



## BREAK EVENT POINT ANALYSIS ON BROILER FARMS OF OKU REGENCY

by

Ayugustin<sup>1</sup>, Fifian Permata Sari<sup>2</sup>, Yetty Oktarina<sup>3</sup>

<sup>1</sup>Student of Agricultural Economy Study Program, University of Baturaja

<sup>2,3</sup>Lecturer of Agricultural Economy Study Program University of Baturaja

Email: [fifianpermatasari@gmail.com](mailto:fifianpermatasari@gmail.com)

### Article Info

#### Article history:

Received Juni 05, 2022

Revised Juni 27, 2022

Accepted Juli 25, 2022

#### Keywords:

BEP analysis

Income

Broiler farms

### ABSTRACT

*This study aims to analyze the income and break-even point of broiler farming in OKU Regency. The research method used is a survey method and the sampling method used is a saturated sampling method with a total sample of 8 broiler breeders spread across Lubuk Raja District and Lubuk Batang District, OKU District. The study was carried out from February to May 2022. The research data was processed using a mathematical equation to calculate the income of broiler business and the break-even point of broiler business in OKU Regency, then to analyze the break-even point of broiler business, it was analyzed using BEP analysis. The results showed that The average income of broiler farming in OKU Regency is Rp. 57.167.110/year. Break Even Point (BEP) in broiler chicken business production is 38,641.97 heads/year, BEP price is IDR 18.683,33/kg in a year and BEP income is IDR 752.291/head/year.*

*This is an open access article under the [CC BY-SA](#) license.*



### Corresponding Author:

Fifian Permata Sari,

Agricultural Economy Study Program,

Post Graduate Program, University of Baturaja

Ki Ratu Penghulu 02301 Baturaja OKU Regency, South Sumatra Province

Email: [fifianpermatasari@gmail.com](mailto:fifianpermatasari@gmail.com)

## 1. INTRODUCTION

The livestock commodity that is widely consumed by the community to meet protein needs is chicken meat. In an effort to fulfill animal protein for chicken meat, the government and breeders have tried to utilize most of the sources of livestock commodities developed. One of the livestock commodities that are prospective to be developed is broiler or broiler farming. The average annual growth of the livestock population for the 2016-2020 period is the largest broiler at 20.27% (Directorate General of Livestock and Animal Health, 2020).

South Sumatra Province is one of the provinces on the island of Sumatra which has great potential in the Livestock Subsector. In addition to having a suitable area for livestock business. During the Covid-19 period, the demand for animal protein in the form of broilers in South Sumatra was still high. Public consumption of chicken meat is quite high compared to consumption of beef, goat or duck. The reason is the high consumption of chicken meat because of the price factor. The price of chicken meat is relatively cheap compared to other types of meat. In addition, the growing population also affects the increasing demand for chicken meat on the market. Data from the Central Statistics Agency sourced from the Directorate General of Livestock and Animal Health, Ministry of Agriculture (2021), shows that South Sumatra is in the top ten with the highest broiler population, ranking eighth with a total population of 81,465,633 broilers. The highest population of broiler chickens was achieved by the province of West Java with 760,143,059 tails, the second in Central Java with 579,111,535 tails, East Java in the third place with 430,673,160 birds, North Sumatra in fourth place with a population of 128,841,803 birds, the order Banten was the fifth with 188,119,193 birds, followed by Riau with 90,784,286 and so on.

In OKU Regency, there are five sub-districts that cultivate and develop broiler chickens. Lubuk Raja District produces the highest broiler chickens as many as 47,500 heads, followed by Sosoh Buay Termite District with 25,000 heads, Sinar Peninjauan District ranks 3rd with a population of 15,500 chickens, then Lubuk Batang District with 4,500 heads and the lowest achieved by Muara Jaya District with 500 tail.

The need for animal protein, namely broilers, is felt by the community, including the people of the Ogan Komering Ulu main district. In addition, broiler farming is a very strategic business because the growth rate is

relatively short. Broiler breeders in Ogan Komering Ulu Regency are still very minimal, so they still supply broilers from other regions. At this time the development of the livestock sector is increasingly becoming an important concern because of the food diversification program to improve the nutritional quality of the community in which in this regard livestock is a source of high quality food production, the demand for public consumption of livestock products still far exceeds the existing supply and the last is Livestock businesses in rural areas are able to provide additional income and employment opportunities for farming families and the community.

The development of broiler farms in Ogan Komering Ulu Regency started from an independent business on a small scale to meet family needs. The existence of technology in animal husbandry along with economic demands, breeders began to develop their business scale into a medium to large scale to meet the needs of the wider community. According to Sunarno et al (2017), when the livestock business grew larger, problems began to arise including the distribution of DOC (Day Old Chicken) and feed that was not smooth. This will affect chicken production to be less than optimal. In addition, the price of chicken meat is quite volatile, if the price is at a low point, farmers will experience losses.

In Ogan Komering Ulu Regency, apart from large breeders who have been in the world of broiler farming for a long time, there are also small breeders who are trying their luck by opening a broiler farming business. With good management, it is not impossible for this broiler farming business to have better prospects in the future. Since the capital used to start this business is not small, it is necessary for an entrepreneur to first analyze whether this business can be continued or not.

Broiler farming business can survive if the income earned is greater than the costs incurred, so it can be continued. In Ogan Komering Ulu Regency, there are still a small number of smallholder farms that have implemented appropriate maintenance management followed by the application of technology. This is due to the lack of knowledge of farmers in conducting studies beforehand so that it becomes one of the obstacles in increasing the broiler population. For this reason, before starting a business or business, analysis is needed to find out how far the business is being carried out, not only about how much income is earned, but the most important thing is when the return on investment will be achieved. So in this case an analysis is needed to find out when the capital will return, namely the Break Event Point analysis. This study aims to analyze the break-even point of broiler farming in OKU Regency using break event point analysis.

## 2. RESEARCH METHOD

The research method used is the survey method, with the sampling method using the saturated random method, where the population of farmers in OKU is 8 people and all of them are taken as samples. the research was carried out in February until May 2022. The analytical tool used to calculate broiler livestock business income is to use the following mathematical equation:

$$IF = TR - TC$$

Where :

IF = Income of Farm (Rp/year)

TR= Total Revenue (Rp/year)

TC = Total Cost (Rp/year)

Net income can be calculated by calculating the difference between the receipts received and the total costs incurred (Soekartawi, 2012). To calculate the break-even point of broiler farming, the BEP analysis is used as follows:

$$\text{BEP price} = \text{Total production cost} / \text{Total production (Kg)}$$

$$\text{BEP production} = \text{Total production cost} / \text{Sales price}$$

$$\text{BEP income} = \text{Total income} / \text{Total production}$$

## 3. RESULTS AND ANALYSIS

a. The average income of broiler farming at OKU

The results showed the average income of broiler chicken farming in OKU Regency as shown in the following table 1 :

No	Income		
	2019	2020	2021
1	2.546.371	732.557	1.335.117
2	121.093.085	77.763.777	62.615.402
3	162.799.440	92.948.745	93.523.398
4	4.984.934	37.998.739	9.053.901



5	31.493.796	4.835.105	11.293.700
6	67.227.745	69.409.232	99.623.521
7	106.692.550	86.400.486	95.396.678
8	34.803.615	61.779.379	35.659.399
Average	66.455.191	53.983.502	51.062.639

Based on the results of processed research data, it shows that the average income received by farmers in 2019 is Rp 66.455.191, in 2020 is Rp. 53.983.502, in 2021 is Rp. 51.062.639. The income of farmers does not only depend on high chicken production, but also depends on the total cost of production. High chicken production can be influenced by rearing techniques, climate, feed quality, chicken health and chicken mortality. If the chicken production is high, it will produce a high production value as well. On the other hand, if the chicken production is low, it will produce a low production value. According to Azizah et al (2013) to analyze income, two main information is needed, namely the state of expenditure and revenue within a certain period of time.

## b. Break event point (BEP) analysis

### 1. BEP of production

To determine the BEP of production, it is necessary to know the total cost of production divided by the selling price per head. The results of research data processing show Break Event Point (BEP) production in broiler farms in OKU Regency in 2019 as many as 36,489 heads, in 2020 production reaches 38,905 and in 2021 as many as 40,532. The production Break Event Point (BEP) value obtained by this breeder means the point where the business reaches the minimum production per head in that year. The size of the production BEP depends on the production costs. If the production is small it will get a loss. Broiler farming business is declared profitable, if the BEP value is directly proportional to the number of broiler chickens produced.

Table 2. BEP production of broiler farming in OKU Regency

No	BEP production (Rp/head/year)		
	2019	2020	2021
1	2.079	2.661	2.4
2	55.444	68.661	74.9
3	46.777	63.367	63.1
4	40.643	24.764	37.6
5	14.808	23.970	20.8
6	52.723	51.992	43.6
7	40.680	45.413	43.1
8	38.757	30.412	38.4
Average	36.489	38.905	40.5

Source : Primary data 2022

From table 2, the average BEP production value is 38,641.97 heads/year

### 2. BEP of price

To analyze the price BEP, it is necessary to know the total production cost divided by the total production of harvested chickens. The results of research data processing show that the price Break Event Point (BEP) in broiler farming businesses in OKU Regency in 2019 is Rp. 18,434/kg, in 2020 it is Rp.18,743/kg and in 2021 it is Rp. 18,873/kg. The Break Event Point (BEP) value of this price means that the selling price per kg in that year is the minimum price, where the business that is running does not make a profit and does not get a loss. If the selling price is below the BEP, the farm will suffer a loss. Sales of harvested chicken production above the BEP price will benefit. In line with the results of the study, Kasmir (2019) states that the price of the product can be determined by calculating the value of the BEP amount, thus the selling value of the product that has been determined does not cause a loss in the company.

Table 3. BEP of price of broiler farming in OKU Regency

No	BEP of price (Rp/kg/year)		
	2019	2020	2021
1	18.512	18.512	18.5
2	18.302	18.302	18.3
3	18.130	18.130	18.1
4	18.543	18.543	18.5
5	18.486	18.486	18.4
6	18.571	18.571	18.5
7	18.425	18.425	18.4
8	18.505	18.814	18.6
Average	18.434	18.743	18.8

Source : Primary data 2022

From table 3, the average BEP of price on broiler farming in OKU Regency is IDR 18.683,33/kg/year

### 3. BEP of income

To analyze the BEP of income, it is necessary to know the total income divided by the total production of harvested chickens. The results of research data processing show that the Break Event Point (BEP) on broiler business income in OKU Regency in 2019 is Rp. 924/head, in 2020 Rp. 701/head and in 2021 it is Rp. 657/head. The Break Event Point (BEP) value of income obtained by farmers means that the income per head in that year is the lowest income. The greater the yield of harvested chicken, the greater the BEP income. According to Banyu et al (2020), the size of business income is influenced by revenue and production costs, for livestock businesses to increase income it can be done by reducing production costs.

Table 4. BEP of income of broiler farming in OKU Regency

No	BEP of income (Rp/head/year)		
	2019	2020	2021
1	904	52	4
2	1.035	666	5
3	1.396	794	7
4	109	873	2
5	1.281	185	4
6	766	772	1.1
7	1.298	996	1.0
8	602	1.068	6
Average	923.875	675.75	657.

Source : Primary data 2022

From table 4, the average BEP of income on broiler farming in OKU Regency is IDR 752.291/head/year

## 4. CONCLUSION

Based on the results of the study, it can be concluded:

1. The average income of broiler farming in OKU Regency is Rp. 57.167.110/year
2. Break Even Point (BEP) in broiler chicken business production is 38,641.97 heads/year, BEP price is IDR 18.683,33/kg in a year and BEP income is IDR 752.291/head/year.

## REFERENCES

- [1] Armstrong, Gray and Philip, Kotler. (2012). Fundamentals of Marketing. Translated by Alexander Sindoro and Benjamin Molan. Akarta : Prenhalindo Publisher.
- [2] Azizah, N., Utami, H. D., & Nugroho, B. A. (2013). Analysis of the partnership pattern of closed house broiler farming business in Plandaan, Jombang Regency. Journal of Animal Sciences (Indonesian Journal of Animal Science), 23(2), 1-5.
- [3] Bayu Amil Saputra, Muzdalifah, Yusuf Azis. (2020). Analysis of Broiler Chicken Farming Business



- 
- Income in Partnership Patterns in Karang Intan District, Banjar Regency.
- [4] Central Bureau of Statistics. (2021). Statistics Indonesia in 2021. Jakarta: BPS.
  - [5] Chariri and Imam Ghozali. (2017). Accounting Theory. Diponegoro University Publisher. Semarang.
  - [6] Director General of Livestock and Animal Health. 2020. Performance Report of the Directorate General of Livestock and Animal Health.
  - [7] Fitrah, H. (2013). Analysis of Break Even Point Broiler Farming Business in Ujung Baru Village, Bati-bati District, Tanah Laut Regency, South Kalimantan Province. *Enviroscientiae*, 9(2), 72-80.
  - [8] Hasan, W., Salendu, A. H., Santa, N. M., & Oroh, F. N. (2018). Analysis of profit and break-even point of broiler livestock business with partnership pattern (case study in Tetey Village, Dimembe District). *Zootec*, 38(1), 235-243.
  - [9] Hanafi, Muhammad Ilham. (2021). Analysis of Broiler (Broiler) Livestock Business at UD Pratama Balung.
  - [10] BPS OKU. <https://web.okukab.go.id/geografis/> 2022. (2022). Geography of Ogan Komering Ulu Regency. OKU Regency.
  - [11] Abraham, Jacob. (2013). Business Feasibility Analysis. Rineka Cipta. Jakarta.
  - [12] Ina, F. (2014). Analysis of Production Efficiency of Broiler Farming Business in Gorontalo City Thesis, 1(614409079).
  - [13] Ilham, Saptana, Nyak. (2016). Price Fluctuations in Race Chicken Eggs and Factors. *Journal of Agricultural Policy Analysis*, Vol. 17 No. 1. 27-37.
  - [14] Illahi, N. M. A., Novita, I., & Masithoh, S. (2019). Income analysis of partnership broiler farms in Nanggung District, Bogor Regency. *Journal of Agriscience*, 5(2).
  - [15] Kadarsan, S.A. (2013). Agricultural Finance and Agribusiness Company Financing. grammar. Jakarta.
  - [16] Kartasudjana, R. and Suprijatna, E. (2016). Basic Science of Poultry. Self-Help Spreader. Jakarta.
  - [17] Kasmir. (2019). Financial Management. grammar. Jakarta.
  - [18] Kotler, P., and Keller, Kevin Lane. (2017). Marketing Management. 14th ed. England: Pearsen Education Ltd.
  - [19] Lolietta, S. (2019). Production Patterns and Profit Levels in a Partnership and Independent Broiler Farming Business in South Payakumbuh District Payakumbuh City (Doctoral dissertation, Andalas University).
  - [20] Makhbubah, Ms. Lailatul. (2020). Analysis of the Broiler Chicken Business at the Bumi Jaya Cage Farm Lamongan, East Java.
  - [21] Mulyadi. (2013). Management Planning and Control System. Salemba Four. Jakarta.
  - [22] Munawar, Aang. (2017). Financial reporting: For Small and Medium Scale Businesses. Grasindo. Jakarta.
  - [23] Murtidjo, B. A. (2017). Guidelines for Concocting Poultry Feed. Canisius. Yogyakarta.
  - [24] Murti, A. T., Suroto, K. S., & Karamina, H. (2020). Analysis of Profits from Independent Broiler Farming in Malang Regency (Case Study in Karangploso Subdistrict, Malang Regency)-Journal. *SOCA: Journal of Agricultural Socioeconomics*, 14(1), 40- 54.
  - [25] Rasyaf, M. (2014). Keeping free-range chickens. Kanisius, Yogyakarta.
  - [26] Rahmat, R. (2021). Analysis of Broiler Chicken Business Income in Watang Pulu Village, Suppa District, Pinrang Regency. *Decision: Journal of Economics and Business*, 2(2), 243-247.
  - [27] Rahayu, L., Widodo, W., & Dyah, P. S. (2020), June. Break Event Point Analysis of Broiler Chicken Farming Partnership Pattern in Kedawung District, Sragen Regency. In National Seminar on Integrated Animal Husbandry Agriculture (Vol. 4, No. 03, pp. 549-562).
  - [28] Retnaning, R. T., & Vitasari, P. (2020). Business Feasibility Analysis Using the Break Even Point (BEP) Method in the Case Study of CV. Jaya Poultry Harmony. *Valtech Journal*, 3(1), 84-87.
  - [29] Setyawan, W. I., Dahlan, M., & Wahyuning, D. (2017). Analysis of Partnership Pattern Broiler Farming Business in Sumberejo District, Bojonegoro Regency. *Livestock Journal*, 8(2).
  - [30] Sunarno, S., Rahayu, E. S., & Purnomo, S. H. (2017). Factors Affecting Broiler Chicken Production in Wonogiri Regency. In the 2017 UNIMUS Research Results and Community Service National Seminar. Muhammadiyah University Semarang.
  - [31] Soekirno. (2017). Basic Principles of Agricultural Products Marketing Management Theory and Its Applications. PT Raja Grafindo Persada. Jakarta.
  - [32] Suratiyah, Ken. (2015). Ilmu Usahatan revised edition. Self-Help Spreader. Jakarta
  - [33] Taufik, D. I. (2013). Analysis of the Effect of Farmer Attitudes on Income in Duck Farming Business in
-

Pesungar Lor Village, Tegal City. Tegal: JITP 2 (3) 201-208.