

FEASIBILITY STUDY OF BUSINESS DEVELOPMENT OF BEEF CATTLE BREEDING IN UD. PAKINDO

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ABSTRACT

UD. Pakindo is a company who move in Agribusiness especially beef cattle. Pakindo was established in 2014 and started producing complete feed for a cow, align with the expansion plans Pakindo have intended to built a new unit business in beef cattle breeding and needed a feasibility study. A feasibility study is a study to analyze wheter the new unit business will be profitable or not. This research aims to determine the feasibility of investment in the establishment of new unit business “breeding” based on business environment, industrial structure, SWOT analysis, market and marketing aspect, legal aspect, technical or operation aspect, management aspect, and also financial aspect with the calculation of the feasibility of investment such as Payback Period (PP), Net Present Value (NPV), and Internal Rate of Return (IRR).

This research was conducted in June – October 2017 using data collection techniques such as observation, interviews and documentation. The result of this research showed that based on all aspect had been used is proper to do, in addition from financial analysis showed that payback period (PP) of that business is 4 years and 4 months, the Net Present Value (NPV) is 405.377.717 rupiah and the Internal Rate of Return is 21,92 %.

Keywords: Feasibility Study, Aspects on feasibility study, beef cattle

INTRODUCTION

National need for beef is increasing every year has not been matched by supply of beef by local ranchers. According to Maryono et al. (2006) in Suryana (2009: 30) there are some problems in the development of beef cattle business in Indonesia, example: 1) the business of beef cattle breeding less enthused by the entrepreneurs because it requires a long maintenance time and large capital, 2) lack of qualified cows for breeding and breeders, 3) forage such as grass, corn straw, etc. for animal feed is difficult to obtain during dry season 4) still not optimal utilization of agricultural waste such as rice straw, corn straw, and others as raw material of concentrate feed.

Lack of public interest in this beef cattle breeding business is causing the lack of beef supply so it has not been able to meet the needs of national beef. The high price of beef that occurs today due to the unbalanced between the amount of production and the high demand of the community to beef. Information on the development of beef cattle population in Indonesia within the last 10 years based on data from the Directorate General of Animal Husbandry and Animal Health can be seen in Table 1:

Table 1. population growth, production and consumption of beef cattle in 2005 - 2016

	Population	Production	Beef Production	Production Growth	Beef Consumption	Consumption Growth
	(000 Ton)	(000 Ton)	(000 Ton)	(%)	(Ton)	(%)

	(m i l l i o n)					
	1 0 , 8 8	2,8 9	395 ,84	10, 35	24 6.4 77	11,33
	1 1 , 5 1	5,8 8	339 ,48	- 14, 24	22 9.4 03	-6,93
	1 2 , 2 6	6,4 4	392 ,51	15, 62	26 6.5 02	16,17
	1 2 , 7 6	4,1 1	409 ,31	4,2 8	29 7.5 16	11,64
	1 3 , 5 8	6,4 4	436 ,45	6,6 3	33 1.5 41	11,44
	1 4 , 8 2	9,1 5	485 ,33	11, 20	33 8.7 87	2,19
	1 5 , 9 8	7,8 0	508 ,91	4,8 6	32 1.5 07	-5,10
	1 2 , 6 9	- 20, 62	504 ,82	- 0,8 0	40 3.0 85	25,37
	1 4 , 7	16, 09	497 ,67	- 1,4 2	42 6.1 59	32,55

	3					
	1	4,7	506	1,8	-	-
	5	0	,66	1		
	,4					
	2					
	1	4,3	524	3,4		
	6	6	,11	4		
	,0					
	9					

Based on data from Table 1.1, it can be seen that the growth rate of beef cattle population in Indonesia during 2012-2016 is only 1.13%. In 2012-2014 beef production has decreased from 509 thousand tons to 498 thousand tons, due to the decrease of people's purchasing power due to the high price of beef which reached Rp 99,332 / kg from the previous Rp 69.641 / kg in 2011. Since per 31 August 2016 beef production increased by 0.034% equal to 524,11 thousand tons, where the price of beef according to the Livestock Service Office of East Java continued to increase to Rp 105,500 / kg per May 4, 2017 (Secretary General of the Ministry of Agriculture, 2016).

In an effort to support the government program in terms of beef self-sufficiency, the writer and some colleagues start up the business that is beef cattle concentrate feed. The business was found by the author and colleagues since 2014 with the name Pakindo. at the beginning we produced concentrate feed for beef cattle and dairy cattle but seeing the business opportunity in the beef cattle industry Pakindo creates a new business unit that is fattening beef cattle. But at the beginning of 2016 Pakindo realized that selling beef cattle, especially for daily consumption has not good enough to competing with imported meat from Australia and India. It is this reason that makes Pakindo develop its business in beef cattle breeding, because imported cows are not allowed for Ied Al-adha.

RESEARCH METHODS

Feasibility Study

According to Kasmir and Jakfar in Aziz, et al., (2016: 114) business feasibility studies can be defined as an activity that studies about a business to be run, in order to determine whether this business good enough to be run or not.

1. Business Environment Aspects
This aspect explains the need to consider the business environment, in political, economic, social and technological terms.
2. Aspects of Industrial Structure
This aspect explains the five forces model of competition approach
3. Corporate Strategy
This aspect explains the company's strategy to be implemented
4. SWOT Analysis
This aspect analyzes the strength, weakness, opportunity, threat of the company
5. Market and Marketing Aspects
This aspect explains the ability to achieve profitable sales volume, produces better products than competitors, determines better prices than competitors, distributes products better than competitors and promotes products that are better than competitors.
6. Legal Aspects
This aspect explains the permit and legality of the business that must be owned in the business of beef cattle.
7. Technical Aspect or Operation
This aspect describes the condition of the business location plan, availability of machinery, layout equipment or other production processes.
8. Management Aspects

This aspect explains the ability to complete business development in accordance with the planned time, labor availability and recruitment ability.

9. Financial Aspects

This aspect describes the funding needs and sources, investment cost requirements, projected profit and loss, cash flow projections, projected balance sheets and investment criteria: Payback Period (PP), Net Present Value (NPV) and Internal Rate of Return (IRR).

Investment Worthiness Criteria

The following are some of the investment feasibility criteria:

1. *Payback Period* (PP)

Payback Period is a assessment techniques on the investment payback period of a project or business (Kasmir and Jakfar, 2016: 101). This calculation is seen from the calculation of net cash (proceed) obtained every year.

$$PP = \frac{\text{Investment}}{\text{Net cash per year}} \times 1 \text{ tahun}$$

2. *Net Present Value* (NPV)

Net Present Value is the ratio of PV of proceeds and investment PV (capital outlays) over the life of investment (Kasmir and Jakfar, 2016: 103).

$$NPV = PV \text{ Net Cash} - PV \text{ Investment}$$

3. *Internal Rate of return* (IRR)

The IRR method is basically a method for calculating the interest rate that can equalize the present value of all cash inflows with the cash flow out of the project investment.

$$IRR = i_1 + \frac{NPV_1}{NPV_1 - NPV_2} \times (i_2 - i_1)$$

Information:

i_1 = Interest rate (discount rate that yields NPV_1)

i_2 = Interest rate 2 (discount rate that yields NPV_2)

NPV_1 = Net Present Value 1

NPV_2 = Net Present Value 2

RESULT AND DISCUSSIONS

1. Business Environment Aspect

Aspects of business environment by using PEST Analysis it can be said that conditions in Indonesia support the business of UD. Pakindo.

a. Political

Regulation by the Minister of Trade (Permendag) No. 37 of 2016 which allows imported frozen beef to be sold in markets with adequate refrigeration facilities and infrastructure.

The objective of minister trade regulation is to create oversupply domestic beef supply and in accordance with President Joko Widodo's direction the meat price is at Rp 80,000 per kilogram (Kg). Based on Law no. 18 of 2012 on food, stated that "the Government is obliged to stabilize the supply and price of staple food at the level of producers and consumers".

In addition, the government also has SIWAB (mandatory pregnant cows), government assistance in the form of artificial insemination or free injecting, reproduction of female cows and pregnancy monitoring.

b. Economical

According to data from BPS (Central Bureau of Statistics) Indonesia's economic growth in 2016 grew by 5.02%, this figure is higher than in the previous year which was 4.88%. In the year 2016 national beef consumption figures reached 623,480 tons which means the amount of turnover for beef reached Rp 69,574,880,000,000.

c. Social

Beef has many advantages such as flavor and its relation with culture so that the existence of beef can not be substituted by other meat. Even on religious holidays although the price has increased but the demand is still high.

Even according to the CNN news website that is published in Kompas.com "rendang" as a Indonesian food was crowned as the world's best food. One of the main ingredients of rendang is beef. In addition to rendang, Indonesians are also familiar with food: rawon, stews, oxtail soup, meatballs, krengsengan and others which are all the main ingredients are beef. Although there are other sources of animal protein such as goat meat, chicken meat and fish meat, but beef is one of Indonesian favorites, it is not balanced with the price of affordable beef.

d. Technological

The most important technology in beef cattle breeding is Artificial Insemination. (IB) or injecting marriage is an attempt to insert semen or semen into the reproductive tract of a female animal that is lusted with the help of inseminator for pregnant animals. The second technology is fermentation for the availability of feed in the dry season. The last technology is about the faeces (feces) and urine (urine) of livestock. In the management of livestock manure both feces and urine can be done with biogas techniques.

2. Industrial Structure Aspect

Aspect of industrial structure using five forces analysis.

The Threat of Intense Segment Rivalry

According to data from BPS, the number of large and small cattle companies according to the main activities of 2010 to 2015 are 28, 33, 34, 13 and 20 companies respectively. This means a extreme decline in the year 2013 to 2014 from 34 to 13 originally caused by the issue of government programs on beef self-sufficiency in 2014.

Newcomer's Threat

By 2015 some nursery companies decide to re-operate because the company has invested considerably in terms of land and farm equipment.

Replacement Product

Protein is a major nutrient in the body that is useful for the formation of new cells in the body to affect the work of enzymes, hormones and immune. There are two sources of protein that can be consumed namely animal protein (beef, lamb, chicken, fish, eggs and milk) and vegetable protein (tofu, tempeh made from soy). Apart from other protein sources, the threat of replacement products is also the result of imported meat which has relatively cheaper prices.

The Bargaining Power of Buyers

The bargaining power of buyer is related to the quality of the resulting product, the service provided and also the positioning of the company.

The Bargaining Power of Suppliers

East Java is an area that has the largest population of beef cattle, as a result in the supply of cattle as a breeder for breeding cattle does not experience any problems. In addition to the supply of Pakindo beef cattle also require concentrate feed as a nutritional requirement for livestock. Currently Pakindo always uses concentrate feed from one of the animal feed factories located in Grati, Pasuruan city . That factory is belong to one of family business at Ciputra University, so in terms of price and quality they always give the best. Pakindo and there supplier (animal feed) have been cooperating since 2014.

Other supplies needed are vitamins and medicines available in the poultry shop or farm and farm shops and cooperatives in the village. The stores sell at relatively the same price on the same goods and products as well. There is practically no threat of bargaining power from suppliers to Pakindo.

3. Corporate Strategy

According to Michael Porter in Kotler and Keller (2013) there are three generic strategies that provide a good starting point for strategic thinking:

a. Cost Leadership

Costs of feed account for 60-80% of total production costs, so the companies should using concentrate feed from suppliers and feed manufacturers that have competitive prices but

also quality. Pakindo uses cow concentrate feed from Factory owned by family business of Ciputra University students. In addition to concentrate feed there are also additional feeds such as agricultural wastes like some part of corn, some part of palm oil and others. This additional feed can be obtained at a low price when working with farmers and local farmers around us.

b. Differentiation

Pakindo distinguishes his company from other companies in terms of selling price. Many of the beef cattle breeding companies sell their cows with a vision system, while Pakindo sells the cattle on a scale system. The reason Pakindo does it is that buyers and sellers are equally fair, so buyers can know and estimate how many it can produce the meat, whereas the seller can provide the right price that is not too expensive and not too cheap.

c. Focus

One of the focus of sales on Pakindo today is special at the time of Eid al-Adha. This is because the imported meat policy imposed by the current government is burdensome if local beef against imported frozen meat.

4. SWOT Analysis

Strength

- a. Incorporated in members of “Sapi Bagus Indonesia” community
- b. Sales through online
- c. Focus on eid Al-adha
- d. Health certificate from the livestock service
- e. Price based on weighing
- f. Service

Weakness

- a. Experience less
- b. Variation of cow of weight
- c. Variations of cow of types
- d. Do not have own delivery transportation
- e. Do not have a loyal customers

Opportunity

- a. Imported cow are not allowed for ied Al-adha
- b. Needs of cows for the qurban idul are increasing
- c. online selling
- d. Indonesia lack of beef
- e. People are becoming aware of health

Threat

- a. Imported cattle
- b. Imported beef
- c. Substitution Goods
- d. New comers

Table 2. SWOT Analysis Internal Factor and Eksternal factor

Description	Weight	Rating	Score
<i>I. Strengths</i>			
1. Incorporated in member of “sapi bagus Indonesia” community	0,12	2,5	0,30
2. Sales through online	0,19	4	0,76
3. Focus on eid Al-adha	0,19	4	0,76
4. Health certificate from the livestock service	0,08	2,5	0,20
5. Price based on weighing	0,18	3,25	0,59
6. Service	0,24	4,5	1,08
Total			3,69

<i>II. Weakness</i>			
1. Experience less	0,17	2,5	0,42
2. Variation of cow of weight	0,33	4,25	1,40
	0,26	4	1,04
3. Variation of cow of types	0,13	1,75	0,22
4. Havent own delivery transportation	0,11	2	0,22
5. Havent loyal customers			
Total			3,30
Total Internal Factor			0,39
<i>III. Opportunities (peluang)</i>			
1. Imported cow arent allowed for Adha	0,27	4,75	1,28
	0,18	3,5	0,63
2. Needs of cows for eid Al-adha are increasing	0,22	3,25	0,71
3. online selling			
4. Indonesia lack of beef	0,21	3,75	0,78
5. People are becoming aware of health	0,12	2,5	0,3
Total			3,70
<i>IV. Threats</i>			
1. Imported cattle	0,30	3,5	1,05
2. Impoerted beef	0,35	4	1,4
3. Subtitution (lamb, chicken etc)	0,25	2	0,5
	0,10	1,5	0,15
4. New comers			
Total			3,10
Total Ekstenal Factor			0,60

Based on the calculation on the SWOT matrix, the values are +0,39 and +0,60. If set in cartesian diagram then the result is as follows:

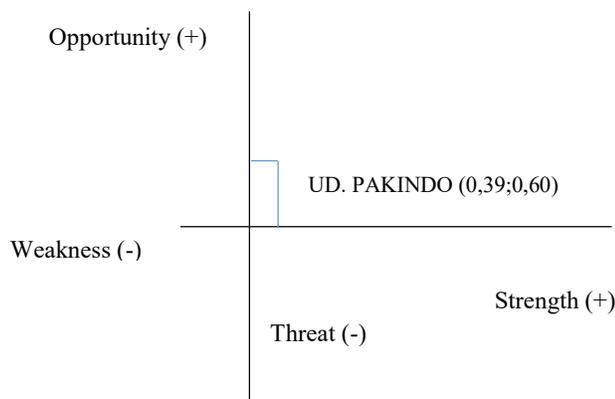


Figure 1. Pakindo's Strategy

Based on Figure 1 it can be seen that the best strategy for Pakindo is the S-O strategy. The position is a profitable position, a position where a company is able to use the ability to take advantage of existing opportunities. The strategy that can be applied in this position is

Stable Growth Strategy, a stable growth strategy where development is done in stages and the targets are adjusted to the conditions. Development in the nursery division is done to diversify the business but still focusing on the beef cattle industry, if the fattening division as a cash flow turnover in the short term then the nursery division as a long-term investment.

5. Market and Marketing Aspect

Market and Marketing Aspect shows that until 2017 Indonesia is still lack of beef. This illustrates the potential of the beef cattle industry is very large at this time.

a. Market Segmentation

In general in the beef cattle industry there are 5 segmentation

Grade I (cow with weight >860 kg)

Grade II (cow with weight 520 – 850 kg)

Grade III (cow with weight 410 – 510 kg)

Grade IV (cow with weight 320 – 400 kg)

Grade V (cow with weight 270 - 310 kg)

b. Targeting

Grade I and II are consumers with upper middle class who have their own satisfaction if could give the best of cow, usually price is not a problem for those, the important think is about prestige.

Grade III targets mosques in a metropolitan city, as for its citizens joint venture to buy a cow with the price 3 - 4 million rupiah per person.

Grade IV targets consumers from the middle to lower class who wish to sacrifice cattle on their own behalf.

Grade V targets mosques and mosques in countryside, as for its the citizens joint or collective of 2 million to 2.5 million rupiah per person to buy a cow.

c. Positioning

Positioning applied in Pakindo is as a provider of quality qurban animals and help individuals or muslim to carry out the worship of Eid al-Adha.

d. Product

The products offered by pakindo are cow for Ied Al-adha. The cow is divided into several grades according to the weight range of the cow.

e. Price

The price offered by Pakindo is dependent on the grade of the cow. The list of beef cattle prices by grade is as follows:

Grade I (cow with weight >860 kg, price Rp 60.000 per kg)

Grade II (cow with weight 520 – 850 kg, price Rp 50.000 per kg)

Grade III (cow with weight 410 – 510 kg, price Rp 51.000 per kg)

Grade IV (cow with weight 320 – 400 kg, price Rp 53.000 per kg)

Grade V (cow with weight 270 - 310 kg, price Rp 55.000 per kg)

f. Location

Pakindo's business address is in Sumber Bendo Mojoagung village, Jombang reGENCY. The location is about 2 hours from Surabaya by car.

g. Promotion

The current promotion is only through private social media.

6. Legal Aspect

Legal aspects in livestock industry are not be considered, especially livestock farming. Based on the results of interviews with experts and breeders livestock farmers can be concluded that farmers in Indonesia have no legal and legal aspects when entering a small business. Legitimate permit in Pakindo is in the form of SIUP with company form UD (Trading Business), but the author as the owner of Pakindo does not have NPWP (Personal Taxpayer Number) which is om process by the tax service

7. Technical Aspect or Operation

The technical or operational aspects discussed in this study are the location of the business, the availability of machinery and equipment, the availability of forage materials, the availability of labor, and the intended market.

a. The location of the business is in the village of santren Mojowarno, Jombang reGENCY.

- b. Availability of feed raw materials. The average farmers in Jombang are corn farmers. Agricultural waste in corn crops that can be used as cattle feed is corn straw etc.
- c. availability of machine. Currently Pakindo has a chooper machine that is useful for cutting and chopping greenery such as grass, rice straw, corn straw, corncobs and corn bucket. This engine capacity of up to 150 kg per hour by using diesel engines.
- d. Availability of labor. Communities around the majority of business locations work as farmers and farm laborers. This will be used by Pakindo to work with farmers to utilize agricultural wastes.
- e. Ability to utilize existing land. Pakindo plans to build a nursery cage on an area of +- 2000 m².

8. Management Aspect

Generally the community around of the business location work as farm laborers, the availability of labor is very abundant.

9. Financial Aspect

The required capital for the purchase of 40 female breeders and 3 bulls is Rp 516,000,000 with the assumption that the price of 1 female cow is Rp 12,000,000 and the price of 1 bulls is Rp 18,000,000. The cost of feed for female cows and males required for 4 years is Rp 333,427,500 assuming 1 cow consumes 3 kg of feed per day, feed price Rp 1500 per kg with 200 rupiah per year increase. While the cost of feed of cattle feed of seedlings nursery period of 1 for 1.5 years is Rp 255.386.000 with the assumption of month 1-6 spent 3 kg / day feed, month 7-12 spent feed 6kg / day and month 13-18 spent feed 10kg / day and feed price Rp 2000 / kg with increase of 200 rupiah per 6 month. Then the cost of cattle feed seedlings nursery period 2 is Rp 283.923.500 and for period 3 of R 320.897.500 and period 4 as much as Rp 365.424.500. Then the estimated salary cost of employees for 5.5 years is Rp 138.600.000, and the cost of building the cage as much as Rp 42,000,000 with the assumption that 1 cow needs a cage fee of Rp 1,000,000.

a. Payback Period (PP)

Payback period is a technique of valuation of the period (period) of a project or business investment return. Payback period value of this beef cattle breeding business plan is 4 years 4 months.

b. Net Present Value (NPV)

The Net Present Value is a comparison between PV of the PV of proceeds and investment PV (capital outlays) over the life of the investment. The calculation result of NPV value of investment difference with net cash projection for 5.5 years with discount factor of 10% is positive, that is Rp 405.377.717. The positive value of the NPV shows that the amount of income is greater than the value of the issued investment, so that the business plan is feasible to proceed.

c. Internal Rate of Return (IRR)

IRR is a method to calculate the interest rate that can equalize the present value of all cash inflows with the cash flow out of the project investment. The calculation of IRR with projection for 5.5 years is 21.92%. IRR value is greater than the interest rate of BCA bank as the largest private bank in Indonesia so that the business plan is feasible to run.

CONCLUSION

Here are some conclusions from this research:

1. Aspects of business environment by using PEST Analysis it can be said that the conditions in Indonesia support the business of UD. Pakindo.

Politics: The government regulation on imported beef price of Rp 80,000 indeed threatens the farming of the people, but on the other hand the government has a program that can help breeding beef cattle program namely SIWAB (Mandatory Pregnant Cow).

Economy: The increase of the Indonesian economic value of approximately 5% every year will make the living standard of human beings increased which impact on public awareness in consuming healthy food.

Social: The people of Indonesia who often do a celebration or big moments like idul fitri and eid adha is a potential for the beef cattle industry. In addition, many of Indonesia's main foods such

as beef meatballs, rawon, rendang, stews, and so is very popular and consumed every day by the people of Indonesia.

Technology: The condition of Indonesia which has 2 seasons of dry and rainy season can be utilized by using preservative technology of forage feed which is abundant during the rainy season.

2. Aspects of Industrial Structure using Five Forces Analysis it can be said that the position of UD. Pakindo in the competition is quite good. The greatest threat is not from competitors or emerging competitors but from government regulations that are less favorable to people's livestock. Then on substitute products there is practically no threat because beef has its own positioning compared to other animal protein sources. Then on the bargaining power of buyers and suppliers with the positioning applied by Pakindo and the right pricing strategy then the buyer bargaining power barrier does not exist.

3. The strategy of Pakindo's company in terms of cost leadership is by cooperating with or partnering with farmers, it is hoped that by cooperating with farmers it will be easy to get forage feed or agricultural waste such as corn leaves, corncobs, corn tebon as forage feed for livestock. While at differentiation Pakindo do it on the selling price system using the weight of live cows made by using scales. Then the focus of the company at this time is to make sales at Eid moment Adha only.

4. The results of the Swot analysis conducted by Pakindo occupy the first quadrant, especially the Stable Growth Strategy where the strategy is to use the strength to take advantage of existing opportunities in a stable and gradual growth.

5. Market and marketing aspect shows until 2017 Indonesia still suffers from lack of beef. This illustrates the potential of the beef cattle industry is very large at this time.

6. Legal or legal aspects of UD. Pakindo only in the form of SIUP with the type of company is a Trading Business or UD.

7. Technical aspects or operation in terms of the location of Mojowarno village Jombang district which the average community is farmers so the availability of forage in the form of agricultural waste from corn is very abundant for the purposes of cattle feed. While on the machine and equipment Pakindo already has a chooper machine to cut and chop forage which is then done preservation.

8. Management Aspects viewed from the location of the village Mojowarno Jombang district the average community around to work as farm laborers and odd jobs hence the availability of labor is very abundant.

9. The financial aspect of Pakindo uses Payback Period (PP), Net Present Value (NPV) and Internal Rate of Return (IRR) indicators as well as risk analysis (pessimistic, normal and optimistic). Based on the results of the feasibility study calculations it shows that PP, NPV and IRR are eligible for the three scenario analyzes.

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