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Income And Welfare Analysis of Rubber Farmers of Sarolangun Regency Jambi - Indonesia

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ABSTRACT

This study aims to analyze the income and welfare of rubber farmers. The research was conducted in the rubber production center of Sarolangun Regency with pauh subdistrict research locus, with sample villages of Karang Mendapo Village, Pauh Village and Semaran Village. The data usedn is primary data obtained by interview method using questionnaires. Sample withdrawal using Simple Random Sampling Metohd. The technique of determining the sample size uses the Slovinmethod. The sample size is 57 farmers. The research period is July - August 2021. Data analysis uses descriptive analysis, contingency tables and chi-square tests (x^₂). The results showed that most farmers have below average incomes. The main source of income for farmers comes from rubber farming. Rubber farmers' income groups are in the low to moderate category. The proportion of farmers' consumption expenditure is greater on food consumption (rice, side dishes), the proportion for non-food consumption is mostly for clothing. The welfare of farmers is in the low category. Differences in farmers' incomes cause significant differences in farmers' well-being. The degree of contingency of income on the welfare of farmers is in the moderate category. While the degree of income relationship of farmers with the welfare of farmers is positive and significant.

KEYWORDS

rubber farming; income; welfare

INTRODUCTION

In 2016-2020 the area of rubber plantations in Jambi Province averaged 670,203 ha with a growth rate of 0.74 %/year production of 348,327.4 tons /year with a growth rate of 1.57 %/year, productivity of 0.9302 tons/ha with a growth rate of 0.24 %/year, the number of farmers 262,272 KK/year with a decrease rate of 0.10 %/year. Rubber plantations playan important role in economic growth, GDP, foreign exchange sources and labor absorption. For this reason, various good policies that have been, are and will come are aimed at increasing the role of rubber plantations to the economy of Jambi Province.

RESEARCH METHODS

The research was conducted in Sarolangun Regency with pauh subdistrict research locus. The stingyarea was chosen *purposively*, with consideration as the center of rubber production and the main source of income offarmers. Sample villages are Karang Mendapo Village, Pauh Village, and DesaSemaran. The object of the study is farmers whose main source of income is from rubber farming. The study is focused on analyzing the income and well-being of rubber farmers. The study was conducted from July 2020 to Augustus 2021. The method of determining sample size is the *slovin method*,while the

determination of the sample size of each population is a comparable allocation *method.* (Sugiono 2016) and Nazir, M (2013) As for the population size and respondents from the three sample villages can be seen Table 1.

Table 1. Population and Respondents of Rubber Farmers in Research Area

No	Village	Population (KK)	Number of Respondents (KK)
1.	Karang Mendapo	452	14
2.	Pauh	911	29
3.	Semaran	426	14
	Total	**1,789**	**57**

The sampling method uses Simple Random Sampling with a random table. The data analysis method uses descriptive analysis, contingency tables, and uses the Chi Square (x^2) test which refers to Nasution, A, H (2008) and Nazir, M (2013).

RESULTS AND DISCUSSION

Description of Farmers and Rubber Farm

The description of farmers and rubber farming in this study was limited to characteristics that are thought to influence totheverdict of farmers in farming endeavors. Adescription of farmers and rubber farming can be seen Table 2.

Table 2. Description of Farmers and Agricultural Rubber in the Research Area, 2021.

Identity of the farmer	Range	Mean
Farmer's age (years)	37 - 60	48
Number of family members (people)	2 - 7	5
Level of Education	SD - SMA	SMP
Experience of farming (years)	15 - 26	20
Land area (ha)	1 - 5	2,35
Production (kg)	2.060 - 5.450	3.774
Price (Rp)kg)	7.500 - 10.000	9.385
Income (Rp million)	15,8 - 36,4	22,80
Cost (Rp million)	0,26 - 0,88	0,67

Table 2 shows that the age of farmers is at aproductive age, the number of farmers' dependency is relatively moderate, the level of formal education is relatively low, the experience of usahatani is relatively high. While the description of rubber farming, while the area is relatively wide, productivity is relatively high, the price received by farmers is relatively low, so as to provide acceptance for farmers is relatively low. The costpaid by farmers is relatively low which describesthe application of cultivation technology classified as traditional farming.

Rubber Farm Income

The main source of income of farmers is from rubber farming businesses whose distribution can be seen table 3.

Table 3. Distribution of Farmers' Income from Rubber Farming in Research Area, 2021

Income Group (Rp /Year)	Number of farmers (KK)	Percentage (%)
15.850.000 – <17.850.000	4	7.01
17,850,000 – <19.850,000	9	15,78
19,850,000 – <21.850,000	11	19.29
21.850.000 – <23.850.000	14	24.56
23,850,000 – <25.850,000	10	17.54
25,850,000 – <27.850,000	6	10,53
27,850,000 – <29.850.000	3	5,26
Total	**57**	**100**

Table 3 shows that the income of rubber farmers is classified as a varied with a range of Rp. 15.85 million – <Rp. 29.85 million, with an average of Rp 22,786,737 there are as many as 42.08% of farmers whose income is below average and there are as many as 57.92% of farmers whose income is above average. This is in accordance with al-Muksit research (2017), that rubber farm income of Rp. 21.44 million / year, based on the category of the Central Bureau of Statistics (BPS) including the moderate income group. Adrianto (2018), that rubber farming income in Labuhan Batu Regency is only Rp. 15.36 million / year. Dewi *et al* (2019) in Balangan Regency only earn Rp. 8.28 million / year. This shows that the income level of rubber farming in Sarolangun Regency is relatively high. Based on the results of research thatt income obtained by farmers karet depends on the area of land,production and price of rubber produced. Farmers with large land earn high incomes and farmers who have narrow land earn low incomes. Theaverageamount is Rp. 31.3 million per year with a land area of 3-5 ha, and an average income of Rp.16,8 million per year with a land area of 1-2 ha.

Farmer's Income and Farmer Income Classification

Farmers, in addition to trying to farm rubber (On farm) also conduct economic activities outside of rubber farming (Off farm) and not farming (Non farm). The total household income of farmers can be seen in Table 4.

Table 4. Total Household Income of Rubber Farmers in the Research Area, 2021

Source of Income	Income (Rp/Year)	Percentage (%)
Rubber Farm (On Farm)	22.786. 737	78,88
Non rubber Farm (Off Farm)	3.481.450	12,85
Non Farm	2.620.000	9,07
TOTAL	28.888.187	100

Table 4 shows that the contribution of income from rubber farming is relatively large, this indicates that the income class of farmers, farmers' consumption expenditures are largely determined by the source of income from rubber farming. So if there is a decrease in the price of rubber will significantly affect the total income of farmers, income groups and on rubber consumption expenditures.

Central Bureau of Statistics (2014), the distribution of farmers based on income level groups is classified into 4 categories, namely very high, high, medium and lowincome groups. Apunthe distribution of farmers based on the classification of income classes can be seen Table 5.

Table 5. Distribution of Farmers Based on BPS Income Classification (2014), 2021

Income Group	Income level (Rp/mon)	Number of farmers Kk	(%)
Very High Income	> 3.500.000	4	7.01
High Income	3.500.000 - 2.500.000	9	15.78
Medium Income	2.500.000 - 1.500.000	33	57.89
Low Income	< 1,500,000	11	19.29
Total		**57**	**100**

Table 5 shows that the average incomeper month is 7.01% of farmers are in the income class is very high. 15.78% of farmers are inhigh incomegroups. 57.89% of farmers are in the golongan middle income and 19.29% of farmers are in the low income group. The average farmer's income amounted to Rp. 28.9 million/ year with an averagefarmer's income of Rp. 2.41 million/ month, lower than the Regional Minimum Wage Kabupaten Sarolangun of Rp.2.63 million/month. But the survival is feasible when compared to the sayogyo criterion (1997), that living a decent life with the equivalent expenditure of 960 kg of rice per year per capita. Based on the World Bank's poverty line standards, 61.40% of farmers are in the high category and 38.60% are still below thekinan kemis linestandard. The results of this study showed that the welfare level of rubber farmers amounted to 63.16% of the prosperous category and by 36.84% entering theegori notyet prosperous.

Rubber Farmers' Consumption Expenditures

Consumption expenditure consists of food consumption and non-food consumption, low-income farmers tend to spend a greater proportion of food consumption than non-food consumption. The welfare of farmers is determined by income and usage patterns (proportion of food consumption to non-food consumption). The expenditure of rubber farmers' household consumption can be seen table 6.

Tabel 6. Rubber Farmers' Household Expenditures in the Research Area, 2021

No	Food comsumption Expendature	Average (Rp/years)	Percentage (%)
1	Rice	2.485.000	8.86
2	Side dishes and vegetables	7.402.500	26.40
3	Nuts and tubers	878.400	3.13
4	Vegetable oil	743.050	2.65
5	Sugar	495.600	1.77
6	Coffea/tea	568.000	2.03
7	Salt	59.450	0.21
8	Milk	385.000	1.37
9	Other	1.196.500	4.27
	TOTAL	14.213.500	50.68
No	**Non-Food comsumption Expendature**	**Average (Rp/years)**	**Percentage (%)**
1	Clothing	3.562.500	12.70
2	education	820.000	2.92
3	Energy	1.855.750	6.62
4	Health	1.250.500	4.46
5	Communication	1.300.000	4.64
6	Housing area	875.700	3.12

7	Credit	850.000	3.03
8	Sosio-cultural-religios	3.315.450	11.82
	TOTAL	13.829.900	49.32
	TOTAL AMOUNT	28.043.400	100

Table 6 shows that the proportion of food consumption expenditures with non-food consumption is relatively the same. Consumption expenditure of rice, side dishes and vegetables is relatively large (35.26%) of total consumption expenditure. Consumption expenditure for clothing, social-cultural - religious by 24.52%. Investment expenditures that are productive are less getting the attention of farmers, total household consumption expenditure is relatively equal to the amount of income, meaning that farmers relatively have no savings.

Farmer Welfare

Welfare is the end result of the economic activity of farmers generating income. This income is one of the tollsokmeasure of farmers' exchange rates and welfare,Sudana, W (2007), Arifin et.al(2012), Rachmat, M (2013) and Fajri, MR (2013). The higher the level of income, the higher the level of household welfare. Todescribe the welfare of farmers in the research area used welfare indicators according to BPS. The 7 indicators of well-being can be seen table 7.

Table 7. Welfare Indicator Score According to BPS (2014) Research Area, 2021

Category	Score	Number of farmers	
		(Kk)	(%)
Population			
Low	5 - 10	31	73.68
Tall	11 - ≤15	26	26.32
Health and nutrition			
Low	12 - 24	56	98.24
Tall	25 -≤36	1	1.75
Family members education			
Low	6 -12	55	96,49
Tall	13 - ≤24	2	3.51
Type of family member work			
Low	9 -18	32	56.14
Tall	19 - ≤27	25	43.86
The level and pattern of family consumption			
Low	4 - 8	24	57.89
Tall	9 - ≤ 12	33	42.11
The condition of the family residence			
Low	12 - 24	7	12.28
Tall	25 - ≤ 36	50	87.71
Social-cultural-religious			
Low	5 – 10	51	89.47
Tall	11 - ≤15	6	10.53

Table 7 shows that the welfare of farmers is reviewed from historical indicators with more farmers in the low category are indicators of population, health and nutrition, education level of family members, types of work of family members, levels and patterns of family consumption. With the number of farmers as many as 73.58%, 98.74 %, 96.49%, 56.14%, and 57.89%. While the welfare indicator is classified as high with more farmers is an indicator of family living conditions and socio-cultural-religious conditions with the number of farmers as much as 87.72%, and 89.47% respectively. This study is consistent with Manullang, Noor, Pardian, Syamsiah (2017), that based on indicators of the income exchange rate of soybean farmers and based on 11 BPS indicators (2007), that the level of welfare of farmers falls into the low category. This is consistent with Al Muksit (2017) obtaining research results for Batanghari Regency there is a tendency for low income groups to produce a moderate welfare category, and if income is classified as high it will provide moderate to high welfare groups.

Income relation and farmer welfare

As for the contingency of income relations and thewelfareof farmers' households based on 7 indicators of BPS welfare (2014), can be seen Table 8.

Table 8. Income-to-Welfare Relationship Contingency in Research Area 2021

Income Group	Welfare		Sum
	Tall	Low	
Tall	25 (43.85 %)	6 (10.52 %)	31 (54.38 %)
Low	11 (19.29 %)	15 (26.31 %)	26 (45.61 %)
Total	36 (63.15 %)	21 (36.84 %)	57 (100 %)

Table 8 shows that there is a tendency for farmers who have high income groups to produce high welfare and conversely low income groups provide low welfare. There is tendency the higher the level of income, the higher the level of welfare of farmers and vice versa. *Test Chi - Square* value. x^2 hit = 7,625 <. x^2 tab = (α= 5% db = 1) = 3.84 means accept H1 Reject H0 means that the difference in income causes significant differences in farmers' welfare. The degree of contingency value, Chit = 0.3435 which indicates that the degree of contingency of the effect of income levels on the high welfare of farmers is 34.35%, and is in the moderate category. While the correlation coefficient obtained r = 0.4875 which indicates that the degree of relationship between income and well-being is 48.57 %, and the results of the t test show that the correlation coefficient obtained is significantly different. This means that there is a significant degree of relationship between income and farmer welfare. Thisresearch is consistent with Aditya Nata *et,al* (2020), that there is a significant income relationship withthe welfare levelof banana farmers and is in the moderate category. Furthermore, Afrida (2018) that the determining factor of farmers' income levels is land area, so that contingency relationships are obtained between land area and the welfare of farmers' households. Farmers who have a relatively wider land area will produce better household welfare. Sudana (2008) that the determinant factor of well-being is the income factor. Adrianto (2018) there is a close relationship between the amount of income and the level of welfare of farmers.

CONCLUSION

Most of the farmers have below average income. The main source of income for rubber farmers is rubber farming. The income group of rubber farmers is in the low to moderate category. The proportion of farmers' consumption expenditure is greater for the consumption of panga (rice, side dishes) the proportion of non-food is mostly for clothing. Based onthe category of BPS (2014) farmers are classified as moderate income. Indicators of relatively low relativeity with more farmers in the lower category are indicators of population, health and nutrition, education level of family members, type of work of family members, the level and pattern of family consumption. With the number of farmers as many as 73.58%, 98.74 %, 96.49%, 56.14%, and 57.89%. While the welfare indicator is classified as high with more farmers is an indicator of family living conditions and socio-cultural-religious conditions with the number of farmers as much as 87.72%, and 89.47%, respectively. Differences in farmers' incomes cause significant differences in farmers' well-being. The degree of tendency of income influence on the welfare of farmers is in the moderate category. While the degree of income relationship between farmers and farmers' welfare is positively. correlated and significant.

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