practices. The second is that the profit share in this partnership system should be reviewed again.

Based on Table II, the average cost of production issued by farmers plasma is 1,258.01 per head per period. The cost of this used to pay the wages of labor, rent home which included land lease depreciation equipment home, husks, gas, electricity and water, the cost of harvest, the cost of social the proportion berturut2 each is 29%, 42%;

32,66%; 8.56%; 15.69%; 5.00%; 4.21%; 4.46%. The highest proportion is rent home because covering land lease and depreciation equipment home, besides cage rent. The cost of harvest is the cost of to pay additional labor during harvest time such as labor to catch chicken, weighing thing chicken and transporting cock of home to vehicles for transporting chicken. The cost of social among them were cost animal breeders to compensation local residents due to pollution such as odor and flies, also to helping a neighborhood social as levy on warning a big day, assistance to build up the public infrastructure.

ACKNOWLEDGEMENT

The researcher wants to extend sincere gratitude to the Graduate Program of Faculty of Animal Science UGM that has granted the funds for this research.

REFERENCES

- [1] A. Daryanto. (2016). Economic of Poultry Industry. Poultry Indonesia. [Online]. Available: www.poultryindonesia.com
- [2] T. Salam, M. Muis, and A. E. N. R. Dan, "Financial analysis on broiler farming in partnership system," *Journal of Agricultural System*, vol. 2, no. 1, pp. 32-39, 2006.
- [3] Yunus, "Efficiency production analysis on broiler farming in partnership and independent system in Palu, Central Sulawesi Province," Postgraduate program, Universitas Diponegoro, 2009.
- [4] S. M. R. Samarokoon and K. Samarasinghe, "Strategies to improve the cost effectiveness of broiler production," *Tropical Agricultural Research*, vol. 23, no. 4, pp. 338-346, 2012.
- [5] R. M. A. S. Bandara and D. M. W. K. Dassanayake, "A quantitaf analysis on factors affecting profitability on small scale broiler production," *The Journal of Agriculture Sciences*, vol. 2, no. 3, pp. 45-50, 2006.
- [6] I. P. A. Suwianggadhana, Suciani, and N. P. Sariyani, "Financial analysis on broiler chicken farming in partnership system," *Journal of Tropical Animal Agriculture*, vol. 1, no. 2, pp. 58-68, 2013.
- [7] I. W. Patrick, "Contract farming in Indonesia: Smallholders and agribusiness working together," ACIAR Technical Reports, Canberra, Australia, 2004.
- [8] J. L. D'Silva, M. Shaffril, H. A. Ulli, and A. Shamah, "A review of contract farming and factors that impinge youths acceptance to contract farming," *European Journal of Social Sciences*, vol. 11, no. 2, pp. 328-338, 2009.
- [9] S. Tapsir, H. L. Mokhdzir, S. N. Rahim, and N. Jalil, "Issue and impact in broiler contract farming in Peninsullar Malaysia," *Economic and Technology Management Review*, vol. 6, pp. 33-57, 2011.
- [10] Rohmad, "Productivity analysis on broiler farming in partnership system in Kandat, Kediri," *Journal of Agribusiness Management*, vol. 13, no. 1, pp. 71-82, 2013.
- [11] M. O. North, *Commercial Chicken Production Manual*, 2nd, West Port Connecticut: Avi Publishing, Co., Inc., 1984.
- [12] Sumardjo, *Teori dan Praktik Kemitraan Agribisnis*, Jakarta: Penebar Swadaya, 2004.
- [13] M. Farooq, M. A. Mian, and A. Asghar, "Factors affecting cost of production and net profit per broiler in the subtropics," *Livestock Research for Rural Development*, vol. 13, no. 1, pp. 71-82, 2001.



Sudi Nurtini received Ph.D. degree in Agriculture Economics from Universitas Gadjah Mada, Yogyakarta, Indonesia in 2006. She has been as an educative staff in the Department of Livestock Socio Economics of the Faculty of Animal Science, Universitas Gadjah Mada, in Yogyakarta, Indonesia. She has published articles: "Factors influencing farmer's decision to increase beef cattle business scale in central Java Province,"

Journal of the Indonesian Tropical Animal Agriculture, vol. 36, no. 1, March 2011; "A supporting aid for beef cattle investment of farm household in central Java," Journal of the Indonesian Tropical Animal Agriculture, vol. 37, no. 1, March 2012; "Household budget and calorie consume of livestock products: Evidence from Indonesia," Academic Research International, vol. 5, no. 3, May 2014. Prof. Nurtini is in membership of Indonesian Society of Animal Sciences.



Mujtahidah Anggriani Ummul Muzayyanah received Ph.D. from Hiroshima University, Japan and now is a lecturer at Gadjah Mada University (GMU), Indonesia. She has been teaching, carrying out research and undertaking community services. She is teaching and researching in the areas of socio-economics of animal husbandry, quantitative analysis and consumer economics topics. She has been doing community services such as in the rural

livestock farming, integrated potato-goat farming, and school milk program for elementary school in rural area. She has published some papers in national and international journal and presented papers at meeting of Tropical Animal Production, Asian-Australasian Association of Animal Production, the Association for Regional Agricultural and Forestry Economics, Sustainable Animal Agriculture for Developing Countries Association, and the Society of Sustainable Future for Human Security. With other colleagues in Faculty of Animal Science, GMU, she published book in Bahasa about Mapping on Potential National Cattle Germ Plasma (PetaPotensi Plasma NutfahTernakNasional). She got some grants for doing research, publication and presenting of her research paper in both national and international journal and conferences.



Fransiskus Trisakti Haryadi was born on September 17th, 1965. He got Ph.D. degree in management and economics of agriculture and forestry from Tokyo University of Agriculture and Technology, Japan. Now he is an associate professor in Communication and Community Development Laboratory, Faculty of Animal Science Universitas Gadjah Mada (UGM), Indonesia. He is also giving some lectures and guidance for graduate students in The

Extension and Development Communication Study Program at Graduated School, UGM. He is also interested in doing research related with the diffusion of agricultural innovation specifically at the small farmers' community and guide farmers on developing the dynamic of livestock farmers' group. Together with his student and other colleague in this study program, he has published paper in The Academic Research International about The influence of Parabela's Leadership towards Society's Attitudes in Preserving Kaombo Forest in Buton Regency. He also presented paper about developing model of goat-sharing system based on farmers group to improve Etawah Crossbred in the First Asian-Australasian Dairy Goat Conference in Malaysia. He also participated in the training of data management for rural development held by SEARCA in 1992 at the Philippines.



Abdul Hakim was born in Karanganyar Regency on December 11th, 1988. He studied as a Bachelor Degree Majoring Livestock at Sebelas Maret University, Solo Indonesia was graduated on 2010. And now He is studying Master Degree Livestock Science at Gadjah Mada University Graduate Program. He took part Pendampingan SMK Program from The Center of Dirjend Pendidikan SMK at SMKN

1 Bunga Mayang, Lampung Utara Regency on 2011. He worked at broilers partnership companies PT. Ciomas Adi Satwa ex PKP (JAPFA Group) as long as 3 years from 2011 until 2014. He worked in Jaya Mulya Poultry Shop Company at broilers partnership. Now He is active mentoring a group of cattle, goat, poultry in collaboration with Dinas Peternakan Karanganyar Regency. Besides, He also as a broiler farmer since 2011 until now.