Expenditure On Oil Palm Farmers' Households In Bayung Lencir Subdistrict Musi Banyuasin Regency

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Abstract

The profitable business potential of palm oil entices the community and the Indonesian Government to develop it. It makes palm oil farming as a major source of farmers' livelihood. However. oil palm plantations confront a number of challenges. including unstable prices and production. This will affect the household income obtained by farmers. The aim of this research is to examine the characteristics of oil palm farming. such as production costs. revenues and income as well as the proportion of household expenditure devoted to food and non-food consumption. This study was carried out in Bayung Lencir District. Musi Banyuasin Regency. South Sumatra Province. The disproportionate random sampling was used to acquire data from 90 respondents who are independent oil palm farmers. The depth interview method was used to acquired data. According to the findings. oil palm farmers' income was IDR. 122,143,547/cultivation area/year or IDR. 10,178,629/cultivation area/month. The annual household income of oil palm farmers derived form on farm income other than oil palm, off farm income and non-farm income. The proportion of household expenditure for food consumption was 26.30%. while the proportion for non-food consumption was 73.70% and indicating that oil palm farming households are classified as prosperous since there is IDR. 1.015.871/month to be saved.

Keywords : oil palm farming; revenue; household income; proportion of household expenditure

1. Introduction

Palm oil is one of the plantation commodities that plays an essential role in the plantation subsector in Indonesia. Its position as the principal raw ingredient in numerous industrial sectors such as the food business, soap industry, and cosmetic industry. This is the fundamental reason palm oil has great demand and commercial value. The profitable financial potential of palm oil makes it appealing for the community or government to develop it. It can be seen that the expansion of oil palm plantation areas in Indonesia grew by 2.7% from 2019 to 2020 [1]. In 2022, South Sumatra Province was contributed 1.1 million hectares of oil palm plantations, which would be made up of community plantations (510,914 hectares), state plantations (49,042 hectares), and private plantations (498,629 ha) [3].

Musi Banyuasin is one of the districts in South Sumatra with the most oil palm plantation area (213,46 hectares). Musi Banyuasin Regency includes 15 sub-districts, one of which is Bayung Lencir District which has the largest oil palm plantation area (16,778 hectares), the highest fresh fruit bunch (FFB) production (220,240 tons), and the highest productivity (13.13 tons/hectare) [2]. This is the reason of palm oil commodity is important and most of people in this area make oil palm farming as one of their main livelihoods.

The income earned from oil palm farming is used as a source to meet household consumption consisting of food consumption and non-food consumption [5]. Income generation from oil palm farming is unfortunately not always consistent because it is influenced by several factors such as current pricing and production. Thus, to meet household needs, farmers look for alternative sources of livelihood in the non-palm oil sector or work in the non-agricultural sector. With these conditions, it is interesting to examine the household income of oil palm farmers and the proportion of

household expenditure based on food and non-food consumption.

2. Materials and Methods

2.1 Place and Time of Research

This research was conducted in Bayung Lencir District, Musi Banyuasin Regency. South Sumatra Province. The selection of the research site was carried out deliberately with the consideration that the location is the highest producer of fresh fruit bunch in South Sumatra. The criteria for respondents are oil palm farmers who cultivate it independently and have a maximum land area of 5 Ha with a productive crop age. This study analyzed data from one growing season in the period October 2021 – September 2022.

2.2 Research and Withdrawal Methods

The method used in this study is the survey method which is carried out to make comprehensive observations to obtain information related to the topic to be studied factually at the research location. The sampling method uses a disproportionate sampling method with a total of 90 independent oil palm farmers' household.

2.3 Data Collecting Methods

Data collection in this study consisted of primary and secondary data. Primary data were obtained by conducted direct interviews with respondents with several questions in the questionnaire as a medium of assistance and making direct observations. While secondary data were obtained from literature studies conducted on several books related to research.

2.4 Data Analysis Methods

The independent oil palm farmer income was defined by the difference between total revenue dan total cost [7]. Mathematically it can be written as follows:\

$$I = TR - TC$$
$$I = Py \cdot Y - (FC + VC)$$

Details:

I   : Income (IDR/Cultivation area/Year)
TR   : Total Revenue
TC   : Total Cost
Py   : Price for fresh fruit bunch (IDR/Kg)
And : Production of fresh fruit bunch (Kg)
FC   : Fixed Cost (IDR/Cultivation area/Year)
VC   : Variable Cost (IDR/Cultivation area/Year)
Meanwhile, to calculate the income of farmers'

households by adding up the overall income received by household members such as the head of household (farmer), spouse and children both the income obtained from oil palm farming, farm income other than oil palm, off farm income (farm labor) and non-farm income (income sourced other than agricultural business) [4]. Mathematically it can be written as follows:

$$I_{HH} = I_1 + I_2 + I_3 + I_4$$

Details:

I_{HH} : Household Income of Independent Oil Palm Farmer (IDR/Year)
I_1 : Oil Palm Farming income (IDR/Year)
I_2 : Business Farming except Oil Palm farming in come (IDR/Year)
I_3 : Off farm income (IDR/Year)
I_4 : Non-farm income (IDR/Year)

Household expenditure can be calculated by adding up the expenditure for food consumption and non-food consumption [9]. Mathematically it can be written as follows:

$$TE = E_f + E_n$$

Details:
TE   : Total Expenditure of Household Independent Oil Palm Farmer (IDR/Month)
E_f : Expenditure for food consumption of Household Independent Oil Palm Farmer (IDR/Month)
E_n : Expenditure for non-food consumption of Household Independent Oil Palm Farmer (IDR/Month)

To calculate the value of the proportion of expenditure for food consumption to total expenditure can be calculated by the following formula [9]:

$$PFC = \frac{E_f}{TE} \; x \; 100\%$$

Details:
PFC   : Proportion of Food Consumption of Household Independent Oil Palm Farmer
E_f : Expenditure for food consumption of Household Independent Oil Palm Farmer (IDR/Month)
TE   : Total Expenditure of Household Independent Oil Palm Farmer (IDR/Month)

Meanwhile, to calculate the value of the proportion of expenditure for non-food consumption to total expenditure can be calculated by the following formula [9]:

$$PNFC = \frac{E_n}{TE} \; x \; 100\%$$

Details:

PNFC : Proportion of Non-Food Consumption of Household Independent Oil Palm Farmer

E_n : Expenditure for non-food consumption of Household Independent Oil Palm Farmer (IDR/Month)

TE : Total Expenditure of Household Independent Oil Palm Farmer (IDR/Month)

3. Results and Discussion

3.1 Socio-economic Characteristics

Table 1 presents the socio-economic characteristic of explanatory variables in this research. The average independent oil palm smallholder in Bayung Lencir District is in the age range of 31 until 40 years with a percentage of 37.04%. This age is included in the productive age. [4] explains that the productive age is in the range of 15-64 years. The existence of a productive age is very beneficial because it can improve family welfare. This is because the productive age is an age with excellent physical condition.

Thus, it can develop its farming more optimally. Oil palm farmers have an average level of education at the primary school level with a percentage of 54.44%. At this level of education. farmers at least have the ability to read. count. write and manage simply in developing their farms. Despite the fact that farmers' average level of education remains low. it is helped by the average of oil palm farming that has been growing. which has lasted 11 until 15 years. This is because oil palm farming is a business that has been run for generations. After farmers do not continue their education, farmers will continue to be an oil palm farmer that has been run by their parents.

The average oil palm farmer has a land area of 1.6 until 2.5 hectares. this is in accordance with the status of farmers who validate their farms independently, which means that the total capital spent to run their farms comes from their own capital. The majority of independent oil palm farmers have weak financial capabilities. So, their land remains limited. In addition. independent oil palm farmers will manage their plantations independently and are assisted by members of the farmer's own household. The average farmer has a family member of 1 until 5 people with a minimum number of 1 member and a maximum of 7 members.

Table 1. Distribution of Respondents Based on Socio-Economic Characteristic

Variables	Frequency	Percentage (%)
Age (years)		
31-40	33	37.04
41-50	32	35.80
51-60	17	17.28
>60	8	9.88
Education level		
Not receiving formal education	3	3.33
Primary education	49	54.44
Middle education	18	20.00
Secondary education	17	18.89
Tertiary education	3	3.33
Farming experience (years)		
1-5	9	10.00
6-10	8	8.89
11-15	38	42.22
>15	35	38.89
Farm size (hectares)		
≤ 1.5	24	26.67
1.6 – 2.5	35	38.89
2.6 - 5	31	34.44
Family size		
1-5	78	86.67
6-10	12	13.33

Source: Data analysis. 2023

3.2 Oil Palm Farming Characteristics

Farmer income obtained by oil palm farming is obtained from reducing revenue from farm production costs consisting of production input costs, labor costs and equipment depreciation costs (Table 2).

to transport fertilizer into the village. Beside that the distance between the district capital and the village is far away. Thus, fertilizer supply becomes more difficult when farmers require it. The other thing is the price of fertilizer is quite high thought by farmer. This limitation made farmers only used three types of fertilizers, such as dolomite, urea and

Tabel 2. Average Revenue. Productivity. Cost and Income per Business Farming and Per Hectare of Oil Palm Farming

Variable	(IDR/Cultivation Area/Year)
1. Total revenue	**150,400,974**
a. Total output (Kg/year)	53,888
b. Price of fresh fruit bunch (IDR/Kg)	2,791
2. Total cost	**28,257,427**
Production input cost	**27,726,406**
a. Fertilizer	9,883,278
b. Herbicide	1,364,200
Labor cost	**13,904,671**
Depreciation cost	**531,021**
3. Income (IDR/year)	**122,143,547**

Source: Data analysis. 2023

Tabel 3. Average Household Income of Independent Oil Palm Farmer

Variables	Income (IDR/year)	Percentage (%)
Palm oil farming	**122,143,547**	**85.60**
Non-palm oil farming	**5,254,423**	**3.68**
a. Rubber farming	5,254,423	3.68
Off farm	**4,990,222**	**3.50**
a. Farmworker	4,990,222	3.50
Non-farm	**10,300,000**	**7.22**
a. Shop stalls	3,124,444	2.19
b. Carpentry	1,680,000	1.18
c. Village apparatus	200,000	0.14
d. Trader	832,222	0.58
e. Transport driver	493,333	0.35
f. Company workers	2,593,333	1.82
g. Company employees	1,376,667	0.96
Total Household Income	**20,544,645**	**100.00**

Source: Data analysis. 2023

The average revenue of farmers per farm and per hectare respectively was IDR. 150,400,974/year. The total cost of farming incurred by farmers to provide fertilizer was IDR. 9,883,278/cultivation area/year. The intensity of farmers to fertilizing in a year is only 1 until 2 times. It is because of the road access is damaged, making it difficult

some farmers using SP36 fertilizer. Herbicide costs incurred amounted to IDR. 1,364,200/cultivation area/year. Farmers spray herbicides maximum of 3 times a year with an average use of 5 liters/hectare.

The most production costs incurred by farmers were allocated for labor costs of IDR. 13,904,671/cultivation

area/year. This high cost is due to the cost of harvesters carrying out the *tonnase* system, where farmworkers get a harvest wage of IDR. 250,000/ton from fresh fruit bunches that can be collected. Harvesting activities are carried out twice in a month. The average production of fresh fruit bunch produced by farmers is 2.8 tons/month. Meanwhile, depreciation costs for equipment are incurred amounting to IDR. 531,021/cultivation area/year. The agricultural tools used by farmers consist of *egrek, dodos*, machetes, sprayers, *angkong* and hoes. Farmers' income was IDR. 122,143,547/cultivation area/year or IDR. 10,178,629/cultivation area/year based on the revenue and total cost production of oil palm farming shown above. The income IDR. 10,178,629/cultivation area/month is classified as high income since it is greates than IDR. 7,000,000/cultivation area/month [11].

[9] (Table 3).

The average of farmers' household income per year is obtained from oil palm farming income of IDR. 122,143,547 (85.60%), rubber farming income of IDR. 5,254,423 (3.68%), income from farmworkers as harvesting workers of IDR. 4,990,222 (3.50%) and non-farm income contributes accounting for 7.22% or IDR. 10,300,000. Farmers tend to choose other jobs outside of agriculture such as opened a shop stalls, carpentry, village apparatus, trader, transport driver, company workers and company employees. In this research location. there are several companies that established their businesses, those companies involved in agribusiness. mining and petroleum. The existence of the companies could create job opportunities that are beneficial to the local farmer and community. This helps farmers

Table 4. Average Expenditure and Proportion Household Consumption of Independent Oil Palm Farmer

Variables	Nominal (IDR/month)	Percentage (%)
Food expenditure	**2,409,661**	**26.30**
Grains	377,189	4.12
Tubers	32,746	0.36
Fish	217,741	2.38
Meat	147,699	1.61
Egg and milk	150,307	1.64
Vegetables	226,630	2.47
Nuts	38,622	0.42
Fruits	97,675	1.07
Oil and fat	100,636	1.10
Spices	143,529	1.57
Instant food and beverages	98,792	1.08
Other consumption	206,456	2.25
Drink	139,553	1.52
Tobacco	432,088	4.72
Non-food expenditure	**6,753,098**	**73.70**
Housing	398,394	4.35
Fuels	494,081	5.39
Education	1129,940	12.33
Health	240,338	2.62
Clothing	431,934	4.71
Social needs	1,392,241	15.19
Loan	2,666,462	29.10
Total Expenditure	**9,162,758**	**100.00**

3.3 Oil Palm Farmer Household Income

The household income of oil palm farmers is derived from cumulative money earned through various economic activities, both on farm. off farm and non-farm become employees of the company in both their positions as permanent employees and as outsourced employees.

3.4 Household Oil Palm Farmer Expenditures and Proportion of Expenditures

Household expenditure is basically divided into two types, namely food expenditure and non-food expenditure [5]. Food and non-food expenditures are calculated in monthly expenditures. Food consumption has 14 types of expenditures including grains, tubers, fish, meat, eggs and milk, vegetables, fruits, nuts, oils and fats, spices, beverage ingredients, finished food and beverages, tobacco and betel and cigarettes. In other stage, non-food consumption has types of expenditures including electricity tariffs, water tariffs, gasoline, diesel, personal equipment, education, health, clothing, social needs, savings and social gatherings, insurance taxes and durable goods [6].

Based on Table 4. the average monthly expenditure for food consumption was IDR. 2,409,661. The three highest food expenditures incurred by farmers are tobacco (4.72%), grains (4.12%), and vegetables (2.47%). The high cost of purchasing tobacco compared to other types of food expenditure is due to the habit of farmers to make tobacco as a complementary food that is commonly found in numerous activities. Complementary foods are commonly seen in activities such as relaxing while enjoying snacks or drinks such as tea or coffee accompanied by smoking or often found smoking after eating. The majority of farmers can afford 1 until 2 packs of cigarettes every day. Grain food is the second most consumed food after tobacco. Most of grain food consumed by farmers is rice, which is the Indonesian people's main habit. Spending cost for vegetable has risen to become third greatest food expenditure. Because of the availability of markets that provide fish and meat food is only available once a week, as consequence of the distance between the research location and the sub-district capital. Respondents are more likely to buy vegetables as an alternative since they are easier to get.

The average monthly for non-food expenditure of farmer households is IDR. 6,753,098. Loans expenses (29.10%), social needs (15.19%), and education expenditures (12.33%) are the three greatest non-food expenditures. Expenditure on loans is the highest non-food expenditure since the majority of farmers seek loans for business capital to develop their farming business such as extending their arable land. Most farmers make business capital loans of IDR. 20,000,000 – IDR. 50,000,000 with an interest rate of 5.6% per year and a collateral period of 3 years. In addition. the second highest non-food expenditure is for social needs (*arisan*). Most farmers participate in *arisan* with a nominal range of IDR. 5,000,000 – IDR. 10,000,000, depending on each farmer's capacity. Education expenses is the last greatest non-food expenditure. This is due to the fact that many members of farming household are still in school.

Table 4 also shows the proportion of food and non-food expenditure to the total expenditure spent by farmers.

The average expenditure per farmer per month for food consumption was IDR. 2,409,661. while for non-food consumption expenditure was IDR. 6,753,098 so farmers' total household expenditure in a month was IDR. 9,162,758. Based on the above data. the proportion of food consumed was 26.30%. whereas the proportion of non-food consumption 73.70%. Households oil palm farmers are classified as prosperous because the value of the proportion of non-food consumption is greater than the value of the proportion of food consumption. In other stage, farmer still have IDR. 1.015.871/month for saving. This money comes from reducing between oil palm farming income and household expenditure. According to [10] the smaller the value of the proportion of food consumption expenditure. the better the level of household welfare. The smaller the proportion of food consumption expenditure, it will increase food security. The higher the household income, it will increase the purchasing power of households and increase the ease of accessing food [10].

4. Conclusion

Oil palm farming income was IDR. 122,143,547/cultivation area/year or IDR. 10,178,629/cultivation area/year and classified as high income. The household income of oil palm farmers sourced from oil palm farming continues to dominate. The proportion of household expenditure for food consumption was greater than the value of the proportion of food consumption. The value of the proportion of smallholder household expenditure shows that oil palm farming households are classified as prosperous since there is IDR. 1.015.871/month to be saved.

5. Acknowledgement

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