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Income from Urban Farming Beans (*Phaseolus vulgaris L.*) in Benpasi Village, Kefamenanu City District

AUTHORS INFO

Aprianus Nelson Bana
Timor University

Umbu Joka*
Timor University
umbujoka@unimor.ac.id

Yosefina. M. Fallo
Timor University

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Abstract

Through a survey approach in June 2020, this study intends to (1) determine the general description; (2) determine income; and (3) calculate the relative advantages of urban farming of chickpeas in the Nekaf Mese farmer group in Benpasi Village, Kefamenanu City District, North Central Timor Regency. The research respondents were chosen from a purposive sample of 20 farmers who were members of farmer groups. The quantitative descriptive method was employed to find out. The findings revealed that bean farmers in Benpasi Village, particularly in the Nekaf Mese Farmer Group, grow their own land, ranging in size from 6 to 9 acres, and engage in all stages of urban farming, including seed preparation, land preparation, planting, maintenance, harvesting, and post-harvest. Farmers' overall revenue from farming activities is Rp. 36.550.000,- with an average of Rp. 1,827,500,- for one planting season, and the total income earned is Rp. Rp. 15,921,000, - with an average income of Rp. 796,050, - for a single planting season. Farmers in the Nekaf Mese Farmer Group, Benpasi Village, Kefamenanu City District, made an average relative profit of 1.74 in bean farming activities, which means that the bean farming activities carried out by farmers in the Nekaf Mese Farmer Group, Benpasi Village, Kefamenanu City District, made an average relative profit of 1.74 in bean farming activities. Because the computation results are more than 1, it can be economically profitable.
Keywords: beans, income, urban farming

A. Introduction

Agriculture is an economic sector that has an important role in Indonesia. The agricultural sector is very strategic as the economic base of the people in rural areas, controlling the livelihoods of most of the population. Positive growth in the agricultural sector can also be seen from data from the Central Statistics Agency (BPS). Based on the BPS report, the agricultural sector contributes to Indonesia's Gross Domestic Product (GDP) up to 13.6%. The agricultural sector is very important because more than half of

the GDP of the manufacturing sector is based on agriculture. In addition, the agricultural sector is also the largest absorber of labor, which is around 35% of the total workforce (BPS RI, 2020).

During the Covid-19 pandemic in Indonesia, the agricultural sector was able to grow by 16.4%. This is because products from the agricultural sector are very much needed by the community. BPS noted, during April-June 2020, the performance of the agricultural sector grew 2.19% on an annual basis. The contribution of the agricultural sector to Gross Domestic Product (GDP) was 15.46%, becoming the second largest sector. (BPS RI, 2020).

The impact of the Covid-19 pandemic on farmers and agricultural sector actors in NTT Province is suspected to have decreased crop yields and income. Decrease in crop yields due to less or less regular rain. The decline in selling prices was due to the closure of market access due to the Covid-19 pandemic. This also has an impact on districts in NTT including TTU (mongabay.co.id)

Chickpeas are very familiar with Indonesian people. However, perhaps many do not know that the bean, which has the Latin name *Phaseolus vulgaris.L* . This is not a native Indonesian plant. Chickpeas are native to America, while *kidney*- beans are native to the Tahuacan-Mexico valley. The spread of the bean plant from America to Europe has been carried out since the 16th century. The center of the spread began in England (1594), spread to European countries, Africa, to Indonesia. Cultivation of chickpeas in Indonesia has been widespread. In 2017, the area of bean planting in Indonesia was around 23,746 hectares, with a production of 279,041 tons.

Urban farming is an agricultural or plantation concept that is carried out by utilizing limited (narrow) land. *Urban farming* is also called urban agriculture, according to experts, the notion of *urban farming* or *urban agriculture* as an activity of cultivating plants or raising livestock in and around large cities (metropolitan).) or small towns to obtain food or other needs and financial additions, including processing crops, marketing, and distribution of products resulting from these activities (Anggrayni et al., 2015; Nur'aini & Krisdianto, 2017; Yusoff et al., 2017).

Bean production in 2017 at TTU was 17.1 tons. (BPS Kabupaten TTU, 2018). The Nekaf Mese Farmer Group is one of the farmer groups in Benpasi Village that cultivates chickpeas. This bean farming has been cultivated since 2015 until now with production in 2017-2018 of 10,000 kg/ha. Bean farming in the Nekaf Mese Farmer's Group, Benpasi Village, Kefamenanu City District, North Central Timor Regency is aimed at providing additional income for farmers. However, the calculation of income from farming is rarely done by farmers so that there is no information on how much income they get from farming beans. Research on bean farming needs to be carried out, so that it can be seen how much profit and feasibility of farming it is.

B. Methodology

The research was carried out in Benpasi Village, Kefamenanu City, North Central Timor Regency through a survey method in June 2020. The sample of the research respondents was 20 bean farmers who were taken by *purposive sampling* who were members of the Nekaf Mese farmer group. Sources of data in this study are primary data and secondary data. Primary data comes from the results of direct structured interviews with farmers through a questionnaire guide. Secondary data is supporting data sourced from the relevant agency services, such as: the agriculture office. The research variables of farmer characteristics consist of: age, formal education, farming experience, production, costs (fixed and variable), price, and farm area.

To find out the first purpose of data analysis used in this study is to use qualitative descriptive analysis, to answer the second problem, income analysis is used. To find out how much income from bean farming can be calculated using the formula according to Soekartawi (1995):

$$I = TR - TC \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

I = Income
TR = Total Revenue
TC = Total Cost

Mathematically, the R/C ratio can be written as follows (Rahim and Hastuti, 2008):

$$a = \frac{R}{c} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$= \frac{p\ y\ x\ y}{VC+FC} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Information :

a = R/C *ratio*
R = revenue (*revenue*)
C = cost (*cost*)
Py = output price
Y = output
FC = *fixed cost* (*fixed cost*)
VC = variable cost (*variable cost*)

Decision criteria:

R/C > 1, profitable farming
R/C < 1, farming is detrimental
R/C = 1, break-even farming (no profit / no loss)

C. Findings and Discussion

The Nekaf Mese Farmer Group was formed on March 13, 2014. At the beginning of the group's formation there were 20 members and the number of members is up to now. The Nekaf Mese Farmers Group is located in Benpasi Village, Kefamenanu City District, North Central Timor Regency.

1. Vision and mission

The Vision and Mission of the Nekaf Mese Farmer Group are as follows:

a. Vision

Based on deliberation and consensus in developing farming in order to improve household welfare and economy.

b. Mission

1. Improving the welfare of members in particular and society in general.
2. Empowering the existing natural resources and human resources in the Benpasi Village Community.
3. Establish and succeed the Community economic movement.
4. Prioritizing a sense of unity and integrity between members and the community.

2. Organizational structure

The organizational structure is very important for the progress of the group, because every activity or activity in the group and the members who join in it must form a clear arrangement regarding a form of duty, authority, and responsibility of each position. Therefore, this Nekaf Mese farmer group also has the following organizational structure:

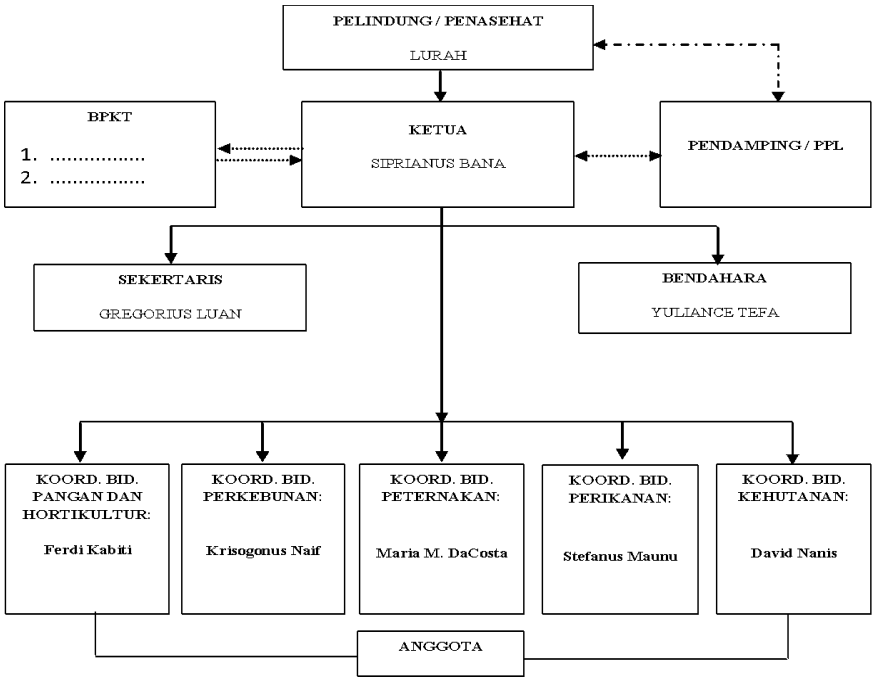

Figure 1: Organizational Structure of the Nekaf Mese Farmer Group

3. An Overview of *Urban* Bean *Farming* in the Nekaf Mese Farmer Group

3.1. Seed Preparation

Bean farming in the Nekaf Mese Farmers Group, the seeds used by farmers in their bean farming are chickpea seeds purchased at the Kefamenanu farm shop. The community chooses the Maksipro seed type because the seeds are of high quality and the fruit produced is dense, this seed is also very suitable for growing in lowland areas.

3.2. Land preparation

The land used for farming the beans is self- owned land with an area ranging from 6-9 acres. Land preparation is carried out with the aim of obtaining good production results. The prepared land is cleaned of grass using tools, namely hoe and machete, the roots of trees and rocks that exist after that the land is then made a bed with a bed size of 40 cm with a bed length adjusted to the length of the land with the labor used ranging from 2- 3 people.

3.3. Planting

Planting is done by making holes using a piece of wood on a bed that has been made with a hole depth of 3-4 cm with a distance between holes of 20-30 cm and then each hole is filled with 3-4 seeds and then covered with soil.

3.4. Maintenance

When the bean plant has grown and begins to spread, a support pole is made and then cleans the weeds around the bean plant. Watering is done 2 times a day, namely in the morning and afternoon during the summer, while when it rains the watering is adjusted to rainy conditions, watering is carried out by bean farmers in the Nekaf Mese Farmer Group using a water pump machine, at the end of the hose tied with a can with the bottom already holes so that the water that comes out of the pump does not hit the newly planted plants. Weeding is also done carefully so as not to damage the bean plants.

The fertilizers used by farmers in farming beans include Urea, SP 36 and KCL fertilizers. Fertilization is carried out 2 times, namely when the plant is 10 days old and when the plant is 20 days old fertilizing in order to fertilize the plant, usually farmers mix the three types of fertilizer so that the reaction is very fast and the plant becomes fertile. The fertilization method is simple by preparing one bucket of ocher water for around 20 liters of large size and then put fertilizer ranging from 3 grams then stirred

until the fertilizer decomposes and then watered on the bean plant using a flush tool made using a paint can.

Bean plants are usually attacked by leaf beetles, bean flies, aphids, and leaf borers. While the diseases include powdery mildew, fusarium wilt, leaf blight and wilt disease. To prevent these pests and diseases, farmers in the Nekaf Mese Farmer Group usually use the Clinset pesticide which is sprayed using a sprayer filled with 5 liters of water and then poured 3 clinset bottle caps. Farmers choose this pesticide because it does not pose a risk to vegetable crops and the reaction is very fast in dealing with pests or diseases that attack these plants.

3.5. Harvest and Post Harvest

Harvesting can be done when the plant is 60 days old, by harvesting the fruit and can be done gradually, ie once every 2-3 days. This is intended to obtain uniform fruit in the level of ripeness. Harvesting 4 times in one planting season. When the fruit is picked, it is put into a bucket, after that it is put back in a sack and delivered to the market and then weighed using a hanging rod.

Post-harvest is the last stage in farming activities, where after picking it is cleaned and packaged in sacks and is ready to be marketed in the new market and the old market.

5. Income Analysis of Beans *Urban Farming* in the Nekaf Mese Farmer Group

5.1. Cost

Cost is the total amount of expenditure used in farming beans which is divided into two, namely fixed costs and variable costs:

a. Fixed cost

Fixed costs are those costs incurred during the production process that magnitude is not influenced by the amount of production that is produced, expressed in units of rupiah. Fixed costs in this study is a tax expense of Rp. 54,000, - with an average tax cost for one planting season of Rp. 2.700,- for equipment costs not included because the average equipment used by farmers is over 5 years old in line with the Manikin & Joka (2020) study related to local corn farming income, where equipment that is over 5 years old is no longer calculated for depreciation.

b. Variable Cost

Variable costs are sacrifices that must be incurred continuously by farmers for one time production and other supporting materials for the course of the production process. Based on the results of the study, the total variable costs incurred during one planting season for 20 respondents were Rp. 19,975,000, - with an average per respondent of Rp. 998.750,-. Variable costs incurred in the following bean farming, seed costs Rp 3.575 million **-** , watering Rp 13.8 million, -, transportation costs Rp 800,000, - and the cost of the drug (clinset) amounting to Rp 2,400,000, - and for the average variable cost per respondent can be seen in table 1.

Table 1. Variable Costs of *Urban Farming* Beans.

No	Fee Type	Average Cost (Rp)
1	Seeds	178,750,-
2	Sprinkling	690,000,-
3	Transportation	40,000,-
4	Medicine (Clinset)	120,000,-

Source: Primary Data Processed, 2020.

5.2 Revenue

Revenue is the product of the production of beans (kg) obtained with the selling price of beans (rupiah) at the community level. Based on the results of research conducted on farmers who try to grow beans, the total production of beans in one growing season is 3,655 kg with an average of 20 respondents producing 182.75 kg.

The price of beans is an element that greatly affects revenue, based on the results of research conducted, it was found that the price of beans was Rp. 10,000,/kg. Farmers know that they sell their produce at a relatively cheap price but this is due to the household economic needs that must be met and the needs of school children, so the total income in one season of bean planting is Rp. 36.550.000,- with an average of Rp. 1.827.500,-.

5.3 Income

Income is the result of net sales received by farmers in farming activities, income is obtained from the difference between revenues and total costs consisting of fixed costs and variable costs. Based on the calculation results, the total income received by bean farmers in the Nekaf Mese Farmer Group is Rp. 15,921,000-, with an average income of IDR 796,050, in line with the research of Bete *et al.,* (2021), related to the income of tomato farming on paddy fields in Leuntolu Village, Belu Regency.

5.4 Relative Profit (R/C Ratio)

The relative profit is the division between the total revenue of Rp. 36.550.000,- with a total cost of Rp. 20,629,000, - so that the R/C Ratio of 1.74 means that economically the chickpea farming in the Nekaf Mese Farmer Group is profitable so it is feasible to continue because the value obtained is greater than 1 in line with the research of Simamora et al., (2020). For more details, see the table below.

Table 2. Total Revenue, Income and R/C Ratio

Average	Total Reception	Total cost	Total Income	R/C Ratio
Group	36.550.000,-	20,629,000,-	15,921,000,-	35
Farmer	1,827,500,-	1.031.450,-	796,050,-	1.74

Source: Primary Data Processed, 2020.

D. Conclusion

1. Bean farmers in Benpasi Village, especially in the Nekaf Mese Farmer Group, cultivate their farms on their own land with a land area that varies between 6-9 acres with the stages of *urban farming* activities starting from seed preparation, land preparation, planting, maintenance, harvesting and post-harvest. harvest.
2. Labor used in farming activities come from farming families themselves so that counts only the total fixed costs Rp 54,000, - with an average fixed costs Rp 2,700, - total variable costs amounted to Rp 20.575.000-, with average -average variable costs of Rp. 1,028,750,- the total income obtained by farmers in farming activities for one planting season is Rp. 36.550.000,- with an average of Rp. 1,827,500, - and the total income earned is Rp. 15,921,000, - with an average income obtained by farmers for one planting season of Rp. 796,050,-.
3. The average relative profit in bean farming activities obtained by farmers is 1.74, meaning that the bean farming activities carried out by farmers in the Nekaf Mese Farmer Group, Benpasi Village, Kefamenanu City District can be economically profitable because the calculation results are more than 1.

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Analysis of Income on The Candlenut Farming in Raimanus Village, Raimanuk District, Belu Regency

AUTHORS INFO

Maria H. Ikun Moruk
Timor University

Werenfridus Taena
Timor University

Umbu Joka*
Timor University
umbujoka@unimor.ac.id

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Abstract

This study aims to determine (1). general description of candlenut farming in Raimanus Village, Raimanuk District, Belu Regency, (2). To find out the analysis of candlenut farming income in Raimanus Village, Raimanuk District, Belu Regency (3). To find out the relative advantages of candlenut farming in Raimanus Village, Raimanuk District, Belu Regency. The research was conducted in November - December 2019. The data collection technique used a survey method with primary data and secondary data. The sample used in the study was 30 respondents. The data analysis method in the study is in the form of a descriptive model, income analysis, and benefit cost ratio (BCR), the net result in 2018 is Rp. 116,221,453, relative profit= 2.42 so that candlenut farming in Raimanus Village, Raimanuk District, Belu Regency is profitable/provides benefits to farmers in Raimanus Village.
Keywords: Income analysis, benefit cost ratio, candlenut farming,

A. Introduction

The candlenut plant is one of the long-lived plants that has many benefits in farming activities in the marketing and processing of candlenut fruit for the lives of the surrounding community. The candlenut plant is one of the plant products that grow in Indonesia which has many benefits in the leaves, candlenut seeds and also the candlenut tree which is useful for human life. The income obtained from the sale of candlenuts is very large, both whole candlenuts and cracked candlenuts have a very high market value. Candlenut (*Aleurite* s *moluccana Willd*) is a group of annual plants with one of the versatile trees. This plant, which has been widely grown in Indonesia for a long time, belongs to *the Euphorbiaceae family* . Candlenut is a basic ingredient for paints, varnishes, inks, soaps, wood preservatives, hair oil and batik ingredients, while the seeds are used as a spice for cooking, even for thrush, toothache, diarrhea, fungal infections, and insomnia (Heyne, 1987; Kusumawati, 2007). 2017; Scott & Craig, 2000). Even according to Elevitch & Manner (2006), the dregs of the hazelnut seeds that have been extracted from the oil can be used as fertilizer.

The production and area of candlenut planting continues to increase, in 2011 the production of candlenut was 99,500 tons with a planted area of 206,700 ha, until in 2014 it reached 215,560 ha with production of 107,300 tons of candlenut (Ditjen Perkebunan, 2015).
Plant hazelnut is common and found in East Nusa Tenggara, Climate in Nusa Tenggara East is very suitable for the cultivation of plants hazelnut, supported by the amount of donations the numberof residents in Nusa Tenggara East most big -eyed subsistence sector of agriculture (Ginoga and Santoso, 1989), so it can be said Pecan fruit is no stranger to the people of East Nusa Tenggara, especially in Raimanus Village, Raimanuk District, Belu Regency.

Processing of candlenut fruit (*badut fuan)* to produce candlenut seeds that are ready to be processed requires a long process, starting from harvesting, drying and breaking the shell of the pecan seeds. Cracking the shell of the pecan seed is very difficult because it has a very hard physique, while the flesh of the pecan seed is easily broken when hit by a collision. People in Indonesia generally break the shells of the candlenut seeds by hitting them on a stone base and by clamping the seeds to the betel nut and gewang tree trunks, the skin of which is dried and then slamming into a stone that has been prepared and the contents of the candlenut fruit will separate from the shell. This traditional method used by the community takes a long time and approximately 2 weeks. the process of drying the hazelnut seeds takes approximately 1 week, and the process of separating the contents of the hazelnut seeds from the shell takes approximately one week if the pecan seeds are in large quantities.

One of the candlenut producing areas in East Nusa Tenggara Province, especially in Raimanus Village, Raimanuk District, Belu Regency. Candlenut production data in NTT in 2018 was 785.97 tons, in Belu Regency in 2018 it was 442.71 tons, in Raimanuk District the candlenut production in 2018 was 31 tons with a land area of 52 hectares from 9 villages with an area of 179, 42 km^2. (BPS Kab. Belu, 2018). Candlenut farming is an annual plant that produces since the age of 5-50 years. The income earned on the candlenut plant occurs during the production period. One thing that is very influential on the income of candlenut farmers is in terms of marketing. The price of candlenut seeds sometimes increases and sometimes decreases with a variable price from Rp. 19,000/Kg to 25,000/Kg in Raimanus Village.

Different price levels lead to different profits. The profits obtained are influenced by the level of prices received by farmers. A study related to farmer's income was carried out by analyzing the income of Candlenut Farming in Raimanus Village, Raimanuk District, Belu Regency.

B. Methodology

This research will be conducted in Raimanus Village, Raimanuk District, Belu Regency in April 2019 until it is completed.

Technique of Data Collection

The method used in this research is a survey method. The types of data used are primary data and secondary data. Primary data was conducted through direct observation or observation from interviews using a list of questionnaire questions. Secondary data is data obtained from references or reading books, previous research, and related agencies.

Sampling method

The method used in sampling is done by survey by looking at how many farmers have candlenut land and who don't have candlenut land, from several hamlets. 448 househoulders total population taken from one village. The number of samples as many as 30 people taken by quota sampling.

Data analysis method

1. Qualitative descriptive method.

This method is used to determine the general description of candlenut farming in Raimanus Village. Descriptive method is also to solve qualitative problems.

2. Quantitative Descriptive Method

2.1. Candlenut farming income

To find out the amount of candlenut farming income in Raimanus Village, the formula according to Soekartawi (2002) is used as follows:

$$I = TR - TC \quad \text{...(1)}$$

Where

TR=Y.Py

TC=FC+VC

Information

I = Candlenut Farming Income

TR= Candlenut Farming Revenue

TC= Total Cost of Candlenut Farming

Y = Candlenut Production (Kg)

Py = Price of Pecan Seeds (Rp/Kg)

FC= Fixed Cost of Candlenut Farming

VC = Variable Cost of Candlenut Farming.

2.2. Benefit Cost Ratio (BCR)

Benefit Cost Ratio (BCR) is a comparison between the benefit value and the cost value of an investment at a predetermined interest rate. A BCR value greater than one indicates a profitable investment (Soetriono, 2006).

$$B/C = \frac{Bt}{TC} \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where :

BCR	= Comparison between income and expenses
Bt	= Benefit (cash inflow in period-t)
TC	= Total cost
t	= Time period

With BCR criteria > 1, the business is declared profitable and vice versa if BCR < 1 means the business is losing.

C. Findings and Discussion

Overview of Research Sites

Raimanus Village is one of the villages in the Raimanuk District with an area of 56 km $^{2,\ the}$ distance from Raimanus Village from the district capital using two and four-wheeled vehicles can be reached in 2.5 hours with a distance of 48 km. The topography is valley, rocky, and plain with coarse and fine soil texture, rainfall <1,000 mm/year with a duration of 12 months, namely January – December 2018. The boundaries of Raimanus Village are as follows: West of Rafa'e and Te'un Villages, East of Renrua Village, North of Faturika and Duakoran Villages, South of Raiulun and Kusa Villages.

Overview of Candlenut Farming .

Candlenut plant is one of the crops that produce a source of income. The candlenut plant in Raimanus Village began to be planted in 1971, a government program from the Belu District Forestry Service was held , by planting the candlenut plant whose plant seeds were 1 year old, and the candlenut plant seeds obtained from the Forestry Service and planted in the Mandeu community forest area with an area of 25 hectares of land in the Raimanus Village area, which was planted on local community land in 1996 the government called it a people 's forest area , several plants planted together contain several long-lived plants such as teak, mahogany, coconut. cashew, (BPS Kab. Belu, 1996). The candlenut plant in Raimanus Village is an agroforestry plant. The candlenut plant is currently producing in Raimanus Village, Raimanuk District, Belu Regency.

- Maintenance.

The maintenance of candlenut plants in Raimanus Village by cleaning weeds that grow around the candlenut plants and candlenut plants in Raimanus Village does not use fertilizer. Farmers in Raimanus Village do not give fertilizer to the cultivated candlenut plants. The candlenut cropping pattern in Raimanus Village is carried out with a distance planting pattern that is planted on the edge of the garden so that in the middle of the land it can be planted or processed with several other plants, and also as a land barrier.

Candlenut plants begin to bear fruit at the age of 5 years. A 5-10 year old candlenut plant produces 10 kg/tree and in the 11-25 year year it produces 25-30 kg/tree.

- Harvest

The harvesting technique is carried out by selecting candlenuts that have fallen to the ground. Post-harvest activities on pecan fruit are carried out by peeling the outer skin of

the candlenut fruit , drying it by drying it in the sun and doing sorting, after that, splitting the candlenut to separate the contents of the candlenut.

- Post-harvest

Solving candlenut uses stones and areca nut which are made similar to candlenut and are based on available stones. At the time of splitting the candlenut, some of the candlenut contents were intact, and some were still attached to the candlenut shell so they had to be separated again using a nyiru and a small knife. The contents of the clean candlenut will be filled in existing sacks for marketing to street vendors at a price of 21,000/kg.

Cost, Revenue and Profits of Candlenut Farming.

1. Cost Analysis

1.1. Fixed Cost of Candlenut Farming in Raimanus Village

Fixed costs (*Fixed Cost)* is the cost incurred by the processing business pecan whose use is not exhausted in one production period. The size of the production cost is not influenced by the amount of production produced by the candlenut processing business. There are several components of fixed costs including equipment depreciation costs and land taxes. Briefly, it can be shown in Table 1.

Table 1. Fixed Costs of Candlenut Seed Business

Equipment Type	Amount	Unit Cost	The amount of costs	Cost of depreciation
Crowbar	47	20,000	1	40,054
Trowel	41	5,000	1	10,728
Bag	274	5,000	1	1,165,500
Small knife	128	10,000	1	170,000
Nyiru	153	5,000	1	170,000
Total	**643**			**1,555,283**
Land tax		**30.5 (Ha)**		**2,034,000**
Total				**3,589,283**
Average				**119,642**

Source: primary data (processed), 2020

Data in Table 1, it can be explained that there are several Fixed Costs, namely equipment depreciation costs and land tax costs, equipment depreciation costs of Rp 1,555,283 and land tax of Rp 2,034,000; so that the total fixed costs of Rp 3,589,283 average fixed costs of Rp 119,642.

1.2. Variable Cost of Candlenut Business in Raimanus Village

Variable costs are costs whose amount is highly dependent on the amount of production. Variable costs in the candlenut business are found in consumption costs during, harvest and post-harvest with the farmers' costs per day being Rp. 15,000-25,000/day for the purchase of betel nut, tobacco sek, with consumption costs of Rp. 44,451,427, with an average cost consumption is Rp. 1,481,714 with a range of Rp. 957.143 to Rp. 5,342,857 per farmer per year.

1.3. Total Cost of Candlenut Business in Raimanus Village

Previous studies, namely Bunga (2016), Sambira *et al.,* (2018), and Risna *et al.,* (2019) related to the analysis of candlenut income resulted in the finding that candlenut is feasible to cultivate because the income ranges from Rp. 3,000,000 to Rp. IDR 7,000,000.

The results of this study also show that the total cost of a business is the total cost, which consists of fixed costs and variable costs. Each business has different total costs, fixed costs are found in consumption costs during, harvest and post-harvest with daily usage of 15,0000.00-25,000.00/day and variable costs are found in equipment owned by farmers by purchasing tools such as crowbars, tajak, sacks, knives, nyiru. each farmer has more than one with an average price / crowbar of Rp. 20,000, 1 piece of tajak of Rp. 5,000, in 1995, 1 sack of Rp. 5000, 1 small knife of Rp. 10,000, and 1 piece of nyiru, amounting to Rp. 5000, where the total cost of a business is determined by the amount of fixed costs

and variable costs of the business concerned. The candlenut business in Raimanus Village has a total cost of IDR 48,040,712; with an average cost of IDR 1,601,357. for more details can be seen in Table 2.

Table 2. Fixed costs of candlenut farming costs in 2018

No	Description	Amount (Rp)
1	Variable Cost	44,451,427
2	Fixed cost	3,589,283
	Amount	48,040,712

Source: primary data (processed), 2020

Receipt of Pecan Seed Business.

Income is the difference between the receipt of production results and the total production costs incurred by the candlenut processing entrepreneur. The income earned by candlenut processing entrepreneurs is strongly influenced by the level of production and is supported by the level of the selling price of the product itself. Candlenut business income in Raimanus Village is Rp. 116,557,288; with an average income of Rp 3,885,243; The results of this study strengthen the results of previous studies Bunga (2016), Sambira *et al.,* (2018), and Risna *et al.,* (2019) where the income ranges from Rp. 15,000,000 – Rp. 20,000,000.

Pecan Seed Business Income

Income is the difference between the receipt of production results and the total production costs incurred by the candlenut processing entrepreneur. The income earned by the candlenut processing entrepreneur is strongly influenced by the high and low production yields and is supported by the level of the selling price of the product itself. Candlenut seed business income in Raimanus Village is Rp. 114,120,971; with an average income of IDR 3,804,032 per farmer per year in Raimanus Village; The results of this study strengthen the results of previous studies Bunga (2016), Noy *et al.,* (2019), Sambira, *et al.,* (2018), and Risna., *et al* (2019) whose income ranges from Rp 15,000,000 – Rp. 20,000,000 per farmer in Bangka Arus Village, East Poco Ranaka District, East Manggarai Regency.

By using the income formula.

I = TR-TC

I = 164.498.000-50,477.029

= IDR 164.498.000

Relative advantage

1.Benefit cost Ratio (B/C ratio)

B/C (Benefit Cost) Ratio is the comparison between the total profit of the candlenut processing business with the total costs incurred. Net profit or income for candlenut business in Raimanus village is Rp. 116,557,288; while the total cost of the candlenut business was Rp 44,040,712; and to get the B/C ratio it can be calculated as follows:

= Rp.116,557,288;/ Rp. 44,040,712;

= 2.42

So the value of the B/C ratio for the candlenut business in Raimanus Village is 2; it means that the candlenut business carried out provides benefits, because the B/C Ratio value > 0. The results of this study are in line with previous studies of Bunga (2016), Sambira *et al.,* (2018), and Risna *et al.,* (2019) whose B/C ratio is > 0.

D. Conclusion

From the above discussion it can be concluded that the processing of candlenut seeds is seen from several stages, namely planting, harvesting and post-harvesting,

1. Candlenut planting begins to be planted at the age of 1 year, begins to produce at the age of 5 years, Candlenut plants are harvested on brown fruit that has fallen to the ground and the hazelnut skin is separated. Post-harvest on the candlenut plant is done by drying and sorting so that the dried candlenut is easy to carry out the process of breaking the candlenut. To separate the contents of the candlenut seeds from the candlenut shell to get the candlenut contents that are ready to be marketed/weighed.

2. Candlenut farmers' income in Raimanus Village, Raimanuk District, Belu Regency, is IDR 116,557,288 per year with an average income of IDR 3,885,243.
3. The relative advantage in Raimanus Village with a value of 2.42 so that the candlenut plant in Raimanus Village is profitable or provides benefits to farmers in Raimanus Village.

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Factors Affecting Paddy Rice Production in Tanggetada District Kolaka Regency

AUTHORS INFO

Aan Wilhan Juliatmaja*
November Kolaka University
aanwilhanjuliatmaja@gmail.com

Nursalam
November Kolaka University

Helviani
November Kolaka University

ARTICLE INFO

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Abstract

The aim of this research is to find out what factors affect lowland rice production in Tanggetada district, Kolaka regency and to find out how the level of technical efficiency, allocative efficiency and economic efficiency of rice lowland in Tanggetada district, Kolaka regency. To examine the effect of the utilization of the factors of production used on the yield of lowland rice production, a multiple linear regression is used and to determine the level of economic efficiency from the use of the factors of production. production by switching between technical efficiency and price / allocative efficiency and any input factors. The results of the study indicated that the factor of production of land area, urea fertilizers and NPK fertilizers had a significant effect. Meanwhile, labor-intensive factors of production, nararel pesticides and seeds have no significant effect. and Based on the results of the allocative efficiency analysis, an average value of 3.18 was obtained. This means that it is not allocatively efficient, so it is necessary to add the use of factors of production and it is necessary to maximize the profits obtained by making efficiency in the cost elements of the factors of production in order to '' achieve optimal conditions. At the same time, the results of technical efficiency show that lowland rice cultivation is not technically efficient. so the use of factors of production should be added to increase the efficiency of lowland rice cultivation. And the value of economic efficiency shows that lowland rice cultivation is still not efficient. It is therefore necessary to make changes and increase the capacity to combine existing factors of production through training in order to achieve economic efficiency.
Keywords: product factor, rice field, multiple regresi analysis, efficientcy analysis

A. Introduction

Rice is a plant that plays an important role in the country's economy, especially as a material to meet the basic needs of the community and as a source of income for farmers. The main activity and the main source of income of the community, especially those living in rural areas, still depend on the agricultural sector, which means that the livelihoods of most households depend on this sector. Because in addition to being a staple food, rice is also a strategic commodity with high economic value (Nurmanaf, 2003). The increase in the production and productivity of lowland rice is linked to the factors of production used. Its use must therefore be managed correctly. The efficient use of lowland rice production factors aims to maximize the use of land, urea fertilizers, poska fertilizers and labor. The efficiency of the

use of the factors of production is necessary for the resulting production to reach the maximum value. Inappropriate use of the number and combination of factors of production can lead to a decrease in the quantity of production and an increase in production costs (Miftahuddin, 2014).

Soekartawi (2001) suggests that the principle of optimizing the use of factors of production is in principle how to use these factors of production as efficiently as possible. This definition of efficiency can be classified into three types, namely technical efficiency, allocative efficiency (price efficiency) and economic efficiency. Technical efficiency (TE) is a quantity that shows the relationship between actual production and maximum production. Allocation efficiency (price) shows the relationship between cost and output. Allocation efficiency (price) can be achieved if it can maximize profits by equaling the marginal product of each factor of production with its price. Economic efficiency is a quantity that shows the ratio of real benefits. Economic efficiency can be achieved if technical efficiency and price efficiency (allocation) can be achieved. Kolaka Regency is one of the regions with predominantly agricultural areas. The lowland rice production data in Kolaka regency for the last five years are presented in Table 1.1 below.

Table 1.1 2015-2019 Kolaka Regency Paddy Rice Production Data

No	Year	Harvested Area (ha)	Production (Ton)	Percentage (%)
1	2015	16.864	88.694	23
2	2016	18.424,8	97.835,69	25
3	2017	17.091,70	85.877.14	22
4	2018	13.022,43	56.650,63	16
5	2019	12.232,69	54.657,11	14
Total		**77.635,62**	**383.714,57**	**100**

Source: Central Statistics Agency (BPS) Kolaka Regency 2020

Based on Table 1.1 in 2015-2016, there was an increase due to the continuous increase in the number of rice farmers. However, in 2017-2019 the production of lowland rice decreased due to the transfer of the function of rice fields to industry, housing or infrastructure which could not be matched by the printing of new rice fields. . Soekartawi (1995) stated that agricultural products are produced from a combination of factors of production of land, labor, capital (fertilizer, seeds and medicine). In agricultural technology, the use of factors of production plays a very important role, because the use of the number of factors of production is not precise, resulting in low production or high production costs. Because there are still many farmers who do not understand how the factors of production are used efficiently.

Kolaka Regency has 12 sub-districts, researchers will focus on research in Tanggetada district. Tanggetada district is one of the sub-districts which has a sufficiently large area for a rice producer in Kolaka regency. In the Tanggetada sub-district, it is supported by technical irrigation, so the development of rice cultivation needs to be improved. The factors of production used by farmers are area, use of urea fertilizer, NPK fertilizer, seeds, pesticides and labor. Currently, these factors are not used according to existing standards because farmers use them according to the available capital.

B. Methodology

Technique of Data Analysis

1. To examine the effect of the utilization of the factors of production used on the yield of lowland rice production, multiple linear regression modalities are used with the Coob Douglas function using the equation:
   Y = aX1bi.X2b2.X3b3.X4b4.X5b5.X6b6.eu

   To simplify the estimation, the equation is converted to a multiple linear form with a solution using the natural logarithm, so that it becomes a multiple linear equation as follows:
   LnY = a + b1LnX1 + b2LnX2 + b3LnX3 + b4LnX4 + b5LnX5 + b6LnX6 + eu

   The description:
   Y = Lowland rice production
   a = constant

bi = Regression coefficient
LogX1 = Area (Ha)
LogX2 = Work (HOK)
LogX3 = urea fertilizer (Kg)
LogX4 = NPK fertilizer (Kg)
LogX5 = Pesticide nararel (Lt)
LogX6 = Seed (Kg)

2. Efficiency Analysis

Determine the level of economic efficiency from the use of factors of production by switching between technical efficiency with price / allocation efficiency and all input factors.

a. Allocation efficiency

To determine the level of allocative efficiency, you can use the formula:
NPMxi = Px or NPMx / Px = 1 (3.5)

Or:
NPMxi = PMxi. Py (3.6)
NPMxi = bixy / xi. Py (3.7)

The description:
NPM = value of the marginal product of the factors of production at i
NPMxi = Marginal production of factor i
Bi = Regression coefficient Xi
Xi = Average use of the i-th paddy rice production factor
Y = Average production of lowland rice (Kg)
Pxi = Average price of the ith paddy production factor (Rp)
Py = Average unit price of lowland rice production (Rp)

According to Soekartawi (1990), in reality NPMx is not always the same as Px or BKMx, but what often happens is the following:
1. NPMx / Px> 1, which means that the use of the factor x is not yet effective, to achieve the efficiency, the input x must be increased.
2. NPMx / Px <1, which means that the use of factor x is not efficient, to achieve efficiency, the use of input x should be reduced.

b. Technical efficiency

To determine the level of technical efficiency (Technical efficiency rate) can be measured using the formula (Soekartawi 1990):
ET = Yi / yi (3.8)

The description:
ET = level of technical efficiency
Yi = The quantity of production (output) i
Yi = The quantity of production expected at the i-th observation

The obtained value can be known if the efficiency level is equal to 1, then the use of inputs or production factors is efficient, and if the technical efficiency value is less than one, the use of inputs or factors of production is not efficient.

c. Economic efficiency

Economic efficiency can be expressed by the following formula:
EE = TER. RAD (3.9)

The description:
EE = Economic efficiency
TER = Technical Efficiency Rate
TEA = Allocative efficiency rate

According to Soekartawi (2003), there are three possibilities for this concept, namely:

- The value of economic efficiency is greater than 1 (one). This means that the maximum economic efficiency has not been achieved. It is therefore necessary to increase the use of factors of production to achieve efficient conditions.
- The value of economic efficiency is less than 1 (one). This means that the work done is not efficient. It is therefore necessary to reduce the use of factors of production.

- The value of economic efficiency is equal to 1 (one). This means that the economic efficiency has been achieved and the maximum profit has been made.

C. Findings and Discussion

1. Factors affecting agricultural production of paddy rice

Factors of production or inputs are things that absolutely must exist to produce a production. The factors of production in lowland rice cultivation activities consist of land area, labor force, urea fertilizers, NPK fertilizers, seeds and nararel pesticides to produce lowland rice. fund. In lowland rice cultivation, it is necessary to know whether the production factors used have an influence or not on the resulting production. This can be seen from the production function which is a function that describes the relationship between physical output and physical inputs.

Variable Y in this study is lowland rice production and variable X in this study consists of area, labor, urea fertilizers, NPK fertilizers, seeds and nararel pesticides . The effect of factors of production on lowland rice cultivation can be observed through multiple linear regression of the Cobb Douglas model and computer aids using the SPSS version 21 program. With this regression analysis, we can see which factors affect lowland rice production in the Tanggetada district. Regency of Kolaka as shown in Table 4.8 below:

Table 4.9 Results of Multiple Linear Regression Factors Affecting Agricultural Production of Rice Fields in Tanggetada District, Kolaka Regency

Variable	regression coefficient	t-count	Sign	
Constant	49,600	0,168	0,867	ns
Area	1885,063	5,878	0,000	s
Work	2,353	0,210	0,834	ns
Urea fertilizer	5,319	2,847	0,006	s
NPK fertilizer	5,480	2,936	0,004	s
Pesticide Nararel	-8,758	-0,072	0,943	ns
Seeds	2,712	1,089	0,280	ns
R-squared	0,974			
F-count	437,810			
F-table	2,231			
t-table	1,997			
Sig	0,000			
N	77			

Source: SPSS 21 treatment results, year 2021

The description:
ns = not significant (0.05)
s = Significant (0.05)
Based on Table 4.8, the following regression equation is obtained:
Ln Y = a + 1X1 + 2X2 + 3X3 + 4X4 + 5X5 + 6X6
Y = 49,600 + 1885 063X1 + 2 353X2 + 5 319X3 + 5 480X4-8 758X5 + 2 712X6

a. Land area (X1)

The regression results in Table 4.9 above show that the variable land area has a value of tcount> ttable (5.878> 1.997) and is real with an error rate of 5% with the value of the regression coefficient obtained is 1885,063. This means that every additional 1% of land area will increase rice production by 1885.063%. Assuming that the variables of the use of other factors of production are fixed (Cateris paribus). The results of this study are in line with the research results obtained by Nurlela (2018), where land area has a significant influence on lowland rice, land is a factor of production which cannot substitute for no production factor.

b. Work (X2)

The regression results in Table 4.9 above show that the work variable has a value of tcount <ttable (0.210 <1.997) and has no significant effect on the error rate of 5% with the value of the regression coefficient obtained is 2.353. This means that every 1% more labor will reduce rice production by 2.353%. Assuming that the variables of the use of other factors of production are fixed (Cateris paribus).

c. Urea fertilizer (X3)

The regression results in Table 4.9 above show that the urea fertilizer variable has a value of tcount> ttable (2.847> 1.997) and is real at an error rate of 5% with the value of the regression coefficient obtained is 5.319 . This means that every 1% addition of urea fertilizer will increase rice production by 5.319%. Assuming that the variables of the use of other factors of production are fixed (Cateris paribus). The use of urea fertilizer has a significant effect on the amount of lowland rice production. The use of urea-based fertilizers in the research area is based on the recommendations or instructions of the agricultural extension agents as well as the financial capacity of the farmers.

d. NPK fertilizer (X4)

The regression results in Table 4.9 above show that the NPK fertilizer variable has a value of tcount> ttable (2.936> 1.997) and is significant at an error rate of 5% with the value of the regression coefficient obtained is 5.480. This means that every 1% addition of NPK fertilizer will increase rice production by 5.480%. Assuming that the variables of the use of other factors of production are fixed (Cateris paribus).

e. Pesticide Nararel (X5)

The regression results in Table 4.9 above show that the pesticide variable nararel has a value of tcount <ttable (-0.072 <1.997) and has no significant effect on the error rate of 5% with the value the regression coefficient obtained is -8.758. This means that every 1% addition of nararel pesticide will reduce rice production by -8.758%. Assuming that the variables of the use of other factors of production are fixed (Cateris paribus).

f. Seeds (X6)

The regression results in Table 4.9 above show that the starting variable has a value of tcount <ttable (1.089 <1.997) and has no significant effect on the 5% error rate with the value the regression coefficient obtained is 2.712. This means that each addition of 1% of seeds will reduce paddy rice production by 2.712%. Assuming that the variables of the use of other factors of production are fixed (Cateris paribus).

2. Efficiency Analysis

In this study, to determine the level of economic efficiency from the use of production factors for lowland rice cultivation in Tanggetada district, allocative efficiency and technical efficiency approaches were used. Being able to see the level of economic efficiency with the arrangements of a business can be considered to achieve economic efficiency if EE 1 (Soekartawi, 1990).

a. Allocative efficiency of rice cultivation

It can be said that lowland rice cultivation achieves allocative efficiency when it is able to maximize production by equaling the marginal value of the product (NPM) of each factor of production with its price. According to Soekartawi (2002), allocative efficiency is the efficiency achieved when the value of the marginal product (NPM) is equal to the factor of production. Thus, we can say that lowland rice cultivation achieves allocative efficiency if the value of NPMX / PX = 1. If NPMX / PX> 1, it means that the use of factor X is not efficient and that input X must be added. During this time, if NPMX / PX <1, it means that the use of factor X is not efficient so the use of input X should be reduced.

In the allocation efficiency analysis in this study, not all production factors were analyzed, but only the production factors that had a significant effect on lowland rice production. Based on the results of tests using the multiple linear regression approach of the Cobbs Douglas model, and computer aids via the SPSS version 21 program, several production factors have a significant effect on lowland rice production, at ie land area, urea fertilizers, nararel pesticides and seeds. So that only these 4 factors were analyzed in an allocative way.

b. Technical efficiency of field rice cultivation

Technical efficiency can be interpreted as the relationship between the level of input use and the resulting output. Technical efficiency is expressed with a rating between 0 and 1. Technical efficiency level below 1 indicates that farmers generally use too much of their production factors, which in turn leads to inefficiency. The number of farmers with the highest technical efficiency value is at the technical efficiency level of 0.95 to 1.14 up to 46 farmers or 59.74% of the total respondents of low-income rice farmers. fund. In addition, at the level of technical efficiency between 0.75 and 0.94 up to 18 farmers or 23.38%. At the level of technical efficiency between 1.15 and 1.54 up to 9 farmers or 11.69%. At the level of technical efficiency between 0.55 - 0.74 farmers or 5.19% The difference in efficiency

level between farmers shows that there are differences in the use of production factors for each farmer. Based on the data obtained above, it can also be seen that the level of technical efficiency of lowland rice cultivation in Tanggetada district, Kolaka regency, is still far from being technically efficient in the region. use of factors of production or that actual output is still not close to potential output.

The lowest efficiency level is 0.56, which means that the respondent is able to achieve 0.56% of the lowland rice production potential. This means that there is a 44% chance for farmers to increase their production using more efficient factors of production. Meanwhile, the highest efficiency level is 1.53, which means that respondents have to reduce the use of factors of production to increase agricultural production in order to achieve an efficiency level. The average value of technical efficiency as a whole is close to number 1, which is 0.995. This indicates that lowland rice cultivation in Tangetada district, Kolaka regency, is not yet technically efficient. The low level of technical efficiency of the respondents is caused by the lack of capacity of the farmers to use the factors of production at their disposal. Therefore, the use of excessive factors of production can lead to a decrease in the quantity of production. So, in this case, the farmers have to reduce the use of the factors of production to increase the efficiency of lowland rice cultivation.

c. Economic efficiency of rice cultivation

Economic efficiency is a combination or product of technical efficiency and allocative efficiency. The level of economic efficiency describes the condition of overall efficiency. If technical efficiency and allocative efficiency are achieved, then the efforts made have achieved economic efficiency (Soekartawi, 2003). The number of farmers with the highest economic efficiency value is at the economic efficiency level (-49.50) - (20.45) up to 39 farmers or 50.65% of total respondents lowland rice farmers. In addition, at the level of economic efficiency between (21.45) - (90.50) up to 19 farmers or 24.68%. At the level of economic efficiency between (-137.707) - (-50.50) up to 12 farmers or 15.58%. At the level of technical efficiency between (91.50) - (175.45) farmers, i.e. 9.09% The difference in efficiency levels between farmers shows that there are differences in the use of production factors for each farmer.

Based on the results of the economic efficiency analysis using the above factors of production, calculating the value of technical and allocative efficiency for each variable, the average value which indicates the level of overall economic efficiency is greater than one, i.e. 5.55. However, if we globally calculate the average between technical and allocative efficiency (3.81, 0.995) then the result is 3.79. We can therefore say that the use of production factors in lowland rice cultivation is not economically efficient. The economic efficiency value for lowland rice cultivation in Tanggetada district, Kolaka regency is 3.79. The value of economic efficiency is greater than 1, which indicates that lowland rice cultivation in Tanggetada district, Kolaka regency, is still not efficient. It is therefore necessary to make changes and increase the capacity to combine existing factors of production through training in order to achieve economic efficiency.

D. Conclusion

Based on the results of the analysis and calculations that were described in the previous discussion, the following conclusions can be drawn:

1. Based on the results of the discussion, it can be concluded that the factor of production of land area, urea fertilizers and NPK fertilizers has a significant effect because the sig value is less than and tcount> ttable. Meanwhile, labor inputs, nararel pesticides and seeds have no significant effect because sig value is greater than and tcount <ttable.
2. Based on the results of the allocative efficiency analysis, the average value is 3.18. This means that it is not allocatively efficient, so it is necessary to add the use of factors of production and it is necessary to maximize the profits obtained by making efficiency in the cost elements of the factors of production in order to '' achieve optimal conditions. While the technical efficiency results got an average efficiency value of 0.995, which indicates that lowland rice cultivation in Tanggetada district, Kolaka regency is not technically efficient. so the use of factors of production should be added to increase the efficiency of lowland rice cultivation. And the economic efficiency value for lowland rice cultivation in Tanggetada district, Kolaka regency is 3.79. The value of economic efficiency is greater than 1, which indicates that lowland rice cultivation in Tanggetada district, Kolaka regency, is still not efficient. It is therefore necessary to make changes and increase the capacity to combine existing factors of production through training in order to achieve economic efficiency.

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Value Added Analysis of The Corn Supply Chain As Feed For Poultry In the Sub-District, Contact the City of Bau-Bau

AUTHORS INFO

Haerunianti
Muslim Buton University
haerunianti1@gmail.com

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Abstract

This study aims to: (1) assess the performance trajectory of the corn supply chain for the needs of the animal feed industry. (2) analyze the added value of the animal feed maize marketing system. using the census sampling technique, where the entire population is sampled because the population is small or less than 35 respondents, so the sample in this study was 30 respondents, i.e. all actors in the chain of corn supply. The technique used to obtain both primary and secondary data in this study was carried out through face-to-face interviews using questionnaires. descriptively to answer the problems and objectives. At the same time, the added value in the animal feed maize marketing system uses the modified Hayami method which will be analyzed to address the second problem and research objective. The results showed that: (1) Supply chain performance consists of a single line, starting from corn collectors and selling to wholesalers. Then the feed company buys from wholesalers as the main supplier of corn. The results of animal feed will be sold to retailers and marketed by end consumers. (2) The value added process created in the animal feed sector which provides added value for corn is Rp. 7,500 per kg of animal feed and the profit earned in the company is Rp. 2,300, - per kg of feed, then the total profit for a month of production is Rp. 5,750,000.
Keywords: Supply chain, Corn, Added value

A. Introduction

The natural resources of the agricultural sector are very abundant, so they must be managed properly, so that they can become a source of fulfillment and increase the economy of the community. Agriculture still plays an important role in efforts to increase the income of populations, particularly in rural areas and as a lever for the regional economy. Maize is a carbohydrate source after rice as a food source that can be widely used by the community. In addition to functioning as a feed, corn can also be processed into poultry feed, which contributes significantly to the production of eggs and chicken meat (Haryono, 2012).

The availability of maize has multiple effects on other agribusinesses, especially livestock (Akindipe, 2014). The current increase in the price of animal feed is influenced by the price of maize, since maize used for animal feed must be imported and maize costs almost 70 percent of the cost of producing animal feed. animals and eggs increase. Maize in South-East Sulawesi is an important and strategic commodity which is a food source after rice, as indicated by the harvested area of maize in South-East Sulawesi which reaches 23,945 ha with a production of

'about 68,141 tonnes or an average productivity level of 2.8 tonnes. / ha (BPS, 2016). According to BPS data (Southeast Sulawesi 2016 figures), the total population of laying hens in Southeast Sulawesi is 202,400 head, while the total broiler population is 3,970,393 head. Chicken egg production in Southeast Sulawesi reaches 1,524,072 kg, and chicken meat (chicken) production reaches 3,600,948 kg. This condition shows that the maize trade in Southeast Sulawesi has great potential and an important role in meeting the consumption needs of the population for eggs and chicken meat.

Wholesalers as suppliers of raw materials that will be transformed into animal feed, while the basic ingredients used are dry corn directly from farmers. However, in order to reach consumers, it is not only the role of producers that must be competitive (products reach consumers correctly, adequately, quickly and precisely) but throughout the chain, including retail to 'to the end consumer. The link between the corn supply chain and the added value of corn cannot be ignored, as it increases profits for both chain actors and retailers. From the point of view of the raw material suppliers (collectors, wholesalers, retailers and end consumers), the process brings benefits and added value for each actor in the sector involved in the development of the corn sector.

On the basis of the preliminary investigation, it was found that the price information at the level of farmers and collector traders was very different from that at the level of wholesalers. The existence of a fairly large price difference at the wholesaler level indicates that the price allocation for each actor in the supply chain is not evenly distributed, which is a problem that must be resolved immediately. Maize supply chain actors from the farmer level to the wholesaler level have very big differences in selling prices. But on the other hand, wholesalers have a bigger role in creating added value in every feed distribution chain. The business activities that are processed into feed for wholesalers are not based on market demand, but due to the cooperation between actors in the supply chain which is distributed to retailers to facilitate the marketing of feed for animals. This is due to the price difference based on the retail level and can increase the profits of chain actors by integrating animal feed.

Activities are carried out to take advantage of this potential by processing, distributing and marketing maize for making poultry feed as one of the business activities. However, in these business activities there are many suppliers who process corn for animal feed but are not vertically integrated as they can be purchased directly by end consumers. Although the animal feed business can be vertically integrated as it has several retailers, it can increase profits and great added value with the integration of animal feed. It is said to be vertical integration because there is a change in shape, i.e. dry corn seeds that will be processed into fine animal feed from the distribution process through to marketing through to retail, as well as the benefits and added value obtained by each actor in the chain are different, by analyzing the supply chain can address the above problems. Considering the fact that wholesalers have integrated animal feed compared to other traders who are not integrated, this research should bring great benefits and added value to producers in the exercise of their activities and bring value. to each actor in the chain in order to increase the revenues of each channel. . This is done so that each actor in the chain can perform well, as expected and ultimately satisfy consumers. Based on this background, the aim of this study was to assess the performance trajectory of the maize supply chain for the needs of the feed industry and to analyze the added value of the system. marketing of corn for animal feed.

B. Methodology

1. Research design
   The types of research used are descriptive research and quantitative research. The supply chain structure describes the elements involved in each actor in the chain. From the results of the interviews with the respondents, information was obtained that the actors in the performance chain of the maize supply chain consist of 5 main elements, namely the maize suppliers from the collectors, wholesalers, feed companies, retailers and end consumers. The five elements have their respective roles in creating a market structure that integrates with feed flows, financial flows and information flows. The end consumer becomes part of the structure of the supply chain as the end consumer is also involved in the flow of animal feed, finance and information. The supply chain structure in the feed industry takes the form of a network or can be referred to as a network supply chain.
2. Population and research sample
   Respondents to this study were collectors, wholesalers and retailers. The respondents were determined on purpose. Meanwhile, the non-probability sampling technique chosen is

census sampling. This can be done if the population is small or less than 35 people (Sudiyono, 2014). Based on information obtained from producers, starting with collectors, wholesalers and retailers using the census sampling technique, where the entire population is sampled because the population is small or less than 35 respondents, so the sample in this study was 30 respondents, ie all actors in the sector supply maize.

3. Data analysis techniques

The data analysis was carried out in a descriptive and quantitative manner, i.e. the management of the descriptive data was carried out by describing the supply chain performance trajectories for wholesalers through the identification of chain actors and the value-added processing process that has been turned into animal feed. At the same time, quantitative data processing is carried out by analyzing the added value in each chain of the feed maize marketing system according to the Hayami modification method.

a. Path and flow of the supply chain

It explains the supply chain performance journey by identifying chain actors or parties involved in the chain. In addition, it also explains the forms of cooperation that occur between supply chain actors at large traders. The data will be analyzed descriptively to answer the problems and objectives of the first research.

b. Added value analysis

According to Hayami et al. (2011) that the concept of value added is a change in value that occurs due to the processing of an input in a production process. This analysis aims to respond to the problem and to the objectives of the second study. Factors that affect value added for processing can be classified into two (Sudiyono, 2014), namely: (1) Technical factors, including production capacity, amount of raw materials used and labor work used. (2) Market factors, including product prices, labor wages, prices of raw materials, transport (transport costs) and the value of other inputs.

C. Findings and Discussion

1. Performance path of the maize supply chain in the animal feed sector

The corn supply chain is done qualitatively. The supply chain path is a path formed from the activities of marketing corn as one of the traded foods. The supply chain that goes from the collection of traders to the end consumer. The sectors of the maize supply chain formed from the marketing activities of maize and which can be marketed for animal feed are grouped together in the first line which is then called line I. The actors of each supply chain in maize are district collectors traders (PPK), wholesalers (PB), Enterprises (Producers), Retailers and End consumers.

Forming a supply chain from sub-district collectors who are directly linked to the wholesalers, then PB sells the maize directly to the feed company, so that the added value is created by the company , the added value is created by the dry retail line activity, then PB sells the corn for animal feed, thereby creating the added value by the companies which include retail, kaudapumen, retail, kayapumen, pagan, kaudapumen, kemapumen, mapumen, mapumen, mapumen, retail, final mapumen. The actors of the maize sector are a daily activity carried out on the marketing of maize and animal feed in order to obtain income and profits to meet the needs of their families. Under such conditions, maize will be more profitable if it is independently processed and sold as animal feed compared to being sold directly as maize seed. The actions they take can simplify the path of the corn supply chain so that the profit margin of the collector traders is lower than that of the wholesalers, then the company gets a higher profit than that of the appilokar collectors. The path of the supply chain is illustrated in the following figure.

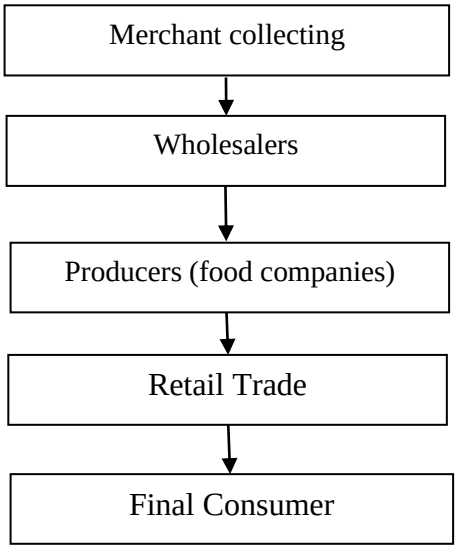

Figure 2. Supply chain

2. Analysis of the value added to the feed marketing system

Added value is linked to the principle of the supply chain because by adding value to an agricultural product, the product will be more easily accepted by large-scale producers. Added value is an indicator to see the performance of the supply chain. Fair profits for each actor in the supply chain is one of the characteristics of an integrated supply chain. Value added is a change in value that occurs due to the processing of an input in a process. production. The flow of increased value added from agricultural products occurs in every supply chain, from upstream to downstream, from collectors to end consumers. The added value in each supply chain varies depending on the input and treatment by each actor in the corn supply chain.

A value added analysis was conducted to obtain information on the feed added value, labor benefits, capital and management benefits for each kilogram of dry corn kernels processed into animal feed. Information regarding the compensation of production factors in the feed processing process is very important for economic actors. Feed distribution activities are carried out by involving multiple retailers to achieve feed production and profit, the amount of added value created in each company's corn supply chain.

Table 2. Value created by each actor in the corn supply chain in the animal feed sector, Bungi District.

No	Description	Average value (Rp/Kg)	Remaks
1	Merchant collecting	4.000	Form of corn
2	Wholesalers	5.000	Form of corn
3	Producers (food companies)	7.000	Animal foods
4	Retail trade	8.000	Animal feed

The supply chain includes all activities from the process of purchasing corn to the process of transformation into animal feed, the added value created in the animal feed sector, from the planning phase to the sale, the wholesalers will still provide corn used in feed processing. to treat. In the maize supply chain, which forms from the purchase of maize to the feed company, then the retailers directly cooperate with the feed company to obtain inputs which will be marketed to final consumers, the price is set by the producer of the animal feed company. according to the average number of orders of each. There are 20 retailers directly linked to the feed producers and registered as regular customers of the company. Each actor in the chain obtains different advantages depending on the activities carried out such as the marketing of corn to the creation of added value in animal feed which is channeled to end consumers, with different buying and selling prices in the industry. of animal feed as a function of the distance between retail orders and end consumers.

The analysis of the added value and profit obtained in animal feed carried out by this company starts from the dry corn grains used in one month of production, i.e. 2,500 kg, 120 liters of fuel, 500 grams of oil and 150,000 electricity / month. The value added analysis calculation is based on one kilogram of processed dry corn kernels per month. The fodder activity collects the corn kernels on a daily basis which will be used, in particular dry corn, for

processing. The value-added analysis consists of several components that make up such as the processing costs and the benefits received by each actor in the chain.

The raw materials used for processing come from corn, the animal feed produced can be sold to retailers and end consumers at different prices depending on the distance traveled both inside and outside the region. region with an average number of orders of 250 kg of animals to feed per month. The number of working days is calculated in a processing process up to 8 hours, and the number of working days in a month is 200 hours for 28 working days. The value of the conversion factor is 2, the value is the ratio between the results obtained and the quantity of corn used. The value of the conversion factor means that for every kilogram of corn processed, 2 kg of feed will be obtained.

The labor coefficient is obtained from the ratio between the number of workers involved in the working day unit and the quantity of corn processed. The calculation results indicate that the labor coefficient is 0.08 working / production day, which means that it takes 8 working hours to process 5,000 kg of feed. The price of food is determined from the quotient between the value of sales for a month of production and the quantity of food sold in a month of the production cycle. The price of the feed is taken from the price received by retailers and end consumers as the price of the feed will be different depending on the distance of the order and the fuel used is taken into account, so the price used is the average price per kg of feed, which is Rp. 7,000 / kg.

The price of the material used, ie dry-cleaned maize, valued at IDR 5,000 / kg, is the average purchase price of maize from collectors and wholesalers. Meanwhile, other inputs from fuel, motor oil, electricity, and food packaging are worth Rp 1,500 / kg. The average value of the contribution of other inputs divided by the kilogram of corn used in a month of production. The value of the feed is multiplied by the conversion factor by the price of the feed, where the value of the feed is 14,000 Rp./kg. The value of the product is higher than the price of corn used in one month of production because the average price of feed is quite high.

Value added is the difference between the added value of animal feed and the price of maize and other inputs. The added value created in the animal feed business during the process of managing corn for animal feed is IDR 7,500 / kg. The value added / food value ratio is 0.53%. The calculation results show that for each IDR 100 kg of feed, an added value of IDR 0.53% will be obtained. Social benefits are the result of multiplying the labor coefficient by an average wage of IDR 5,200 / kg. While labor share is the ratio of social benefits to added value, the value is 0.69%. The profit obtained from the value added in the feed trade is 2 300 Rp / kg, or the percentage profit rate of 0.31% is the value obtained from the added value minus the remuneration of the job. So, one month of production, the total profit in the feed business is Rp 5,750,000.

The results on the distribution of value-added feed are lacking as most of the profits are made by the retailers and the benefits of labor are relatively small, only 5,200 for workers compared to other value-added, due to the relatively low wages received by workers and only 200 hours of active working days in a month of production. The corn management process at the enterprise level is only carried out by five people from the corn lifting process, machine operators, cleaning, weighing and packing. added in the supply chain is analyzed to see a comparison of values. Obtained by each actor in the supply chain. Common costs are the costs incurred to produce two or more types of animal feed in a production process that is carried out simultaneously. When two or three animal feeds are produced from the same resource, a combined cost is formed. In this case, joint costs are the joint production costs incurred in the production process and produce animal feed products in the business. Where costs are used from the start of the management process, including the cost of fuel, engine oil, electricity, labor wages and the cost of depreciation of equipment incurred by the company to produce this type of animal feed.

D. Conclusion

Based on the results of the study, some of the results of the analysis can be stated as follows:

1. The performance path of the corn supply chain consists of a path, starting from the corn collectors and sold by the wholesalers. Then the feed company buys from wholesalers as the main supplier of corn. The results of animal feed will be sold to retailers and marketed by end consumers.
2. The added value process created in the animal feed sector on the marketing system has an added value to the animal feed of 7,500 Rp. - per kg of maize and the profit obtained in the

feed sector. animal feed is Rp. 2,300, - per kg feed, then the total profit for a month of production is Rp. 5,750,000.

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Value Added Business of Milk Fish Pond in Pinrang Regency

AUTHORS INFO

Ariella Ramadhani Putri*
Hasanuddin University
ariellaramadhani@gmail.com

Didi Rukmana
Hasanuddin University

Rahmadanih
Hasanuddin University

ARTICLE INFO

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Abstract

Milkfish is no longer just a superior commodity in Pinrang Regency, but it has become an inflation suppressor in South Sulawesi, so that representatives of Bank Indonesia South Sulawesi have made the milkfish commodity a development cluster in Pinrang Regency. This study aims to analyze the added value of various types of milkfish products processed by milkfish processing household industries in Pinrang Regency. The research was conducted in Pinrang Regency, South Sulawesi Province. The location selection was carried out purposively with the consideration that the location is an area where milkfish processing is located. The respondents used were one home industry. The data analysis used is descriptive qualitative method of data and information and Hayami method. The results showed the added value produced by the processing of boneless fish products with a small size of Rp. 3,450,-/head, medium size Rp. 6.182,-/head, large size Rp. 15,972,-/fish, shredded fish bone product Rp. 41,991,-/pack and Meatball products Rp. 60,923,-/ pack. This shows that the development of the milkfish processing industry provides added value (positive). It is hoped that the government can further develop the milkfish processing industry in Pinrang Regency because it can provide beneficial value for milkfish farmers.
Keywords: Value Added, Products, Milkfish

A. Introduction

Milkfish is one of the superior fish cultivated in brackish water ponds . The advantages of these fish can be grown in the traditional cultivation techniques, are herbivores,capable ofadapting tochanges in theenvironment, resistant to attack the disease, can be cultivated with animals other like shrimp. In the market, milkfish is quite attractive to the public. This is because milkfish has a distinctive taste and currently its management has been carried out in various ways, milkfish contains many benefits if consumed frequently, some of thesebenefits are to prevent coronary heart disease , lower cholesterol, improve bone and dental health, and help growth fetus for pregnant women .

Based on the annual report of the Department of Marine Affairs and Fisheries (2018), it is written that milkfish is no longer just a leading commodity in Pinrang Regency, but is a suppressor of inflation in South Sulawesi so that representatives of Bank Indonesia South Sulawesi make milkfish commodity as a development cluster in Pinrang Regency. The

development of milkfish in Pinrang Regency continues to be carried out through the implementation of milkfish cultivation systems and technology based on good fish farming practices (CBIB) to increase the productivity and quality of milkfish.

As a special product that is used as a commodity to be able to suppress the inflation rate at the provincial level, milkfish production in Pinrang Regency from 2015 has increased until now. Data from the Central Statistics Agency for Pinrang Regency (2020), the amount of milkfish production in Pinrang Regency has continued to increase since 2015 which was 19,383.90 tons/ha and in 2019 it became 20,236.00 tons/ha.

Fish needs not only be separated on demand fresh fish course, still there are chances large in some segments of the business that relates closely to the diversification processed. As in Pinrang Regency, there are several home industries that produce processed milkfish into a finished product that is ready to be marketed. Processed milkfish products include boneless milkfish, shredded milkfish, and milkfish meatballs.

The added value (added value) itself replaces the value of a product or commodity due to processing, transport or storage in a production become much better. With the effort that changed the shape of the primary into a product just the more high-value economic after through the process of processing, it will be able to provide value-added for incurred costs that form the price of the new that is high and the profit is great when compared to being sold in the form of fresh fish. This research was conducted to determine the pattern of profit sharing, income and added value if milkfish in Pinrang Regency.

B. Methodology

1. *Research Design*

Milkfish *(Chanos-chanos)* is one of the commodities that can be obtained from the aquaculture sector. The utility of the milkfish processing group can be increased through product customization, high quality, cost reduction and distribution speed with integrated revenue-sharing management. Product procurement activities, conversion into semi-finished goods and final products, and delivery to final consumers .Milkfish is a fishery commodity that has bright prospects in both the domestic and export markets. One of the largest milkfish producing areas is Pinrang Regency, the demand for milkfish in Pinrang Regency continues to increase, but the amount of production has not been able to meet the market demand for milkfish even though production increases every year.

Livelihood as cultivators of milkfish ponds is the main job for residents who live in coastal and coastal areas of Pinrang Regency. The resources that support this area become one of the largest milkfish producers in the province of South Sulawesi and even Indonesia.The milkfish processing industry in Pinrang Regency is an industry that processes milkfish into a finished product on a household scale. Processed milkfish products include shredded milkfish, presto milkfish and fish balls.

Analysis of added value in the milkfish processing industry was analyzed using the Hayami method. To find out the added value, it is necessary to know the costs, revenues and income of the milkfish processing industry. In addition, it is necessary to know the costs, revenues and income of milkfish farming.

2. *Participants/Respondents/Population and Sample*

In this study, because the population is relatively small, the respondents who are taken in this study are home industries of milkfish processing who are also land owners or cultivators of ponds that use a milkfish production sharing system in Pinrang Regency as many as 1 home industry of milkfish processing.

3. *Technique of Data Collection*

Data collection was carried out through structured interviews with respondents and informants who were considered to know the most about what would be researched in the field in order to provide the necessary information.

4. *Technique of Data Analysis*

The analytical method used to answer the purpose of the mechanism analysis is to identify it using a qualitative descriptive method. To calculate the added value in this study, the Hayami method is used to calculate the added value. The Hayami method was chosen to add an explanation and analysis of added value because by using the Hayami method, in addition to knowing the added value of a product, it can also determine the value of output, production productivity, and also the amount of remuneration to the owners

of production factors such as capital, contributions of other inputs, company profits , and labor (Soekartawi, 2003; Hayami, et al, 1987; Firdaus, 2014; Yuliana, 2016; Febriyanti, et al, 2017).

C. Findings and Discussion

Findings

Characteristics of Respondents

In Table 1 shows the number of respondents by age group in Pinrang Regency, namely from 84 respondents of bandeng fish farm farmers there are 49 farmers respondents are in the age group of 25-45 years with a percentage of 58.33%, and there are 35 farmers respondents are in the age group over 45 years with a percentage of 41.67%.

Table 1 Number of Respondents by Age Group in Pinrang Regency , 2020

No	Age Group (Years)	Number of people)	Percentage (%)
1.	< 25	0	0
2.	25 - 45	49	58.33
3	> 45	35	41.67
	Total	**84**	**100.00**

Table 2 shows the number of respondents based on their level of education. Farmers respondents have different levels of education, namely, as many as 22 people or as many as 26.19% of respondent farmers have the same level of education or the same as elementary school, as many as 23 people or as many as 27.38% of farmers respondents have the same level of education or the same as junior high school.and as many as 39 people or as many as 46.43% of farmers respondents have an education level equal to or equal to the high school level.

Table 2 Number of Respondents by Education Level in Pinrang Regency , 2020

No.	Education Level	Number (Soul)	Percentage (%)
1.	No School	0	0.00
2.	Elementary School/Equivalent	22	26.19
3.	Middle School/Equivalent	23	27.38
4.	High School/Equivalent	39	46.43
	Amount	**84**	**100.00**

Table 3 shows the number of dependents of farmers' families who are trying to farm fish in Pinrang Regency. Farmers who have family dependents between 1 to 4 people amounted to 43 people (51.20%). As for farmers respondents who have family dependents of 5 to 7 people amounted to 38 people (45.23%) and respondents who had family dependents amounting to more than 8 people as many as 3 people (3.57%).

Table3 Identity of Respondents Based on Number of Dependents Families in District Pinrang 2020

No.	Family Dependents (Soul)	Number (Soul)	Percentage (%)
1.	1 - 4	43	51,20
2.	5 - 7	38	45.23
3.	> 8	3	3.57
	Amount	**56**	**100.00**

Analysis of Value Added Fish Bandeng

In Table 4 shows the added value of processing bandeng fish produced by the household industry processing fish bandeng small and medium enterprise 88 Marijo. SME 88 Marijo processed bandeng fish in the form of boneless bandeng fish (packaged in 3 types, namely small size, medium size and large size), fish bone abon and bandeng fish meatballs.In Table 5, there is a plus for boneless fish products of size. small is Rp 3,540,-/pack with a value-added ratio of 62.47% and a profit of Rp 1,540,-/pack, medium-sized boneless fish products are Rp 6,182,-/pack with a value-added ratio of 61.82% and a profit of Rp 2,432,-/pack,The added value of bandeng fish bone abon products amounted to Rp 41,991,-/pack with a value-added ratio of 93.31% and a profit of Rp 38.91,-/pack and the added value of bandeng fish meatball products

amounted to Rp 60,923,-/pack with an added value ratio of 87.03% and a profit of Rp 51,922,-/pack.

Discussion

In this study, the bandeng fish farming business in Pinrang Regency is a traditionally cultivated business. This effort is carried out by bandeng fish farmers for generations by utilizing brackish water. Although a lot of training has been provided both from the Fisheries and Marine Service and from MSMEs who went down directly to review the location and provide socialization so that the increase in the production of bandeng fish farm farmers can increase.However, farm farmers are still very loyal to the traditional cultivation process.

Some areas in Pinrang regency conducted a bandeng fish farming business with a revenue sharing system, namely in Mattiro Sompe, Suppa and Duampanua districts. The lack of purchasing power of the community on farmland becomes one of the factors the community prefers cultivation with a revenue sharing system.

Added value is the basic concept of the difference between input value and output value. The concept of commodities itself is based on increasing the maximum added value so that the greater the added value obtained, the better an overall industrial process (Vania, 2018).While according to Helda (2004), added value is the difference between the value of the product with the cost of raw materials and other input costs and the profit is the difference between added value and direct labor income. The added value generated in this analysis is a gross added value for the processor.The gross added value obtained still contains direct labor rewards. The main components for calculating added value are raw materials, products/outputs, labor inputs and other contribution inputs.

Indrustri households that process bandeng fish products studied are UKM 88 Marijo which is one of the farmers who do a revenue sharing system. UKM 88 Marijo was founded in 2008 by Mrs. Maryani Pandin. This business produces many processed products from bandeng fish, namely boneless bandeng products, bandeng presto, bandeng fish amplang, fish bone abon, fish bone tik-tik, and bandeng fish meatballs.But only 3 products (namely boneless bandeng products consisting of 3 packaging, fish bone abon products and fish meatball products) were analyzed to see the added value generated after processing.

Analysis of the added value of The Bandeng Fish Processing Household Industry in SMEs 88 Marijo has different outputs. The production of monthly for boneless fish with stuffing 3 tails, 2 tails, 1 tail is 4,500 packs, 5,000 packs, and 3,000 packs while for fish bone abon and fish meatballs in a row is, 60 packs and 40 packs. This suggests that the output in the processing of Boneless Fish is greater compared to fish bone abon and fish meatballs, as this effort since its inception has focused on Boneless Bandeng Fish. The conversion factor for boneless fish obtained the value is 1 while the conversion factor for fish bone abon and fish meatballs is 3 and 2.The conversion factor It is derived from the distribution of the output produced with the raw materials used. The selling price of products per tail for small boneless fish is Rp. 5,667,-/tail, medium size Rp. 10,000/tail, large size Rp. 25,000/tail. The selling price of fish bone abon per pack in 100 grams packaging is Rp. 15,000. As for fish meatballs per pack in packs of 500 grams is Rp. 35,000.Labor coefficient is a comparison between the input of domestic industrial labor processing with the input of raw materials produced by boneless fish products, fish bone abon and meatballs. fish. The labor coefficient for boneless bandeng fish with small and medium size is 0.01, while the labor coefficient of bone bandeng fish with large size is 0.02. The labor coefficient for fish bone abon and fish meatballs is 0.31.This coefficient value is the value of labor outpouring to process 1 fish into processed products of boneless bandeng fish, fish bone abon and fish meatballs.

The profit of products produced by the bandeng fish household industry is an added value obtained minus the price of raw materials of the product. Thus, the benefits obtained for the processing of fish without bones small size amounted to Rp. 1,540 / tail, medium size Rp. 2,432 / tail, large size Rp. 6,972 / tail. For the processing of fish bone abon, the profit obtained amounted to Rp. 38,991 / wrap and processing fish meatballs amounting to Rp. 51,922 / wrap.

Table 4 Analysis of the Added Value of Milkfish Processing Home Industry in SMEs 88 Marijo in Pinrang Regency, 2020

Output, Input and Price							
1	Output/Production Results (Pack/month)	A	4,500	5,000	3,000	60	40
2	Inputs/raw materials (tail/month)	B	4,500	5,000	3,000	20	20
3	Tenaga Kerja (HOK)	C	50	50	50	6.25	6.25
4	Conversion Factor	D = A/B	1	1	1	3	2
5	Coefficient of Power Work	E = C/B	0.01	0.01	0.02	0.31	0.31
6	Output Price (Rp/Bks)	F	5.667	10,000	25,000	15,000	35,000
7	Wage Workers Working (Rp/HOK)	G	7.222	7.222	7.222	21,667	21,667
Income and Value Added (Rp/pack)							
8	Raw Material Prices (Rp/Tail)	H	2,000	3.750	9,000	3,000	9,000
9	Other Input Prices (Rp/Bks)	I	126.70	67.57	28,16	8.52	77.48
10	Output Value (Rp/Bks)	J = D x F	5.667	10,000	25,000	45,000	70,000
11	Added Value (Rp/Bks)	K = J - H - I	3,540	6.182	15,972	41,991	60,923
	Value Added Ratio	L% = K/H x 100%	62.47	61.82	63.89	93.31	87.03
12	Labor Income (Rp/Bks)	M = E x G	80.25	72.22	120.37	6,770.83	6,770.83
	The shareof Manpower Employment (%)	N% = M/K x 100%	2.27	1.17	0.75	16.12	11.11
13	Profit (Rp/Bks)	O = K - H	1,540	2,432	6,972	38,991	51,923
	Profit Rate (%)	P% = O/ H x 100%	27.18	24.32	27.89	86.65	74.18
Reply Services Factors of Production							
14	Margin (Rp/Bks)	Q = J - H	3,667	6.250	16,000	42,000	61,000
	Tenaga Kerja (%)	R% = M/Q x 100%	2.19	1.16	0.75	16.12	11.10
	Capital (Input Donations Other) % Profit (%)	S = I/Q x 100%	3.46	1.08	0.18	0.02	0.13
		T% = O/Q x 100%	42.00	38.92	43.57	92.84	85.12

D. Conclusion

The added value generated by the Bandeng Fish Household Industry for the processing of boneless bandeng fish with a small size of Rp. 3,450 / tail, medium size Rp. 6,182 / tail, large size Rp. 15,972 / tail. While the added value for fish bone abon processing amounting to Rp. 41,991 / wrap and for the processing of fish meatballs amounting to Rp. 60,923 / wrap. This shows that the development of the processed fish industry provides added (positive) value. It is expected that the government can further develop the bandeng fish processing industry in Pinrang Regency because it can provide profitable value for bandeng fish farmers.

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Inclusive Finance in Cooperatives for Community Empowerment Through MSME Development in The City of Tarakan

AUTHORS INFO

Khaerunnisa*
Borneo Tarakan University
khaerunnisa3892@gmail.com

Nurlela
Borneo Tarakan University

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Abstract

Inclusivefinance has animportantrole in all eviating poverty and reducing income disparities. One of the development priorities in the Government Work Plan (RKP) is the development of Micro, Small and Medium Enterprises (MSMEs). This is based on the fact that MSME shave contributed a lot tothenational economy. The development of Micro, Small and Medium Enterprises (MSMEs) is very strategic. One form of government support in developing MSMEs in Tarakan City is MSME capital support through cooperatives. Can every community, especially MSME actors, get the same access to Cooperative servicesor not and what are the implementations and implication sof the seinstitutions for community empowerment through MSME development. This study aims to (1) determine the supporting and in hibiting factors ofinclusive finance for empowering farming communities through the development of MSMEs in Cooperatives in Tarakan City (2) Knowing and analyzing the implementation of inclusivef in anceforempowering farming communities through the development of MSMEs in Cooperatives in Tarakan City. The data analysis method used is descriptive qualitative according to Miles and Huberman. The results of the study show that (1) Financial inclusion in cooperatives in Tarakan City isimplemented through a program ofproviding productive capital. The implementation of this cooperative program has been quite successful, buttheperformance of the program has not runefficiently. The indicators off inancialinclusion in question are indicators of availability of access, indicators of use, and indicatorsof quality. (2) The implications off in ancialinclusion show a positivemovement in value where mostof the recipient shave felt the benefits and changes in economic conditions. For those who previously had a business, they felt that there was anincrease in income, and for those whos tarted a new business, they felt that there was anincrease in economic capacity, although it was not too significant. So, the implications of inclusivef in ancefor Cooperatives in Tarakan City have been able to create empowerment for the community, although not yet significantly.

Keywords: Inclusive Finance, Empowermen, Cooperatives

A. Introduction

The national vision of inclusive finance is formulated to create a financial system that is accessible to all levels of society to encourage economic growth, reduce poverty, distribute income, and create financial system stability in Indonesia. Therefore, inclusive finance enables the poor to save and borrow, build their assets, invest in education and entrepreneurship, and in turn improve livelihoods.

The emergence of this national strategy is inseparable from the joint agreement of the countries that are members of the G-20 in Toronto, Canada, in 2010, which stated that the inequality in welfare between countries and between people was caused by the weak access of the people to conventional formal financial institutions. The Association of South East Asian Nation (ASEAN) has also integrated this financial inclusion program in 2015 through the Economic Blue Print. Likewise with world leaders at the United Nations, they have included a financial inclusion agenda to reduce poverty into the eight Millennium Development Goals (MDGs). At the end of 2015, efforts to reduce poverty through financial inclusion were also affirmed as the first goal of the Sustainable Development Goals or abbreviated as SDG2.

Inclusive finance has an important role in alleviating poverty and reducing income disparities. Khasnobis and Mavrotas say that the effective mobilization of domestic savings for private investment plays a key role in achieving economic growth and poverty reduction3. Thus, inclusive finance will greatly help marginalized and low-income groups to increase their income, accumulate wealth, manage risk, and make efforts to get out of poverty4.

In Indonesia, community groups that are prioritized to get access to finance include low-income people in this case MBR, MSME actors, migrant workers, disabilities, neglected children, the elderly, residents of disadvantaged areas as well as students and youth5. According to Global Findex data in 2017, the level of financial inclusion in Indonesia reached 48.9% or 12% higher than the results of the Global Findex three years earlier where in 2014, only about 36% of Indonesia's adult population had access to formal financial institutions6. One of the development priorities in the Government Work Plan (RKP) is the development of Micro, Small and Medium Enterprises (MSMEs). This is based on the fact that MSMEs have contributed a lot to the national economy. The development of Micro, Small and Medium Enterprises (MSMEs) is very strategic, because of its great potential in driving the economic activities of the community, and at the same time being the main source of income for the majority of the community in improving their welfare.

Tarakan City is one of the regions in North Kalimantan Province with a fairly large MSME growth of 9% in 2018 with a total of 4,451 MSME actors. The opportunity for developing MSMEs in Tarakan City, North Kalimantan Province is certainly a strategic one. The position of the North Kalimantan Region which is directly adjacent to Malaysia, makes MSMEs have to improve themselves in increasing their competitiveness, especially with the implementation of free trade in the ASEAN Economic Community (AEC) since 20157. One of the sectors that support the economy of North Kalimantan Province, especially in Tarakan City, is the agricultural sector after the mining sector. Therefore, the empowerment of farming communities must be made on the agenda in the development of the agricultural sector, one of which is a corporate approach that connects farmers with agricultural businesses. In this case, the growth of MSMEs engaged in agriculture8.

One form of government support in developing MSMEs in Tarakan City is MSME capital support through cooperatives. This makes it interesting for researchers to see how the opportunities for every farming community who are members of MSMEs can get the same access to formal financial services, especially cooperatives. Can every community, especially MSME actors, get the same access to Cooperative services or not and what are the implementations and implications of these institutions for community empowerment through MSME development. Therefore, researchers are encouraged to conduct research on financial inclusion in one of the microfinance institutions, namely Cooperatives for empowering farming communities through the development of Micro, Small and Medium Enterprises in Tarakan City.

B. Methodology

1. Research Design

The researchlocationwasdeterminedpurposively in Tarakan City, North Kalimantan Provincewiththeconsiderationthatbasedonstatistical data fromNorth Kalimantan Province, Tarakan City isan area that has thehighestnumberofMSMEs. Thisresearchwillbeconductedfrom May toDecember 2019.

2. Participants/Respondents/PopulationandSample

Determination of informants is done by snowball sampling method. The snowball informant retrieval technique implies an increasing number of informants as time goes by. The researcher departs from an informant who is considered to have more knowledge about the object of research to initiate data collection. The criteria for informants from MSMEs are MSMEs engaged in the agricultural sector and have collaborated with cooperatives for at least 1 year,

while informants from cooperatives are cooperatives that have served MSMEs engaged in the agricultural sector for at least 1 year.

3. Technique of Data Collection

The formsof data collection used are observation, interviews, documentation and triangulation

4. Instruments

The instrument used in this study was a questionnaire.

5. Technique of Data Analysis

The research method used is descriptive qualitative research method. This study uses the data analysis method by Miles and Huberman (1994) in Basrowi (2008)21, where the analysis technique is based on three components: data reduction (data reduction), data presentation (data display), anddrawing and testing conclusions (drawing and testing). Verifying conclusions). Data reduction (data reduction). The data reduction step involves several stages. The first stage involves the step sofediting, grouping, and summarizing the data. In the second stage, there searcher compiles codes and notes (memos) on various matters, including thos erelating to activities and processes so that there searcher can find themes, groups, and data patterns.

C. Findings and Discussion

1. *Implementation of Inclusive Finance in Cooperatives in Tarakan City*

The financial inclusion program by providing business capital loans and assistance with working tools to MSME actors has on average been carried out since the beginning of the establishment of each active cooperative in Tarakan City. Program Since rolling well from 2013 to 2017, this program has been able to provide inclusive financial services to more than ten MSMEs in Tarakan City. Inclusive finance that is realized through this program is basically aimed at creating community empowerment through the development of micro-enterprises as cooperative philanthropic institutions in carrying out the capital lending program. In the aspect of capital utilization or distribution, so far there are two distribution patterns, namely the consumptive pattern and the productive distribution pattern. Through a productive distribution pattern, cooperative financial instruments will be able to open access to ownership for recipients of business capital assistance in the form of production facilities, either by providing financial access in the form of business capital loans or access to goods in the form of work equipment assistance. From here, cooperatives can actually play a role as financial inclusion instruments to support strategies and realize the national vision of financial inclusion. So, the productive pattern in Cooperatives in Tarakan City is manifested in the form of micro-business capital loans or work tools assistance for developing MSMEs.

The granting of business capital loans or work equipment assistance through this program, prospective recipients of assistance must submit applications and meet certain requirements, which include requirements for recipients of assistance and administrative requirements. However, one thing that is more emphasized for prospective recipients of capital assistance is having an entrepreneurial spirit. The entrepreneurial spirit can at least determine the business concept that you want to develop and be better able to manage the aid funds provided so that there is potential for the sustainability of the business they are undertaking which can eventually change the status of the beneficiary from a developing group to an advanced group.

Therefore, cooperatives are very concerned about the characteristics of prospective beneficiaries. The importance of paying attention to the potential and ability of potential beneficiaries in managing the assistance funds provided is also where the provision of capital to SMEs must also be carefully considered whether the person concerned has the ability to manage the funds provided, so that at some point he does not depend on others. If this can be managed properly with good supervision, then gradually, MSMEs that are given capital loans will continue to progress. After the requirements are met, the implementer of the capital grant program conducts a field survey related to the real conditions that exist in the prospective beneficiaries. The results of the survey obtained are then discussed in a meeting of the community economic program sector, then if it has been declared to meet

Requirements, then the granting of assistance will be approved and given to the prospective beneficiaries. After the business capital assistance or work equipment assistance has been provided, the next program implementer's agenda is to provide assistance. Assistance efforts are carried out by conducting monthly monitoring and visits as well as conducting evaluations to see the development of their business.

Conceptually, community empowerment through the development of MSMEs in Tarakan City is carried out with a system of empowering business actors themselves. To realize the empowerment program for business actors as the target of the activities to be achieved, it is necessary to determine the approach used in carrying out the program. The approach in question is the method used so that the people who are the target of the activity are open to accepting innovations that are intended so that they can be empowered.

2. Implications of Inclusive Finance for Community Empowerment Through MSME Development

Inclusive finance run by cooperatives through productive capital provision programs has no small role in realizing the national vision of inclusive finance to create a financial system that is accessible to all levels of society. This is due to the characteristics of cooperatives that are able to reach elements of the poor and marginalized which have been difficult to reach by some financial institutions. Besides that, this cooperative is able to become a real scheme of the intensity of inclusive financial services that aims to overcome the situation of poverty in the community.The objective here is to make financial inclusion an effort to open up the exclusivity of financial institutions which generally only provide capital to parties who are considered bankable. Determine the intention to carry out financial inclusion, namely the willingness to include non-bankable parties who have been excluded or marginalized from financial institutions to be re-categorized as eligible parties and deserve various financial services. This capital provision program in an effort to make financial inclusion synergies within the program by maximizing the potential of available resources and then turning it into an inclusive financial instrument has been carried out quite well, although it has not yet achieved the expected expectations.

The expectation in question is the expectation that empowers the economically weak community, then ultimately increases their economic scale, then they will be able to reach access to financial services from financial institutions that are generally commercial in nature. In real terms, cooperatives can be allocated to overcome the problems of economic development in Indonesia, namely in the form of debt, unemployment, and poverty. This is due to the potential of cooperatives which are opportunities for the realization of prosperity as a manifestation of the national vision of inclusive finance.

The implications of cooperative financial inclusion in Tarakan City show a fairly positive movement of results. This relates to the narratives given to the recipients of capital assistance that most of them have felt the benefits and changes in economic conditions. For those whopreviously had a business, they felt that there was an increase in income, and for those who started a new business, they felt that there was an increase in their economic capacity, although it was not too significant. So, some recipients have also felt that there is a form of empowerment as a result of the program that has been received from the cooperative. This is based on a review of indicators empowerment where the community or individual is said to be empowered if a community or individual has one or more of the four variables as an indicator of empowerment.The variables in question are as follows: First, having the ability to meet the basic needs of life and a stable economy. Second, have the ability to adapt to environmental changes. Third, have the ability to face threats and attacks from outside. Fourth, have the ability to be creative and innovate in self-actualization.

From the explanation of the empowerment indicators, the program of providing capital by cooperatives in order to create financial inclusion for community empowerment through the development of micro-enterprises in Tarakan City has had positive implications by creating community empowerment, although not yet significantly. Positive implications are shown by the ability of the cooperative's capital provision program to create conditions for communities or individuals who are more empowered than the conditions they experienced before. As for the implications that have not been significant, it is shown through indicators of empowerment which have not been achieved as a whole in improving the condition of the community or individual. This, as mentioned above, is caused by various factors related to the implementation process, including the principles and approaches of community empowerment that have not been implemented properly, inadequate human resources from both parties, and the limited scope of community empowerment activities.

D. Conclusion

Financial inclusion in cooperatives in Tarakan City is implemented through a productive capital provision program. This program seeks to facilitate financial accessibility for MSMEs by providing business capital loansor work equipment assistance. The implementation of this cooperative program has been quite successful, but the performance of the program has not runefficiently. This is known from the financial inclusion performance in dicators that have not run as expected. The indicator sofinclusive financial performance are indicator sofaccess availability, us age indicators, and quality indicators.

The implication sofinclusive finance for community empowerment through the development of MSMEs in Tarakan City show a positive value move ment where mostof there cipients have felt the benefits and changes in economic conditions. For those who previously had a business, they felt that there was anincrease in income, and for those who started a new business, they felt that there was anincrease in economic capacity, although it was not too significant. So, the implication sofinclusivef in ancefor Cooperatives in Tarakan City have been able to create empowerment for the community, although not yet significantly. This is based on a review of empowerment in dicators where a community or individual is said to be empoweredif a communityor individual has one or more off our variables as indicator sof empowerment, namely being able to meet the basic need soflife and a stable economy, able to adapt to environmental changes, able to face threats and attacks from outside, and be able to be creative and innovate in self-actualization.

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