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Comparative Analysis of Value-Added Analysis at Five Dadiah Agro-industry Centers in West Sumatra Province

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A B S T R A C T

This study aims to compare the value added of buffalo milk processing production into Dadiah at each Dadiah agro-industry center in West Sumatra Province. The research was conducted in five Dadiah agro-industry centers in West Sumatra Province: Agam District, Lima Puluh Kota District, Tanah Datar District, Sijunjung District, and Solok District. The research was conducted in March-July 2022. The research method used is a case study. Respondents in this study were Dadiah entrepreneurs with owner status. The number of respondents in the study was 31 Dadiah business actors, with respondent criteria The value added analyzed is Dadiah business actors who process high buffalo milk raw materials in each district. Data analysis using the Hayami method. The results showed that in the production of buffalo milk processing into Dadiah the value added ratio of Dadiah agro-industry in Sijunjung District was 89.83. higher than the value-added ratio of other dadiah agro-industry in West Sumatra Province. Dadiah processing production in every agro-industry in West Sumatra Province provides a high level of profit found in dadiah agro-industry in Sijunjung District. With a profit rate of IDR 69,948.25/Month, which is higher than other Dadiah agro-industry in West Sumatra Province.

1. INTRODUCTION

1.1. Research Background

Milk is a strategic commodity obtained from animal udder secretions as a source of animal protein to meet the nutritional needs of humans [12]. The level of milk consumption by the Indonesian people in 2020 was 16.27 kg /per capita/year and domestic fresh milk production was 948 thousand tons. As many as 3,392.76 tons of national milk needs are still imported [4]. The low level of milk consumption in Indonesia is due to high milk prices due to imported products, low milk-drinking culture, and intolerance to milk lactose because they are not used to consuming milk from an early age [9]. The development of traditional dairy products has the potential to support the increase in national milk consumption because it has long been known and consumed by the public so that it is easily accepted, and cases of milk intolerance can be avoided [11]. Traditional food processing uses traditional methods to maintain the same texture and taste [14].

Processing of buffalo milk into traditional food in North Sumatra is Dali ni Horbo (Batak cheese) [13], in Enrekang District, South Sulawesi it is Dangke (Sulawesi cheese) [8], in Sumbawa District West Nusa Tenggara province is buffalo milk candy [1], in West Sumatra is Dadiah (yogurt Minang). Dadiah is the most popular food at traditional events such as weddings and the appointment of a Datuk title in West Sumatra [18]. Dadiah agro-industry centers in West Sumatra Province are located in Solok Alahan Panjang (Aia Dingin), Tanah Datar District (Tanjung Bonai), Limapuluh Kota District (Batu Payung Gadut Village), Sijunjung District (Batang Panjang), Bukittinggi, Agam District (Sitingkai) [15]. Agro-industry is the activity of processing agricultural products to produce finished goods or raw materials for industry. Agro-industry is an important driving force

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for the agricultural industry because it can absorb labor, distribute income and improve people's welfare [2].

Processing buffalo milk into curd aims to increase shelf life and can expand marketing coverage to increase the income of the Dadiah agro-industry. Processing of pure buffalo milk by farmers in West Sumatra is a home-based agro-industry that has the potential to be developed, because it creates jobs by empowering the surrounding community and provides additional benefits for business actors with the value-added generated [16]. Several studies on Dadiah that have been carried out are mapping the traditional food Dadiah agro-industry of the Minang Kabau tribe [6], and identification of raw materials, processes, and products from the Dadiah traditional agro-industry [7]. However, there is no research on value-added analysis in any Dadiah agro-industry centers in West Sumatra.

1.2. Research Objective

This study aims to compare the value added at each Dadiah agro-industry center in West Sumatra Province.

2. MATERIALS AND METHODS

The research method used in this research is a case study. the determination of the research location was chosen intentionally or purposively sampling. West Sumatra Province was chosen, considering West Sumatra Province is a Dadiah agro-industry center. Dadiah agro-industry centers in West Sumatra Province are located in five regencies: Agam District, Lima Puluh Kota District, Tanah Datar District, Sijunjung District, and Solok District, West Sumatra Province. The time of study was carried out in March-July 2022. The respondents in this study were Dadiah entrepreneurs with owner status. The number of respondents in the study was 31 curd businessmen. Respondent Criteria The value added analyzed is Dadiah business actors who process high buffalo milk raw materials at each Dadiah agro-industry center in five districts in West Sumatra Province.

The tools used in the study were questionnaires containing a list of questions, stationery, calculators, and Microsoft Excel 2010 software. The research data consisted of primary data and secondary data. Primary data were collected employing observation and direct interviews with respondents consisting of the need for raw materials, labor, other inputs, production results, data on estimated selling prices, and income. Secondary data is supporting data obtained from the literature, journals, and agencies related to research.The data analysis used in this research are:

1. The first step is to calculate the total costs incurred in each Dadiah agro-industry center. By using the following formula:

$$TC = TFC + TVC \quad \text{.....(1)}$$

Where :

TC = Total cost of curd processing business (IDR/Month)
TFC =Fixed costs of curd processing business (IDR/Month)
TVC =Variable cost of curd processing business (IDR/Month)

2. Next, calculate the total revenue generated from the sale of Dadiah products at each agro-industry center using the following formula:

$$TR = Q \times P \quad \text{.....(2)}$$

Where :

T = Total revenue of Dadiah business (IDR/Month)
Q = Number of curd products produced (Unit/Month)
P = Price of Dadiah product (IDR/Unit)

3. After obtaining the total cost and total revenue, then the amount of income generated from the Dadiah business is calculated using the following formula:

$$\Pi = TR - TC \quad \text{.....(3)}$$

Where :

Π = Dadiah operating income (IDR /month)
TR = Total revenue of Dadiah business (IDR/Month)
TC = Total cost of curd processing business (IDR/Month)

4. So from the results of calculations using profit analysis, the comparison of the number of profits obtained at each Dadiah agro-industry center in West Sumatra Province can be seen. Furthermore, the value-added analysis, to determine the value-added ratio in each Dadiah agro-industry center using the Hayami method is presented in Table 1.

Table 1. Calculation of Value Added Based on the Hayami Method

No.	Variable	Unit	Notation
	Output, Input, and Price		
1.	Output	liters /Month	1
2.	Raw material input	liters /Month	2
3.	Labor input	HOK/Month	3
4.	Conversion factor		(1/2)
5.	Coefficient of labor	JKO	(3/2)
6.	Price o output	IDR/ liter	6
7.	Labor wages	IDR/ liter	7
	Revenue and Profit		
8.	Raw material prices	IDR/ liter	8
9.	Other input prices	IDR/ liter	9
10.	Output value	IDR/ liter	(4*6)
11.	a. Value-added	IDR/ liter	(10-8-9)
	b. Value-added ratio	%	(11a/10*100)
12.	a. Labor income	IDR/ liter	(5*7)
	b. Direct labor share	%	(12a/11a*100)
13.	a. Profit	IDR/ liter	(11a-12a)
	b. Profit rate	%	(13a/10*100)
	Remuneration for Factors of Production		
14.	Margin	IDR/ liter	(10-8)
	a. Direct labor income	%	(12a/14*100)
	b. Other input contributions	%	(9/14*100)
	c. Company profit	%	(13a/14*100)

Source : [10]

According to Hubeis (1997) *in* [17], value added can be grouped into three, namely:

a. Low category, if the value added ratio is <15 %
b. Medium category, if the value added ratio is 15-40%
c. High category, if the value added ratio is >40%

3. RESULT AND DISCUSSION

3.1. Raw Material and Production Equipment

The main raw material used in the manufacture of Dadiah in every Dadiah agro-industry center in West Sumatra Province is buffalo milk. For each production process of raw materials (buffalo milk) in Dadiah agro-industry in West Sumatra Province. Raw materials for buffalo milk, the raw materials needed for one week of the Dadiah production process in West Sumatra Province for one month are presented in Table 2.

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Table 2. Dadiah Raw Materials for Each Agroindustry Center in West Sumatra Province

Week	Raw Materials for Each Dadiah Agro-industry Center (liters/Month)				
	Agam District	Lima Puluh Kota District	Tanah Datar District	Sijunjung District	Solok District
I	13.50	14.85	18.90	11.63	17.10
II	13.50	14.85	18.90	11.63	17.10
III	13.50	14.85	18.90	11.63	17.10
IV	13.50	14.85	18.90	11.63	17.10
Total	54	59.40	75.60	46.52	68.40

Source: Primary Data 2022

Based on Table 2 shows the average raw material needed for Dadiah agro-industry in Agam District per month required is 54 liters/month. Dadiah agro-industry in Lima Puluh Kota District per month requires raw materials of 59.40 liters/month. Dadiah agro-industry in Tanah Datar District requires 75.60 of raw materials per month liters/month. Dadiah agro-industry in Sijunjung District requires 46.52 raw materials per month liters/month. Dadiah agro-industry in Solok District requires 68.40 liters per month. This shows that the ratio of raw materials for buffalo milk that is most needed is in the Dadiah agro-industry in Tanah Datar District with the required raw materials of 75.60 liters/month. Each Dadiah agro-industry center requires some of the same equipment as each agro-industry. The equipment needed includes a kettles, bamboo, plastic, rubber bracelet, and a filter.

3.2. Labor

Another important factor of production is labor. The workforce used in the five Dadiah agro-industry centers in West Sumatra Province is a permanent workforce of one person with the same wage. The average hourly wage of the Province. West Sumatra is 16,630/hours of work [5]. The average working hours per day for each Dadiah agro-industry in West Sumatra Province is 5 hours/day with a labor wage of 83,150/HOK for each Dadiah agro-industry in West Sumatra Province.

3.3. Curd Production

Every day Dadiah agro-industry in West Sumatra Province produces Dadiah differently in each Dadiah agro-industry center. The production level of Dadiah agro-industry at each Dadiah agro-industry center in West Sumatra Province is presented in Table 3.

Table 3. Dadiah Production at each Agroindustry Center in West Sumatra Province

Week	Production of each Dadiah Agro-industry Center (liters/Month)				
	Agam District	Lima Puluh Kota District	Tanah Datar District	Sijunjung District	Solok District
I	13.50	14.85	18.90	11.63	17.10
II	13.50	14.85	18.90	11.63	17.10
III	13.50	14.85	18.90	11.63	17.10
IV	13.50	14.85	18.90	11.63	17.10
Total	54	59.40	75.60	46.52	68.40

Source: Primary Data 2022

Based on Table 3 shows the average Dadiah production produced in Dadiah agro-industry in Agam District per month is 54 liters/month. Dadiah agro-industry in Lima Puluh Kota District per month produces 59.40 of production liters/month. Dadiah agro-industry in Tanah Datar Kota District per month produces 75.60 of production liters/month. Dadiah agro-industry in Sijunjung District per month produces 46.52 liters/month. Dadiah agro-industry in Solok District per month produces a production of 68.40 liters/month. This shows that the highest Dadiah production ratio is in the Dadiah agro-industry in Tanah Datar District, producing 7 5.60 liters/month.

3. 4. Cost Analysis

Costs in this study are costs incurred for processing curd or in the production process, which consist of variable costs and fixed costs. More details on variable costs and fixed costs incurred by the Dadiah agro-industry in West Sumatra Province are presented in the Table of Variable Costs presented in Tables 4 and 5.

Table 4 shows the variable production costs at each Dadiah agro-industry center in West Sumatra Province for one month, consisting of the cost of raw materials, bamboo, plastic, rubber bracelet, kettless, plastic filters, and labor costs. The dadiah agro-industry in Agam District incurs a variable cost of IDR 2,844,885.71, the dadiah agroindustry in Lima Puluh Kota District is IDR 2876760.71, dadiah agroindustry in Tanah Datar District is IDR 3,005,310.71,dadiah agroindustry Sijunjung District is IDR 2,689,275.71,and dadiah agroindustry in Solok District is IDR 2,721,360.71. This shows the comparison of the highest production variable costs used by the Dadiah agro-industry in Tanah Datar District.

Table 4. Dadiah Variable Costs at each Agroindustry Center in West Sumatra Province

Variable Cost	Variable Costs for each Dadiah Agro-industry Center				
	Agam District	Lima Puluh Kota District	Tanah Datar District	Sijunjung District	Solok District
Raw Material Cost	648,000	712,800	907,200	558,240	820,800
Bamboo	360,000	330,000	270,000	300,000	90,000
Plastic	29,034	26,614.50	21,775.50	24,195	7,258.50
Rubber bracelet	6,066	5,560.50	4,549.50	5,055	1,516.50
Kettles	15,000	15,000	15,000	15,000	15,000
Plastic Filter	5,000	5,000	5,000	5,000	5,000
Labor costs	1,781,785.71	1,781,785.71	1,781,785.71	1,781,785.71	1,781 ,785.71
Total	2,844,885.71	2,876,760.71	3,005,310.71	2,689,275.71	2,721,360.71

Source: Primary Data 2022

.Based on Table 5 shows the number of fixed costs incurred by each Dadiah agro-industry center in West Sumatra Province for one month amounting to IDR 43,000, consisting of Equipment Depreciation Value (NPA) and PPB (Land and Building Tax).

Table 5. Dadiah Fixed Costs at Each Agroindustry Center in West Sumatra Province

Fixed Cost	Fixed Cost Value (IDR/Month)
Tool Depreciation Value (NPA)	3,000
PBB	40,000
Total	43,000

Source: Primary Data 2022

3.5. Revenue

Revenue is obtained from the calculation of the total amount of production multiplied by the selling price of the Dadiah product. Revenues at each Dadiah agro-industry center in West Sumatra Province are presented in Table 6.

Table 6. Revenue at Each Agro-Industry Center in West Sumatra Province

Agro-industry	Total Production (liters/Month)	Selling Price (liter/Month)	Total Receipt (IDR/Month)
Agam District	54	62,500	3,375,000
Lima Puluh Kota District	59.40	103,800	6,165,720
Tanah Datar District	75.60	50,000	3,780,000
Sijunjung District	46.52	120,500	5,605,660
Solok District	68.40	92,000	6,292,800

Source: Primary Data 2022

Based on Table 6 shows the revenue at each Dadiah agro-industry center in West Sumatra Province for one month. Dadiah agro-industry in Agam District received revenue of IDR 3,375,000,Dadiah agro-industry in Lima Puluh KotaDistrict was IDR IDR 6,165,720,dadiah agro-industry in Tanah Datar District is IDR 3,780,000,dadiah agro-industry in Sijunjung District is IDR 5,605,660,and dadiah agro-industry in Solok District is IDR 6,292,800. This shows that the ratio of the highest total revenue is obtained by the Dadiah agro-industry in Solok District.

3.6.Income

Revenue is obtained from the difference between revenue and total costs for one month of production. Income at each Dadiah agro-industry center in West Sumatra Province is presented in Table 7.

Based on Table 7 shows the income at each Dadiah agro-industry center in West Sumatra Province for one month. Dadiah agro-industry in Agam District earns IDR 487 income. 114.29,dadiah agro-industry in Lima Puluh KotaDistrict is IDR 3,245,959.29,dadiah agro-industry in Tanah Datar District is IDR 731,689.29, Dadiah agro industry in Sijunjung District is IDR 2,873,384.29, and Dadiah agro-industry in Solok District is IDR 3,528, 439.29. This shows that the ratio of total income in each Dadiah agro-industry center in West Sumatra Province is the highest obtained by Dadiah agro-industry in Solok District.

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Table 7. Income at each Agroindustry Center in West Sumatra Province

Agro- industry	Total Receipt (IDR/Month)	Total Cost (IDR/Month)	Total income (IDR/Month)
Agam District	3,375,000	2,87,885.71	487,114.29
Lima Puluh Kota District	6,165,720	2,919,760.71	3,245,959.29
Tanah Datar District	3,780,000	3,048,310.71	731,689.29
Sijunjung District	5,605,660	2,732,275.71	2,873,384.29
Solok District	6,292,800	2,764,360.71	3,528,439.29

Source: Primary Data 2022

Table 8. Analysis of Value added at Each Agroindustry Center in West Sumatra Province

No	Variable	Unit	Notation	Agam District	Lima Puluh Kota District	Tanah Datar District	Sijunjung District	Solok District
Output, Input and Price								
1.	Output	liter/Month		54	59,40	75,60	46.52	68,40
2.	Raw Material Input	liter/Month		54	59.40	75.60	46.52	68.40
3.	Labor Input	HOK/Month		21.43	21.43	21.43	21.43	21.43
4.	Conversion factor		(1/2)	1	1	1	1	1
5.	Labor Coefficient	JKO	(3/2)	0.40	0.36	0.28	0.46	0.31
6.	Output Price	IDR/liter		62,500	103,800	50,000	120,500	92,000
7.	Labor wages	IDR/HOK		83,150	83,150	83,150	83,150	83,150
Revenue and Profit								
8.	Raw material prices	IDR/liter		12,000	12,000	12,000	12,000	12,000
9.	Other input contributions	IDR/liter		256.23	214.46	139.47	250.25	57.88
10.	Output value	IDR/liter	(4*6)	62,500	103,800	50,000	120,500	92,000
11.	a. Value-added	IDR/liter	(10-8-9)	50,243.77	91,585.54	37,860.53	108,249.75	79,942.12
	b. Value added ratio	%	(11a/10*100)	80.39	88.23	75.72	89.83	86.89
12.	a. Labor income	IDR/liter	(5*7)	32,996.03	29,996.39	23,568.59	38,301.50	26,049.50
	b. Direct labor department	%	(12a/11a*100)	65.67	32.75	62.25	35.38	32.59
13.	a. Profit	IDR/liter	(11a-12a)	17,247.73	61,589.14	14,291.93	69,948.25	53,892.62
	b. Profit rate	%	(13a/10*100)	27.60	59.33	28.58	58.05	58.58
Remuneration for Factors of Production								
14.	Margin	IDR/liter	(10-8)	50,500	91,800	38,000	108,500	80,000
	a. Direct labor income	%	(12a/14*100)	65.34	32.68	62.02	35.30	32.56
	b. Other input contributions (%)	%	(9/14*100)	0.51	0.23	0.37	0.23	0.07
	c. Company profit (%)	%	(13a/14*100)	34.15	67.09	37.61	64.47	67.37

Source: Primary Data 2022

3.7. Value-Added Analysis

Value added is the value-added of a commodity because it undergoes processing, transportation, or storage in the production process [19]. The value added from the product perspective is the value given to the product, the further downstream the process is applied, the more value added is generated [3]. The results of the value added analysis at each Dadiah agro-industry center in West Sumatra Province are presented in Table 8.Based on Table 8 shows the output generated from processing buffalo milk into Dadiah at each Dadiah agro-industry center in West Sumatra Province for one month. Dadiah agro-industry in Agam District produces an average output of 54 liters/month with the use of raw material for buffalo milk as much as 54 liters/month. Workers

who play a role in the production process of processing buffalo milk into Dadiah are 1 person with an average of 5 working hours/day. The conversion factor is calculated based on the division between the amount of output produced and the raw materials used, the conversion results obtained are 1. The labor coefficient is obtained from the ratio between the number of workers and the raw materials processed, the labor coefficient is 0.40. The selling price of Dadiah is IDR 62,500/liter. The wages of labor in the production process of processing buffalo milk into Dadiah is IDR 83,150/production. The price of buffalo milk used as raw material is 12,000/liter. With the contribution of other inputs of IDR 256.23/liter. The output value is the product of the conversion factor with the output price, so the output value obtained is IDR 62,500/liter. The value added is obtained from the reduction of the sales value with the total cost incurred, it can be seen that the value added of Dadiah in Dadiah agro-industry in Agam District is IDR 50,243.77/liter. The value-added ratio is obtained from the division between the value added and the output value expressed in percent yield (%) which is 80.39%, meaning that one liter of Dadiah produces 80.39%, with a high value added category. Labor income is IDR 32,996.03, which is obtained by workers for each processing of one liter of raw materials with the share of labor obtained by 65.67%. Profit is the difference between value added and labor income, business actors in the Dadiah agro-industry in Agam District get a profit of IDR 17,247.73/liter, with a profit rate of 27.60 %. Processing buffalo milk into Dadiah produces a margin of IDR 50,500/liter. Labor income obtained from processing buffalo milk into Dadiah is 65.34%. The processing of buffalo milk into Dadiah requires another input contribution of 0.51%. Processing of buffalo milk into Dadiah produces agro-industry profits. The profit is obtained from the results of the comparison of profits divided by a margin and then multiplied by 100%, so the profit obtained is 34.15%.

Based on Table 8 shows the output produced from processing buffalo milk into Dadiah in Lima Puluh Kota District produces an average output of 59.40 liters/month with the use of buffalo milk as raw materials as much as 59.40 liters/month. Workers who play a role in the production process of processing buffalo milk into Dadiah are 1 person with an average of 5 working hours/day. The conversion factor is calculated based on the division between the amount of output produced and the raw materials used, the conversion results obtained are 1. The labor coefficient is obtained from the ratio between the number of workers and the raw materials processed, the labor coefficient is 0.36. The selling price of Dadiah is IDR 103,800/liter. The wages of labor in the production process of processing buffalo milk into Dadiah is IDR 83,150/production. The price of buffalo milk used as raw material is 12,000/liter. With the contribution of other inputs of IDR 214.46/liter. The output value is the product of the conversion factor with the output price, so the output value obtained is IDR 103,800/liter. The value added is obtained from the reduction in the value of sales with the total cost incurred, it can be seen that the value added of Dadiah in the Dadiah agro-industry in the District of Lima Puluh Kotais IDR 91,585.54/liter. The value added ratio is obtained from the division between the value added and the output value expressed as a percentage (%) of 88.23%, meaning that one liter of Dadiah produces 88.23%, with a high value added category. Labor income is IDR 29,996.39, which workers obtain for each processing of one liter of raw materials with the share of labor obtained by 32.75%. Profit is the difference between value added and labor income, business actors in the dadiah agro-industry in Lima Puluh Kota District earn a profit of IDR 61,589.14/liter, with a profit rate of 59.33%. Processing buffalo milk into dadiah produces a margin of IDR 91,800/liter. Labor income obtained from processing buffalo milk into dadiah is 32.68%. The processing of buffalo milk into dadiah requires another input contribution of 0.23%. Processing buffalo milk into dadiah produces agro-industry profits. The profit is obtained from the comparison of the profits divided by the margin and then multiplied by 100%, the profit obtained is 67.09%.

Based on Table 8 shows the output resulting from processing buffalo milk into dadiah in Tanah Datar District produces an average output of 75.60 liters/month with the use of raw materials for buffalo milk as much as 75.60 liters/month. Workers who play a role in the production process of processing buffalo milk into dadiah are 1 person with an average of 5 working hours/day. The conversion factor is calculated based on the division between the amount of output produced and the raw materials used, the conversion results obtained are 1. The labor coefficient is obtained from the ratio between the number of workers and the raw materials processed, the labor coefficient is 0.28. The selling price of dadiah is IDR 50,000/liter. The wages of labor in the production process of processing buffalo milk into dadiah is IDR 83,150/production. The price of buffalo milk used as raw material is 12,000/liter. With the contribution of other inputs of IDR 139.47/liter. The output value is the product of the conversion factor with the output price, so the output value obtained is IDR 50,000/liter. The value added is obtained from the reduction in the value of sales with the total cost incurred, it can be seen that the value added of dadiah in dadiah agro-industry in Tanah Datar District is IDR 37,860.53/liter. The value added ratio is obtained from the division between the value added and the output value expressed as a percentage (%) which is 75.72%, meaning that one liter of dadiah it produces 75.72%, with a high value added category. Labor income is IDR 23,568.59, which is obtained by workers for each processing of one liter of raw materials with the share of labor obtained by 62.25%. Profit is the difference between value added and labor income, business actors in the dadiah agro-industry in Tanah Datar District get a profit of IDR 14,291.93/liter, with a profit rate of 28.58%. Processing buffalo milk into dadiah generates a margin of IDR 38,000/liter. Labor income obtained from processing buffalo milk into dadiah is 62.02%. The processing of buffalo milk into dadiah requires another input contribution of 0.37%. Processing buffalo milk into dadiah produces agro-industry profits. The profit is obtained from the comparison of profits divided by the margin and then multiplied by 100%, so the profit obtained is 37.61%.

Based on Table 8 shows the output generated from processing buffalo milk into dadiah in Sijunjung District produces an average output of 46.52 liters/month with the use of buffalo milk as much as 46.52 liters/month. Workers who play a role in the production process of processing buffalo milk into dadiah are 1 person with an average of 5 working hours/day. The conversion factor is calculated based on the division between the amount of output produced and the raw materials used, the conversion results obtained are 1. The labor coefficient is obtained from the ratio between the number of workers and the raw materials processed, the labor coefficient is 0.46. The selling price of dadiah is IDR 120,500/liter. The wages of labor in the production process of processing buffalo milk into dadiah is IDR 83,150/production. The price of buffalo milk used as raw material is 12,000/liter. With the contribution of other inputs of IDR 250.25/liter. The

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output value is the product of the conversion factor with the output price, so the output value obtained is IDR 120,500/liter. The value added is obtained from the reduction in the value of sales with the total cost incurred, it can be seen that the value added of dadiah in dadiah agro-industry in Sijunjung District is IDR 108,249.75/liter. The value-added ratio is obtained from the division between the value added and the output value expressed as a percentage (%) which is 89.83%, meaning that one liter of dadiah produces 89.83%, with a high value added category. Labor income is IDR 38,301.50, which is obtained by workers for each processing of one liter of raw materials with the share of labor obtained by 35.38%. Profit is the difference between value added and labor income, business actors in the dadiah agro-industry in Sijunjung District get a profit of IDR 69,948.25/liter, with a profit rate of 58.05%. Processing buffalo milk into dadiah produces a margin of IDR 108,500/liter. Labor income obtained from processing buffalo milk into dadiah is 35.30%. The processing of buffalo milk into dadiah requires another input contribution of 0.23%. Processing buffalo milk into dadiah produces agro-industry profits. The profit is obtained from the comparison of profits divided by the margin and then multiplied by 100%, so the profit obtained is 64.47%.

Based on Table 8 shows the output produced from processing buffalo milk into dadiah in Solok District produces an average output of 68.40 liters/month with the use of buffalo milk as raw materials as much as 68.40 liters/month. Workers who play a role in the production process of processing buffalo milk into dadiah are 1 person with an average of 5 working hours/day. The conversion factor is calculated based on the division between the amount of output produced and the raw materials used, the conversion results obtained are 1. The labor coefficient is obtained from the ratio between the number of workers and the raw materials processed, the labor coefficient is 0.31. The selling price of dadiah is IDR 92,000/liter. The wages of labor in the production process of processing buffalo milk into dadiah is IDR83,150/production. The price of buffalo milk used as raw material is 12,000/liter. With the contribution of other inputs of IDR 57.88/liter. The output value is the product of the conversion factor with the output price, so the output value obtained is IDR 92,000/liter. The value added is obtained from the reduction in the value of sales with the total cost incurred, it can be seen that the value added of dadiah in dadiah agro-industry in Solok District is IDR 79,942.12/liter. The value-added ratio is obtained from the division between the value added and the output value expressed as a percentage (%) which is 86.89%, meaning that one liter of dadiah produces 86.89%, with a high value added category. Labor income is IDR 26,049.50, which is obtained by workers for each processing of one liter of raw materials with the share of labor obtained by 32.59%. Profit is the difference between value added and labor income, business actors in the dadiah agro-industry in Solok District get a profit of IDR 53,892.62/liter, with a profit rate of 58.58%. Processing buffalo milk into dadiah produces a margin of IDR 80,000/liter. Labor income obtained from processing buffalo milk into dadiah is 32.56%. The processing of buffalo milk into dadiah requires another input contribution of 0.07%. Processing buffalo milk into dadiah produces agro-industry profits. The profit is obtained from the comparison of profits divided by a margin and then multiplied by 100%, so the profit obtained is 67.37%.

A Comparison of value added at dadiah agro-industry centers in West Sumatra Province for one month is presented in Table 9.

Table 9. Comparison of Value Added to Every Agroindustry Center in West Sumatra Province

Variable	Unit	Agam District	Lima Puluh Kota District	Tanah Datar District	Sijunjung District	Solok District
Value-added	IDR/liter	50,243.77	91,585.54	37,860.53	108,249.75	79,942.12
Value added ratio	%	80.39	88.23	75.72	89.83	86.89
Labor income	IDR/liter	32,996.03	29,996.39	23,568.59	38,301.50	26,049.50
Profit	IDR/liter	17,247.73	61,589.14	14,291.93	69,948.25	53,892.62

Source: Primary Data 2022

Based on Table 9 shows the comparison of value added in each Dadiah agro-industry in West Sumatra Province for one month. The value added of Dadiah agro-industry in Sijunjung District is higher than the value added of another agro-industry in West Sumatra Province. The comparison of the value added of Dadiah agro-industry in Sijunjung District with Dadiah agro-industry in Lima Puluh Kota District is IDR 16,664.21, the comparison of value added with dadiah agro-industry in Solok District is IDR 28,307,63, the comparison of value added with dadiah agro-industry in Agam District is IDR 58,0005, 98, and the comparison of value added with dadiah agro-industry in Tanah Datar District is IDR 70,389. The level of value added is seen from the size of the percentage of the value added ratio produced. Processing of buffalo milk into dadiah in dadiah agro-industry in West Sumatra Province, on average, all provide the value added ratio with a high category. This is in line with the value-added ratio with a percentage > 40% categorized as high value added (Hubei 1997 *in* [15]). The ratio of the value added of dadiah agro-industry in Sijunjung District is higher than the ratio of the value added of another agro-industry in West Sumatra Province. This shows that the comparison of value added in each dadiah agro-industry center in West Sumatra Province is found in dadiah agro-industry in Sijunjung District.

Based on Table 9 the income received by workers in the production process of processing buffalo milk into dadiah in West Sumatra Province is influenced by production capacity consisting of raw materials and the amount of production per month and wages per liter of products produced. The comparison of production capacity produced in dadiah agro-industry in Solok District is higher than another dadiah agro-industry in West Sumatra Province. The capacity of dadiah agro-industry in Solok District is 68.40 liters/month, so the labor income in dadiah agro-industry in Solok District is higher than other dadiah agro-industry in West Sumatra Province. A comparison of each dadiah agro-industry center in West Sumatra Province for one month shows the profit of dadiah agro-industry in Sijunjung District is higher than other dadiah agro-industry. With a profit rate of IDR69,948.25/Month compared to dadiah agro-industry in Lima

Puluh Kota District with a difference of IDR 8,359.11, compared to dadiah in Solok District with a difference of IDR 16,055.63, compared to dadiah agro-industry in Agam District with a difference of IDR 52,700.52, and compared to Tanah Datar District with a difference of IDR 55,656.32.

This is because the value added generated in dadiah agro-industry in Sijunjung District is greater than another agro-industry in West Sumatra Province. In addition, the labor income received by workers in the dadiah agro-industry in Sijunjung District is large compared to other agro-industry in West Sumatra Province, so the value added of dadiah agro-industry in Sijunjung District is greater than other agro-industries in West Sumatra Province. So the profit of dadiah agro-industry in Sijunjung District is higher than another dadiah agro-industry in West Sumatra Province. This is in line with the amount of profit that is influenced by the value added generated and the benefits received by the workforce. The higher the value added, the greater the profit obtained, and vice versa, the smaller the value added, the smaller the profit obtained [20].

4. CONCLUSION

Based on the research that has been done, the following conclusions are obtained: (1) Production Processing buffalo milk into Dadiah at each Dadiah agro-industry center provides a high value added ratio. The value added ratio in Dadiah agro-industry in Sijunjung District is 89.83, higher than the value added ratio in another Dadiah agro-industry in West Sumatra Province; (2) 2. Dadiah processing production in every agro-industry in West Sumatra Province provides a high level of profit found in Dadiah agro-industry in Sijunjung District. The profit rate of IDR 69,948.25/Month is higher than another dadiah agro-industry in West Sumatra Province.

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