

# COMMUNICATION PATTERN NETWORK IN BROILER PARTNERSHIP

J.A Putritamara \* S. Azizah \*, N. Febrianto \*

\* (Socio-economics Livestock Department, Faculty of Animal Science, Brawijaya University, Indonesia  
Email: jaisyap@ub.ac.id )

\*\*\*\*\*

## Abstract:

The research aimed to analyze the communication pattern network. The research was conducted at external partnerships in Malang regency. Research respondents included the public, voluntary, and private sectors. Phase 1 of the study was to identify the communication networks of broiler partnership stakeholders, so it used Social Network Analysis with UCINET 6.682 open-access software. The results of the study show that the value of in degree was 100%, which means that farmers contribute significantly to the partnership, in the case of external partnerships having interlocking personal networks where farmers lock information with other stakeholders. The value of in closeness 87.50% and out closeness 57.17% means that farmers have a high dependence on Nucleus. Nucleus was able to influence the decisions of the farmers. In the communication network pattern, Nucleus was easily influenced by marketing agents (brokers) so that brokers play an essential role in price takers; this causes low bargaining position of farmers level.

**Keywords - Broiler, communication, network, partnership.**

\*\*\*\*\*

## I. INTRODUCTION

In the era of free trade, most livestock products are imported products. It contrasts with the fact that Indonesia as an agricultural country. The livestock sub-sector is an important sector that contributes to the supply of animal protein.

Livestock sub-sector accounted for 1.58 percent of the national GDP third quarter of 2017; the contribution is more significant than the agriculture and hunting services sub-sector, which accounted for 0.20 percent. (DG PKH, 2017).

Broilers have an advantage in supplying animal protein with relatively affordable prices. So that broilers become superior products in the market. The openness of information makes consumers have an awareness to consume nutritious food by utilizing existing trends in the culinary business. So entrepreneurs make chicken meat as the main product in a culinary business that is easily

accessible to consumers. Low prices and nutrients derived from animal protein (Mangisah, 2003).

This is a great opportunity for farmers in the era of the industrial revolution 4.0 to increase competitiveness in the development of the broiler business. The majority of independent broiler farmers are powerless in providing livestock production facilities, so they need partners to work with companies. However, through this cooperation, farmers are not independent because they have a high dependence on Nucleus due to the imbalance between rights and obligations given by the company to farmers. The imbalance is caused by several factors. Namely, farmers tend to communicate linearly and statically, and then business information is obtained only from the company. This makes it difficult for farmers to develop.

The problem is caused when the cooperation agreement is not based on the principle of freedom,

so the position of farmers is fragile because they do not have the opportunity to negotiate the contents of the agreement. They only have the option to accept or reject (take or leave) the agreement offered by the company. If the farmer accepts the agreement, he must be prepared with all the consequences that arise as a result of the agreement, but if the farmer refuses, the farmer will lose the opportunity to develop his business (Morrow, 2005).

Strategic efforts carried out through institutional support and communication networks as a strategy to solve problems to change the conventional attitudes of farmers in the global era to millennial farmers derived from institutional strategies. Measurement of farmers' welfare is through farmers' welfare and income, while communication with stakeholders is a very important support in supporting economic aspects (Azizah et al., 2018).

Institutional is a tool that has a significant impact on farmers as social creatures, which will certainly interact with individuals that make farmers have a great opportunity to receive information flow in the environment. The institution aims to make farmers independent in various environmental conditions not bound by current problems. Farmers are bound by partners, so most decisions are based on the environment. The era of the industrial revolution 4.0 requires farmers to immediately transform themselves to face the expansion of information that is open to mutual seeking and receiving information.

## **II. LITERATURE REVIEW**

Institutional strengthening strategies can be carried out to make improvements in institutional aspects. Institutional strengthening also requires support from other institutions so that institutions can play a role in encouraging farmers to achieve independence and empowerment. For this reason, a strategy that includes strengthening farmer institutions that build institutional capacity, increasing institutional resource capacity, developing capacity, and partnership in extension services (Yuniati, Susilo and Albayumi, 2017).

Technically, eight institutions are important in the development of agribusiness, namely: (1)

agriculture supply of institutional inputs, (2) provision of institutional capital, (3) labor institutions, (4) institutional provision of land and irrigation water, (5) institutional agriculture, (6) institutional processes, (7) institutional marketing of agricultural products, and (8) institutional information provision (technology, markets). Each institution can be run in two ways, namely individual (soft structure) or collectively (hardware structure) (Mardikanto, 2010).

Farmer communication activities determine the success of the business. That is because modern agriculture cannot be done independently. Communication is defined as the process of delivering messages/information from the communicator to the recipient of the message. Farmers need excellent communication and coordination with stakeholders such as suppliers of agricultural companies, governments, brokers, and consumers as policymakers, input providers, or their role in cultivation, processing, and marketing (Azizah et al., 2018).

The communication network, according to Rogers (1983), is a network of related individuals, connected by patterned communication flows, whereas (Berger and Chaffee, 1987) see communication networks as regular patterns of contact between people that can be identified as information exchange in social systems.

## **III. RESEARCH METHODOLOGY**

The research was conducted in Malang district in June-August 2019 through information search from broiler farmers who established external partnerships including CV Jaguar, Mitra Makmur Sejati, Umi Perkasa, Surya Inti Perkasa, Mitra Agro Jaya, Sawahan poultry shop and Bela Jaya Poultry Shop.

The first stage of the research was to analyze the pattern of communication networks in a broiler partnership with an integrator. Data analysis uses UCINET 6682. UCINET is a communication network analysis that aims to describe the actual communication network following existing conditions. The interaction model of communication in social networks and recognize actors who have an important role in social

networks. Bonds that are formed in social networks can be considered strong (strong ties) if one of the out-degree and in-degree networks has a value of more than 50%. To analyze the role of actors in social networking can be done by the Social Analysis (SNA) method (Everett and Borgatti, 2005),

#### IV. RESULTS AND DISCUSSION

##### Patterns of Communication Network in External Partnership for Broiler Business

Based on the results, the majority of broiler farmer has partner with integrator or external partnerships with the contract system. The contract system applied is almost the same as an internal partnership from a company with an upstream-downstream concept. The difference from the contract system is that external partnerships must cooperate with upstream and downstream companies as providers of livestock production facilities such as seeds and feed and production equipment.

The advantage of external partnerships is that companies can supply livestock production facilities by the farmers' financial capabilities. The disadvantage of external partnerships is that farmers have to pay transportation costs for shipping livestock production facilities from different companies. This is because each farmer has different financial capabilities so that external partnership companies must cooperate with various companies providing production facilities so in the business cycle, the role of external partnerships as suppliers.

In the pattern of external partnerships, the company is not able to provide quality control over the means of production purchased by farmers as plasma. The company only selects internal partnership companies that can be invited to work together because of the company's position as a reseller. The majority of external partnerships are poultry shops. The experience that has been encountered is when the quality of the DOC requested does not match the expectations of the farmer. Also, the case of high feed prices is due to the majority of imported feed ingredients so that

production costs are high. This has an impact on high market prices, causing consumer demand for broiler meat to decline.

Mid-2019, consumer prices are high due to oversupply. East Java has a large population for broiler supply. The problem is when East Java receive supply live bird supply from the Central Java. It could be excess stock, and the impact for this case made are the market price is unstable, and many broilers are wasted. Characteristic of broiler business, which is always complex, is based on the viewpoint of farmers so its important to observing about communication network patterns. The aim is to analyze the structure of communication network in broiler partnership that has decision-making authority in a broiler business partnership. In addition, the Social Network Analysis is able to observe the alignments between stakeholders through communication patterns.

Here is a Social Network Analysis results are presented in the form of sociogram like Figure 1.

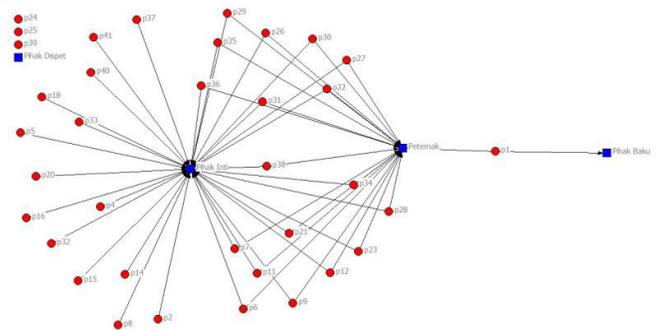


Figure 1. Sociogram of communication patterns of external partnership broiler business networks.

Based on the results obtained information that the farmer only to establish communication with the external partnerships, even farmers have never communicated with the broker regarding the price per kg of body weight or with the Department of farms in the region. Never also communicate with other farmers who have the same business and work together with the same partners. It was conducted by an external partner company to the farmers to avoid the exchange of information between farmers, so farmers do not know the market information.

Communication network structures (fertilization) tend to interlock, that is, private networks, according to Rogers and Kinkaïd (1981). This structure has a high level of integration between actors. It tends to be closed with the environment outside the system so that the relationship between farmers and outsiders is minimal in exchanging information. Wheel-shaped network structure patterns are network structures that have central leadership and have the power to control.

Based on the results of the analysis that the value in the communication network aims to measure the contribution of the role of stakeholders in communication. In the communication network pattern with a value of 100% degree means that the farmer has an opportunity as a determinant of business success because the role of farmers is very high in the broiler partnership communication network. The motivational aspect of Farmers is high in developing broiler businesses whose hope is to increase the productivity of broiler businesses through collaboration with the Nucleus. But the reality is that farmers have a high dependence on the Nucleus, so it is not independent, especially as a price taker. The evidence is shown through all communication activities related to the development of broiler business is a type of unidirectional communication, where farmers always become communicators.

The content of communication between farmers and the Nucleus is the progress of farmers' cultivation in a period from a chick into the harvest. Nucleus rarely provides new information related to business development, because Nucleus knows that farmers understand the technical maintenance of broilers. Each month Nucleus sends extension agents for visits to farmers 1-3 times a month.

Scott (2012), there is no interaction patterns will emerge or survive if not all participants benefit.

Plasma has a large dependence on the Nucleus due to 1) powerless breeders in the procurement of livestock production facilities independently; 2) the powerlessness of farmers as a determinant of prices in the market; 3) the powerlessness of farmers in the face of high feed prices. For farmers, the type of external partnership with the poultry shop makes it

easy for plasma because the guarantee and risk of loss are low. After all, the Nucleus adjusts the plasma budget. Communication between the Nucleus and plasma is done directly and verbally. Farmers assume that the core role is significant for the productivity of plasma-owned businesses as suppliers of production facilities so that plasma is powerless to negotiate the contents of contracts made by the Nucleus.

In the partnership business partnership, the process of terminating a unilateral cooperation contract is undoubtedly very detrimental to farmers because they have to pay investment. This is a common problem experienced by smallholders. In such a position, plasma farmers cannot do anything, which means they can simply accept the decisions of the core company (Morrow, 2005).

It is different from the regulations made by the ministry in No. 13 2017 that the contract between the Nucleus and the plasma supervised by the Director-General of Livestock that are stakeholders that must be synchronized to empower farmers, but the reality in terms of the contract always happen alignments in the Nucleus. So it needs a strategy that provides a firm foundation for the empowerment of farmers as plasma, especially when implementing cooperation contracts.

Out degree value of 55.56% is the percentage of the ability of the Nucleus to provide information to all stakeholders in the communication network. Based on the results of research that the Nucleus provides information to plasma is only a critique and advice if farmers can not give a good yield according to company standards, while criticism and suggestions that become feedback from plasma to the Nucleus is the harvest time that is not following the contract because the core must wait for harvest time when live bird prices on the market are high. While farmers suffer losses because they have to add to the maintenance period. Failures are caused by farmers having to buy more feed when the maintenance period is added because of the delayed harvest. In that case, farmers are usually in debt to the Nucleus to buy feed. The loan is returned to the core when the farmers get the next period's profit. Not a few are hampered debt so that farmers go bankrupt. So in cases such as plasma are

powerless, so farmers assume that the core purpose is only selling feed as the main business.

Social Network Analysis also estimates the value of closeness, which means that in the analysis it also aims to find out the role of actors in spreading information and to influence and be influenced by other actors in communication network patterns. In-closeness value is 87.50% and and out-closeness 57%.

There are three different objectives in the arrangement of partnership contracts, namely: (1) to approve the allocation of values, (2) risk allocation, and (3) allocation of decision rights. The distribution of values related to the part of the transaction in the contract, specifically the price or pricing mechanism, and the conditions of delivery under the particular price paid. Risk allocation related to the uncertainty of contract partners and the potential financial effects of this uncertainty, and mechanisms to reduce risk. In other words, certain ones bear market risk, production risk, transportation risk, and so on. The allocation of decision rights relating to the control of the parties, on the other hand, consists of many activities and decisions in which all together form transactions.

The role of government as a policymaker is expected in the case of a partnership, but based on the results that the government has not been involved in the communication network pattern shown by the sociogram. Farmers assume that all information received is only from the Nucleus. The livestock service office does not have the authority in the cooperation contract; business can be done on the condition that it does not violate government regulations. Plasma also does not establish communication with brokers so farmers cannot access market information when harvesting, so plasma submits entirely to the Nucleus, so, naturally, farmers do not know the price per kg of live bird in the market because farmers follow the price requested by the Nucleus according to the contract agreement.

As a solution to this problem, the farmer hopes that the Livestock Service Office will contribute to living bird data providers to protect farmer prices, even though 80% of broiler commodities are controlled by broiler companies as Nucleus. So far,

stakeholders assume that the import of Grand Parents Stock is only as a foreign investment that does not affect plasma. The issue is considered wrong because if the number of DOC is not limited, it will result in oversupply. Also, the facilities in the form of cold storage in slaughterhouses are limited so that the product is not durable and abundant supply, which ultimately wasted products.

This causes unstable market prices because prices have decreased significantly. High production numbers for Grand Parent (GP) and Great Grand Parents (GPS) resulted in a lack of reliability of the data on the total needs of the DOC. Information about the amount of DOC needs in a cage can be used as a reference in calculating the final stock and farmers' needs, to create a fairer business space (Ministry of Trade, 2016).

Nucleus's role in the pattern of external partnership communication networks is as a provider of production facilities. The majority of plasma cooperates with poultry shops, including CV Jaguar, Mitra Makmur Sejati, Umi Perkasa, Surya Inti Perkasa Jaya Agro Mitra, Sawahan poultry shops, Bela Jaya poultry shops, and Jaya poultry. Based on the analysis results obtained by the communication model in sociogram image 2.

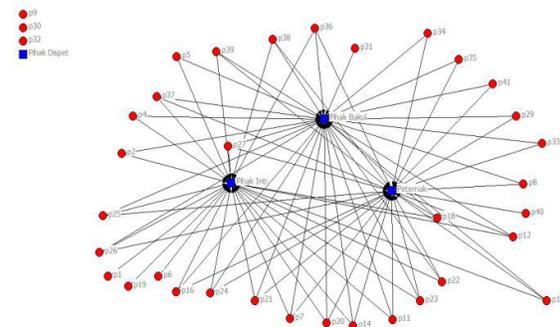


Figure 2. sociogram of the role of the Nucleus in the Broiler Business Partnership Communication Network

Based on the analysis, results obtained an in-degree value of 77.78%. This means that the core role in the communication approach is 100% because the core does not depend on other actors in getting profit, but the Nucleus depends only on the broker. So in these conditions, the role of the broker is high as a decision-maker related to living bird

prices. The closeness value is 41.67%, where the Nucleus cannot be influenced by other actors such as farmers and livestock service. Still, the Nucleus is more for communicating with brokers with a closeness value of 87.50%, meaning the core is easily influenced by the broker.

Based on the results of the study, the broker took a substantial profit and thus made the bargaining position of farmers lower. Even though the price is low at the farm level, due to the high bargaining power of the broker, it causes the price at the consumer level to be high. One of the factors that can cause a low bargaining position at the farmer level is partial political policies and broiler producers controlled by large upstream-downstream industries.

The problem of high prices at the consumer level is one effect of the nature of the monopoly market by brokers, which results in double margins in marketing agents. Even the market for the core includes the oligopoly market potential in the case of collusion because the competition is carried out by the same industry and competes beyond price.

The Nucleus is dominated by upstream-downstream companies, so it is necessary to do political will by the government related to collusion. Based on complex cases on broiler commodities is the impact of 1) partial policies that cause broiler prices to be unstable. 2) The number of uncontrolled DOC distribution is because the government cannot detect the population of Grand Parent Stock and Parent Stock. 3) GPS stock in Indonesia is still limited, the level of uniformity of DOC is low so that the seeds produced vary, different ages 4) The range of broiler exports is also less extensive.

## V. CONCLUSION

Patterns of Communication in broiler partnership are interlocking personal networks. Plasma only communicates with the Nucleus; farmers do not communicate with other stakeholders—the Nucleus limits communication among partner farmers to avoid information exchange. Nucleus gives more role to the broker as the main stakeholder who is able to provide profit to the product, causing a low bargaining position at the farm level.

## ACKNOWLEDGMENTS

Special thanks to Institute for Research and Community Service, University of Brawijaya for the assistance of Grant Scheme to the Novice Researcher in 2019.

## REFERENCES

- [1] Azizah, S., JAPutritamara, and N.Febrianto. Aspects of Life smallholders. UB Press.Indonesia.
- [2] Berger, Charles R. and Steven. H Chaffe, 1987. Handbook of Communication Science, Newbury Park: Sage Publications.
- [3] Bijman, J. 2008. Contract farming in Developing Countries, An Overview. Wageningen University and Research Center. Netherlands.
- [4] Morrow, AA 2005. inti Partnership Agreement With Pattern Cut Plasma In Chicken farmer / Broiler In Central Java Grobogan District Government. Thesis. Notary Master Program. Diponegoro University.
- [5] Directorate General of Livestock and Animal Health. 2017. Development of Gross Domestic Product (GDP) Subsector Livestock Third Quarter 2017 Issue: 04 / pdb / 12/2017.
- [6] Everett, MG, SP Borgatti. (2005). *Extending centrality*. Pp 57-63. In Carrington, Scott Wasserman (ed.) *Models and Methods in Social Network Analysis*. Cambridge University Press, New York
- [7] Ministry of Trade. 2016. *Study Competition policy in the Poultry Sector*. Center for the Study of Domestic Trade and Development Agency for the Assessment of Trade Ministry of Trade of the Republic of Indonesia.[http://bppp.kemendag.go.id/media\\_content/2017/08/KAJIAN\\_KEBIJAKAN\\_PERSAINGAN\\_USAHA\\_DI\\_SEKTOR\\_PERUNG\\_GASAN.pdf](http://bppp.kemendag.go.id/media_content/2017/08/KAJIAN_KEBIJAKAN_PERSAINGAN_USAHA_DI_SEKTOR_PERUNG_GASAN.pdf).
- [8] Mangisah, I. 2003. Utilization of Turmeric (*Curcuma Domestica*) and Curcuma (*Curcuma Roxb xanthorrhiza*) Efforts to Reduce Cholesterol Levels Broiler Chicken Meat. Java: Balitbang
- [9] Mardikanto, Totok. 2010. The concepts of Community Empowerment. Eleven March University Press - Surakarta.
- [10] Mudiarta KG 2009. Social Network (Networks) in the System Development and Agribusiness Perspective Theory and Dynamics of Social Capital Studies. Journal of Agro Economic Research Forum. Vol. 27. No. 1 pp. 1-12.
- [11] Rogers, EM and L. Kincaid. 1981. communication network: toward a new paradigm for research. London: Collier Macmillan Publishers.
- [12] Saptana, Pranadji T, Syahyuti, Elyzabet. 2003. Traditional Institutional Transformation for Strengthening Democracy in Rural Economic Network. Bogor: Center for Research and Socio-Economic Development of Agriculture.
- [13] Scott, John. 2012. Social Theory: Basic issues in Sociology. Student Library. Yogyakarta.
- [14] Syahyuti. 2004. The government, market and community: a major factor in the development of agribusiness in the countryside. Agro Economic Research Forum 22 (1): 54-62.
- [15] NT Uphoff. 1986. Local Institutional Development: An Analytical Sourcebook with Cases. USA: Kumarian Press.
- [16] Yuniati, S.Susilo D and Albayumi, F. 2017. In the Institutional Strengthening Efforts to Improve Welfare Sugar Cane Growers. Proceedings of the National Seminar and Call For Paper Economics and Business (snapper-EBIS 2017) - Jember, 27 to 28 October 2017 (pp 498-505) ISBN: 978-602-5617-01-0