Contribution and Distribution of Farmers Income
of Palm Oil (*Elaeis guineensis* Jacq.) in Pewisoa Jaya Village Tanggetada Sub-District Kolaka Regency

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Abstract

The objective to be achieved is to determine the contribution of oil palm farmers' income to the total income of farmers in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency. To determine the income distribution of oil palm farmers in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency. on the results of the study it can be concluded that the contribution and distribution of income of oil palm farmers is 25,10 % harvest season, the average income of oil palm farmers is 61,42 % per harvest year while the contribution of oil palm farming is 25.10% of the total income of oil palm farmers, and the distribution of income of oil palm farmers is 0.004. the condition is still very low or the community is less prosperous in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency

Keywords: Contribution, income distribution

A. Introduction

Indonesia is an agricultural country, where agriculture plays an important role in the national economy. In 2012, the contribution of the agricultural sector to Gross Domestic Product (GDP) reached 14.44%, ranking second only to the manufacturing sector. The agricultural sector is a sector that is strong enough in facing the shock of the economic crisis and can be relied on in the recovery of the national economy. One potential agricultural sub-sector is the plantation subsector. Although its contribution to GDP is still relatively small (around 1.94%), the plantation sub-sector is a producer of industrial raw materials, absorbing labor for the majority of the population in rural areas and foreign exchange earners (BPS, 2017). The government's policy to increase production and meet CPO market demand is land expansion and plantation revitalization. In line with the enactment of the Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI) in 2011. The development area of oil palm plantations is directed to become the center of growth and development of systems and sustainable plantation agribusiness businesses. The increase in the area of oil palm plantations is good compared to other commodities. As with national development, the development of plantations, including oil palm plantations, aims to equalize development and improve community welfare. According to Syahza (2013), plantation-based agricultural development in a broad sense aims to improve the welfare of people's lives so that there is a change in the life of the surrounding community. On the other hand the success of the development of oil palm plantations is expected to reduce income inequality between groups of people and regions, where the main goal is to increase community income and reduce the poor population in the countryside by empowering the people's economy.Palm oil is one of the plantation crops that has high economic value and is very prospective to be developed. This is because the market demand for palm oil products, both crude palm oil (CPO) and its processed products is very large. Palm oil (*Elaeis guineensis* Jacq.) is basically a cultivated plant that has a good response to environmental conditions. Like other cultivated plants, oil palm requires an appropriate environmental condition so that its production potential can be maximally obtained. Climate and soil conditions are the main factors besides other factors such as genetics, plant care and others (Lubis, 1992). Farming is a set of natural resources found in the place needed for agricultural production, such as sunlight, soil and water, improvements that have been made to the land with buildings that have been built on it. A farm is a unique agro ecosystem; a combination of physical and biological resources such as land forms, land, water, plants (wild plants, trees, cultivated plants) and animals (wild and maintained). Income contribution is a description of the amount of farm income contribution to total income. Income contribution is a concept that explains the amount of income received by farmers based on ownership of resources or production factors that are sacrificed to earn income.

B. Methodology

To find out how much the contribution of oil palm farming income to the total oil palm farmer households is:

1. $X = \dfrac{P1}{Pk} \times 100\%$ ....(1)

Description:

X = Percentage of contribution of oil palm farming income to total income of oil palm farmer households (%)

P1 = Income from oil palm farming (Rp)

Pk = Total income of oil palm farmer households (Rp.)

(Soekartawi in Budiman 2014). Income distribution is a measure of the evenness of society's prosperity when economic growth occurs in a region. Usually there is a trade off between economic growth and income distribution (Sukartawi, 2002). This distribution concerns the human as an individual or household and the total income they receive. The way in which the household or individual gets the income, how much each individual or household receives it, from which the source of income, place and sector of income is not questioned (Sukartawi, 2002).

Inequality in income distribution can be measured by various methods such as pareto, logarithmic variety, coefficient of variation, Pearson skewness, gini ratio, percentage of maximum similarity, information on theil, index of EltatoFrigyes and size of Atkinson. Of these measures, the most frequently used in empirical research is gini ratio (Simatupang & Togar, 1994). To provide an assessment of the high and low inequality of income distribution, this was done with the following criteria:

a. The gini index of less than 0.4 indicates a low income distribution imbalance;
b. The gini index between 0.4-0.5 indicates the inequality of moderate income distribution;
c. The gini index is greater or equal to 0.5 indicating a high inequality of income distribution.

The gini index ranges between zero and one. If the gini index is equal to zero, the distribution of income is very evenly distributed because each class of population receives the same share of income. Graphically, this is indicated by the coincidence of the Lorenz Curve with perfect evenness lines. However, if the gini index is equal to one, it indicates that there is an imbalance in perfect income distribution because all income is only enjoyed by one person. In short, the higher the gini index value, the more unequal income distribution of a population group. Conversely, the lower the value of the gini index means the more evenly distributed the income (Saptana & Rozi, 2014)

Soekartawi (2002), states that income is the difference between the total revenue and the total farming costs that have been spent in the farming process. Farm income is analyzed using the formula:

$$Pd = TR - TC \quad \text{.. (2)}$$

Information:
Pd = income (Rp)
TR = Total Revenue (Rp.)
TC = Total Cost (Total Cots) (Rp)

Revenue is a selection of revenues and costs incurred during the production process. According to Hernanto (1994), it illustrates that the economic progress of farming and the success rate of a farmer compared to other farmers. To find out whether farming is said to be successful if it is able to generate revenue> 1 then farming gets income (profit) but if revenue <1 then farming is said to be a loser.

Based on the background, the purpose of this study was to determine the contribution of oil palm farmers' income to the total income of farmers in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency and to determine the income distribution of oil palm farmers in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency.

This research was carried out in Pewisoa Jaya Village, TanggetadaSubdistrict, Kolaka Regency. This research was carried out from March 8, 2018 to April 17, 2018. The population in this study were all farmers who cultivated oil palm plants in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency which 30 families. Determination of the sample is done by census based on opinion (Sugiyono, 2014), which states that if the population is less than 100 people then all members of the population are sampled. The data used in this study are 2 types, namely primary data and secondary data. Data were obtained from respondents (farmers selected as samples), through questionnaires (questionnaires) as well as through interviews (interviews), village offices, District Offices, Education Center for Extension, and through literature studies (references) or literature

books and research reports , studies of relevant agency and service agencies. Data is analysis using formulas :

1. $X_{ks} = \dfrac{P1_{ks}}{Pk_{ks}} \times 100\%$ ....(2)

Description:

Xks   = Percentage of contribution of oil palm farming income to total household income of
             oil palm farmers(%)
P1ks   = Income from oil palm farming (Rp)
Pkks   = Total income of oil palm farmer households (Rp)

To find out the income distribution, use the formula:

$$GR = 1 - \sum_{j=1}^{k} \frac{Yj+Yj-1}{k}$$ ....(3)

Information:

Yjks   : The cumulative percentage of income received to the jth group
Yks j-1   : The cumulative percentage of income received to previous groups
Kks   : Number of Groups (class)

C. Results and Discussion

Production is the amount or amount of yield obtained from Palm oil farming in one production process measured in kilograms (kg). The results of the research on the production of oil palm farming in Pewisoa Jaya Village are presented in Table 1, as follows:

Table 1. Palm oil production in pewisoa jaya village, tanggetada district, kolaka regency 2018

No.	Production (Kg)	Number of Respondents	Percentage (%)
1	1.000 – 2.000	2	6.67
2	2.001 - 4.000	23	76.67
3	4.001 – 4.500	5	16.67
	Total	**30**	**100**

Source: Primary Data After Processing in 2018

The above table can be seen that respondent farmers obtained oil palm production in the range of 1,000 kg to 4,500 kg, this can be caused by varying palm oil production because there are two possible causes including the treatment of farmers in oil palm plants especially in trimming and giving different fertilizers different, so the results obtained also vary.

1. Farming and non-farming income

Farming income is the difference between the total income received and the total production costs incurred by oil palm farmers in one farming production process. The results of research on oil palm farming income are presented in Table 2, as follows:

Table 2. Range of Number of Oil Palm Farming Revenues in Pewisoa Jaya Village, Tanggetada
District, Kolaka Regency 2018

No.	Income (Rp)	Number of Respondents	Percentage (%)
1	1.000.000 - 6.000.000	2	6.67
2	6.100.000 - 10.000.000	9	30
3	10.100.000 - 15.000.000	15	50
4	15.100.000 - 35.000.000	4	13.33
	Total	**30**	**100**

Source: Primary Data After Processing in 2018

The table above shows that oil palm farmers have different income, the range of income of oil palm farmers is between Rp. 1,000,000 to Rp. 35,000,000, - this is because the production obtained is also predictable, so the income earned is also different, depending on the volume of production produced by the farmer.

2. Contributions Income

An analysis of the contribution of oil palm farming will provide an overview of the size of oil palm farming income to the total income of farmers. This analysis relates to goals and hypotheses, which is assumed that oil palm income has a large contribution to farmers' income. Farming income is income from agricultural products other than oil palm crops such as clove plant income, cashew nuts and others. Non-farm income is the result of the farmer's business other than agricultural products such as the results of the workshop business, trading, livestock and others. Contributions carried out by oil palm farmers in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency, in more detail can be seen in Table 3.

Table 3. Contributions Income of Respondent Farmers in Pewisoa Jaya Village, Tanggetada
District, Kolaka Regency 2018

No	Source of	Contributions (Rp)	Precentage (%)
1	Pendapatan Kelapa Sawit	11.806.920	25,10
2	Pendapatan Usahatani Lain	28.882.567	61,42
3	Pendapatan Non Usahatani	6.334.733	13,39
	Amount of	47.024.220	100

Source: Primary Data After Processing in 2018

Based on the analysis used above, it is obtained that the average Palm Oil farmers' income is 25.10%, while the other farm income is much greater around 61.42%, this is possible, because oil palm farmers are also pepper farmers and clove farmers and the possibility of value selling from clove and pepper commodities is far more expensive than the price of palm oil.

3. Income Distribution

The income distribution analysis will provide an overview of the level of evenness or inequality contributed by each source of income to the income distribution of palm oil farmer households. The indicators used to measure income distribution in this analysis are Gini Ratio and Lorens Curve. The description of the level of inequality of oil palm farmer household income can be seen in Table

4. If the distribution of farmer household income is separated for each source of income between the sources of oil palm farming, other farming, and non-farming, it is relatively more unequal than distribution total income and income from oil palm farming and other farming.

Table 4. Gini Index of Oil Palm Farmers in Pewisoa Jaya Village District of Tanggetada, Kolaka Regency 2018.

No	Revenue Sources	GR	TK
1	Palm Oil Income	0,0044404	R
2	Total Revenues	**0,0044404**	**R**

Source: Analysis of primary data 2018

Contribution of ratio gini curve
Gape: RG = Gini Ratio
Tk   = Level of inequality
Criteria   = Oshima, 1976
R   = Low (Gini Ratio <0.4)
S   = Medium (Gini Ratio 0.4-0.5)
T   = Height (Gini Ratio> 0.5)

The level of inequality of distribution of Pewisoa Jaya's oil palm farmers total income is 0.0044404. Inequalities that occur in oil palm farmers in Pewisoa Jaya Village are in the low category with values according to the gini ratio. This is because all oil palm farmers are involved in other farming and non-farming activities. The contribution given by the activity to the total income is quite significant. Besides using the gini index, the level of inequality in the distribution of income of oil palm farmers in Pewisoa Jaya Village can also be seen from the lorenz curve. The more convex curve formed from the balance line, the more uneven distribution of income of oil palm farmers. If the lorenz curve formed is near the equilibrium line, it can be interpreted that the distribution of income of oil palm farmers is more evenly distributed.

D. Conclusions

Based on the results of the study, it can be concluded that the contribution and income distribution of oil palm farmers (*Elaeis guineensis* Jacq.) is the average farmer's income of Rp. 47,024,220, the average income of oil palm is Rp. 11,806,920 while the contribution of oil palm farming amounted to 25.10% of the total income and the distribution of farmer's income of 0.004 means that in very low conditions or less affluent communities in the Jaya Village of the Tanggetada District, Kolaka District. Therefore farmer need to register it can be suggested as follows: Palm Oil Farmers in Pewisoa Jaya Village, Tanggetada District, Kolaka Regency, should carry out detailed records of the use of costs used during the production process. It is expected that the Kolaka District Government, especially in the plantation office, will pay attention to oil palm farmers in the form of counseling, so that the production and income of farmers can improve further in the future.

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