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BUSINESS ANALYSIS, DISTRIBUTION AND INCOME CONTRIBUTION OF THATCH LEAF ROOF WEAVERS IN THATCH LEAF ROOFING BUSINESS IN BLANG CUT VILLAGE PEUSANGAN DISTRICT BIREUEN REGENCY

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Abstract

The presence of the thatch leaf woven roof agroindustry in the midst of rural community life is aimed at expanding employment opportunities for the surrounding community and can increase the income of entrepreneurs and weavers. Mr. Syukri's thatched roof woven business, located in Blang Cut Village, Peusangan District, Bireuen Regency, which was built in 2011, is a small business that has developed the potential of natural resources through weaving thatched leaves into house roofs. The roof made from thatch definitely increases the income of the weavers which can be used to meet household needs. This research aims to analyze the business, distribution and contribution of thatch leaf roof weavers' income to family income. This research uses primary data and secondary data. The data analysis method used is quantitative analysis using the Gini index analysis tool. The results of the research show that the profit obtained in one production process in Mr Syukri's thatched roof woven business is IDR 14.409.253/production. Meanwhile, the average income of thatch leaf roof weavers is IDR. 229.076 / month. The income distribution of thatch leaf roof weavers is at a low level of income inequality with a Gini Ratio Index of 0,09, which means that the income of thatch leaf roof weavers is fairly evenly distributed to meet household needs. The contribution of thatch leaf roof weavers' income to family income is 16,42%, meaning that the contribution of thatch leaf roof woven craftsmen's income to the income of small families is ≤ 50%.

Keywords: *business analysis, income contribution, income distribution, leaf roofing*

1. INTRODUCTION

Thatch plants or sago plants have long been recognized by the Indonesian people as native to Indonesia. Thatch grows predominantly in Eastern Indonesia. Based on data from the Directorate General of Plantations (2020), thatch centers are spread across Papua, West Papua, Maluku, North Maluku, Riau, Sulawesi and Kalimantan.Thatch plants that are widely found in the territory of Indonesia are not just plants, if they are able to be cultivated and empowered they can produce good quality thatch stems so that they can provide great added value because thatch can be used as building materials and hand woven. One of the products of thatch processing is woven thatched leaf roofs (Hafni, 2019). The processing of thatch leaves into woven roofs is widely practiced in several districts in Aceh, considering that Aceh has a large area of thatch land. Based on data from the Aceh Agriculture and Plantation Office (2021), the largest number of thatch plants are in Siemelu Regency, Pidie Regency, North Aceh Regency and Bireuen Regency. Bireuen Regency is one of the districts that does a lot of processing of thatch into woven thatched leaf roofs. This can be seen from the number of agro-industries processing woven thatched leaf roofs spread across several sub-districts in Bireuen Regency.

Table 1. Number of Thatch Agro-industries in Bireuen Regency in 2019

No	Sub- District	Number of agro-industries
1	Pandrah	16
2	Jeunieb	11
3	Peulimbang	2
4	Kota Juang	4
5	Kuala	18
6	Peusangan	7
7	Jangka	10
8	Peusangan Selatan	8
9	Peusangan Siblah Krueng	6
	Total	**82**

Source: Investment, Trade, Cooperatives and SMEs Office of Bireuen Regency, 2019.

Based on table 1, it can be seen that the number of woven thatched roof agro-industries in Bireuen Regency is 82 businesses. When viewed from the number of agro-industries, Peusangan Sub-district is ranked 6th with only 7 agro-industries. However, Peusangan sub-district has a large-scale agro-industry compared to Kuala sub-district, which has only household-scale businesses with a workforce of only one or two family members. Peusangan sub-district is a sub-district where the majority of people earn a living in the agricultural sector, especially in food crop cultivation and agro-industry processing, one of which is the agro-industry processing of woven thatched roof leaves. Although the number of thatched roof agro-industries in Peusangan Sub-district only amounts to 7 agro-industries, when viewed in terms of the length of time the business has been established and the number of workers it has, Peusangan Sub-district is one of the sub-districts that has the largest thatched roof agro-industry. This can be seen in table 2.

Table 2. Number of thatched roof agro-industries in Peusangan Sub-district

No	Village	Number of agro-industries	Number of workers
1	**Blang Cut**	**1**	**15**
2	Tanjong Mesjid	3	6
3	Tanjong Nie	3	3

Source: Investment, Trade, Cooperatives and SMEs Office of Bireuen Regency, 2019.

The presence of the agro-industry of woven thatched roof leaves in the midst of rural community life which is done by utilizing time outside the farming business, is directed at expanding employment opportunities for the surrounding community and can increase the income of entrepreneurs and weavers. The existence of agro-industry as a side job is expected to provide additional income. Mr. Syukri's thatched roof business has developed the potential of natural resources through weaving thatched leaves into roofs. The roofs made from these thatch leaves certainly increase the weaver's income which can be used to meet household needs such as meeting the costs of food and drink, clothing and children's education. Additional income from the processing of thatch trees for weavers can improve economic conditions, but how evenly distributed and how influential the contribution of roof weavers' income to their income is not yet known. This study aims to (1) analyze Mr. Syukri's thatched roof weaving business, (2) analyze the income distribution of thatched roof weavers in the study area, (3) determine the contribution of thatched roof weavers' income to family income in the study area.

2. LITERATURE AND THEORETICAL REVIEW

Basically, income distribution is a concept that discusses the distribution of income of each person or household in society (Sukirno 2010). Lack of income distribution can lead to low purchasing power, the occurrence of poverty, injustice, hunger and others which will ultimately lead to anti-stigma of low-income groups against high-income ones, so that it will lead to social

jealousy in society (Siara, 2021). Income contribution is a contribution or in the research is intended as the amount of income contributed from work to the total family income. The contribution of female labor is calculated based on the ratio between the income of female labor obtained from working in the industry and the total family income. The amount of total family income is determined by the husband's income, children's income and income from side jobs. Women's contribution in household activities means that the wife is a housewife. In this case, housewives play a very important role in the formation of a prosperous family as the smallest unit in the life of society, nation and state (Marhawati 2016).

3.IMPLEMENTATION METHOD

This research was conducted at Mr. Syukri's thatched roof business in Blang Cut Village, Peusangan District, Bireuen Regency. The selection of this business location was carried out purposively considering that Mr. Syukri's business is the largest thatched roof weaving business in Peusangan District. The object of this research is Mr. Syukri and the thatched roof weavers who work in Mr. Syukri's thatched roof business. The scope of this research is limited to examining the analysis of business, distribution and contribution of income of thatched roof weavers in Blang Cut Village, Peusangan District, Bireuen Regency.

The data used in this study are primary data and secondary data. Primary data is data obtained or collected directly in the field by researchers by conducting direct interviews through filling out questionnaires, and direct observation of the research object. Secondary data is data obtained from existing sources such as previous research reports, published journals and data from literature related to research. The population used in this study were Mr. Syukri and all thatched roof weavers who worked in Mr. Syukri's thatched roof weaving business in Blang Cut Village, Peusangan District, Bireuen Regency. The sample used in this study is the business owner, namely Mr. Syukri and 15 thatched roof weavers who work in Mr. Syukri's thatched roof business. The data analysis method used in this research is quantitative data analysis method. Quantitative analysis in this study is as follows;

1. Business analysis

a. Total Production Costs

Production costs are all costs used in the woven thatched leaf roof business. Production costs are divided into two, namely fixed costs and variable costs. According to Soekartawi (2006), the formula for calculating total costs is:

$$TC = TFC + TVC$$

Description:

TC (Total cost)= Total cost
TFC (Total fied cost) = Fixed cost
TVC (Total variable cost) = Variable cost

b. Revenue (Gross Income)

Revenue is the result of multiplying the price (P) of selling thatched roof leaves by the quantity (Q). According to Soekartawi (2006) the formula for total revenue is:

$$TR = P \times Q$$

Description:

TR (Total Revenue) = Total revenue
P (Price) = Product price
Q (Quantity) = production quantity

c. Profit (Net Income)

Profit is revenue (gross income) that has been reduced by business production costs. According to Soekartwi (2006), the profit formula is:

$$\pi = TR - TC$$

Description:

Π = Profit

TR (Total Revenue) = Total revenue

TC (Total cost) = Total cost

2. Income distribution

To determine the income distribution of thatch roof weavers, the Gini index coefficient can be used. This ratio is one of the measuring tools often used in every empirical study as an indicator of income distribution inequality. The formula for calculating the Gini index is as follows (Widodo, 1990):

$$GC = 1 - \sum_{1}^{n}.fi(\text{Yi} + \text{Yi} - 1)$$

Where:

GC = Gini index coefficient

n = number of classes

Fi = Proportion of the number of craftsmen in class i

Yi = Cumulative proportion of total income

Yi-1 = cumulative percentage of total income up to the i-th class

With high and low criteria for income distribution inequality according to Oshima (1976) (in Rosanti, 2010), among others:

- Gini index of less than 0.4 indicates low income distribution inequality.
- Gini index between 0.4-0.5 indicates moderate income distribution inequality.
- A Gini index of more than 0.5 indicates high inequality in income distribution. The closer to zero, the better the distribution, while the closer to one, the worse or more unequal the income distribution.

3. Income Contribution

To calculate the contribution of thatched roof weavers' income to family income, the following formula can be used (Handayani & Arini, 2009):

$$P = Qx/Qy \times 100\%$$

Description:

P = Contribution of thatched roof weaver's income to family income (%)

Qx = Thatch roof weaver income (Rp)

Qy = Total household income (Rp)

To determine the size of the contribution of thatched roof weavers to family income, it is measured by:

- If the contribution is <50% of the total family income, the contribution is small.
- If the contribution is >50% of the total family income then the contribution is large (Samadi, 2001).

4. RESULTS AND DISCUSSION

4.1. General description of the thatched roof business

Mr. Syukri's thatched roof business in Blang Cut Village is a privately managed household industry that has been established since 2011. Initially, this business was established to fulfill family needs. In addition, this business is expected to be able to provide employment opportunities to others. The woven thatch roof business continues to grow in line with increasing market demand and currently employs 15 workers. So far, the demand for woven thatch leaves comes from brick entrepreneurs, boiler chicken breeders and also the surrounding community. The marketing of Mr. Syukri's woven thatch roofs is not only around Bireuen Regency, but also to Takengon and Meulaboh. With the marketing system, if it is still within the Bireuen Regency area with not too much demand, it will be delivered by Mr. Syukri himself, with additional costs of around Rp30,000

to Rp80,000 depending on the distance traveled. As for outside Bireuen Regency, such as Takengon and Meulaboh, they will take it themselves to the place, namely at Mr. Syukri's house.

4.2. Analysis of Thatch Leaf Roof Plaiting Business

4.2.1. Production Cost

a) Fixed Costs

In carrying out the production process of making thatched roofs, which includes fixed costs, is the cost of depreciation of equipment used in the production process, which is calculated based on the economic life of each piece of equipment. Factors that become fixed costs in the thatched roof business include equipment costs, equipment depreciation costs, and other costs.

Table 3. Details of equipment depreciation costs in Mr. Syukri's thatched roof business

No	Tool Type	Quantity	Purchase Price (Rp/Unit)	Total	Economic year	Residual Value	Depreciation cost	Depreciation cost (Production)
1	Machete	7	100,000	700,000	5	0	140,000	11,667
2	Knife	4	30,000	120,000	8	0	15,000	1,250
3	Chainsaw	1	2,300,000	2,300,000	10	500,000	360,000	30,000
4	Meter	1	25,000	25,000	5	0	5,000	417
5	Egrek	1	45,000	45,000	8	0	5,625	469
6	Rickshaw	1	7,000,000	7,000,000	15	2.000,000	333,333	27,778
7	Building	1	4,000,000	4,000,000	10	200,000	380,000	31,667
	Total			**14,190,000**			**1,058,958**	**103,247**

b) Variable Costs

The cost factors that become variable costs in Mr. Syukri's thatched roof business can be seen in the following description.

- Raw Material Costs

Table 4. Average cost of raw materials in the thatched roof business for one production time

No	Description	Unit	Quantity	Unit price (Rp)	Total Value (Rp/Production)
1	Thatch leaves	Ikat	200	7,500	1,500,000
2	Bamboo	Batang	50	15,000	750,000
3	Rattan	Ikat	143	12,500	1,785,500
	Total				**4,037,500**

Source: Primary Data Processed, 2023.

Raw material costs incurred amounted to Rp. 4,037,500/production, these costs consisted of thatch leaves, bamboo and rattan. The cost incurred for thatch leaves was Rp.7,500/bunch. The number of thatch leaves used to produce wickerwork per production is 200 bundles. Thatch leaves are obtained in Peusangan, Peusangan Siblah Krueng and Jangka sub-districts. This does not make it difficult for Mr. Syukri to obtain raw materials because he does not focus on just one place.

- Labor Costs

The use of labor in the production process of thatched roofs comes from housewives in the Blang Cut area. Mr. Syukri's thatched roof business uses 15 workers in the weaving section and one worker in the supply section of thatch leaves. The labor wage system applied in the woven thatch leaf business is a daily system for workers in the raw material supply section, namely wages given per production activity. As for weavers, wages are given per piece of roof produced.

Table 5. Details of labor costs in the thatched roof business in one production cycle

No	Description	Unit	Quantity	Unit price (Rp)	Total Value (Rp/Production)
1	Weavers	lembar	5,000	700	3,500.000
2	Thatch leaf supplies	hari	5	70,000	350,000
	Total				**3.850.000**

Source: Primary Data Processed, 2023.

Based on Table 5, it can be seen that the labor costs incurred in Mr. Syukri's business are only for workers in the weaving section as many as 15 weavers and one person who usually helps Mr. Syukri to supply thatch leaves which are done for five days in one production. The total labor cost incurred by Mr. Syukri in one production process to produce 5000 pieces of roofing is Rp.3.850.000.

- Other costs

Other costs are supporting costs for the production activities of Mr. Syukri's thatched roof business. These costs only consist of fuel costs. The need for fuel for one production reaches 10 liters at a price of 10.000/liter. Other costs incurred in Mr. Syukri's thatched roof business amounted to Rp.100.000/production.

Total Variable Costs

Table 6. Details of total variable costs in Mr. Syukri's thatched roof business

No	Description	Cost/Production
1	Raw material cost	4,037,500
2	Labor	3,850,000
3	Other Costs	100,000
	Total Variable Cost	**7,987,500**

Source: Primary Data Processed, 2023.

Based on table 6, the cost of raw materials spent by Mr. Syukri is Rp.4.037.500. Labor costs are Rp.3,850,000 and other costs are Rp.100,000. So, the total variable costs incurred in Mr. Syukri's woven thatched roof business amounted to Rp.7,987,500 / production.

Total Production Costs

Total production costs include the sum of all fixed costs and variable costs. Total costs are the result of the sum of fixed costs and variable costs incurred in one production process of woven thatched roof leaves. The summation of these costs can be seen as follows (Soekartawi, 2006):

TC = TFC + TVC
TC = Rp.103,247 + Rp. 7,987,500
TC = Rp.8,090,747

Based on the summation of fixed costs (TFC) and variable costs (TVC) above, the total cost incurred by Mr. Syukri in one production process amounted to Rp.8,090,747. This cost was incurred by Mr. Syukri for the production process of 5000 woven roofing sheets.

4.2.2. Production and receipts

In Mr. Syukri's thatched roof business, in one production, he is able to produce 5,000 pieces of roofing that are sold for IDR 4,500 per sheet. The amount of revenue in the processing of woven thatched roof leaves can be seen as follows (Soekartawi, 2006):

TR = P x Q
TR = Rp.4,500 x 5,000
TR = Rp.22,500,000

4.2.3. Profit

Profit is the amount of value received in Mr. Syukri's woven thatched roof business, after deducting production costs. Details of the profit on Mr. Syukri's woven thatched roof business in table 8.

Table 7. Details of Profits in Mr. Syukri's thatched roof business in one production cycle

No	Description	Total (Rp)
1	Total pendapatan (TR)	22,500,000
2	Total Biaya (TC)	8,090,747
	Profit (TR-TC)	**14,409,253**

Source: Primary Data Processed, 2023.

From table 7, it can be seen that the profit obtained in Mr. Syukri's woven thatched roof business is Rp.14,409,253 / production. This profit value is obtained from the result of reducing total revenue by total costs.

4.3.1. Income Distribution of Thatch Leaf Roof Weavers

Income distribution is one of the measures used to show the level of income equality received by the community. Income distribution reflects the even or unequal distribution of results among the community. Income distribution is used to see the income inequality between thatched roof weavers. The Gini Ratio Index is an approach that can show the inequality or unevenness of income between weavers.

Table 8. Gini Index Ratio of income as a thatched roof weaver (IDR/month)

No	Factions	Sample Quantity	Income (Rp)	Income (%)	Cumulative (%)	Yi+Yi-1	Fi (Yi+Yi-1)
1	40% lowest	6	1,000,093.75	29.11	29.11	29.11	0.12
2	40% medium	6	1,416,385.42	41.22	70.33	99.43	0.40
3	20% high	3	1,019,666.67	29.67	100	199.43	0.40
	Total	**15**	**3,436,145.83**	**100**			**0.91**
						IG	**0.09**

Source: Primary Data Processed, 2023.

Table 8 shows that the Gini Index ratio of weavers based on income from weaving thatched roofs shows low inequality with a Gini index value of 0.09 <0.4, meaning that the income distribution of thatched roof weavers is almost evenly distributed although there are some weavers who have high incomes. The highest monthly income of Rp.363,292/month is far from the lowest income of weavers, which is only Rp.135,792/month. This low income inequality occurs because the average amount of woven roof production produced is almost the same. The additional income earned by weavers is almost evenly distributed, but from the results of interviews, the income earned from weaving thatched roof leaves is on average only used to fulfill kitchen needs and also the needs of children's snacks.

4.3.2. Contribution of Thatch Leaf Roof Weavers' Income to Family Income

Contribution is something that is done to help produce or achieve something together with others or help make something successful. Where every contribution made has an ease in achieving it, especially in family income. In the research area, the work of husbands and mothers is different overall, and men and women have the same role in family income. The husband's income in the household is considered inadequate to meet the needs of the family. Therefore, the mothers took

the initiative to work as thatch roof weavers. The following is a table of the total income of mothers as thatch roof weavers and husband's income.

Table 9: Total income of mothers as thatch roof weavers and outside thatch roof weavers and income of family members

No	Description	Average (Rp/Month)
1	Wife's Income	
	1. thatch roof weaver	229,076
	2. Income outside of thatch roof weavers	476,667
	Wife's total income	**705,737**
2	Income of Family Members	689,333
	Total family income	**1,395,076**

Source: Primary Data Processed, 2023.

From table 9, it is known that the average wife's income in a month is Rp.705,737, which is obtained from working as a weaver of thatched roof leaves and income outside of weaving thatched roof leaves. Income outside of working as a roof weaver is obtained from the agricultural sector such as the results of gardening, coconut, and wages as farm laborers, and also non-agricultural such as sewing. Meanwhile, the average income of family members is Rp.689,633 per month. So the total income for one month averaged Rp1,395,076. To determine the size or size of the contribution of thatched roof craftsmen to total family income, it is measured by :

- If the contribution ≤ 50% of total family income then the contribution is small
- If the contribution ≥ 50% of the total family income then a large contribution (Samadi, 2001).

$$P = \frac{Qx}{Qy} \times 100\%$$

$$P = \frac{\mathbf{229.076}}{\mathbf{1.395.076}} \times 100\%$$

$$P = 16.42\%$$

The involvement of female labor in economic activities will affect the amount of family income in meeting the needs of life, the amount of contribution of weaver income to total family income is 16.42%. So the percentage of the contribution of the thatched roof weaver is declared small because it is below ≤ 50%. This means that the contribution made by thatched roof weavers has not fully helped and fulfilled family income, but even though the contribution of thatched roof weavers is small, it can still help the family economy. The income earned by mothers as weavers is not much, but it can be an additional income for mothers to help the family, such as to meet kitchen needs and also snacks for school children. Because in addition to working as a thatched roof weaver, she also has other income outside of weaving roofs, such as farm labor or the results of planting in the yard such as spinach, kale and chili.

5. CONCLUSION

Based on the results of the research that has been carried out, it can be concluded that:

1) The profit obtained by Mr. Syukri in one production process at Mr. Syukri's woven thatched roof business is Rp.14,409,253 / production.
2) The income distribution of thatched roof weavers is at a low level of income inequality with a Gini Ratio Index of 0.09, which means that the income of thatched roof weavers is evenly distributed enough to meet household needs. The contribution of thatched roof weavers' income to family income is 16.42%, meaning that the percentage contribution of thatched roof weavers' income to family income is small because it is <50%.

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