Level of competitiveness of laying hens

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Abstract. This study aimed to determine the level of agribusiness competitiveness of laying hens in Pinrang Regency, South Sulawesi Province. This research was conducted in December 2017 until January 2018. This type of research is quantitative descriptive. Data sources are primary data obtained from interviews and secondary data, namely data obtained from agencies related to research. Data analysis used is PAM (Policy Analysis Matrix). The results showed that laying hens have good competitive value and competitiveness so that the competitive power of laying hens in the Duampanua sub-district, Pinrang Regency is quite large.

1. Introduction
The development of laying chicken breeds in Indonesia economically has profitable business prospects because the demand is always increasing [1]. Even though the potential of laying chicken breeding business is very interesting, a number of challenges can be a barrier to businesses that can turn potential profits into losses. According to [2], the challenges and obstacles in laying chicken breeding business include weak maintenance management, fluctuations in product prices, fluctuations in the price of production facilities, uncertainty in selling time, low operating margin, and production facilities that are highly dependent on imports and increasingly fierce global competition.

Pinrang Regency as one of the regencies in South Sulawesi plays an important role in developing livestock business considering that Pinrang Regency has an area of around 196,177 hectares and has abundant natural resources so that it can be used by businesses to improve the economy and utilize human resources in Pinrang Regency. According to the Pinrang Regency Central Bureau of Statistics in 2015 the population of laying hens in Duampanua sub-district was around 15,778. This shows an increase in the population of laying hens from year to year where in 2010 there were only around 9,492 tails.

Basically, laying hens are profitable but are more productive if all land resources, labor and other resources can be utilized efficiently. This condition requires a clear analysis using the Matrix Analysis Policy by comparing private data and social data from an area / country that are considered to be in perfect market conditions to clearly determine whether the business being run is profitable or not.

2. Research methods
Data collection includes primary data and secondary data. Primary data were obtained from respondents of laying hens in Pinrang Regency, South Sulawesi Province by direct interviews.
covering production costs, fixed costs, variable costs and income in December 2017 to January 2018. To find out the impact of local government policies on laying hens business, Policy Analysis was used Matrix (PAM) [3]. The formulation of the PAM model:

Table 1. Formulation of the Model Policy Analysis Matrix (PAM)

|       | Revenue | Input Tradable | Cost | Domestic Factor | Profit |
|-------|---------|----------------|------|-----------------|--------|
| Private | A       | B              | C    | D               |
| Social  | E       | F              | G    | H               |
| Divergency | I   | J              | K    | L               |

Note:
1) Private Profit (D) = (A-(B+C))
2) Social Profit (H) = (E-(F+G))
3) Divergency Output (I) = A-E
4) Divergency Input (J) = B-F
5) Divergency Factor (K) = C-G
6) Net Divergency (L) = D-H = (I-(J+K))

3. Results and discussion

3.1. Input and results of Matrix Analysis Policy

The following is a general description of laying chicken farming business in the district, Duampanua sub-district, Pinrang Regency (Private Data) compared to laying hens in the Lamongan Regency in East Java with a business scale ratio of 100 tails, can be seen in table 2

Table 2. Poly Analysis Matrix (PAM) of layer chicken business in Duampanua sub-District, Pinrang Regency.

|       | Revenue | Input Tradable | Factor Domestic | Profit    |
|-------|---------|----------------|-----------------|-----------|
| Private | IDR 37,240,000 | IDR 20,412,000 | IDR 2,800,000   | IDR 14,028,000 |
| Social  | IDR 38,821,128 | IDR 19,008,631 | IDR 2,965,037   | IDR 16,847,460 |
| Divergency | IDR(1,581,128) | IDR(1,403,369) | IDR(165,037)    | IDR(2,819,460) |

Based on the results of the PAM analysis in table 2, the high tradable input is caused by laying hens needing feed with good nutritional content so that egg production also increases so that farmers pay more for feed management, this is in line with the opinion of Rasyaf [4] that one failure what is easy to happen in laying hens is the maintenance management, which results in very increased production inputs due to lack of research from farmers. According to [5], because the price of high feed raw materials greatly affects the costs incurred by farmers where the cost of feed is 60-70% of the total cost of livestock production. Based on table 2 on domestic factors there is a negative divergence, compared to social prices, the price of private input tends to be cheaper. In general, private locations for workers usually use relatives or families so that the wages of labor in private locations are comparatively cheaper compared to the provincial minimum wage (PMW)

Based on Governor Decree No. 2834 / XI / Year 2017, Provincial Minimum Wages (PMW) or 2017 Regency / City Minimum Wages (CMW) have been established in almost all provinces in Indonesia, including South Sulawesi. For South Sulawesi itself, the PMW value in 2017 stipulated by the Governor is IDR 2,500,000 or an increase of 10 percent from wages in 2016 which is only IDR 2,250,000. This figure was decided at the Plenary Meeting of the Makassar Manpower Office, together with the Board Wages of Makassar City at the Labor Office. According to Siregar [6] the workforce used by farmers is grouped into two major groups, namely labor in the family and out-of-work (hired) labor, in this case, labor in the family is not paid. According to [7] those variable costs are costs whose
total always changes proportionally (proportional) to changes in the volume of company activities. The size of the total variable costs is influenced by the size of the production volume. If production is small, variable costs are few and vice versa. Examples of these types of costs include: raw material costs, direct labor costs, some factory overhead costs (such as depreciation of factory fixed assets that are calculated based on the number of units of production), sales commissions determined based on the percentage of sales and so on. This shows that management is less efficient in the use of labor even though the wages of factual labor are more expensive than the wages of social work.

3.2. Matrix analysis policy ratio
The following is a general description of laying chicken farming business in the Duampanua district, Pinrang Regency (Private Data) compared to laying hens in the Lamongan Regency in East Java with a business scale ratio of 100 tails, can be seen in table 3.

Table 3. Ratio Policy of Matrix (PAM) analysis of layer chicken business in Duampanua sub-district, Pinrang Regency.

| Indicator of PAM Model Analysis                      | Value |
|-----------------------------------------------------|-------|
| Nominal Output protection coefficient (NOPC)        | 0.95  |
| Nominal Input Protection Coefficient (NIPC)         | 1.07  |
| Private Value Ratio (PVR)                           | 0.16  |
| Domestic Source Value Ratio (DSVR)                  | 0.14  |
| Effective Protection Coefficient (EPC)              | 0.84  |
| Profit coefficient (PC)                             | 0.83  |
| Subsidy Ratio for Producers                         | 0.07  |

Policy Analysis Ratio The matrix for laying hens in Pinrang Regency has a Nominal Protection Coefficient on Output (NPCO), which is 0.95%, which means the output obtained at Kab. Pinrang is lower than social comparison, in government policy if the value of NPCO is smaller than one (NPCO <1) then what happens is that producers do not receive subsidies on output from the government, because the government does not increase output prices in domestic markets above world prices (prices efficient). The value of the nominal input protection coefficient greater than one (NPCI > 1) means that the government does not reduce the price of tradable foreign inputs in the domestic market below world prices so that production costs are high and produce smaller profits. In Pinrang Regency laying chicken farms Nominal Protection Coefficient on Inputs (NPCI) which is 1.07% the high ratio value is influenced by the price of DOC and feed used in laying hens in Pinrang Regency is higher than the price of DOC and feed used for social comparison.

The value of comparative advantage or economic efficiency can be measured using the Private Value Ratio (PCR) and Domestic Source Value Ratio (DRC). The PCR value obtained was 0.16%. This shows that businesses wearing laying hens in the Duampanua sub-district, Pinrang Regency has a good competitive value, because PCR <1, with a small value, the competitive power of laying hens in Pinrang Regency is quite large. The DRC value of laying hens in Pinrang Regency is 0.14%, this shows the DRC value <1 that the business is efficient in using domestic resources which means it has competitiveness so that it can produce itself. This is in accordance with Monke and Pearson [8], which states that private Cost Ratio (PCR) = C / (AB): If PCR <1, it means that the commodity system under study has a competitive advantage and vice versa if PCR > 1 means the commodity system is not have a competitive advantage. Domestic Resource Cost Ratio (DRCR) = G / (E-F), DRCR is an indicator of comparative advantage that shows the amount of domestic resources that can be saved to produce one
foreign exchange unit. The system has a comparative advantage if DRCR <1, and vice versa if DRCR> 1 does not have a comparative advantage.

The effect of input-output policy can be explained through an analysis of the Effective Protection Coefficient (Effective Protection Coefficient or EPC), Profit Coefficient (PC) and Subsidy Ratio for Producers (SRP). The EPC value illustrates the extent to which government policies protect or inhibit domestic production [6]. Laying chicken farms in Pinrang Regency have an EPC value of 0.84%, this indicates an effective protection coefficient value that is smaller than one (EPC <1), meaning the impact of government policy does not provide support for domestic production activities. The profit coefficient (PC) value is an indicator that shows the impact of incentives on all output policies, tradable and domestic input policies. The value obtained is 0.83%, where PC <1. This value reflects that the profits received by producers are smaller than the net social benefits. Subsidy Ratio to Producer (SRP) with a value of 0.07%, a positive SRP value implies that government policies or market distortions that have so far caused laying agribusinesses to spend lower production costs than the cost of producing production [9]. The purpose of government policy in trade is to protect domestic producers. If import prices are lower than domestic prices, then it will weaken the competitiveness of domestic products because consumers will tend to buy products at lower prices. As a result, demand for domestic products will decrease which has implications for the decline in domestic production and income of domestic producers [9].

4. Conclusion

Based on the Policy Analysis Matrix (PAM) discussion on laying hen farms, it can be concluded that there is a negative divergence in domestic factors where the value of private input is cheaper than social input. The competitiveness of laying hens in the Duampanua sub-district, Pinrang Regency can be seen from the values of DCR and PCR which indicate that these farms have competitive value and good competitiveness so that the competitive power of the business of laying hens in the Duampanua sub-district, Pinrang Regency is quite large.

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