



The business models for broiler production in South Konawe Regency of South-East Sulawesi Province, Indonesia

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Abstract. The research aims to identify the business models of broiler production in South Konawe regency through the analysis of capital resource require and income of chicken breeders. The research applied census and Focus Group Discussion (FGD) to gather information. The research result shows that there are two models of broiler business, independent and partnership. Chicken breeders who carry out independent business deal with all production activities, including marketing their products. As well as using their own capital, they may take up loans. On the other hand, chicken breeders who enter into a partnership do so with companies that can provide capital and market. Chicken breeders undertake production activities while their partner companies provide capital and market. The number of individual chicken breeders was less compare to chicken breeders who perform partnership due to limited capital being available to them. The income of individual chicken breeders however is higher than chicken breeders who carry out partnership.

Key Words: business partnership, broiler production, capital, income.

Introduction. The decision of chicken farmers regarding business models are influenced by capital ownership, labour and expected earning. Making a chicken coop, providing fooder and Day old Chick (DOC) are the largest expenditure that every chicken farmer has to spend in the begining of their broiler business. The substantial costs are a burden for many farmers who are involved in broiler business. Although, there is opportunity to gain fairly large profits, most chicken farmers have to bear a huge risk if they fail in their broiler business. The large expenditure has made many farmers can only establish a small scale broiler business. According to Hanafi (2009) famers will allocate inputs efficiently to obtain maximum production and profit.

This substantial outlay is one of the significant reason of chicken farmers to incorporate with a poultry company. There are several sources of capital available for a chicken farmer to obtain. It may come from their own savings or be inherited; it may be a loan from within the family or from financial institution either formal or informal. According to Padangaran (2013) source of capital can be obtained from the savings, family arrangement, incorporated farm, leasing, purchase contract, vertical integration and borrowing.

Chicken farmers consume most of their income on consumptions, if they can save any they will use it for the next season of their chicken broiler business, their children's education, to maintain their house; only a few of them can save any of their income to enlarge their business.

This article generally analyzes the pattern of broiler farming, the source of capital and its use as well as the income of broiler farms in South Konawe, Southeast Sulawesi Province of Indonesia.

The characteristics of management pattern of broiler business. Based on Law Number 18 of 2009 concerning livestock and animal health, poultry company is an individual or corporation which are established and domiciled in Indonesia. Business of livestock is the activities which produce products and services.

There are several considerations which influence whether a chicken farmer will carry out the business on their own or will cooperate with a poultry company. Generally chicken farmers will take into account the availability of their capital, the ability to market their products, information they have regarding management of a broiler business and any information they may receive from fellow breeders or a breeder company.

Based on his research findings, Supriyatna et al (2006) explained that there are two models of broiler businesses: 1) those which are comprised of a partnership between farmers and livestock enterprises; and 2) breeder enterprises which are managed by the farmers themselves. Furthermore, Purnomo (2011) asserted that independent farmers generally purvey all means of production necessary. The patterns of broiler business management in South Konawe regency is quite similar those scholars have described.

Yulianti (2012) suggested that a partnership between farmers and a company should share risks rather than share profit; partnership should not only emphasize how to get high price but also pay attention to establish good cooperation in order to reduce risks. There is evident that often a company will be late to pick up the broilers from farmers. As a result, chicken farmers have to bear the additional cost of feeding which reduces their income. Hartati (2013a, b) in her research found that a delay such as this will increase cost of production. In similar vein, Downey & Ericson (1992) revealed that the expenditure to purchase fodder is the highest cost in a broiler business; it comprises of 60 to 70% of production cost.

In Indonesia, 83% of fodder production is used for poultry husbandry. Corn is the main raw material in making fodder for poultry husbandry most of which is still imported. This makes the price of fodder for poultry to be high and fluctuant; it even becomes scarce on occasions, which makes it difficult for vulnerable independent smaller scale chicken farmers to access supplies.

According to Saragih (2001), broilers should be harvested on time; any delay on slaughtering will significantly increase production cost. In addition, Umboh (2014) explained that the survival of broiler businesses is determined by the production cost (fodder) and the price of broilers itself.

Capital in the broiler business. In the broiler business, capital is pivotal; it must be managed properly if it is to support and generate profit. According to Samuelson & Nordhaus (2004), capital is not only about money but all assets which can be used to sustain a business. Farm capital must be provided, maintained, managed and controlled for production in an agribusiness company, as well in small-scale farming enterprises (Kadarsan 1992). Padangaran (2013) described that capital are valuable goods which is used in production process, post-harvesting process and marketing of agricultural products.

Chicken farmers who work independently, generally use their own capital and/or source capital by borrowing from formal or informal financial institutions. On the other hand, chicken farmers who build a partnership with the poultry companies will receive a loan provided by the company.

Generally, chicken farmers spend capital to build the henhouse, to buy eating and drinking utensils, DOC and food for the chicken. Samuelson & Nordhaus (2004) assert that every poultry company should assist their chicken farmer partners to spend their capital effectively in order to keep down cost and increase revenue.

Fixed costs in chicken broiler business are the manufacture/lease of cage and equipment purchase while variable cost are the purchase of DOC, feed and medicine for the chickens. According to Daryanto (2009) and Bahari et al (2012) around 60-70% of expenses in chicken broiler business is used for chicken food. While Nugroho (2004) claimed that around 60-80% of costs are allocated to purchasing DOC, food and medicine.

There are different views regarding financing between a partnership chicken broiler business and an independent chicken broiler business. According to Bahari et al (2012) the cost per chicken in partnership business is less than in an independent chicken broiler business. Generally independent chicken farmers feed their chicken more than chicken farmers who involved in partnership. On the other hand, Nugroho (2004) claimed that cost for the means of production in partnership broiler business is higher than in independent chicken broiler business. Generally, the cost in a partnership chicken broiler business is higher by between 1.94% and 2.23% compared to independent chicken broiler business. Giving an excessive amount of feed will lead to waste but giving too little feed lead to low production.

A chicken broiler business needs intensive management, which makes them different from free range chicken production. Okeno et al (2012) who did research in three kinds of free range chicken maintenance system, consists of traditional system, semi-intensive and intensive found that using traditional system in maintaining free range chicken is more profitable compare to semi-intensive and intensive system. A broiler chicken needs feed nutrition standards which cannot be maintained in the way of free range chickens with no standard feed nutrition.

Material and Method. This research was carried out in South Konawe regency in four sub-district, Konda, Ranomeeto, Tinanggea and Moramo. It used purposive sampling considering that those sites have plenty of chicken broiler businesses both independently and partnership with poultry companies. Based on the agricultural census conducted in 2013, the number of households that undertake a broiler business in South Konawe regency is 125 households. This is well above the average number of households that undertake chicken broiler business in other regencies of Southeast Sulawesi province which is only 79 households.

Stratified random sampling method was used to differentiate between partnership and independent chicken broiler businesses. Stratified random sampling was also applied to differentiate the number of chickens, the amount of capital loan and the level of income. Rianse & Abdi (2009) consider that the technique of stratified random sampling have advantages because all the characteristics of a heterogeneous population can be represented and make it possible for researchers to examine the relationship between the layers one with the other and can compare them.

The number of independent farmers was very little, so that all such farmers became respondents in this study. The number of independent farmers in this study consisted of only 15 people. According to Sugiyono (2009) disproportionate stratified random sampling technique is used to determine the number of samples, when a stratified population is proportionately smaller. On the other hand, because there were 110 people in breeder partnerships a random sample of 30 was selected.

The data used in this research is the primary data and secondary data. Primary data was obtained directly from farmers as respondents. The primary data collection in this study was conducted by interviewing, using a questionnaire. The questionnaire was used as a guide in conducting interview. FGD technique was also used to get more detailed data about the management of broiler farming. The secondary data were obtained from BPS (2013, 2015).

The research variables measured were: (1) the characteristics of the respondents, which include: age, level of formal education, experience in raising broilers; (2) the characteristics of broiler farming, which include: variable costs and fixed costs. Variables cost include: DOC, feed, vaccines and medicines, labor, fuel, electricity and water, as well as chaff. Fixed costs, such as: building (cages, food warehouses), equipment (feeders, trays, drinking (automatic and manual), heating, shovels, hoes, water pumps, lights and curtains); (3) the price of livestock production or broiler.

The variables in this study are categorized in two models of management of broiler chicken farming, namely independent chicken farming and partnership.

The data analysis techniques used in this study is descriptive analysis. It was used to determine a variety of activities through the identification of models of independent business management of broiler and broiler business partnership. Quantitative analysis is

used to calculate the income, the analysis of the use of capital, capital resources in the poultry business partnerships and independent comprising: tabulation analysis and revenue analysis.

Results and Discussion. In the last three years, the number of farmers in South Konawe regency has markedly increased and is relatively high. This is due to the short distance of South Konawe district to the capital of Southeast Sulawesi (Kendari) as a centre of economic activities in Southeast Sulawesi province. In addition, there are still plenty of non-productive areas which are ideal for chicken farms. The following Table 1 presents the number of chicken farmer households in South Konawe.

Table 1

The number of households and the amount of both chicken broiler and laying chicken in South Konawe and the city of Kendari

City/district	Chicken broilers		Laying chickens	
	Households	Chicken number	Households	Chicken number
The city of Kendari	62	1.284.200	4	20.910
South Konawe	131	1.220.340	12	44.752

Source: compiled from Statistical Bureau Data (BPS 2013, 2015).

From the 22 sub-districts in South Konawe regency, the highest population of chicken broiler households is in Ranomeeto (27 households) followed by Konda sub-district (20 households), Landonu (15 households), Mowila (9 households), Andoolo (7 households), Tinanggea (6 households) and Moramo (6 households).

Although, according to the data presented in Table 1 Kendari city has the higher number of chicken broilers, most of it is produced from poultry companies and imported from South Sulawesi province.

The number of independent chicken farmers in research sites in South Konawe is less than breeder partnerships. This is due to the limitation of capital that hampers many farmers to open a chicken broiler business independently; this is in line with Kadarsan (1992) findings that generally independent farmers face a problem of weak capital support. In this study, breeders said that chickens broiler business requires a relatively large capital to be used for investment and operational costs, so farmers prefer to join in the partnership business with the poultry companies. Many breeders also revealed that they only want to do farming without having to be bothered to look for a market or they fear of the risk if the chicken cannot be sold.

Due to the limitation of capital many of the independent chicken farmers then shift to become involved in partnership with the poultry companies. Most of the head of households who undertake partnership consider that they only gain limited profit from the partnership model. It is just sufficient to fulfill their subsistence needs and for their children's school fees. There is no chance for them to allocate a part of their income from their chicken broiler business to enlarge their business. According to Saragih (2001) until recently in Indonesia most chicken farmers have low income. However, this research found that many chicken farmers claimed that income that they received from a partnership in a broiler business is better than income that they obtained from other businesses. Many of them were grateful that they are still able to send their children to school. They hope the government will pay more attention, provide technical support and farm credit with low interest.

Independent and partnership of chicken broiler business. The results of this study indicated that the independent chicken farmers are farmers who carry out farming activities, marketing activities of their chicken broilers and bear all the costs on the business activities of livestock that includes investment costs of purchase cages, equipment, and operational costs such as the purchase of DOC, feed, and medicine. Chicken farmers who undertake partnership is a breeder who diverts some of the costs used in the partner company with the contract system. According to Kadarsan (1992) a contract between chicken breeder and poultry company comprises financial aid, market

yield and production guidance. MacDonald (2014) said almost all the chicken broilers are raised under company's farm with the contract system. Livestock companies provide capital, utilities, chicks (DOC), food for chicken, transportation, veterinary services, and technical assistance from the company's farms.

Age, education and raising chicken experience. In order to increase income, the farmers must be able to manage properly their chicken broiler business. Age, education and experience of farmers will influence the way they make decisions about the management of their broiler business. Yazdani & Tash (2014) suggest that the level of education of farmers has an important role in managing their chicken business. It would be better if farmers already have knowledge regarding broiler business beforehand. Data on the age of the farmer, education and duration in carry out livestock (breeding experience) can be seen in Table 2.

Table 2

Age, education and experience of broiler farmers in the research site

<i>Age, education and experience</i>	<i>Chicken broiler business models</i>			
	<i>Independent chicken broiler model</i>		<i>Partnership chicken broiler model</i>	
	<i>Households</i>	<i>%</i>	<i>Households</i>	<i>%</i>
<i>Age</i>				
15-65 years (productive age)	15	100	59	98.3
< 15 & > 65 years (non productive age)	0	0	1	1.7
<i>Education</i>				
≤ 12 years	14	93.3	15	25
> 12 years	1	6.7	45	75
<i>Experience in chicken breeder</i>				
≤ 5 years	10	66.7	37	61.7
> 5 years	5	33.3	23	38.3

The results showed that independent farmers and those in partnerships in the research site were in the productive age. In the productive age generally farmers have physical abilities to work well. In terms of education, independent farmers have a higher education level than the breeder partnerships. Roothaert et al (2011) argued that farmers have a desire to continue increasing their skills, particularly in poultry management and treatment of livestock. A high illiteracy rate however is another challenge facing some in matters such as record keeping, supervision, training, counseling and plans to develop agriculture business as well as cost-benefit analysis. On the other hand, Amadou et al (2012) stated that the high illiteracy rate among urban farmers in West Africa does not threaten the level of acceptance of technology and innovation to support sustainable livestock production enterprises.

The source of capital of broiler business. This study found that chicken farmers faced difficulty in raising capital and enhancing their productivity; this occurs both for independent and chicken breeders in partnership. According to Daryanto (2009) and Ukwuaba & Inoni (2012), the price of feed, disease attack and inadequate access to markets are a range of constraints that influence the ability of farmers to obtain significant profit. Insufficient capital occupies a highest rank, with average score of 2.60 on the 'Likert scale'. This means that farmers have difficulty accessing credit.

Lack of capital to finance the poultry business made farmers decide to access credit. Otunaiya et al (2014) used 'logit regression analysis'. The model revealed that factors such as gender, household size, the amount of credit available, the main work of farmers and extension workers are factors that affect the decisions of chicken farmers to use credit in poultry business.

Based on this research, it is undeniable that breeders need capital support to increase their capital gains and assets in order to improve their broiler business. Generally, breeders have limited access to financial sources and they do not have assets

that can be pledged as collateral. According to Daryanto (2009) many farmers have assets but do not have any written evidence related to its ownership.

Generally breeders have difficulty to access capital from financial institutions. Breeders considered they cannot meet the requirements stipulated by many of the financial institutions, where an applicant must have collateral and effort to pay interest costs. Daryanto (2009) stated that there are indications that the banks are reluctant to provide credit to the small-scale chicken farms. The banks consider that the small farm businesses are not financially viable and many of them are not able to meet the banking requirements.

Based on interviews with breeders using FGD method, many breeders narrated that initially they built cages using their own capital and assets, however many of them will run out of capital towards the completion of their cage. This is because many breeders cannot manage costs properly, particularly overhead cost. Many breeders do not have recording or bookkeeping regarding their businesses.

As a result, many breeders then borrowed money from their family or sell their valuable things such as gold, even part of their land. Others borrowed from cooperatives or from middlemen. This happens not only for independent farmers but also occurs for partnership breeders. Sources of capital for both independent and partnership broiler farmers can be seen on Table 3.

Table 3

The source of capital for chicken broiler farmers in the research site

<i>Broiler business model</i>	<i>Sources of capital</i>	<i>Allocation of capital</i>
Partnership broiler farmers	Poultry company, capital itself, relatives, financial institutions (pawnshop, cooperatives), Bank	Cage, DOC, feed, chicken medicine
Independent broiler farmers	Capital itself, relatives, financial institutions (pawnshop, cooperatives), Bank	Cage, DOC, feed, equipment and chicken medicine

Capital support from partner companies is the main reason farmers to join with a partner company. Generally, companies partner provide capital assistance in the form of DOC, feed and market the whole broilers from farmers. While independent farmers raise capital from their relatives and then returned it in the form of animal feed.

Generally independent farmers in South Konawe have kinship relation with each other. 12 of 15 independent breeders in South Konawe district have kinship relationship. In addition to help each other in terms of capital, independent farmers in South Konawe also share information in terms of production techniques, as well as product marketing.

Generally broiler breeders use their capital for the purchase of DOC, feed and building cages. Bahari et al (2012) found that the percentage of feed costs have ranged between 60-70% of the total cost of broiler farming. Capital resources and the distribution of capital for both independent and partnership broiler models can be seen in Table 4.

Table 4

Sources of capital and its use in the broiler businesses in South Konawe regency

<i>Broiler business models</i>	<i>Distribution of own capital (%)</i>	<i>Distribution of borrowed capital (%)</i>
	<i>Partnership</i>	
Cage	70	30
DOC	0	100
Feed	0	100
	<i>Independent</i>	
Cage	95	5
DOC	100	-
Feed	85	15

Most independent chicken farmers finance the manufacture of the chicken coop (95%), DOC (100%) and chicken feed (85%) from their own capital, the rest they obtain from borrowing from their relatives. Due to the limited capital they have, independent chicken farmers tend to raise broiler chickens on a small scale. Even some of them in ariduous times will even harvest their chickens earlier than the specified optimal time. This occurs because of the urgent need or lack of capital to buy food and medicine.

On the other hand, 70% of chicken farmers in partnership use their own capital only for building the cages; the other expenses are handled by the poultry company. However, the sale price of chickens is determined by the poultry company. The independent chicken farmers were more free to determine their own points of sale and the price of their chickens.

In connection with the use of loan capital, according to the member of chicken farmer federation in New Zealand, Melyukhina (2011) stated that independent farmers must have ability to divide their attention between financial management and improving productivity of their livestock. In USA, in a few centuries ago, the government has changed from small scale chicken farmers to a great livestock business namely 'Industrial Farm Animal Production (IFAP) policy. Under this discretion, USA government provides subsidies which enable the small scale chicken farmers to become large breeders (Rossi & Garner 2014).

Income. The price of DOC, feed, labour, medicine, the mortality of rate of chickens, the weight of a broiler and its price determine the income of breeder. The income of breeder in South Konawe can be seen in Table 5.

Table 5

The income (during the period of maintenance) of independent and partnership chicken broiler farmers in South Konawe regency

<i>Breeding businesses</i>	<i>Income (Rp)</i>
Partnership breeder	4.586.326
Independent breeder	5.912.359

Income of an independent chicken breeder is bigger than that of a partnership breeder. This is because most of the partnership breeders are highly dependent on their poultry company. Partnership breeders sell their chickens to the poultry company for a lower price than independent breeders who sell their chickens directly to the market. Yunus (2009), Yulianti (2012), Wijayanto et al (2013) and Rohmad (2013) found that income of independent broilers was higher than that of partnership breeders. In line with that Bahari et al (2012) in his research to breeders in Kendari city discovered that revenue/cost ratio of independent breeder is greater than that of partnership breeder. However, Yulianti (2012) claimed that the poultry companies monopolized the price of chicken broiler in the market and made the price fluctuate. This makes independent broiler farmers are often disadvantaged and in turn decreases their income.

Conclusions. There are two models of chicken broiler businesses in South Konawe district. Independent chicken breeders use their own capital to finance the manufacture of cage, purchase DOC and feed, if their capital is insufficient they will borrow from relatives. They sell all their chickens broiler to the market or elsewhere by themselves so they can obtain good price. Chicken breeders who are involved in partnership with a poultry company defer the cost to build cages, DOC and feed to the poultry company. They then sell all their broiler products to the poultry company at a predetermined price as stated in the contract. As a result, partnership breeders cannot enjoy the price increases that often occur or choose buyer that offer better price. Consequently, independent farmers earn a higher income than do partnership breeders.

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