



# MODEL OF LIVESTOCK COMMUNICATION NETWORK AS PLASMA IN BROILER PARTNERSHIP IN MALANG DISTRICT

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**Abstract.** The research aims to analyze the pattern of farmer communication networks in partnerships and the role of farmers as one of the stakeholders in implementing communication within the institution. The number of research respondents as many as 11 respondents taken by the non probability sampling method through snowball sampling found 8 farmers who partnered with the core of external partnerships and the rest were core, brokers and livestock services. Data analysis using open access software with UCINET 6,682. Based on a survey that the majority of broiler farmers in Malang district amounting to 72% were farmers partnering with integrators or external partnerships because for the procurement of breeder production facilities able to adjust to financial capabilities. The results of the study show that the value of in degree in the communication of the farmer actors is on average higher than the outdegree which means that the farmer's role as a communication actor in the partnership because the farmer acts as the main actor in providing upstream to downstream technical information to the company, while the out value degree where the ability of farmers in the network to exchange information continuously with a value of 55.56%, the value of outdegree was not as big as the degree because the farmer's communication relationship is only with the core technical limit. The incloseness value of 87.50% where the farmer was able to influence the network was very high because the farmer as the main actor of business success and outcloseness was the ability of the farmer to be influenced by only 57.17% because the farmer has mastered technical maintenance compared to other actors.

## 1. Introduction

Agriculture Sector is the main sector in national development because the structure of the national economy is in the agriculture sector which is based on the Industrial structure which is able to contribute to the decline in the value of inflation in controlling food values causing inflation of food raw materials in 2017 with a value of 1.26%. This value is lower than in 2013 which was 11.35%, whereas in 2017 food raw materials have a value far below the general inflation value of 3.61. However, in reality from the results of the Bulletin of Foreign Trade statistics Bulletin of the Central Statistics Agency in 2018 exports for agricultural products are the lowest compared to the industrial and mining sectors where the number of exports of agricultural products from February 2016 to February 2018 is still considered volatile.

The superiority of the agricultural sector in the aspect of labor absorption in the February 2018 data is able to provide 36.91 million workers with the percentage of absorption as much as 28.23% of the entire labor sector in Indonesia which is divided into several groups of agro-complex including labor in the food crop sector as much as 46.58%, plantation 30.79%, livestock with a percentage of 13.47%, and horticulture 9.16%. However, this contribution is considered to be very low if it is assessed that each increase in 4 years only experienced a growth of 13.68%, namely the value of the

Gross Domestic Product of the agricultural sector amounting to 994.8 trillion, in 2013 and increasing in 2017 to 1334.7 trillion. [1]. The slow increase in the value of gross domestic product shows weak productivity growth in this sector.

Based on BPS data in 2018, the growth of the agricultural sector from the livestock sub-sector which is growing is a poultry commodity, especially broilers. Broiler is a meat-producing poultry so that from the livestock-producing livestock sector is quite rapidly developing in Indonesia. Broiler farmers consist of three groups including internal partnerships with large companies that have sub-systems from upstream to downstream, the second is an external partnership where the partnership system with poultry shops or companies that work with large companies that supply production facilities, and the third type is the pattern self-cultivation so that the capital system comes from farmers themselves, but based on the implementation in the field the number of independent broiler farmers is less than 10% because of the large amount of capital that must be spent in production for meat-producing commodities so that the amount of feed expenditure is very large, while the majority of imported raw materials so that the cost of feed is also high and the majority of broiler entrepreneurs are controlled by large companies so that the independent farmers do not have a high bargaining position especially when chickens have to be harvested while the production price does not match the market price then it does not. The small number of farmers who suffer losses in the face of the price phenomenon in the market is mainly the case of live birds prices at the farmer's level which are much lower than in the market. Based on the existing problems, it is necessary to conduct research around the patterns of communication networks, especially in the viewpoint of farmers in interacting with other actors in a broiler partnership.

## 2. Research Methodology

The study was conducted in July to September 2019 in the Greater Malang area with respondents selected as samples were farmers who partnered with companies as suppliers, namely external partnerships with a purposive sampling method where the majority of farmers in Malang Raya partnered with poultry shops or companies as suppliers and distributors because farmers can adjust the price of livestock production facilities with financial capabilities so that it is more flexible in terms of finance. While the requirements for joining plasma are easier, many farmers prefer to become an external partnership type plasma.

### 2.1. Sampling

Research using non-probability methods using snowball sampling where the first informant is the company as the core of an external partnership that will provide information related to farmers who are partners in broiler business cooperation. External partnerships in this study consisted of 8 integrators including Jaguar, Mitra Makmur Sejati, Umi Perkasa, Surya Inti Perkasa, Mitra Jaya Agro, Sawahan Poultry Shop, Bela Jaya Poultry Shop and Aneka Poultry Shop.

#### 2.1.1. Analysis Data.

Data analysis using social network analysis methods with open access software, namely UCINET 6,682. The purpose of the SNA analysis is to analyze the communication network patterns of actors involved in both decision making and policy makers in broiler partnerships, especially in analyzing communication networks in the farmer aspect when communicating with other actors. To view the role of the actor in the social network, used methods of SNA and its application can be done by: first change sociogram survey results into a format UCINET dataset for software NetDraw through applied the concept of degree and closeness centrality using the following equation [4].

## 3. Result and Discussion

The communication network in the partnership involves several institutional support coming from the public sector, namely the Animal Husbandry and Animal Health Service of Malang Regency, the

private sector, which is the integrator and broker, and the voluntary sector, namely the extension officer. From several existing actors, then with the social network Analysis, it will be known who is the actor who gives the most role and influence in institutional types of core and plasma broiler partnerships when viewed from each stakeholder both as communicators and communicants. Based on the results of research for communication networks in an external partnership from the perspective of plasma with the results of the sociogram as follows.

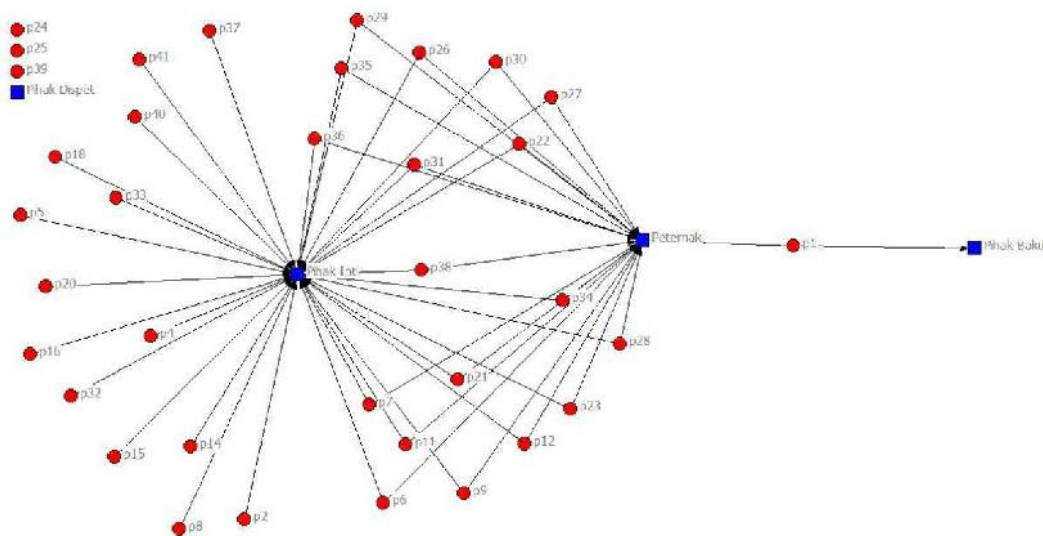


Figure 1. Sociogram of the Role of Plasma Actors in External Partnership Communication Networks

Figure the communication model with social network analysis through the open access software approach that the Farmer only opens communication with the integrator as the core. The results of the analysis are indicated by the degree and closeness values. In degree testing aims to see the role of actors in the network, while out degree aims to analyze the exchange of information that occurs in the network between 1 actor and other actors so that continuous communication from one information to the next is related to information in the network. The value of in degree from the results of the analysis with the software UCINET 6,682 is 100% meaning that the role of farmers is very high in the partnership communication network because it is that the farmer is an actor who acts as a determinant of business success and increasing profit for the core. farmers master all maintenance management techniques from upstream to downstream and fulfill all the rights and obligations made by the core and mutually agreed as a condition in providing output to increase the broiler performance index through increasing the body weight desired by the core because of the lower FCR and growing body weight. fast with final body weight in the range of 2.1-2.3 kg will increase profits for the core. The core role is only to provide livestock production facilities and will then be handed over to plasma, but the core will continue to monitor by sending field extension officers to visit the plasma enclosure on the livestock monitoring agenda. Information from plasma is needed by the nucleus in monitoring the maintenance process from upstream to downstream from chick in to chicken must be harvested, because plasma failure is also fatal to the nucleus, therefore the nucleus is waiting for information provided by plasma, but from this problem dependence the core of plasma is not to empower plasma but for the benefit of the company in maintaining profits. Article 19 of Law No. 44 of 1997 farmers are entitled to make cooperation contracts with the core, so it is not the core that demands the rights and obligations made by one party of the company to establish cooperation partners.

Article 19 mentions the role of government in assisting and facilitating the implementation of partnerships for small entrepreneurs. In his explanation mentioned that the guidance and assistance includes, among others, the preparation of the agreement and its requirements. The explanation of

article 19 indicates that the farmer has the right to participate in drafting the agreement and even has the right to obtain guidance from the government when drafting the agreement [7].

In the contract agreement it was found that the partnership contract agreement was more profitable for the core company compared to plasma. If the farmers in the production process run smoothly, this relationship is mutually beneficial, but when there is a crop failure, the plasma that will be harmed is the crop failure, the core that will be harmed [2].

Out degree value of 55.56% means that the communication given by farmers is not sustainable because it is far from the ideal value of sustainability in communication 100%, it is related to the value of degree where the core dependency is only for the benefit of the company so that if the chicken has been harvested then the core communication and plasma is stopped even the core will not provide market information related to the price of live birds, so there is always a price parity at the farmer level with the market especially when it is at a marketing institution such as a broker. Domestic chicken meat supply has reached self sufficient where domestic needs can be fully met in domestic production. Even in 2014, the amount of chicken meat production reached 2.5 million tons, while the need was estimated at 2.3 million tons. The excess supply causes the price of live birds at the level of farmers to fall even below the cost of production. But the price reduction at the farmer level is not transmitted to the price of chicken meat at the retail (retail) level or the price paid by consumers. Prices at the consumer level actually tend to increase from time to time [8].

Partnerships are agricultural production systems that involve agreements between buyers and farmers, which create certain conditions for the production and marketing of agricultural products [9]. Usually, farmers agree to provide a certain number of agricultural products, which must meet the buyer's quality standards and will be supplied by the buyer at the time specified by the buyer. Instead, the buyer is committed to buying the product at an agreed price, and in certain cases, must support production, for example through the supply of agricultural inputs, land preparation, and the provision of technical pendamping. It was further said that the contractual relationship would only be sustainable if both parties accepted that they would be better off cooperating.

Based on the sociogram picture that farmers only establish communication with the core, while actors involved in the partnership are not only core, there are agencies and brokers to be able to communicate directly, but from the results of implementation in the field that the core limits plasma to communicate with other actors, so information that can be accessed by farmers, especially regarding livebirds prices, is very limited. In reality, the majority of plasma fields are reliable in technical management because from upstream to downstream cultivation rarely experiences problems except high feed prices. The integrator also limits communication between the farmer and the livestock service, besides that the actors from the livestock service office feel that they do not have the authority to decide on plasma policies as long as the core and plasma meet each other's rights and obligations. The powerlessness of plasma to reject the core attitude so that plasma is isolated in outside information that farmers should get as a right. One of the powers to be empowered is the power of ideas. An empowerment process must include the power to think autonomously and not dictate one's world view either by coercion or by denying access to alternative terms of reference. It must also legitimize the expression of these ideas in public forums, the capacity of the community to engage in dialogue with others and the ability of community ideas to contribute to public culture [5].

The farming contract is a determining factor in the success of the partnership, because it determines the rights and obligations of each actor, the higher the nature of the rights and obligations of one actor, the more profit will be. In making the core and plasma contracts supervised by the secretary of the directorate general of animal husbandry that has been regulated in the Republic of Indonesia Government Regulation No. 6 of 2013 concerning empowerment of farmers in partnerships because all stakeholders may not take sides with other actors other than farmers as plasma, but in reality the contents of the core and plasma contracts there is an imbalance between the rights and obligations due to alignments on the core. The occurrence of conflict in the partnership at this time still does not have an arbitration institution that is able to mediate when a dispute occurs [2].

This is in accordance with Windarsari's research results [10], there are several factors that influence the success of broiler farmers partnership business in running a partnership business, namely the cooperation contract agreement with the provisions of farmers being required to sell all of their production to the core company in accordance with the agreed price stated in the contract which has been mutually agreed upon by farmers and companies.

The value of in closeness in the communication network sociogram 87.50% where the ability of farmers to provide information to the integrator, information provided about the technical management of maintenance to chicken harvesting and the value of out closeness of 57.17% is the ability of farmers to be influenced by other actors is not too high because farmers do not really need technical information, while the information provided by the nucleus is only technical, but what plasma needs is market access. So from the communication network based on farmer aspects it is known that the communication patterns that exist in partnerships are less than ideal because they are dominated by certain actors.

This is contrary to the opinion that partnerships should be based on an understanding of honesty, trustworthiness, fairness, and open communication summarized in business ethics so that partnerships will be strong and enduring [3]. Added the opinion that there are five factors that influence farmers' participation in contract farming in Peninsular Malaysia, especially with reference to fresh fruits and vegetables [6]. The five factors in question are market guarantees, access to marketing information and technology, transfer of technology to agriculture, access to inputs. Contract farming helps farmers gain better knowledge in cultivation practices, facilitates increased access to marketing information, enables easier marketing and more effective use of agricultural resources.

#### **4. Conclusion**

The value of in degree in farmer actor communication is on average higher than the outdegree which means that the farmer's role as a communication actor in partnership is because the farmer acts as the main actor in providing technical information upstream to downstream to the company, while the value of out degree where the ability farmers in the network to exchange information continuously with a value of 55.56%, the value of outdegree is not as big as the degree because the farmer's communication relationship is only with the core technical limit. The incloseness value of 87.50% where the farmer is able to influence the network is very high because the farmer as the main actor of business success and outcloseness is the ability of the farmer to be influenced by only 57.17% because the farmer has mastered technical maintenance compared to other actors.

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