

Cost of Goods Produced: Medium Scale and Household Scale Tempe Chips Agroindustry in City of Jambi-Indonesia

Endy Effran^{1*}, Zakky Fathoni², Siti Kurniasih³, Vika Indah Rahayu⁴, Arsyad Lubis⁵, Selfia Herlina⁶

^{1,2,3,4,5,6}Agribusiness Study Program, Faculty of Agriculture, University of Jambi.

Jl. Jambi – Ma. Bulian KM.15 Mendalo Indah Kecamatan Jambi Luar Kota Kabupaten Muaro Jambi, Jambi- Indonesia

ABSTRACT: This research aims to 1) Describe the profile and overview of the Ilham and Slawi Ayu Tempe Chips Agroindustry activities in Jambi City. 2) Calculate and also analyze the amount of cost of production of tempe chips using the Full Costing method and costing variables in the Tempe Chips Agroindustry in Jambi City. 3) Analyze the comparison of the cost of production obtained by the Tempe Chips Agroindustry in Jambi City using the Full Costing method and costing variables. The data used are primary and secondary data. The data was analyzed again in a qualitative descriptive manner. The results of the study show that 1) Ilham agroindustry is one of the medium-scale agroindustries in Jambi City which has an average tempe production capacity of 197.7Kg/production. Slawi Ayu Agroindustry is one of the household-scale agroindustries in Jambi City which has an average tempe production capacity of 35.04 Kg/production. 2) The cost of production of medium-scale agro-industrial tempe chips is Rp. 11,274/300 grams and household-scale agro-industry Rp. 15,804/300 grams. The calculation of the Full Costing method in the medium-scale agro-industry is Rp. 11,610 and in the household-scale agro-industry is Rp. 16,897.7. Meanwhile, according to the accounting theory, the Costing Variable in the medium-scale agroindustry is Rp. 10,340 and the household-scale agroindustry is Rp. 15,289. 3) based on the results of the comparison of the cost of production, it is known that there is a significant difference between the cost of production in the medium-scale agro-industry and the household-scale agroindustry, where the medium-scale agroindustry, namely Ilham, has a cheaper cost of production compared to the Slawi Ayu agroindustry.

Published Online:
December 20, 2024

Keywords: Agroindustri, Full Costing, Variabel Costing, Cost Plus Pricing

Corresponding Author:
Endy Effran

1. INTRODUCTION

The nature of agricultural products that are easily damaged, perishable, and also cannot be left for a long time makes the quality and selling value of these agricultural products less, both in terms of quality and quantity. The way to avoid depreciation in price and also the quality of agricultural goods and products harvested by farmers is to make an innovation movement to be able to process these raw materials or raw materials into finished materials that can be consumed directly or indirectly with the help of existing technological sophistication. Agroindustry is an activity carried out by a person or a group of people by processing agricultural raw materials into materials that have good value and quality so that there is a price suitability based on the processed products carried out.

Almost all agricultural commodity products can be processed into processed products that have a fairly high selling value, one example is soybeans. Soybeans are food ingredients other than rice and corn that are most in demand by the community (Junior, 2022). The content of soybeans is rich in protein and also with high enough nutrition to meet daily nutritional needs. Finished products made from soybeans are soy sauce, tempe, tofu, taucu, and also soy milk. One of the processed soybeans is tempe. Tempe contains unsaturated fatty acids, especially omega-3 and omega-6 fatty acids, which can support heart health. Omega-3 fatty acids can help lower bad cholesterol and triglyceride levels in the blood (Radiati & Sumarto, 2015), (Fadillah et al., 2014), (Rahayu, 2021), (Cahyaningrum, 2023). Tempe can be processed again into derivative products in the form of savory and crispy tempe chips. The number of tempe chips in Jambi City can be seen in the table below.

Table 1. Number of Tempe Chips Industry and Number of Workers Based on Districts in Jambi City in 2022

No	District	Number of Industries	Labor
1	Alam Barajo	1	1
2	Jambi Selatan	2	5
3	Kota Baru	1	3
4	Jelutung	1	30
	Amount	5	39

Source : Industry and Trade Office City of Jambi, 2022

According to data obtained from the 2022 Department of Industry and Trade in Jambi City, there are a total of 5 tempe chip agroindustries, the tempe chip agroindustry that has the most labor absorption is Ilham Agroindustry which is classified as a medium industry and Slawi Ayu Agroindustry is classified as a household industry. These two agro-industries are made from the same raw materials, namely from real tempe obtained from different suppliers (Dinas Perdagangan Dan Perindustrian Kota Jambi, 2022). For the agro-industry, Ilham gets raw materials from suppliers located behind the Stikkes Harapan Ibu area, South Jambi. What was obtained was at a tempe price of Rp 10,000/Kg. As for tempe chips, Slawi Ayu got tempe raw materials from suppliers in Pakuan Baru Village with a purchase price of Rp 14,000/Kg. With different raw material prices, these products are produced at different selling prices.

The processing process of the two Tempe Chips Agroindustry has a difference, namely in the use of tempe cutting machines. In Agroindustry, Ilham still uses manual processing, namely using a knife, while in Agroindustry, Slawi Ayu uses a tempe cutting machine to produce the same size of tempe and also to streamline the time used. However, there is a difference in the selling price of tempe chips from each agro-industry to consumers, which often makes market competition fierce. The amount of production volume can also affect the costs incurred. The costs incurred during the production process will also affect the selling price of a product. Therefore, to be able to maintain profits and also be able to find out the right selling price for a product is to use the calculation of the cost of production. The cost of production is also the most important part that must be calculated by small companies/industries to be able to set the selling price of a product. The cost of production can be calculated and can be known using the Full Costing and Variable Costing methods. The general difference between these two methods is the difference with overhead calculations, the full costing method uses more fixed and variable plant overhead costs, while the use of the variable costing method only uses and calculates variable overhead costs just. With the calculation of the cost of production, a price that is said to be suitable to be used as a selling price for a product created by a company or industry can be determined. So that from the price that has been set and determined, the profit can be calculated (Kurniati et al., 2015).

II. METHOD

The scope of this research is only on data related to costs as a determinant of the cost of production of Agroindustrial tempe chips products. The data to be analyzed in this study is data on the cost of production with a cost accounting period of one month of March 2024. A series of activities during the research included interview activities and also filling out questionnaires.

The data sources in this study are from primary data and secondary data. Primary data was obtained by conducting direct interviews with the owners of the tempe chips agroindustry, to find out how the processing process of tempe chips products and the costs incurred during the production process. The secondary data used is data obtained from documentation, books, records, financial reports, or literature related to this study.

The sampling method in this study uses Purposive Sampling with the consideration that the Agroindustry processes tempe into a tempe chip which is included in the medium scale and household industrial scale. The respondents in this study are the owners of the two agroindustries, namely the owner of Slawi Ayu Agroindustry and the owner of Ilham Agroindustry. The determination of this respondent is a key informant who is considered able to answer the problem to be researched and is also a reliable source of data.

The research method used to analyze the data in this study is a quantitative descriptive method. This descriptive analysis aims to explain the state of the tempe chips agro-industry business in Jambi City. while the quantitative analysis aims to explain the results of the calculation and comparison of the cost of production using the full costing method and variable costing (Dunia et al., 2019). Previously, information on production costs related to the determination of cost of production was carried out first, such as raw material costs, labor costs, factory overhead costs , and non-production costs. After that, an analysis was carried out using a paired t-test to test the hypothesis in this study.

III. RESULTS AND DISCUSSION

Ilham Agroindustry is a medium-scale processing industry that was established in 2004. This agro-industry is located at Lorong Teladan Number 58, RT 31 Payolebar Village, Jelutung District, Jambi City. The owner of Ilham's agroindustry is a housewife named Ibu Olive. This agroindustry is engaged in the business of processed snacks from tempe. The product produced by this agroindustry is in the form of tempe chips. The tempe chips sold by the agroindustry have permits from various agencies such as P-IRT permits, and permits from the Indonesian Ulema Council. The diversification of products produced by the ilham agroindustry is not only in the form of tempe chips, but there are many more types of crackers produced by this ilham agroindustry, including anchovy crackers, peanuts, sago tempe chips, and other types of chips. This tempe chip product from the agro-industry has one flavor variant, namely salty savory with packaging sizes of 150 grams and 300 grams. The price offered from this tempe chip product starts from Rp. 11,000 to Rp. 26,000. Currently, the scope of marketing of Ilham's agro-industrial products has reached the island of Java.

Slawi Ayu Agroindustry is a household-scale tempe chip processing industry that was established in 2017 with the owner of the agroindustry named Dewi Nurmasitoh. This agro-industry is engaged in the processed snack business. The product produced by this agroindustry is in the form of tempe chips. Slawi Ayu Agroindustry is located at Lorong Kenanga, Paal Merah, South Jambi District, Jambi City, 36126. In running the business, Slawi Ayu Agroindustri has a business license from related agencies such as a License from the P-IRT Health Office and a License from the Indonesian Ulema Council. These tempe chips have flavor variants, namely spicy and original. These tempe chips are sold at different prices according to the size of the package. The packaging that is marketed is 100 grams, and 300 grams with prices ranging from Rp. 10,000 to Rp. 24,000. For products measuring 100 grams, this agro-industry sells at a price of Rp. 10,000 and for 300 gram packaging it is sold at a price of Rp. 24,000. The following is a profile of the medium-scale and household-scale tempe chips agroindustry, which can be seen in the table below.

Table 2. Household and Medium Scale Agroindustry Business Profile

Profile	Household Agroindustry	Agroindustry Intermediate
Business name	: Slawi Ayu Tempe Chips	Tempe Chips Ilham
Address	: Lorong Kenanga, Paal Merah, Kecamatan Jambi Selatan, Kota Jambi, 36126	Lorong Teladan Nomor 58, RT 31 Kelurahan Payolebar, Kecamatan Jelutung, Kota Jambi
Owner's name	: Dewi Nurmasitoh	Zaiun
Year	: 2017	2004
Status usaha	: Own	Own
Skala industri	: Household industry	Medium industry
Tenaga kerja	: 3 people	30 people
Processed commodities	: Soybean	Soybean
Supplier	: Supplier tempe	Supplier tempe
Volume of Production	: 30-36 kg	180-200 kg
Production/period	: 21 Production times/ month	26 Production times/month
Product selling price	: Rp 24.000/300 gram	Rp 26.000/300 gram

Source: Primary Data, 2024

Overview of Production in the Agro-Industry of Medium-Scale and Household Scale Chips

In the Ilham agroindustry and also the Slawi Ayu agroindustry, research activities are carried out 26 and 21 times the production process. In every tempe chip production activity carried out, there are physical components that are released to be able to produce tempe chips. The components can be seen in the table below:

Table 3. Overview of Tempe Chip Production in Medium-Scale and Household Agroindustries

Component	Medium-Scale Agroindustry	Household Scale Agroindustry
Tempe/Kg	5.140	736
Tempe Chips /Kg	5.010	610
Packaging 300 gr/pack	16.700	2.036

Source: Primary Data, 2024

Endy Effran et al, Cost of Production: Medium Scale and Household Scale Tempe Chips Agroindustry in City of Jambi-Indonesia

Based on the table above, information was obtained that the medium-scale Agroindustry in producing tempe chips during March 2024 was 5,140 kg of tempe resulting in 5,010 kg of processed tempe chips. If packed in 300 gr packages, for 5,010 kg of tempe chips, it produces 16,700 packs. As for the household-scale agro-industry during the period of March 2024, it is able to spend 736 kg of tempe and produce 610 kg of processed tempe chips, if packed in 300 gr packages, then it is obtained with a total of 2,036 packs.

Analysis of the Calculation of the Cost of Tempe Chips Production in the Medium-Scale Agroindustry

Based on the results of the research carried out, the Tempe Ilham Chips agroindustry carried out production activities 26 times from March 1, 2024 to March 30, 2024. The costs incurred during the tempe chip production process by Ilham industry agorindustri include:

Table 4. Cost of Raw Materials for Tempe Chips in the Medium-Scale Agroindustry for the Period of March 2024

Cost Type	Unit	Average Quantity	Price	Total costs	Cost Percentage
Main Raw Materials					
Tempe	Kg	197,6	10.000	1.976.000	48,83%
Auxiliary Raw Materials					
Cooking oil	Litre	49,6	15.000	744.000	18,37%
Flour	Kg	49,1	13.000	638.300	15,76%
Spice	Kg	6,9	100.000	690.000	17,04%

Source: Primary Data, 2024

It can be seen in the table above, that tempe is the main raw material used to produce tempe chip products. The price of tempe as the main raw material will not increase in March 2024.

Table 5. Overhead Costs in Medium-Scale Agroindustry for the March 2024 Period

Overhead Costs	Unit	Average Quantity	Price (Rp/unit)	Average Cost (Rp)
Overhead Constance				
Depreciation of Goods				15.899
Indirect Labor	Orang	5	120.000	600.000
Transportation				200.000
Overhead Variabel				
Electricity Costs				35.000
Gas PGN				220.000
Packaging Cost	Pcs	642,3	1.300	835.000

Source: Primary Data, 2024

Based on the data obtained by the researcher, it can be known that the cost allocation in the calculation of the cost of production of tempe ilham chips according to the agroindustry, the full costing method, and also the variable costing method can be seen in the following table:

Table 6. Calculation of Cost of Tempe Chips Producers by Agroindustry, Full Costing Method, and Variable Costing Method

Cost Element	Agroindustry Calculation	Full Costing Calculation	Costing Variable Calculation
	Average Cost (Rp)	Average Cost (Rp)	Average Cost (Rp)
Main Raw Materials			
Tempe	1.976.923	1.976.923	1.976.923
Auxiliary Raw Materials			
Flour	638.000	638.000	638.000
Spice	692.308	692.308	692.308
Cooking oil	744.231	744.231	744.231
Overhead constantly			
Depreciation of Goods		15.899	

Endy Effran et al, Cost of Production: Medium Scale and Household Scale Tempe Chips Agroindustry in City of Jambi-Indonesia

Cost Element	Agroindustry Calculation	Full Costing Calculation	Costing Variable Calculation
	Average Cost (Rp)	Average Cost (Rp)	Average Cost (Rp)
Indirect Labor	600.000	600.000	
Transport		200.000	
Overhead Variable			
Electricity	35.000	35.000	35.000
Gas	220.000	220.000	220.000
Packaging	835.000	835.000	835.000
Labor			
Direct Labor	1.500.000	1.500.000	1.500.000
Total Production Cost	7.241.462	7.457.361	6.641.462
Average Amount Production	642,3	642,3	642,3
Cost of Production	11.274	11.610	10.340

Source: Primary Data, 2024

As can be seen in the table above, it is known that the total production cost of tempe chips for the March 2024 period using the full costing method is Rp. 7,457,361 with a cost of production of Rp. 11,610. For the agro-industrial method, the total production cost is Rp. 7,241,462 with the cost of production Rp. 11,274 while for the variable costing method, the total production cost is Rp. 6,641,462 with the cost of production Rp. 10,340. The total cost of production and cost of production according to the full costing method are greater than the total cost of production according to the agroindustry and the variable costing method (Cahyani, 2023). The difference in total cost and cost of production is influenced by the difference in the calculation of costs used in the process of making tempe chips, both using the full costing method, variable costing and even the agro-industry method.

Analysis of the Calculation of the Cost of Tempe Chips Production in the Household Scale Agroindustry

Based on the results of the research carried out, the Slawi Ayu Tempe Chips agroindustry carried out production activities 21 times starting from March 2, 2024 to March 30, 2024. The costs incurred during the tempe chip production process by the Slawi Ayu industry agroindustry include:

Table 7. Cost of Raw Materials for Tempe Chips in the Household-Scale Agroindustry in the Period of March 2024

Cost of Type	Unit	Average Quantity	Price	Total costs	Cost Percentage (%)
Main Raw Materials					
Tempe	Kg	35,1	15.000	526.000	57,4%
Auxiliary Raw Materials					
Cooking oil	Liter	14,8	15.000	222.000	24,25%
Flour	Kg	4,8	14.000	67.200	7,42%
Spice	Kg	1	100.000	100.000	10,92%

Source: Primary Data, 2024

It can be seen in the table above, that tempe is the main raw material used to produce tempe chip products. The price of tempe as the main raw material has not increased from January to March 2024.

Table 8. Overhead Costs in Household-Scale Agroindustry for the Period of March 2024

Biaya Overhead	Unit	Average Quantity	Price (Rp/unit)	Average Cost (Rp)
Overhead Constance				
Depreciation of Goods				6.041,7
Indirect Labor	person	1	50.000	50.000
Transportation				100.000
Overhead Variabel				
Electricity Costs				25.000
LPG Gas	Tube	4,8	35.000	168.333
Packaging Cost	Pcs	96,95	1.800	174.514

Source: Primary Data, 2024

Endy Effran et al, Cost of Production: Medium Scale and Household Scale Tempe Chips Agroindustry in City of Jambi-Indonesia

The calculation of the cost of tempe chips production in the Slawi Ayu agroindustry uses a *full costing* method that prioritizes details and also the details of all costs used in the production process ranging from raw material costs, direct and indirect labor costs, *variable overhead costs* and *overhead costs*. It will still have a great influence on the determination of the cost of production and then this information can later be used in determining the right selling price as well (Fitri et al., 2024). Based on the data obtained by the researcher, it can be known that the cost allocation in the calculation of the cost of production of Slawi Ayu tempe chips according to the agroindustry, *the full costing* method, and also the *variable costing method* can be seen in the following table:

Table 9. Calculation of Cost of Tempe Chips Producers by Agroindustry, Full Costing Method, and Variable Costing Method

Cost Element	Agroindustry Calculation	Full Costing Calculation	Costing Variable Calculation
	Average Cost (Rp)	Average Cost (Rp)	Average Cost (Rp)
Main Raw Materials			
Tempe	525.714	525.714	525.714
Auxiliary Raw Materials			
Flour	67.333	67.333	67.333
Spice	100.000	100.000	100.000
Cooking oil	222.143	222.143	222.143
Overhead Constance			
Depreciation of Goods		6.042	
Indirect Labor	50.000	50.000	
Transport		100.000	
Overhead Variabel			
Electricity	25.000	25.000	25.000
Gas	168.333	168.333	168.333
Packaging	174.514	174.514	174.514
Labor			
Direct Labor	200.000	200.000	200.000
Total Production Cost	1.533.038	1.639.080	1.483.038
Average Amount			
Production	97	97	97
Cost of Production	15.804	16.897,7	15.289

Source: Primary Data, 2024

As can be seen in the table above, it is known that the total cost of production and cost of production according to the full costing method is greater than the total cost of production according to the agroindustry and the variable costing method. The difference in total cost and cost of production is influenced by the difference in the calculation of costs used in the process of making tempe chips, both using the full costing method, variable costing and even the agro-industry method.

Determination of Selling Prices of Tempe Chips in Medium-Scale and Household-Scale Agroindustries

Determining the selling price in a product is very important, because the selling price of a product will later affect the sales volume and will also affect the amount of revenue of a business. The determination of the selling price by the cost plus pricing method adds the expected profit above the overall production cost. Before calculating the selling price of mkaa products, you must first determine the markup percentage based on the ROI or profit desired by the company (Savitri et al., 2021). In this study, the determination of the selling price by this method refers to the cost of production using the full costing method

Table 10. Selling Price of Tempe Jeripik According to the Agroindustry and According to the Cost Plus Pricing Method.

Agroindustry	Selling Price of the Agroindustry (Rp/300 Gr)	Selling Price Cost Plus Pricing Method (Rp/300 Gr)
Ilham	26.000	20.000
Slawi Ayu	24.000	27.500

Source: Primary Data, 2024

Endy Effran et al, Cost of Production: Medium Scale and Household Scale Tempe Chips Agroindustry in City of Jambi-Indonesia

Comparative analysis of cost of production in Medium-Scale Agro-industry and Household-Scale Agro-industry based on independent sample t-test

In this study, a statistical test was also carried out, namely by using an independent sample t-test, where this test was used to find out the difference between two groups of free data. The comparison of cost of production based on the analysis of the independent sample t-test also aims to be able to find out the results of the hypothesis that suspects that there is a difference in the results of the comparison of the cost of production from the difference in industrial scale in the medium-scale and household-scale tempe chips agroindustry in Jambi City. The data tested is data on the cost of tempe chips production calculated using the full costing method and also the costing variable. The following are the results of the t-test using an independent sample t-test of the cost of tempe chips production during the March 2024 period using the full costing method.

Table 11. Comparison of Cost of Tempe Chips Production Using the Full Costing Method in Medium-Scale Agro-Industry and Household-Scale Agro-Industry for the March 2024 Period Using Independent Sample t-test
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
HPP	Equal variances assumed	23,004	,000	-59,318	45	,000	-5712,09890	96,29622	-5906,04944	-5518,14837
	Equal variances not assumed			-53,762	21,713	,000	-5712,09890	106,24804	-5932,61265	-5491,58516

Source: Data processed, 2024

The table above explains the difference in the cost of production based on the independent sample t-test. The output generated from this t-test is intended to see a hypothesis based on the value of the 2-tailed sig. Based on the theory, if the value of the 2-tailed sig ≤ 0.05 , H0 is rejected and H1 is accepted. On the other hand, if the value of the 2-tailed sig ≥ 0.05 , H0 is accepted and H1 is rejected. Based on the results of the t-test above, a 2-tailed sig value of $0.000 \leq 0.05$ was obtained, which means rejecting H0 and accepting H1. So it can be statistically concluded that there is a significant difference in the united cost of production of tempe chips products (300 grams) from the medium-scale agroindustry, namely Ilham, and the household-scale agroindustry, namely Slawi Ayu in Jambi City. The results of the t-test using an independent sample t-test of the cost of tempe chips production during the period of March 2024 using the variable costing method can be seen in the table below.

Table 12. Comparison of Cost of Tempe Chips Production Using the Variable Costing Method in Medium-Scale Agro-Industry and Household-Scale Agro-Industry for the March 2024 Period Using Independent Sample t-test
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
HPP	Equal variances assumed	21,434	,000	-65,270	45	,000	-4743,83516	72,67990	-4890,22000	-4597,45033
	Equal variances not assumed			-59,300	22,112	,000	-4743,83516	79,99733	-4909,69055	-4577,97978

Source: Data processed, 2024

Endy Effran et al, Cost of Production: Medium Scale and Household Scale Tempe Chips Agroindustry in City of Jambi-Indonesia

The table above explains the difference in the cost of production based on the independent sample t-test. The output generated from this t-test is intended to see a hypothesis based on the value of the 2-tailed sig. Based on the theory, if the value of the 2-tailed sig ≤ 0.05 , H0 is rejected and H1 is accepted. On the other hand, if the value of the 2-tailed sig ≥ 0.05 , H0 is accepted and H1 is rejected. Based on the results of the t-test above, a 2-tailed sig value of $0.000 \leq 0.05$ was obtained, which means rejecting H0 and accepting H1. So it can be statistically concluded that there is a significant difference in the cost of production of the united production of tempe chips (300 grams) from the medium-scale agroindustry, namely Ilham, and the household-scale agroindustry, namely Slawi Ayu in Jambi City.

Comparative analysis of selling price determination between agro-industry and cost plus pricing method

After calculating the selling price of tempe chips in the medium-scale agro-industry of Ilham and the household-scale agro-industry of Slawi Ayu using the cost plus pricing method which makes the cost of production as the basis for determining the selling price of the tempe chip product, with the addition of a percentage markup which aims to cover the production costs that have been incurred by each agroindustry. Meanwhile, the selling price of tempe chips products carried out by each agro-industry was previously determined with several considerations such as the selling price set must be able to cover the production costs incurred. Therefore, it is known that there is a difference in the calculation results between the ilham and slawi ayu agroindustries. The differences in the results obtained are as follows.

Table 13. Selling Price of Tempe Chips According to the Agroindustry and According to the Cost Plus Pricing Method

Agroindustry	Agroindustry's selling price (Rp/300gram)	Selling price of the cost plus pricing method (Rp/300gram)	Difference (Rp)
Medium Scale	26.000	20.000	-6.000
Household Scale	24.000	27.500	+3.500

Source: Data processed, 2024

Based on the table above, it is known that the selling price of products set by each agro-industry has a difference with the selling price that has been calculated using the cost plus pricing method. The selling price set by Ilham agroindustry is smaller than the selling price set using the cost plus pricing method, where the difference in selling price is Rp. 6,000. Likewise with the Slawi Ayu Agroindustry, the selling price set by the agroindustry is smaller than the selling price set using the cost plus pricing method, while the difference in the selling price is Rp. 3,500. If the two agroindustries choose to use and set the selling price according to the cost plus pricing calculation method, then the profit is in accordance with what is expected by each agroindustry, 70% of the profits of Ilham Agroindustry and 60% of Slawi Ayu Agroindustry.

Based on the results of the comparison of the two industrial scales in this study, it is also known that the medium-scale agro-industry is able to create a lower cost of production than the household-scale agro-industry. The amount of production volume indirectly affects the cost of production (Effran, 2022). This is because basically, if you buy goods in large quantities from suppliers, you will get a cheaper price, so that the price of obtaining production cost components is more economically efficient. Agro-industry business actors and their workforce should continue to improve their skills and knowledge so that they are able to work more efficiently in producing tempe chip products and provide innovations that can increase the added value of products (Effran & Novita, 2023). The benefits of this effort can also help increase regional income from the processing industry sector and also be able to create jobs and increase community income (Ulma et al., 2023),(Yusuf et al., n.d.).

V. CONCLUSION

Ilham agroindustry is one of the medium-scale agroindustries in Jambi City which has an average tempe production capacity of 197.7Kg/production. Meanwhile, the Slawi Ayu agroindustry is one of the household-scale agroindustries in Jambi City which has an average tempe production capacity of 35.04 Kg/production.

The calculation of the cost of production in March according to the calculation of medium-scale and household-scale agro-industry is Rp. 11,274: Rp. 15,804. The calculation of the cost of production using the full costing method in medium-scale and household-scale agro-industries is Rp. 11,610: Rp. 16,897.7. Meanwhile, the calculation of the cost of production using the Variable Costing method in medium-scale and household-scale agroindustries is Rp. 10,340 : Rp. 15,289. This value is obtained from the total cost of production divided by the number of products produced.

There is a difference in the cost of production of the two types of tempe chips agro-industry scale in Jambi City. Where the medium-scale agro-industry produces a smaller cost of production than the household-scale agro-industry. Based on the results of the data analysis test, it also shows that there is a significant difference in the cost of production.

VI. ACKNOWLEDGMENTS

We appreciate the assistance provided by the Agribusiness Study Program, Faculty of Agriculture, University of Jambi, so that this article can be well prepared.

VII. DISCLOSURE

The writing of this article does not have any element of conflict of interest with any parties

REFERENCES

1. Cahyani, A. S. (2023). Sistem Akuntansi Biaya. *Jurnal Pusdansi*. <http://pusdansi.org/index.php/pusdansi/article/view/99>
2. Cahyaningrum, F. (2023). *ANALISIS KANDUNGAN GIZI DAN UJI ORGANOLEPTIK TEMPE BIJI DURIAN (Durio zibethinus Murr)(sebagai Media pembelajaran berupa Google classroom pada* eprints.untirta.ac.id. <https://eprints.untirta.ac.id/id/eprint/30420>
3. Dinas Perdagangan Dan Perindustrian Kota Jambi. (2022). *Direktori Data Industri Kota Jambi*.
4. Dunia, F., Abdullah, W., & Sasongko, C. (2019). *Pengantar Akuntansi*. 8–9. <https://api.penerbitsalemba.com/book/books/01-0439/contents/4172b307-3005-4765-a883-d78648a829ae.pdf>
5. Effran, E. (2022). Analisis Pendapatan Dan Penerimaan Industri Gula Merah Tebu Di Desa Lindung Jaya Kecamatan Kayu Aro Kabupaten Kerinci. *Jurnal Bisnis Tani*. <http://jurnal.utu.ac.id/jbtani/article/view/4307>
6. Effran, E., & Novita, T. (2023). Determinants That Influence The Income Of Arabica Coffee Farming In Kerinci Regency, Jambi Province. *International Journal of Agriculture* <https://ageconsearch.umn.edu/record/339017/>
7. Fadillah, F., Syarfaini, S., & ... (2014). Identifikasi Kandungan Zat Gizi Pada Jus Tempe dan Modifikasinya Sebagai Alternatif Pemberian Makanan Tambahan (PMT) Pada Balita. *Al-Sihah: The Public* <https://journal3.uin-alauddin.ac.id/index.php/Al-Sihah/article/view/1614>
8. Fitri, S., Widayanti, S., & Atasa, D. (2024). ANALYSIS OF COST OF GOODS PRODUCED AND VALUE-ADDED AT UMKM TEMPE" TROSOBO" TUBAN. *International Journal of Economy* <http://ije3.esc-id.org/index.php/home/article/view/232>
9. Junior, V. J. W. (2022). Soybean production in Paraguay: Agribusiness, economic change and agrarian transformations. *Journal of Agrarian Change*. <https://doi.org/10.1111/joac.12436>
10. Kurniati, I. D., Setiawan, R., Rohmani, A., Lahdji, A., Tajally, A., Ratnaningrum, K., Basuki, R., Reviewer, S., & Wahab, Z. (2015). *Buku Ajar*.
11. Radiati, A., & Sumarto, S. (2015). Analisis sifat fisik, sifat organoleptik, dan kandungan gizi pada produk tempe dari kacang non-kedelai. *Jurnal Aplikasi Teknologi Pangan*. <http://www.jatp.ift.or.id/index.php/jatp/article/view/32>
12. Rahayu, I. (2021). *Analisis kandungan gizi dan uji aktivitas antioksidan pada tempe kedelai dengan variasi penambahan biji klabet (Trigonella Foenum-Graecum l.)*. etheses.uinsgd.ac.id. <https://etheses.uinsgd.ac.id/id/eprint/41070>
13. Savitri, T. I., Haryono, D., & Saleh, Y. (2021). Analisis struktur biaya, keuntungan dan nilai tambah agroindustri tempe di Kelurahan Gunung Sulah sebelum dan sesudah Covid-19. *Open Science and Technology*. <https://www.opscitech.com/journal/article/view/21>
14. Ulma, R. O., Damayanti, Y., & Effran, E. (2023). ASSESSING THE COST STRUCTURE, INCOME, AND EFFICIENCY OF RED CHILI FARMING IN KAYU ARO DISTRICT, KERINCI REGENCY, AND IMPLICATIONS *Jurnal AGRISEP: Kajian* <https://ejournal.unib.ac.id/agrisep/article/view/29238>
15. Yusuf, M., Sayuti, R., Sukmana, F. H., & Muttaqin, M. Z. (n.d.). The Implementation a Cost-Driven Strategy Based on Economic Sociology to Face Competition: A Case in the Tofu Agroindustry Business in Lombok-Indonesia. In *academia.edu*. https://www.academia.edu/download/98944374/The_Implementation_a_Cost-25082022-3.pdf