

Feasibility Analysis of Processing of Cow Skin Crackers Stick at Small Scale Home Industry, Mataram, NTB, Indonesia

E. Basuki*, V C.B. Harto, R. Widyasari

*Faculty of Food Technology and Agroindustry, University of Mataram, Indonesia 83125
Corresponding Author**

Abstract: General activities carried out by UD. IJOE Mataram, NTB, Indonesia is processing cow skin into cow cracker products. The processing stages are carried out starting from the preparation, slicing, drying, sizing, frying, and packaging process. Processing activities is still simple and almost uses human labor. The feasibility analysis is calculated from equipment depreciation costs, building costs and maintenance costs, variable costs consisting of raw material costs, packaging costs, fuel costs, labor costs, etc. Analysis of the benefits of the cracker skin industry is on the total revenue and the total cost. The business feasibility analysis consists of Revenue / Cost (R / C) Benefit / Cost (B / C) ratio, Return on Investment (ROI). Based on the results of the feasibility analysis, the values obtained were respectively Rp. 1.26 <1, Rp. 26, 26% This figure has been calculated in two times the order process and has a value with and becomes a viable home industry when calculated by business feasibility analysis.

Key words: BC Ratio, cowskin cracker, feasibility analysis

I. INTRODUCTION

Agro-industry is a business to increase sector efficiency Agriculture to grow to be a very productive activity through the process of agricultural modernization. Modernization in the industrial sector on a national scale can increase the value added revenue so that export revenues will be greater [5]. Basically, the agro-industry business is faced with tighter competition so that it must be able to produce products or services that are highly competitive in the business to come first market share, while avoiding the market. [4]. One small business that has very potential prospects for developed in NTB is a business of making cowhide crackers. Based on the results of basic research, the economic potential of small businesses is very dependent on the value of business development being carried out. Most of the small businesses in the home industry sector especially cracker businesses, are rapidly increasing. Although the amount of investment in the home industry is relatively small, it absorbs quite a lot of labor and increases people's income. Based on the capabilities of this home industry, it is necessary to extend the home industry. The cracker business is a snack that made from animal skin, which has been traditionally processed for immediate consumption. The process of frying these crackers is done by cleaning the cow skin, boiling,

slicing and seasoning, drying in the sun, then frying into crackers, a process that is done like frying chips in general. Every business needs an understanding of whether or not it is worth the effort to build. In this research, a business feasibility study is a method or method consisting of various aspects of assessment to determine whether a business to be carried out is feasible or not. So it can be said that it is also a very powerful forecasting tool to find out the possibilities that will occur, and to immediately make decisions on the results obtained, namely to accept or reject the effort.

UD. IJOE is one of the home industries in NTB that makes snack creations using cowhide. UD. IJOE was founded in 1990, each year the company is growing both in terms of production and export coverage. Initially, sales were made around the city of Mataram by selling from house to house, but gradually already has its own customers and finally have reached various places in NTB and even to Java . The brand product that is produced is "DJEMPOL" Stick Skin Crackers, which is processed independently, namely by one's own family or assisted by neighbors. The raw materials used are obtained from slaughterhouses, because cowhide processing is only limited to making crackers. It is not uncommon for raw materials to be purchased directly in the form of dry skin from Java, this can make it easier because dry skin can be fried directly. This is an important factor that greatly influences the trust and satisfaction of consumers, because the trust and satisfaction of these consumers will determine the success and progress of a home industry. The aim of this article is give the impression the feasibility analysis on the production of cowhide crackers at UD. IJOE., small scale home industry, Mataram, NTB.

II. PROCESS PRODUCTION

In the processing process, the cow hides are boiled at a high temperature which is intended to give effect to the texture and to eradicate the microorganisms in the raw material in order to produce a quality final product. Apart from the boiling process, adding salt and frying the raw materials can also extend the shelf life [3]. The end product of quality cowhide cracker has a crunchy texture, bright brown color, has a distinctive taste and aroma of cowhide. After the final stage of product processing, namely frying, the product is immediately

packed with plastic to maintain the quality of the product. According to Susanto [6] and Suseno [7], quality is very important in human life, because quality is related to something that can provide satisfaction to human users of these products. Quality control is an activity or program that is undividable from all industrial production processes and commodity marketing, including agricultural commodities. Industry always requires quality control of the products it produces [1,2].

III. FEASIBILITY ANALYSIS

a. Analysis of Fixed Cost Cattle Skin Crackers Industry UD. IJOE

Fixed costs are costs incurred by leather cracker industry. whose use does not end in one production period. The size of the production cost is not influenced by the amount of production produced by UD. IJOE. In the skin cracker industry, which includes fixed costs, is the cost of depreciation of equipment, building costs and maintenance costs [8,12].

It can be seen that the use of fixed costs that must be incurred by the leather cracker industry. in the form of depreciation of Rp. 1,584,651 per month. The depreciation value is obtained from the number of units multiplied by the price divided by the economic life, to get per month divided by 12 months. As for the total fixed costs of the UD IJOE skin cracker industry. can be seen in table 2 below.

Tabel 1. Depreciation Cost of Equipment at UD. IJOE

No	Cost Equipment	Cost Amount (Unit)	Economic Age (Month)	Price (Rp/unit)	Total (Rp)	Depreciation Cost (Rp/month)
1	Building	1	240	100,000,000	100,000,000	416.667
2	Wok	3	60	2,000,000	6,000,000	100.000
3	Bucket	10	36	35,000	350,000	9.722
4	Blades	6	120	25,000	150,000	1.250
5	Scales	1	120	1,070,000	1,070,000	8.917
6	Cutting Machines	12	180	12,000,000	144,000,000	800.000
7	Furnace	4	36	1,000,000	4,000,000	111.111
8	Table	1	180	350,000	350,000	1.944
9	Baskets	4	36	62,500	250,000	6.944
10	Stirrer	2	36	25,000	50,000	1.389
11	Brush	1	24	20,000	20,000	833
12	Choping Board	2	36	50,000	100,000	2.778
13	Oven	1	180	8,000,000	8,000,000	44.444

14	Big Drum	15	96	150,000	2,250,000	23.438
15	Small Drum	13	96	100,000	1,300,000	13.547
16	Printer	1	24	1,000,000	1,000,000	41,667
				Total	268,890,000	1,584,651

Table 2. Total Fixed Cost of UD. IJOE

No	Description	Total Cost (Rp/ 2 times the order)
1	Equipment depreciation costs	1,584,651
2	Machine Maintenance Costs	250,000
	Total	1,834,651

Based on table 2 above, the total fixed cost is IDR 1,834,651 / 2 orders within 4 days. Another cost component included in fixed costs is non-production costs, namely maintenance costs. Maintenance costs are costs incurred only for maintenance of the machine. The maintenance cost for the machine is carried out once a month, which is IDR 250,000 / month.

b. Analysis of Variable Cost of Leather Crackers Industry UD. IJOE

Variable costs are costs whose amount depends on the amount of production. Variable costs in the UD skin cracker industry. IJOE includes raw material costs, packaging costs, fuel costs, labor costs, and other costs.

Table 3: Raw Material Cost for Craker of UD. IJOE

No	Description	Total Production (Days)	Price (Rp/units)	Total (Rp/ 2 times the order)
1	Wet Skin	200 kg	25,000	5,000,000
2	Dried Skin	2500 kg	65,000	16,250,000
3	Cooking Oil	51 liter	13,000	66,000
4	Garlic	60 kg	15,000	900,000
5	Salt	8 kg	10,000	80,000
6	Flavors	2 kg	35,000	70,000
	Total		163,000	169,213,000

Raw material costs represent costs used to purchase raw materials for the manufacture of skin crackers. The type of raw material used in the UD skin cracker industry. IJOE is divided into 2, namely main raw materials and supporting raw materials. The main raw material for making skin crackers is wet skin and dry skin, where the animal skin used is cow, both male and female. Meanwhile, the supporting raw materials are salt, cooking oil, garlic, salt, and flavorings.

Based on table 3 shows that the total cost of raw materials is Rp. 169,213,000 / 4 days, including the price of wet skin Rp. 5,000,000 / 4 days, dry skin Rp. 16,250,000 / 4 days, cooking oil Rp. 663,000 / 4 days, garlic Rp. 900,000 / 4 days, salt Rp. 80,000 / 4 days, and flavoring IDR 70,000 / 4 days.

Table 4. Packaging costs for UD. IJOE Skin Cracker Industry

No	Description	Sum (Rp/ 2 times the order)
1	Plastic packaging	168,000
2	Labelling	75,000
3	Rafia Rope	5,000
Total		248,000

Based on the table above, it shows that the packaging cost for plastic packaging is IDR 168,000 / 2 orders within 4 days. The cost of label paper for packaging is IDR 75,000 / 2 orders within 4 days, the cost of the raffia rope used to tie the packaging is IDR 5,000 / 2 orders within 4 days, and the total cost of packaging that must be incurred by the leather cracker industry UD. IJOE of IDR 248,000 / 2 orders within 4 days.

Table 5: Fuel Cost at UD. IJOE Cracker Industry

No	Description	Sum (Rp/ 2 times the order)
1	Wood	500,000
2	Natural Gas (10 gallon, @3kg)	200,000
Total		700,000

Fuel costs consist of wood fuel and natural gas. Wood fuel is used as fuel for the frying process for skin crackers while gas fuel is used for the boiling process of the skin before cutting it to remove. The amount of wood used in the production process is one pick up for 2 orders at a cost of IDR 500,000 / pick up, the amount of gas used in the production process is 10 tubes with a weight of 5 kg as many as 10 tubes for 1 month at a cost of IDR 200,000 / 2 orders within 4 days. The total cost of fuel that must be paid by UD. IJOE of IDR 700,000 / 2 orders within 4 days.

Table 6: Labor Costs in UD Skin Crackers Industry. IJOE

No	Cost Description	Amount	Wages(day)	Amount (Rp/ 2 times order)
1	Skinning	1	225,000	225,000
2	Cutting	2	225,000	450,000
3	Frying	14	225,000	3,150,000
4	Packaging	3	225,000	675,000
5	Machinery	1	500,000	500,000
Total		21	1,400,000	5,000,000

As for the use of labor in the UD skin cracker industry. IJOE 21 people consisting of workers in peeling, cutting, frying, and packaging and mechanical engineering. There are 21 workers in the industry who use a daily wage system, each worker gets a wage of 225,000 / day for workers in the crushing, cutting, frying and packaging sections, while for technician workers, they get a wage of IDR 500,000 / day. The total labor cost is IDR 1,400,000 / day and IDR 5,000,000 / 2 orders within 4 days.

Another cost component that must be incurred by the UD leather cracker industry. IJOE is the cost of electricity and cost of water. The amount of costs for the use of electricity and water that the skin cracker industry has to pay UD. IJOE per month is IDR 50,000 / month. The use of electricity comes from subsidies, therefore the costs incurred by UD. IJOE is minimal.

Table 7. Total Variable Cost of UD. IJOE

No	Description	Total Cost (Rp 1,000 / 2 times order)
1	Raw Material cost	169,213.
2	Packaging Cost	248.
3	~ The Cost of Wood fuel ~ Gas fuel cost	500. 200.
4	Labor Cost	500.
5	~Electricity and water costr	50.
Total		175,211.

Table 7 shows that the total variable costs incurred by the UD leather cracker industry. The IJOE for every 2 orders within 4 days is IDR 175,211,000 with the largest variable that must be spent is for the cost of raw materials, which is IDR. 169,213,000 / 2 orders within 4 days and the smallest variable cost is for electricity costs, which is Rp. 50,000 / month.

Table 8. Total Production Cost at UD. IJOE

No	Description	Amount (Rp/ 2 times the order)
1	Total Fixed Cost	1,834,651
2	Total Variable Cost	175,211,000
Total		177,045,651

Based on table 8 shows that the total fixed costs that must be incurred by UD. IJOE is IDR 1,834,651 / 2 orders within 4 days, while the total variable cost is IDR 175,211,000 / 2 orders within 4 days. As for the total costs incurred by UD's leather cracker industry. IJOE is IDR 177,045,651 / 2 orders within 4 days.

c. Analysis of the Benefits of the UD Skin Crackers Industry. IJOE

Profits are business activities that reduce some of the costs incurred by the sales results obtained. M. Nafarin (2007) in

Sajari et al [4, 8,9,10] states that profit is the difference between income and a balance of costs and expenses for a certain period. The average profit in the skin cracker production business can be seen in the following calculations and table:

$$\text{Total Receipts (TR)} = P \times Q = 280,000 \times 800 \text{ pcs} = 224,000,000$$

$$\text{Total Cost (TC)} = \text{FC} + \text{VC} = 1,834,651 + 175,211,000 = 177,045,651$$

$$\text{Profit } (\pi) = \text{TR} - \text{TC} = 224,000,000 - 177,045,651 = 46,954,349$$

Table 9: Profits of the Skin Crackers Industry

No	Description	Amount (Rp/ 2 times order)
1	Total Receipts (TR)	224,000,000
2	Total Cost (TC)	177,045,651
	Profit	46,954,349

d. Analysis of the Feasibility of the Skin Crackers Industry UD. IJOE

1. Revenue/ Cost (R/C)

Analysis of the Feasibility of the Skin Crackers Industry UD. IJOE

Revenue / Cost (R / C)

Revenue cost is a value that shows the ratio between business revenue and total costs. The calculation of revenue / cost analysis can be seen as follows:

$$R / C = \text{"Total Revenue"} / \text{"Total Cost"} = \text{"224,000,000"} / \text{"177,954,349"} = 1.26$$

Based on the comparison of total revenues and total costs, it shows that the calculation of the R / C ratio in the UD leather cracker industry. IJOE is profitable because the R / C ratio is Rp. 1.26 > 1. This means that each expenditure is Rp. 100, -, giving receipts of Rp. 126 then the UD skin cracker industry. IJOE is worth the effort.

2. Benefit/Cost (B/C) Ratio

Benefit / Cost (B / C) ratio is a business analysis to provide an idea of why you should choose or not choose the specifications of an investment [4,11.13]. In terms of the amount of the B / C Ratio value, it can be seen whether a business is profitable or not.

$$B / C = \text{"Total Profit"} / \text{"Total Cost"} = \text{"46,954,349"} / \text{"177,954,349"} = 0.26$$

This means that each production cost incurred is Rp. 100, -, you will get a profit of Rp. 26, indicating that the leather cracker industry of UD. IJOE can be said to be worthy (fortunate) to be cultivated. This can be seen from the

comparison of total revenues with total production costs that are greater than zero.

3. Return On Investment (ROI)

Return On Investment (ROI) is a form of profitability ratio which is intended to measure the company's ability with the overall funds invested in assets used for the company's operations to generate profits.

$$\text{ROI} = \text{"Profit"} / \text{"Total Cost"} \times 100\% = \text{"46,954,349"} / \text{"177,954,349"} \times 100\% = 26\%$$

Based on the comparison of profit and production capital, the ROI value is 26%, which means that the amount of profit obtained compared to investment (ROI), the amount of profit obtained compared to the investment invested is good, meaning that for each capital of Rp. 100, a profit of Rp. 26.

IV. CONCLUSION

Based on the results of the implementation of PKL activities at UD. IJOE, can be concluded as follows: UD. IJOE is a Kerupuk Kulit UMKM located in Mataram City, West Nusa Tenggara Province, where this processing is still carried out in a simple way and the workers are neighbors. The analysis of the benefits of the skin cracker industry is in the total revenue and total costs, where the business feasibility analysis consists of Revenue /Cost (R/C) Benefit / Cost (B / C) ratio, Return On Investment (ROI). Based on the results of the feasibility analysis, the values obtained were respectively Rp. 1.26 < 1, Rp. 26, 26%. With this number, the calculation has been carried out twice in the order process and has a value with and becomes a viable UMKM when calculated by a business feasibility analysis.

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