Revenue analysis of mobile rice milling business

M Salam, I Fudjaja, R Darma, P Diansari, N M Viantika and Nafisa M
Agribusiness Study Program, Social Economic Department, Agriculture Faculty, Hasanuddin University, Makassar.

Email: nafisamuchtar123@gmail.com

Abstract. The aim of this research to determine the income of a mobile rice milling business in Batulappa Village, Wattang Pulu District, Sidenreng Rappang Regency. Analysis of the data used is income analysis, which is the difference between revenue and total costs. Revenue is obtained from the number of products multiplied by the price. For total costs obtained from the sum of fixed costs and variable costs. The results showed the average annual income was Rp. 222,280,000, and the total cost is Rp. 130,920,278. - so an annual income of Rp. 91,359,722.

1. Introduction
Rice is one of the food commodities that have a strategic role both in producer and consumer side. From yearly development, society consumption of rice compared to other primary food that is placed in the first ranking, so then rice becomes one of the main food commodities because it is the primary food of Indonesian people. In other words, Indonesia people are very dependent on rice as their main food needs [1].

The government of South Sulawesi has made rice as one of the best commodities, which is its productivity needs to be improved. Until today, the government of South Sulawesi known as food barns in eastern Indonesia. Sidenreng Rappang Regency is one of a regency in South Sulawesi Province that has a large land area with rice production in 2018 reached 665,287 tons that harvested from land area 106,327 Ha or with the productivity of 62.57 Ku/Ha. The agricultural sector has an important role in the economy of the Sidenreng Rappang Regency [2].

In supporting the increase of rice production, post-harvest handling is needed, one of which is a good rice milling process so that production results can be processed and production yield is maximized. Previous rice mills only consisted of permanent rice mills, but over time there was a mobile rice mill, which was an innovation. With processing technology that is relatively the same as conventional (permanent) rice mills, but is best in terms of mobility and small initial investment. The mobile rice milling machine itself is a modification of a permanent rice milling machine (husker and polisher), which is then given a chassis car. The existence of a mobile rice mill in the village has greatly helped the community in processing their post-harvest rice yield [3]. The procurement of a mobile rice mill in its operation requires various costs, which are usually referred to as variable cost and fixed cost.
The cost incurred certainly affect acceptance. Therefore, this also affects the income of rice mills itself [4].

There are a lot of rice mills which is not running smoothly because it is influenced by the management of business that is carried out by entrepreneurs who are not efficient. Basically, rice mills entrepreneurs pay less attention to the management of costs that affect business income, besides that they should pay more attention to the strategies that should be carried out in developing its business by looking at internal and external aspects to find out its strengths, weakness, threat, and opportunity so that the formulations can be obtained to carry out by the rice mills in order to continue to survive and develop.

2. Methods
This study located in Batu Lappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency, South Sulawesi Province. Location selected purposively with the consideration that Sidenreng Rappang Regency is one of the areas that are the largest rice producer in South Sulawesi, so it is making it easier for the researcher to get information. This study conducted two months long, which is in April 2019 to Mei 2019.

The respondents taken was the owner of a mobile rice mill in Batu Lappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency. The method used in sample determination with the census method is the population of a mobile rice milling business, which amounts to 3 units as well as being the sample of this study. To find out the income and strategy for developing mobile rice mills using the following analysis:

2.1. Revenue Analysis
Revenue is the margin between revenue and total costs incurred during the production process, which can be formulated as follows:

\[
TC = FC + VC \\
TR = Q \times Pq \\
\Pi = TR - TC
\]

Information:
- TC = Total costs (Rp)
- TR = Total revenue (Rp)
- FC = Fixed costs (Rp)
- Q = Amount of products
- VC = Variable costs (Rp)
- Pq = Price of product (Rp)
- \Pi = Revenue (Rp)

3. Results and discussions

3.1. Characteristics of mobile rice millings business owner
The average of mobile rice millings business owner in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency still classified as productive age, the education level of business owners who are the highest is only up to junior high school bench with a percentage 66.67%. The number of dependents owned by the mill owner consists of 4 people and two people. The experience of a business owner runs a mobile rice mill around 12 years. The average of the total production of rice per year of the mobile rice milling business is Rp. 25,800- kg per year.
3.2. Cost Analysis of Mobile Rice Mills
Cost structure analysis is done by grouping the costs incurred for the production activities of the rice milling business consisting of fixed cost and variable cost.

3.2.1. Fixed Costs. Fixed costs are costs that must be incurred by the business owner, whose amount is not affected by the products produced. Components in fixed costs are incurred by the owner of mobile rice mills in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency, which includes depreciation tool costs Rp. 920,278- and tax fee costs Rp. 100,000-. The average fixed costs per year are Rp. 1,020,278-.

3.2.2. Variable Costs. Variable costs are costs that vary according to the number of products produced. In this case, the more products produced, the greater the number of variables released. The variable cost component incurred by the owner of a mobile rice mills business in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency includes sacks, diesel, gasoline, cigarettes, and labor costs. The average variable cost per year is Rp. 129,900,000-.

3.2.3. Total Costs. Based on costs consisting of fixed costs of Rp. 1,020,278 and variable costs of Rp. 89,100,000, - it can be calculated the average total cost incurred by the owner of a mobile rice mill business in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency of Rp. 130,920,278-.

3.3. Acceptance of mobile rice mill
Acceptance of mobile rice mill in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency in conducting business activities derived from sales results in the form of main products and side products. The main product produced is rice, the cost of the mill service applied is paid using rice in a ratio of 10: 1, for 10 kg of rice produced, then the wage for ground rollers is 1 kg of rice, while the revenue from the by-products produced is bran or rice bran and groats. The average income of the mobile rice milling business can be seen in table 1.

Table 1. Average revenue of mobile rice mills in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency, 2019.

| No | Information | Price (Rp) | Amount (Kg) | Value (Rp/Year) |
|----|-------------|------------|-------------|----------------|
| 1  | Rice        | 7,500      | 25,800      | 193,500,000    |
| 2  | Bran        | 4,000      | 5,500       | 22,000,000     |
| 3  | Groats      | 3,000      | 2,260       | 6,780,000      |
|    | Total       | -          | -           | 222,280,000    |

Table 1 shows that the average of the total revenue of mobile rice mills in Batulappa Sub District, Wattang Pulu District, Sidenreng Rappang Regency amounting to Rp 222,280,000- per year per mobile rice mills business. The revenue consists of proceeds sellers amounting to Rp 193,500,000- per year, then proceeds from the sale of bran Rp 22,000,000-, per year, and sale of groats Rp 6,780,000- per year. We can see that revenue from the byproducts of grinding products can also contribute to income.
3.4. Mobile rice mills business revenues

Revenues in the margin between total revenue with total cost. If the margin is positive, then the company gets a profit. However, if the margin is negative, then the company loses. The income of mobile rice mills in Batulappa Village, Wattang Pulu District, Sidenreng Rappang Regency is quite varied. The average mobile rice mills business revenues can be seen in Table 2.

Table 2. The average of revenues per year per mobile rice mills business in Batulappa Village, Wattang Pulu District, Sidenreng Rappang Regency in 2019.

| No. | Description       | Volume (Kg) | Price (Rp) | Value      |
|-----|-------------------|-------------|------------|------------|
| 1.  | Revenues          |             |            |            |
|     | Rice              | 25,800      | 7,500      | 193,500,000|
|     | Bran              | 5,500       | 4,000      | 22,000,000 |
|     | Groats            | 2,260       | 3,000      | 6,780,000  |
|     | Total Revenues    | -           | -          | 222,280,000|
| 2.  | Fixed Costs       |             |            |            |
|     | a. Tax            | -           | -          | 100,000,00 |
|     | b. Equipment Depreciation | - | - | 569,444,00 |
|     | - Milling Machine | -           | -          | 94,444,44  |
|     | - Pick Up Car     | -           | -          | 222,222,22 |
|     | - Balance         | -           | -          | 21,666.67  |
|     | - Tarp            | -           | -          | 2,500.00   |
|     | - Bucket          | -           | -          | 10,000.00  |
|     | - Cart            | -           | -          | 2,500.00   |
|     | Total Fixed Costs | -           | -          | 1,020,278  |
| 3.  | Variable Costs    |             |            |            |
|     | - Sacks           | 700         | 1,200      | 840,000.00 |
|     | - Diesel          | 2,160       | 10,000     | 21,600,000 |
|     | - Gasoline        | 1,800       | 10,000     | 18,000,000 |
|     | - Cigartettes     | 360         | 21,833     | 7,860,000  |
|     | - Labor           | 2           | 40,800,00  | 81,600,000 |
|     | Total Variable Costs | -       | -         | 129,900,000,00 |
| 4.  | Total Costs (BT+BV) | -       | -         | 130,920,278 |
| 5.  | Income (TP-TB)    | -           | -          | 91,359,722  |

The table 2 shows that revenue is greater than the total cost so that the mobile rice milling business in Batulappa Village, Wattang Pulu District, Sidenreng Rappang Regency can be said to be profitable, the average revenue of Rp 222,280,000, and the average total business cost of Rp 130,920,278, so that the average net income of the business is Rp 91,359,722 per year.

4. Conclusions

Based on the research about Revenue Analysis and Strategy for Developing Mobile Rice Mills Business in Batulappa Village, Wattang Pulu District, Sidenreng Rappang Regency, can be concluded as followings the average of mobile rice mills business in Batulappa Village, Wattang Pulu District, Sidenreng Rappang Regency amounting to Rp 91,359,722- per year.
References
[1] Oktaviani S 2004 *Penyusunan Model Recursive Dynamic General Equilibrium*. (Institut Pertanian Bogor)
[2] BPS 2018 *Kabupaten Sidenreng Rappang Dalam Angka 2018* (Sidenreng Rappang)
[3] Sabir N Analisis Kelayakan Usaha Penggilingan Padi Keliling
[4] Patiwiri A W 2006 *Teknologi Penggilingan Padi* (Jakarta: Gramedia Pustaka Utama)