Management and Feasibility Analysis of Smoked Fish Business in Ambon

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Abstract
This research aims to examine management and feasibility aspects of smoked fish business in Ambon. By using survey, this research focused on smoked fish business in Negeri Hative Kecil and Silale, known as dried fish producer villages. Primary and secondary data collected by using interview, observation, and recording. Analysis methods used are qualitative descriptive analysis and business feasibility analysis covers NPV, Payback Period (PP), and Break Even Point (BEP). The result shows that most of the smoked fish businessmen do not apply the proper management in their business. Two to three people do all the works (from production to marketing) without a clear job description. Feasibility analysis for smoked fish business in Negeri Hative Kecil shows that NPV is 21,501,053,-, PP is 58 days, and Benefit Cost Ratio (B/C) is 1,06. BEP Production is 1,455 kg, and BEP Price is IDR 19,941, while the feasibility analysis for smoked fish business in Desa Silale shows that NPV is 30,745,837,-, PP is 24 days and Benefit Cost Ratio (B/C) is 1,41. BEP Production is 988 kg, and BEP Price is IDR 7,966.

Based on the result, the two smoked fish business in Ambon is feasible to be developed. However, good management with clear job description should be applied to improve the business.

1. Introduction
Maluku is a well-known province of fish and non-fish resources that are potential to be managed and developed as income and foreign exchange for the country and the region itself. The resources will not produce benefits or high economic value if not followed by proper processing and good marketing [13]. [14] Stated that processing is needed to increase the economic value of fish resources that could lead to optimal utilization. Processing development is also expected to increase the value added and create a variation of products to broaden the market and absorb labor. Fish processing can be done in various ways: salting, drying, smoking, fermentation, processing in low and high temperature and by products processing [1][14]. Smoked fish processing is a famous fishery business in Ambon, which is still operated in small scale (household scale) and traditional manner. Most of the home industries are still being undertaken traditionally. Fish smoked is a typical product of Ambon which is already famous in the domestic, national and foreign markets. Kind of fish commonly smoked are skipjack (\textit{Katsuwonus pelamis}) that found mostly in the waters around Ambon Island and Banda Sea.
Traditional smoked fish processing business contributes economy to the businessmen and the development of the region. Stated that fish processing business can drive the regional economy development [7]. However, this kind of business is very dependent on weather condition and lead to the unstable price of products. Difficulties of getting capital also influence this business, so the development of it sometimes is risky. Therefore, in developing this business, a good planning is crucial. To be developed, each business needs evaluation, especially financial evaluation with many criteria or aspects. This assessment will determine whether the business is experiencing a profit or loss. Risk can be minimized or even avoided through good planning [8][9]. This research aims to analyze business management and feasibility of smoked fish household industry in Ambon. Financial analysis criteria in this study are Net Present Value (NPV), Payback Period (PP) and Break Event Point (BEP).

2. Methodology
The basic research methodology used in this research surveys [10], which consists of observation, interview by using questionnaire and documentation.

2.1. Population and Samples
Population in this research is smoked fish producers in Ambon, and samples were determined by using purposive technique [10]. Samples taken were smoked fish producers in Negeri Hative Kecil and Silale who actively produce smoked fish to be sold. The sample in each village amounted to four people, so the total sample amounted to eight people.

2.2. Data Analysis
This research used qualitative and quantitative descriptive analysis method. The qualitative descriptive analysis method is used to describe the current facts carefully [10][2] while quantitative descriptive analysis used to calculate and explain the financial aspects such Net Present Value (NPV), Net Benefit/Cost, Payback Period (PP) and Break Even Point (BEP) [12].

2.3. Location and Time
This research was conducted in Negeri Hative Kecil and Silale, Ambon, on June – July 2016.

3. Result and Discussion
There are three smoked fish processing centers in Ambon, namely Negeri Hative Kecil, Silale village and Laha village. The first two villages are the greatest productivity of smoked fish in Ambon. Traditional smoked fish processing requires several production factors, such as capital, raw material, labor and adequate infrastructures. Experienced human resources are necessary to produce specific smoked fish products in Ambon.

3.1. Business Management Aspect
The management aspect of this traditional smoked fish processing business is focused on internal conditions. Management aspects analyzed in this research are planning of the raw materials, labor, capital and equipment used [4].

Raw materials used in smoked fish processing is skipjack (Katsuwonus pelamis). The smoked fish raw material obtained in two ways. First, the processors buy the raw materials directly from the fishermen. This could happen in a fish season. Second, the processors buy the raw materials from cold storage, and it occurs in no fish season. However, raw materials used in smoked fish processing in Ambon are usually purchased from fishermen [7]. The producers are not able to plan the raw materials purchased well, due to the uncertainty of raw materials availability.

All the smoked fish business in Negeri Hative Kecil and Silale are individual businesses and household scaled only. Such kind of business does not need many labors, and those who work in the smoked fish processing business in the two villages are family members. The processors are also functioned as marketers, and therefore, there are only two to three people in that business with the unclear job description. Initial capital used by the traditionally smoked fish processors comes from their capital. As theirs are very limited, the processors often borrowing money for the continuation of
their business. The limited capital of the processors causes this business are constrained to be developed. Instruments used in smoked fish processing are still traditional, simple and using manpower. Most of the equipment used in smoked fish processing is improper.

3.2. Financial Aspect

The financial aspect of this business covers investment, expenditure, revenue, and income. [12][3]. Stated that financial aspect is crucial in a business activity. Investment capital is an initial cost/venture capital incurred at the time the business is running. The average investment of smoked fish business in Negeri Hative Kecil is IDR 13.325.000 whereas in Silale is IDR 8.193.750,- Investment capital used by each smoked fish processors in the two villages can be seen in the following table.

| Table 1. Investment of Smoked Fish Processing Business in Ambon |
|-----------------|-------------------|-----------------|
| Villages        | Respondents       | Total Investment (IDR) |
|-----------------|-------------------|-------------------|
| Hative Kecil    | 1                 | 15.000.000        |
|                 | 2                 | 11.250.000        |
|                 | 3                 | 17.500.000        |
|                 | 4                 | 9.550.000         |
| Total           |                   | 53.300.000        |
| Averages        |                   | 13.325.000        |
| Silale          | 1                 | 8.900.000         |
|                 | 2                 | 9.250.000         |
|                 | 3                 | 8.950.000         |
|                 | 4                 | 5.675.000         |
| Total           |                   | 32.775.000        |
| Averages        |                   | 8.193.750         |

Costs incurred by this business are fixed and variable costs. Fixed costs cover depreciation and maintenance costs, while the variable costs are incurred to purchase the raw material, salt, kerosene, coconut oil, coconut shell, yarn, bamboo, detergent, plastic bags, transportation, and consumption.

| Table 2. The Average Costs Incurred by Smoked Fish Business in Ambon |
|-----------------|-----------------|-----------------|-----------------|
| Villages        | Respondents     | Total variable cost (Rp) | Total Fixed Cost (Rp) | Total Cost (Rp) |
|-----------------|-----------------|--------------------------|-----------------------|-----------------|
| Hative Kecil    | 1               | 62.197,250,-             | 4.413.333,-           | 66.610.583      |
|                 | 2               | 71.994.417               | 2.775.000             | 74.769.417      |
|                 | 3               | 67.329.333               | 3.721.666             | 71.050.999      |
|                 | 4               | 79.000.000               | 3.926.667             | 82.926.667      |
| Total           |                 | 280.521.000              | 14.836.666            | 141.380.000     |
| Averages        |                 | 70.130.250               | 3.709.167             | 35.345.000      |
| Silale          | 1               | 12.126.857               | 212.917               | 12.339.774      |
|                 | 2               | 17.307.000               | 185.417               | 17.492.417      |
|                 | 3               | 14.620.500               | 222.083               | 14.842.583      |
|                 | 4               | 15.313.998               | 253.000               | 15.567.000      |
| Total           |                 | 59.368.355               | 873.417               | 60.241.774      |
| Averages        |                 | 14.842.089               | 218.354               | 15.060.444      |
Table 2 shows total variable costs, fixed costs and total costs incurred by the smoked fish business. It can be seen that the average total cost in Negeri Hative Kecil was amounting to IDR 35,345,000, and in Silale amounting to IDR 15,060,444.

Table 3. Revenue and Income of Smoked Fish Business in Ambon

| Villages     | Resp. | Prod (Kg) | Revenue (IDR) | Total Cost (IDR) | Income (IDR/Mo) | Income (IDR/Year) |
|--------------|-------|-----------|---------------|------------------|------------------|------------------|
| Hative Kecil |       |           |               |                  |                  |                  |
| 1            |       | 3.077     | 71,500,000    | 66,610,583       | 4,889,417        | 58,673,004       |
| 2            |       | 3.485     | 80,990,000    | 74,769,417       | 6,220,583        | 74,647,000       |
| 3            |       | 3.048     | 74,818,333    | 71,050,999       | 3,767,334        | 45,208,008       |
| 4            |       | 3.598     | 86,020,833    | 82,926,667       | 3,094,166        | 37,129,992       |
| Total        |       | 13.208    | 313,329,166   | 295,357,666      | 17,971,500       | 215,658,004      |
| Averages     |       | 3.302     | 78,332,292    | 73,839,416       | 4,492,875        | 53,914,501       |
| Silale       |       |           |               |                  |                  |                  |
| 1            |       | 1.080     | 18,900,000    | 12,339,774       | 6,560,226        | 78,722,712       |
| 2            |       | 1.620     | 24,300,000    | 17,492,417       | 6,807,583        | 81,690,996       |
| 3            |       | 1.350     | 20,250,000    | 14,842,583       | 5,407,417        | 64,889,004       |
| 4            |       | 1.450     | 21,320,000    | 15,567,000       | 5,753,000        | 69,036,000       |
| Total        |       | 5.500     | 84,770,000    | 60,241,774       | 24,528,226       | 294,338,712      |
| Average      |       | 1.375     | 21,192,500    | 15,060,444       | 6,132,057        | 73,584,678       |

Table 3 shows that the average revenue received by the smoked fish business in Negeri Hative Kecil is IDR 78,332,292, per month while those in Silale received IDR 21,192,500, per month. The total expenditure of smoked fish business per month in Negeri Hative Kecil is IDR 73,839,416, and in Silale is IDR 15,060,444. Based on the revenue and expense issued, the income of the business can be calculated. The average income of the smoked fish business in Negeri Hative Kecil is IDR 4,492,875, per month or IDR 53,914,501, per year, and the average income of the similar business in Silale is IDR 6,132,057, per month or IDR 73,584,678, per year.

3.3 Business Feasibility Analysis

Business feasibility of smoked fish home industries in Negeri Hative Kecil and Silale are analyzed by using several criteria of financial analysis, Net Present Value (NPV), Payback Period (PP), and Break Even Point (BEP).

Table 4. Business Feasibility Analysis of Smoked Fish Business in Ambon

| Villages     | Resp. | NPV (IDR) | PP | B/C Ratio | BEP Prod. | BEP Price | Feasibility Criteria |
|--------------|-------|-----------|----|-----------|-----------|-----------|---------------------|
| Hative Kecil |       |           |    |           |           |           |                     |
| 1            |       | 22,186,394,- | 0.5 | 1.07 | 1,416 | 11,025 | Feasible |
| 2            |       | 31,473,734,- | 0.27 | 1.08 | 1,037 | 7,169 | Feasible |
| 3            |       | 18,060,413,- | 0.45 | 1.05 | 1,446 | 12,200 | Feasible |
| 4            |       | 14,283,672,- | 1.08 | 1.04 | 1,919 | 13,370 | Feasible |
| Total        |       | 86,004,213,- | 2.30 | 4.25 | 5,818 | 43,764 | Feasible |
| Average      |       | 21,501,053,- | 0.58 | 1.06 | 1,455 | 19,941 | Feasible |
| Silale       |       |           |    |           |           |           |                     |
| 1            |       | 33,780,487,- | 0.23 | 1.53 | 705 | 7,860 | Feasible |
| 2            |       | 35,071,316,- | 0.22 | 1.39 | 1,166 | 6,825 | Feasible |
| 3            |       | 27,581,546,- | 0.27 | 1.36 | 990 | 8,189 | Feasible |
| 4            |       | 26,550,000,- | 0.25 | 1.37 | 1,090 | 8,990 | Feasible |
Smoked fish production depends on the season and production per month. If there is no fish season, the production will decline, and vice versa. The fish season usually takes place in January, February, March, and December, during the no fish season last from April to November. The production in every month ranges from 25-28 days. Raw materials taken from the cold storage in Ambon priced IDR15,000,- per kilogram in the fish season, and IDR 24,000,- in no fish season.

The result of NPV analysis shows that NPV value of the two villages is different. The average value of NPV in Negeri Hative Kecil 21,501,053,-, while in Silale 30,745,837,-. Those values are > 0 and means that investment in traditional smoked fish processing businesses in both villages can be accepted. The NPV value indicates that this business in Ambon is estimated able to turn a profit. Stated that positive value of NPV indicates that the running businesses will be able to turn a profit [11]. The value of Payback Period for traditional smoked fish business in Negeri Hative Kecil 0.58 (58 days) and Silale 0.24 (24 days), which indicates that business able to restore the investment for less than one year. The shorter the time to return the investment, the better the business could be developed [11]. Benefit-Cost Ratio (B/C) in Negeri Hative Kecil is 1.06 and Benefit Cost Ratio (B/C) in Silale is 1.41.

Analysis of Break Even Point (BEP) shows that the average of BEP production in Negeri Hative Kecil is 1.455kg, while the average of BEP price is IDR 19,941,-. The average production in Negeri Hative Kecil when the research was undertaken 3.302 kg and average selling price IDR 20,000,-. The average production in Silale 1,455 kg, and averages BEP price is IDR 7,966,-. And the average production of fish smoked in Silale was 1.375 kg with selling price IDR. 20,000,-. Analysis of business feasibility is critical to undertake by the smoked fish processor in Ambon. By that means, the processors can improve and increase the advantages [12]). Investment available at a venture is also determined the advantage gained [3][14]. A good investment will benefit the business the processing of this traditional.

4. Conclusion
1. Management aspects of the smoked fish business were feasible but still, needs to be improved regarding the technical and operational aspects.
2. The smoked fish business in Ambon is financially feasible and able to be developed.

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