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# Actor Contestation in The Broiler Chicken Supply Chain Influences Broiler Chicken Price Fluctuations in Indonesia

Agung Suganda[1], Darmawan Salman[2*], Syahdar Baba[3], Imam Mujahidin Fahmid[4]

**Abstract**

*The broiler chicken industry, both in the world and in Indonesia, has become a megafarm force that forms vertical integration, namely business integration from upstream to downstream. What is unique in Indonesia is that the broiler chicken industry has two integrations, namely vertical and horizontal integration. Therefore, the aim of this research is to analyze actor contestation in the broiler chicken supply chain arena, and actor contestation in the broiler chicken market arena. This research uses a qualitative descriptive method to detect the social practices of each actor contesting in these two arenas. This research was carried out nationally and in several provinces, namely West Java, Central Java, East Java, South Sulawesi and North Sumatra. The research informants consisted of 1-2 top management people at the GPS company, 1-2 leaders of commercial farms in the province, 1-2 representatives of breeder associations (Gopan or Pinsar) in the province, one independent breeder in the province, and one farmer. The research results show that actor contestation in the broiler chicken supply chain arena is controlled by full and partial integrator companies due to ownership of DOC FS, Feed input sources, and control of downstreaming and forms an oligopolistic market structure, while actor contestation in the broiler chicken market arena is determined based on the competitive market structure. because there are many supply actors and consumers for each. The prices are formed based on the strength of each actor depending on the use of economic capital by supply chain actors and the use of social capital in the form of information networks and networks of market chain actors.*

***Keywords:*** *Actor Contestation, Social Practices, Price Determination, Live Bird, Supply Chain.*

## 1. INTRODUCTION

The poultry industry is an industry that produces chicken meat which has become a popular commodity. The world trend of chicken meat consumption continues to increase from 2010 – 2018 (OECD-FAO, 2022). It was also reported that the trend in chicken meat consumption is dominated by lower-middle income consumers. This means that middle to lower income consumers prefer chicken meat compared to other meat consumption. Due to the increasing demand for chicken meat, the poultry industry continues to develop production technology in response to high demand.

The poultry industry, especially broiler chickens, is an industry with quite large capitalization and is integrated from upstream to downstream, and has implemented

[1] Doctoral Program in Development Studies, Graduate School, Hasanuddin University
[2] Department of Agricultural Socioeconomics, Faculty of Agriculture, Hasanuddin University
[3] Faculty of Animal Husbandry. Hasanuddin University
[4] Department of Agricultural Socioeconomics, Faculty of Agriculture, Hasanuddin University

supply chain management which has great potential to streamline production and increase market competitiveness (Salim et al., 2020; Alfaima et al. ., 2023). According to (Daryanto 2022; Elsedig et al., 2015), the competitive performance of the poultry industry depends on a global supply chain with a high level of global connectivity and must be able to increase its comparative advantage. In the global value chain, the value chain activities of the poultry industry are integrated from breeding (Great Grand Parent Stocks/GGPS, Grand Parent Stocks/GPS, Parent Stocks/PS), feed/medicine, cultivation (on-farm), distributor, processing and final consumers (Bukhori et al, 2015; Saptana et al, 2016; Prayugo et al, 2012; Syam, et.al, 2019).

The poultry industry is classified as an oligopolitical market (Mua'zu et al, 2013). Several studies show that the market structure in the poultry industry in various countries is an oligolithic market structure, especially in control of production inputs and outputs, such as Indonesia, Malaysia, Thailand, the Philippines and Japan (Mua'zu et al, 2013; Saptana et al, 2020; Chokesomritpol et al, 2018; Chung, 2007; Tajima, 2023). Control of day old chick (DOC) input by several large companies in a country is because these companies have access to pure line broiler companies. There are only 3 companies in the world. This company dominates the world market for pure lines, namely Aviagen Broiler Breeders, Cobb-Vantress, and Hubbard (Hiemstra and Napel, 2013). The Aviagen Broiler Breeders company is part of the Aviagen Group and which is a family company called EW Group located in Germany. Hubbard is owned by Groupe Grimaud which is located in France and is also a family company. Cobb-Vantress is a subsidiary of Tyson Foods Inc. The company is represented by Cobb-Europe in Europe located in Colchester, England. However, the Hubbard company was acquired by Aviagen in 2016 so there are only two broiler chicken genetic companies, namely Aviagen and Cobb-Vantress. Thus, the dependence on DOC GPS seeds from abroad is very high, making the supply of DOC seeds oligopolistic in nature. In addition, imported feed raw material components encourage the price of livestock production inputs (sapronak) to continue to increase from time to time, while output prices experience relatively high fluctuations (Saptana et al., 2016).

Generally, the broiler chicken business is intensive farming and it is often associated that individual breeders often get small profits (Brevik et al, 2020;Caffyn, 2020). Over several decades, the industry developed or evolved from a fragmented local business into one of the most efficient and vertically integrated parts of agricultural production (Asche et al, 2018;Brevik et al, 2020). Vertical integration of the broiler chicken supply chain implies coordination and collaboration between several actors (Brevik et al, 2020). Along with the development of increasingly complex supply chains, model optimization is needed to improve efficiency and competitive market performance (Pla et al, 2014; Rodríguez et al, 2012). Broiler chicken supply chain players, both in Indonesia and abroad, have the same system, namely the supply chain is formed from vertical integration (Brevik et al, 2020; Mua'zu et al, 2013). Supply chain actors become a unified network from upstream to downstream and are all linked in the supply chain system (Caffyn, 2021a; Juniyanti et al., 2021). The integrator's strength in controlling production inputs, such as DOC and feed, also has cultivation companies, transportation and processing companies so that with this system efficiency can be created (Syam, et.al, 2019).

The complexity of the broiler chicken supply chain has many challenges that can result in failure to manage the supply chain. Considering that the supply chain consists of activities carried out by several business actors, managing it is not easy. This complex system is a combination of a number of elements that influence each other dynamically, when the number is small it does not have much influence but when the number becomes larger it will greatly influence the running system (Cilliers, 2002). The complexity of the broiler chicken supply chain is built by a number of actors who have their own habitus and use their capital (economic, cultural, social and symbolic) in the broiler chicken supply chain as an arena by carrying out a number of social practices and contestations in

playing with prices so that the prices formed are not completely because of the balance of demand and supply but because of the actors who play a role.

Contestation is an activity that critically involves certain objects at a certain level which aims to change or maintain the status quo (Weiner, 2018). The identification and measurement of actor contestation is measured based on information about the influence of the knowledge and power elements possessed by each actor (Juniyanti et al., 2021). Actor contestation in the broiler chicken supply chain is the activity of actors involved in the supply chain who attempt to maintain their position of power (Zürn, 2018) in the supply chain. In social theory, there is a dualism of power, namely subjective power (actor level) and objective power (structural level) (Juniyanti et al, 2018). The level of power structure refers to power that does not only come from the actor himself but also depends on the actors around him (Arts and Van Tatenhove, 2004). Power is defined as an actor's ability to mobilize resources to achieve specific outcome goals in a network, which can take the form of changing political decisions, rules of the game, and actor dependency in reproducing domination (Morriss, 2006). Thus, the ability of actors to use their power reflects social practices in the supply chain system.

Social practiceis a meeting place between structures and agents that are repeated and patterned across time and space where the duality of structure and action is mutually dependent or related (Priyono, 2003). In other words, social practice is an activity that is carried out continuously and continuously and requires special treatment from the agent who carries out the action.According toBourdieu (1990 cited by Krisdinanto, 2014; Wahyudi, 2020) said that social practice is the result of a combination of habitus, capital and arena (Caffyn, 2021b; Juniyanti et al., 2021; Koka, 2024).

Habitus appears as a product of behavior based on human life experience. Habitus is a lifestyle, values, dispositions and expectations that have been internalized within a person or group which continue to change into choices that are institutionalized and embedded within a person or group. (Bourdieu, 1980 cited by Fausayana, 2017; Fausayana, 2017). Bourdieu also defines habitus as a property of social agents (whether individuals, groups or institutions) which consists of structured elements and elements that structure "structured and structuring structure" (Bourdieu, 1994 cited by Wiranata, 2020). Thus, habitus is a "structure" in which there is a systematic arrangement rather than being arranged randomly and without a pattern.

Capital tends to be connoted with economics or finance. However, Bourdieu expands the "sense" of capital, namely economic, social, cultural and symbolic capital which acts as a tool to achieve systemic power (Fashri, 2014;Krisdinanto, 2014). Economic capital consists of all assets or connotes money owned by agents/actors; cultural capital consists of education, knowledge, skills and language skills aimed at achieving a higher social status; social capital consists of trust, networks and interrelationships so that it can grow a strong network to maintain a position in the arena; and symbolic capital consists of prestige, self-esteem and symbols of identity or power that make it possible to obtain equivalent to what is obtained through physical and economic power (Fashri, 2014; Krisdinanto, 2014)..

Bourdieu argues that in order to understand interactions between humans, or to explain an event or social phenomenon, it is not enough just to see the event but also to observe space as a place where events, interactions and transactions occur (Wiranata, 2020). A social space or arena means not only localizing the object of observation in a specific historical context or local/regional/national or international place context, but also exploring further the ways in which previous knowledge about an object emerged. who gave rise to that knowledge, and their interests in giving rise to knowledge which resulted in certain practices (Bourdieu, 1990 cited by Wiranata, 2020).The arena is a realm of contestation for internal actorsimplement strategies to maximize their position using the

capital they have, wellin the form of economic, cultural, social and symbolic (Sjaf, 2014; Wiranata, 2020).

Based on the concept of social practice, it is linked to the concept of the supply chain, namely the behavior of the actors which is identified with habitus, the capital owned by the actors in order to maintain their position in the supply chain, and the supply chain itself as an arena for contestation. Who are the supply chain actors in Indonesia? Abroiler chicken supply chain factors according to Minister of Agriculture Regulation no. 32 of 2017 which means: (1) integration business actors areBusiness actors breeding Great Grand Parent Stock (GGPS), Grand Parent Stock (GPS), and/or Parent Stock (PS) as well as cultivating Final Stock (FS); (2) independent business actors are purebred chicken cultivation business actors who have PS and/or do not yet have PS but are able to carry out FS cultivation business independently; (3) FS chicken breeders, hereinafter referred to as Breeders, are business actors cultivating purebred chickens who do not have GGPS, GPS and PS; (4) GPS breeders are business actors who produce PS shoot eggs and/or Day Old Chick (DOC) for the needs of PS breeders and independent business actors; (5) PS breeders are business actors who produce DOC FS for the needs of breeders, cooperatives and independent business actors and whether or not they carry out FS cultivation as a producer of broiler chickens (live birds) and eggs for consumption. Other actors are collectors in chicken distribution who take live chickens to breeders' cages that have been appointed by the core company, then sell live chickens or carcasses to wholesalers, retailers, meat shops and hotels, restaurants and catering (HORECA) ( Saptana et al., 2016). Partnership pattern breeders are breeders who run a livestock business with a cooperation pattern between the core company and breeders as plasma where in the contract the output and input prices have been agreed upon which have been determined by the core company (Fahmid, Jamil, et al., 2022; Fahmid, Wahyudi, et al., 2022). Non-partner (independent) breeders are breeders who are able to run a livestock business with their own capital and are free to sell their output to the market. All losses and profits are borne by yourself.

Actors compete in the supply chain so that they can maintain their position in the chain. The oligopolistic market structure in the broiler chicken industry indicates that actors with large capital can compete in determining live bird prices. This is one of the allegations regarding the practice of determining prices in the broiler chicken supply chain in Indonesia. This condition needs to be proven by research into these allegations so that pricing practices in this industry can be known (Baba et al., 2021). No one has ever researched research like this before, so the results of this research can be used as novelty or the latest in science and knowledge. Therefore, the aim of this research isto analyze contestation between actors in the supply chain in relation to fluctuations in live bird prices in Indonesia.

## 2. LITERATURE REVIEW

This section explores related literature on supply chains influencing price fluctuations. The point of reviewing these works is to provide a more basic understanding of this research

### 2.1 Supply Chain

According to (Daryanto 2022; Elsedig et al., 2015), the competitive performance of the poultry industry depends on a global supply chain with a high level of global connectivity and must be able to increase its comparative advantage. In the global value chain, the value chain activities of the poultry industry are integrated from breeding (Great Grand Parent Stocks/GGPS, Grand Parent Stocks/GPS, Parent Stocks/PS), feed/medicine, cultivation (on-farm), distributor, processing and final consumers (Bukhori et al, 2015; Saptana et al, 2016; Prayugo et al, 2012; Syam, et.al, 2019).

Vertical integration of the broiler chicken supply chain implies coordination and collaboration between several actors (Brevik et al, 2020). Along with the development of increasingly complex supply chains, model optimization is needed to improve efficiency and competitive market performance (Pla et al, 2014; Rodríguez et al, 2012). Broiler chicken supply chain players, both in Indonesia and abroad, have the same system, namely the supply chain is formed from vertical integration (Brevik et al, 2020; Mua'zu et al, 2013). Supply chain actors become a unified network from upstream to downstream and are all linked in the supply chain system. The integrator's strength in controlling production inputs, such as DOC and feed, also has cultivation companies, transportation and processing companies so that with this system efficiency can be created.

The complexity of the broiler chicken supply chain has many challenges that can result in failure to manage the supply chain. Considering that the supply chain consists of activities carried out by several business actors, managing it is not easy. This complex system is a combination of a number of elements that influence each other dynamically, when the number is small it does not have much influence but when the number becomes larger it will greatly influence the running system (Cilliers, 2002). The complexity of the broiler chicken supply chain is built by a number of actors who have their own habitus and use their capital (economic, cultural, social and symbolic) in the broiler chicken supply chain as an arena by carrying out a number of social practices and contestations in playing with prices so that the prices formed are not completely because of the balance of demand and supply but because of the actors who play a role.

### 2.2 Price Fluctuations

According to Yohanes Surya, price fluctuations are changes in the rise and fall of a variable that occur as a result of market mechanisms (Ismail, 2022). Fluctuation theory is formed from the law of supply and demand that occurs in the market . According to the law of demand, the higher income, the more consumers spend that money. Vice versa, as income decreases, the less money is spent. From the law of supply and demand, it can be concluded that if prices experience uncertainty, income will decrease or vice versa. Dornbusch describes the "four elements" of the recovery cycle (upward movement) - peak (peak point) - recession (downward movement) - trough (lowest point) (Edward, 2019; Puspitasi, et.al, 2019).

### 2.3 Research question

The following research questions guided the primary objectives of this study.

1. What is the Supply Chain Model for the Poultry Industry in Indonesia?
2. How are Actors Contested in the Broiler Chicken Supply Chain Arena?
3. How are Actors Contested in the Live Bird Market Arena?

## 3. RESEARCH METHODS

### 3.1 Research design

This research describes and explains the phenomena that are the object of study, namely the characteristics and contestation capacity of broiler chicken supply chain actors in relation to price fluctuations of broiler chickens (live birds) (Fausayana, 2017; Miles and Huberman, 1992). The case unit in this research is the broiler chicken supply chain system with a focus on contestation between actors in relation to fluctuations in live bird prices, both nationally and at provincial level. The social practice theory approach is applied in this research as a design model in determining habitus, capital and arena in broiler chicken chains.

### 3.2 Determination of Research Locations and Informants

The locations chosen for this research were the national and provincial levels, namely West Java,Central Java, East Java, North Sumatra and South Sulawesi. The province chosen is a center for broiler chicken production. The research informants consisted of 1-2 top management people at the GPS company at head office, 1-2 leaders of commercial farms in the province, 1-2 representatives of breeder associations (Gopan or Pinsar) in the province, one integrator partnership breeder in the province, and one independent farmer.

### 3.3 Data collection technique

This research uses primary and secondary data. Primary data collected through in-depth interviews is used to reveal data about actor identity, actor interests, actor power, roles played by actors in the running of the broiler chicken supply chain system and formation of live bird prices. Interviews were conducted with integrator companies, commercial farms integrators, integrator partnership breeders, independent actors, plasma breeders, brokers and live bird collectors. Secondary data was collected through various documents from the Directorate General of Animal Husbandry and Animal Health, Central Statistics Agency, as well as reports related to research (Mappa, et.al, 2018).

### 3.4 Analysis Method

The data analysis technique in this research follows the data analysis flow according to Creswell and Poth (2018). The data analysis steps are as follows.

a. Data coding for context analysis. The context in this research is the supply chain system and the formation of live bird prices as an arena for ongoing actor contestation. Supply chain analysis was carried out descriptively by following the flow of broiler chicken and live bird products from breeders to consumers at production centers.

b. Inter-case analysis. The analysis between cases in this research includes a comparison of the supply chain system in the West Java case; Central Java; East Java, North Sumatra and South Sulawesi. The comparison between cases is mainly focused on actor identification, the number of actors and the variety of actors involved in the supply chain system.

c. Theme analysis. The themes analyzed in this research are the interests of actors, the influence of actors, and the role of actors in forming live bird prices in the supply chain system in each broiler chicken producing center area. In each case, actors will be mapped based on the type and level of influence, type and level of importance so that actors can be identified in classifications: high influence-high interest, high influence-low interest, low influence-high interest, and low influence-low interest. After that, each category of actor is analyzed for the ways they use to fight for their interests based on the strength of their influence to play a role in the supply chain system and the formation of live bird prices.

d. Analysis between themes. Inter-theme analysis is intended as an analysis of the relationship between themes in each case and a comparative analysis between cases related to these themes so that similarities and differences in theme characteristics between cases are found which allows theoretical construction regarding actor contestation in the formation of live bird prices.

In this research, an analysis of the average price of live birds at the breeder level and the price of live birds at the wholesale level in each province was also carried out. The analysis used is price trend analysis from January to the first week of December 2023.

## 4. RESULTS AND DISCUSSION

### 4.1 Poultry Industry Supply Chain Model in Indonesia

In general, the broiler chicken supply chain model at the national level can be seen in Figure 1. This illustration reflects the actors involved in the supply chain network, namely DOC GPS suppliers, DOC PS suppliers, DOC FS suppliers, FS cultivators, and live bird market players (LB).

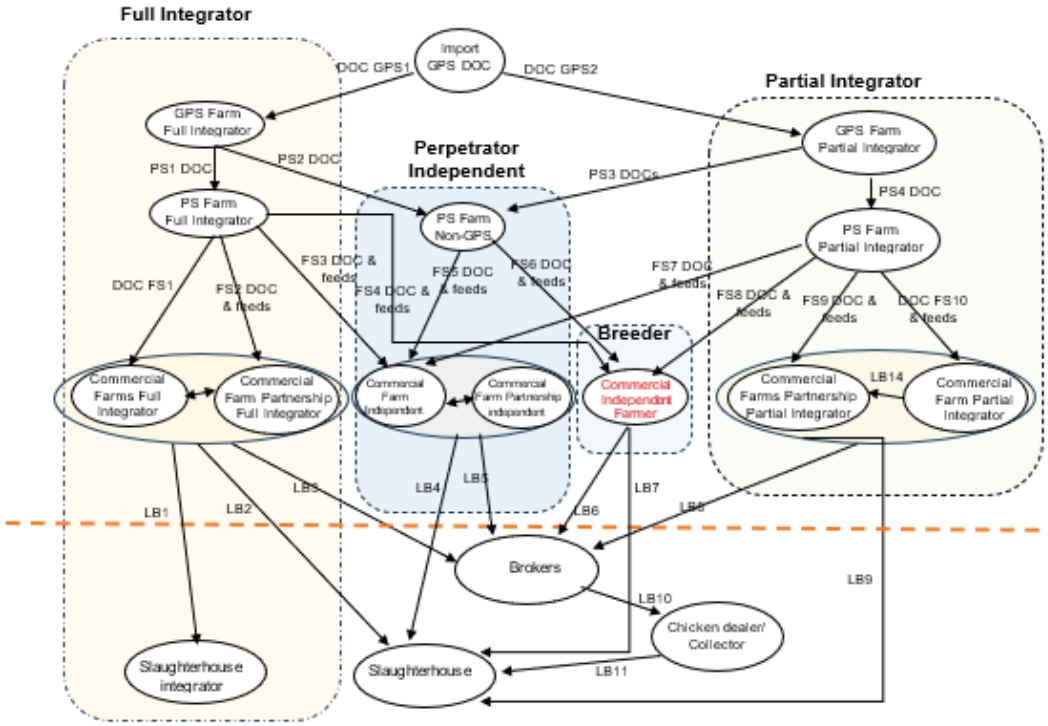


Figure 1. Supply Chain Models from DOC GPS to Live Bird

Figure 1 shows an overview of the national broiler chicken business system. In this picture, it is divided into two actors, namely LB supply actors and LB market players. LB supply actors are divided into 4 actors, namely full integrators, partial integrators, independent actors and breeders. Full integrators are actors who are vertically integrated starting from GPS farms to RPHU, Partial Integrators are actors who are vertically integrated starting from GPS farms only to cultivation companies, independent actors arepurebred chicken cultivation business actors who have PS and/or do not yet have PS are vertically integrated with FS cultivation business actors independently, and breeders are purebred chicken cultivation business actors who are not integrated with full integrators or partial integrators or independent actors .

There are two business integrations involved, namely vertical and horizontal integration. Vertical integration is full integrator and partial integrator. Vertically integrated companies control all stages from livestock breeding and hatchery to growth, processing, and marketing (Vukina and Zheng, 2015). Horizontal integration is for independent actors and breeders because the procurement of DOC PS and feed is supplied by full integrators/partial integrators using a buying and selling system only. Based on these two integrations, this could indicate that actors who are vertically integrated will gain privileges in obtaining the availability of feed production inputs and DOC as well as prices compared to actors who do not have integration with full integrators and partial integrators.

GAn illustration of the number of business actors can be seen in Figure 2. In this figure the number of GPS breeding companies is less than that of PS and FS companies. The number of GPS breeding companies is smaller because they have to meet standards set by the government. The government opens opportunities for all companies, cooperatives or

other actors to manage DOC GPS. Therefore, these companies have the opportunity to gain access to overseas chicken genetic companies producing DOC GPS.

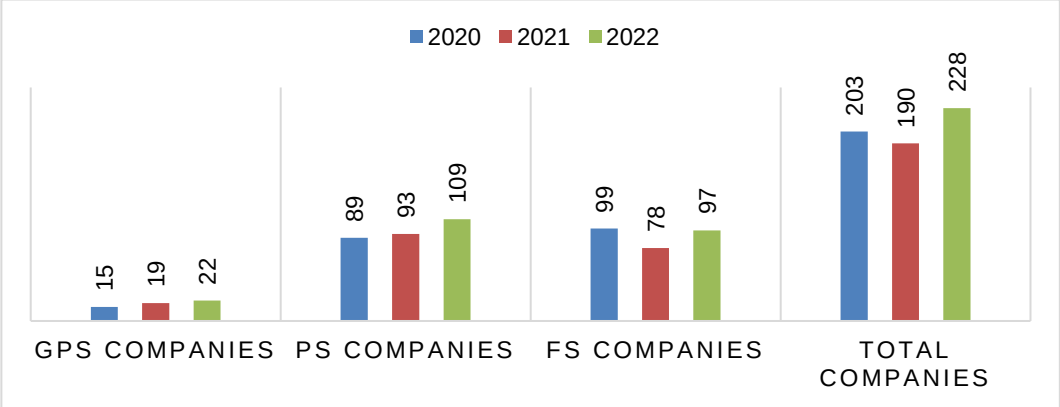


Figure 2. Number of Broiler Chicken Companies

(Source: Ministry of Agriculture, 2023)

4.2 Actor Contestation in the Broiler Chicken Supply Chain Arena

Mapping actor contestation in the broiler chicken supply chain system reflects the ability of actors to contest in the broiler chicken supply chain. Control of production inputs (DOC and feed) and integration/affiliation of actors are important factors in contesting. Broiler chicken supply chain actors are full integrators, partial integrators, independent actors and breeders.Munro (1993) emphasized that the position of integrators as actors in the poultry supply chain arena is determined by the volume and composition of capital they have, and the struggle in the arena occurs to accumulate several forms of capital. Integrators have an important role in the broiler chicken supply chain because these integrators have resources that independent actors or breeders do not have.

In Indonesia, integrators are divided into 2, namely full integrators and partial integrators. Full integrators have integrated actors from upstream to downstream, namely feed factories, PS farms, FS farms, commercial farms, partnerships and RPHU. A partial integrator is an actor who only has some of the factors or is not as complete as a full integrator. Table 1 shows the full and partial integrators in the broiler chicken supply chain. All actors are companies, both domestic companies and Multinational Corporations (MNCs). The number of integrator companies is 22 companies.

Table 1. List of Full and Partial Integrator Companies in Indonesia

| No | GPS Company | Mastery of Production Input and Actor Integration | | | | | |
|---|---|---|---|---|---|---|---|
| | | Feed Factory | PS Farm | FS Farm | Commercial Farm | Partnership | RPHU |
| **A** | **Full integrator** | | | | | | |
| 1 | PT. Charoend Phokphand | √ | √ | √ | √ | √ | √ |
| 2 | PT. Japfa Indonesia | √ | √ | √ | √ | √ | √ |
| 3 | PT. Indonesian Seeds | √ | √ | √ | √ | √ | √ |
| 4 | PT. Januputera Sejahtera | √ | √ | √ | √ | √ | √ |
| 5 | PT. Cibadak ISF | √ | √ | √ | √ | √ | √ |
| 6 | PT. Explore Nasuba | √ | √ | √ | √ | √ | √ |
| 7 | PT. Sido Sari Multifarm | √ | √ | √ | √ | √ | √ |
| 8 | PT. Widodo Makmur Poultry | √ | √ | √ | √ | √ | √ |
| 9 | PT. Super Poultry Jaya | √ | √ | √ | √ | √ | √ |
| 10 | PT. Sreeya Sewu Indonesia | √ | √ | √ | √ | √ | √ |

| No | GPS Company | Mastery of Production Input and Actor Integration | | | | | |
|---|---|---|---|---|---|---|---|
| | | Feed Factory | PS Farm | FS Farm | Commercial Farm | Partnership | RPHU |
| | | | | | | | |
| **B** | **Partial integrator** | | | | | | |
| 1 | PT. Be independent | | √ | √ | | | √ |
| 2 | PT. Obedient Beautiful Shining | | √ | √ | √ | √ | √ |
| 3 | PT. Wonokoyo JC | √ | √ | √ | √ | | √ |
| 4 | PT. Mother Nature's Beautiful Work | | √ | √ | √ | √ | √ |
| 5 | PT. Hybro Indonesia | | √ | √ | √ | √ | √ |
| 6 | PT. CJ-PIA | √ | √ | | | | |
| 7 | PT. Borneo Jaya Animals | | √ | √ | | | √ |
| 8 | PT. Reza Mighty | | √ | | | | √ |
| 9 | CV. Missouri | √ | √ | √ | | | √ |
| 10 | PT. Intan Jaya Abadi | | √ | √ | √ | √ | √ |
| 11 | PT. Create Superior Light | √ | √ | √ | √ | √ | |
| 12 | PT. Dynamics of Megatama Citra | √ | √ | √ | √ | √ | √ |

The integrator company has the ability to import DOC GPS and manage or raise DOC GPS as a prospective parent to produce DOC PS. The average maintenance from DOC GPS to culling is an average of 65 weeks with the average productivity of one GPS parent producing 60 DOC PS. Likewise, DOC PS maintenance is up to 65 weeks of culling and the average productivity of one PS parent can produce 150 DOC FS. The GPS company contributes to providing DOC FS whose output is live bird (LB) which will be consumed by consumers. By mastering the production input in the form of DOC, this becomes a separate point for determining the DOC FS price.

Table 1 shows that several GPS companies have poultry feed factories or are affiliated with feed companies, either for the production of grower, layer or finisher feed for both GPS, PS and FS maintenance. Generally, every purchase of DOC PS or DOC FS from a GPS company will be included with the purchase of feed from that company. The main feed ingredient for chickens is corn which reaches 40-50%. The need for corn for feed factories is 12.5 million tons per year. If domestic corn production drops, companies will import corn from China and/or the United States. Apart from corn, other feed ingredients are soybean meal, rice bran and others. All these feed ingredients depend on the season, so if there is a decrease in production it will cause the price of these feed ingredients to increase. This is the next point that large companies can determine feed prices.

Based on these two things, the actor who has strong contestation in determining LB prices is the integrator actor who has 2 input resources, namely feed and DOC. These two production inputs are important factors in cultivating DOC FS. Feed is an important factor in broiler chicken cultivation because feed costs dominate the operational costs of broiler chicken cultivation, amounting to 60-70% (Thirumalaisamy et al., 2016).The results of an interview from one of the top management of a broiler chicken company in Indonesia stated that:

“DOC and feed prices are determined by the head office in Jakarta. "The price of DOC and feed is different in each province."

Regarding the DOC and feed pricing system by integrator companies, each province has different feed ingredient production potential. If the area is a rice producer, bran

production will automatically be abundant, as will other feed ingredients such as corn. On the other hand, there are several areas where labor and transportation costs are cheaper compared to other provinces, so that the resulting LB output will be cheaper than other provinces. These two production input factors greatly determine LB price fluctuations on the market. In integrator companies, there are several companies that are pioneers in the poultry industry in Indonesia so that these companies have quite a long experience in this industry, including mastery of technology, cultivation and markets. This experience becomes important capital in contesting these actors in the broiler chicken supply chain in Indonesia. The capabilities of the integrator company will be transmitted to its branch companies or those affiliated with the integrator in each province (Junaidi, Masdar, et al., 2024; Miar et al., 2024).

The results of supply chain surveys in producing regions, such as West Java, Central Java, East Java, North Sumatra and South Sulawesi show that the broiler chicken supply chain system has the same supply chain model, as seen in Figure 4. Representative companies (Commercial farms) in The province is tasked with maintaining DOC FS directly, and distributing DOC FS and feed to partnership breeders affiliated with the company, as well as to breeders or cultivation companies outside the integration.

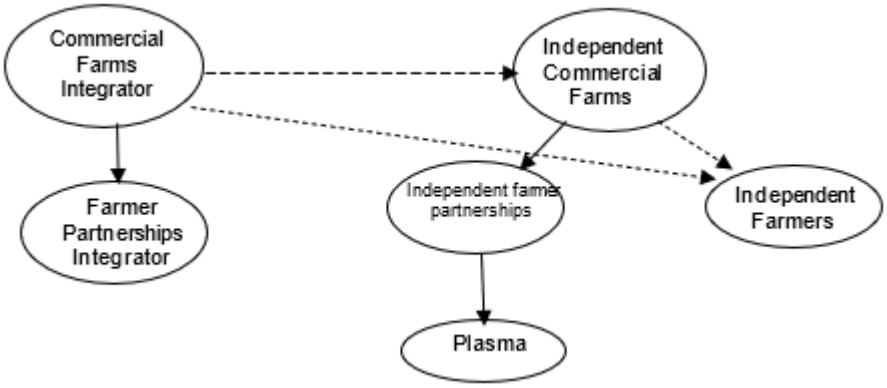


Figure 4 Broiler Chicken Supply Chain Model in the Study Area

(Dotted line outside integration)

The role of each actor or supply chain actor in the province in determining the prices of DOC FS, feed and live bird (LB) can be seen in Table 2. In this table it is shown that the price determiner for DOC FS, feed and LB or the price setter is the integrator company or parent company. All supply chain actors under it, including commercial farm integrators, are only price takers. The results of interviews with independent palaku or associations stated that:

"The price of DOC FS and feed for partnership breeders is set by the DOC and feed supplier company, independent actors and breeders only accept the price set by the company. "Integrated business actors will be given cheaper prices compared to cultivation actors outside of affiliation or integration."

Table 2. Determination of DOC FS and Feed Prices in Sample Provinces

| **Supply Chain Actors*** | **Determination of DOC FS prices** | **Determination of feed prices** | **Determining live bird prices** |
|---|---|---|---|
| a. Full and Partial Integrator | Price setter**) | Price setter | Price setter |
| b. Commercial farms integrator | Price taker***) | Price takers | Price takers |
| c. Farmer partnership integrator | Price takers | Price takers | Price takers |
| d. Independent Commercial Farms | Price takers | Price takers | Price takers |

| | | | |
|---|---|---|---|
| e. Independent farmer partnership | Price takers | Price takers | Price takers |
| f. Plasma | Price takers | Price takers | Price takers |
| g. Independent farmer | Price takers | Price takers | Price takers |

Notes:

*) Actors in the provinces of West Java, Central Java, East Java, North Sumatra and South Sulawesi

**) Price setting is the most important and complicated process considering the company environment and competition so that the price set becomes the reference price (Cataluña et al, 2019)

***) Price taker is the price accepted by business actors as is (Anufriev and Kopányi, 2018)

### 4.3 Actor Contest in the Live Bird Market Arena

The description above relies on mastery of production inputs in the broiler chicken supply chain system, such as DOC FS and Feed. These two production inputs are the main production inputs for DOC FS cultivation. Control of production inputs has control over the prices of DOC FS and feed. Large capital determines control of production inputs. In accordance with Bourdieu's theory that in an arena there are sources of input as capital that facilitate the conquest of certain control (Vogt, Silva and Valle, 2021). It was further stated that capital is a resource that enables the conquest of power and determines a larger and more influential position in the field.

The broiler chicken supply chain arena is not limited to the supply flow of DOC, feed and live birds between supply actors in the supply chain, but also to actors marketing live birds as the output of broiler chicken cultivation. The DOC FS maintenance output is live bird, this output becomes a commodity that will be consumed by consumers after being processed first. Before processing, this output must be sold to live bird marketers. In this market arena, supply players face off against broiler chicken marketing players (Hadi et al., 2019; Hamdan & Basrowi, 2024; Mulyani & Basrowi, 2024). As in Figure 1, there are three actors marketing broiler chickens, namely brokers, chicken traders or baskets, and poultry slaughterhouses (RPHU). There are quite a lot of supply actors or market players, so the market structure that occurs when these two actors meet can be called a competitive market. A competitive market is a market structure where price formation occurs as a result of bargaining between supply players and the market, especially the live bird market (Alexandro & Basrowi, 2024b; Junaidi, Basrowi, et al., 2024; Yusuf et al., 2024).

This competitive market becomes an arena for contestation between supply actors and market players in determining prices. The two actors will pit themselves against each other in determining the live bird price. Supply players determine the selling price of live birds in cages based on how much they cost, while market players have the power in terms of market information and marketing networks. Market players have access to other supply chain actors to find prices so they can compare prices from one actor to another. The market player's decision is to make a deal with a supply player who provides a price below that of other market players. Apart from that, supply actors have the power to withhold supply to the market so that live bird products will be scarce on the market, causing prices to increase. On the other hand, supply actors can also reduce prices by over-supplying live birds (Alexandro & Basrowi, 2024a; Kittie & Basrowi, 2024; Purwaningsih et al., 2024).

Based on information on live bird prices at the producer level and prices at the wholesale level, it can be seen in Figure 5. Figure 5 depicts the average development of live bird prices in the provinces of West Java, Central Java, East Java, South Sulawesi and North Sumatra. In the picture you can see that both prices fluctuate from the first week of January 2023 to the first week of December 2023. However, in March - April 2023 there

will be an increase in prices, especially the price of live bird chickens at the wholesale level. The price increase is in line with the approaching month of Ramadan and Eid al-Fitr, which for Muslims are big holidays. In these months the prices of all basic commodities increase drastically. Usually, after the big holiday, the price of live birds will return to normal, but in May it decreases slightly and then rises again until the middle of the second week of July 2023. This increase can be caused by various factors, one of which is the increase in feed and DOC prices. Then, in the last week of November and early December 2023, there will be a decrease in live bird prices at the breeder level. In fact, the lowest price at the breeder level is IDR 14,000/kg live bird, even though the cost of goods sold at the breeder level is IDR 17,000/kg live bird. The results of a survey with breeder associations stated that:

“The price of DOC FS has decreased drastically from IDR 8000/DOC FS to IDR 4000/DOC FS. The decline in the price of DOC FS is due to the large company that owns the GPS having an oversupply of DOC FS so this is damaging the market price of live birds at the breeder level."


Figure 5 Development of Live Bird Prices at the Breeder Level with Live Bird Selling Prices at the Wholesale Level

The contestation between actors in the live bird market arena is quite interesting to discuss because there will be a shift in the demand supply curve until an agreement price is formed. Each actor has capital strength, be it economic capital or social capital. Broiler chicken supply chain actors have the power of economic capital in controlling production input resources. Meanwhile, live bird market players have social capital in the form of information networks and networks of market players and supply players. In the live bird market arena, market players are slightly more dominant in determining live bird prices because they have information networks and links to supply players, so that market players can detect profitable live bird price ranges. Meanwhile, broiler chicken supply chain actors do not have information about live bird prices among other supply chain actors or live bird prices between them cover each other because they compete with each other (Purwaningsih et al., 2019; Purwaningsih & Rahmanto, 2013).

This opportunity is used by market players to get the best prices. Supply players (integrators with a market >50%) are closed, so their supply strength is unable to influence market prices. The suggestion is that there should be openness between integrator companies as supply actors. The input components between integrators and independent farmers are different (efficiency) while competing in the same market, so there is a need to separate the market between integrators (which should sell to RPHU) and independent breeders. The LB supply chain is a competitive market because it involves many supply and demand actors so that the price mechanism is built on the basis of bargaining between supply and demand actors (competition market theory). The

government's role in competitive markets must be reduced in order to create a perfectly competitive market. However, with the existence of independent breeders/breeders, the presence of the government is needed to protect and empower independent breeders/breeders so that they are able to survive in market competition.

## 5. CONCLUSION

Based on the description above, it can be concluded that actor contestation in the broiler chicken supply chain arena is controlled by integrator companies due to ownership of DOC FS and Feed input sources, while actor contestation in the broiler chicken market arena is determined by the strength of each actor depending on the use of economic capital by supply chain actors and the use of social capital in the form of information networks and chain actor networks.

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