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INCOME INEQUALITY AND POVERTY AMONG RICE FARMERS: A CASE ON OWNER FARMERS AND SHARECROPPERS IN LAHAT REGENCY OF SOUTH SUMATERA PROVINCE

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ABSTRACT

South Sumatera Province occupies the position of poverty above the national average. The biggest contribution came from rural areas, most of which were communities with livelihoods as rice farmers. In-depth information is needed by the government to continue to reduce poverty and income inequality that occur. Lahat Regency is in the spotlight due to the achievement of average economic growth and poverty reduction above the provincial average. The lack of available information regarding the poverty of rice farmers in the category of land ownership status (owner and sharecropper) is an important foundation for this research. The objective of this study was to determine income inequality and poverty distribution among rice farmers in Lahat Regency of South Sumatera Province. Using the Gini ratio and minimum income based on the method by the Asian Development Bank (ADB) and Biro Pusat Statistik (BPS), the level of inequality and distribution of poverty between the owner farmers and sharecroppers were determined. The results of the study showed that income inequality occurred in the moderate category of rice farmers in the Lahat Regency. Based on BPS and ADB criteria, the highest distribution of poverty is found on sharecroppers. Overall poverty occurred among the rice farmers in Lahat Regency was high, namely 52.55% (BPS) or 73.65% (ADB).

Keywords: *income inequality, profit-sharing, poverty distribution, sharecropper, rice farmer.*

INTRODUCTION

Poverty is a major problem commonly faced by developing countries. The problem has predominantly occurred in the rural areas where large proportions of the livelihood rely on agriculture. For South Sumatera Province, the poverty rate was 13.9%, or above the national average (10.96%). Nevertheless, not all districts in the province contributed the same share. Lahat Regency, for instance, is one district in the province that exhibited an average economic growth and poverty reduction above the provincial average (South Sumatera, 2015).

Although Lahat Regency is not the main rice production center for South Sumatera Province, rice farming plays an important role in the district economy. Most of the studies on poverty among rice farmers discussed the status of farmers with criteria based on land area tenure. Hutapea & Raharjo (2016) showed that rice farmers who have the narrowest land tenure have the greatest poverty rates compared to rice farmers who have medium and wider land. Setiawan et al. (2007), Anggraini (2016), and Sriati (2017) also determined the poverty of rice farmers by utilizing the amount of land ownership. However, the poverty phenomena related to the status of the farmer or the profit-sharing system is varied regions. This study was performed to determine income inequality and poverty distribution among rice farmers in Lahat Regency of South Sumatera Province.

RESEARCH METHOD

The study was conducted in July 2018 based on the primary data collected from two sub-district (South Lahat and Tanjung Sakti) known as the rice production centers for Lahat Regency, South Sumatera Province. Banjar Negara and Tanjung Payang villages were selected to represent South Lahat Sub District, while Ulak Lebar and Sindang Panjang villages were selected to represent South Lahat Sub District. Total samples of 160 out of 509 rice farmers in the villages were drawn according to simple random sampling (Sukiyono, 2018). The samples were comprised of 53 owner farmers and 107 sharecroppers. Each farmer was interviewed using a prepared questionnaire related to the characteristics of farmers and rice farming.

$$\pi = TR - TC$$

where $TR = Y \, x \, P_y$ and $TC = TFC + TCV$, TR is total revenue, Y is total production, and P_y is price of rice, TC is the total cost, TFC is total fixed cost, TVC is total variable costs.

The income inequality was estimated using the Gini Ratio (Gini Ratio or Gini Index). Gini ratio or Gini coefficient is a tool to measure the degree of inequality in income distribution. This tool is based on the Lorenz curve to represent the relationship between the cumulative percentage of per capita household expenditures and the cumulative percentage of the population (De Janvry & Sadoulet, 2015). The Gini index has been used developed in the development of quantitative policy analysis (Sadoulet & de Janvry, 1995), assess the impact of carbon taxes on income distribution (Oladosu & Rose 2007), developing information policies for sustainable consumption and social justice (Druckman & Jackson, 2008), evaluating social welfare programs (Kenworthy & Pontusson, 2005; Ostry et al., 2014; and Sukiyono et al., 2016). The Gini index can be formulated as follows:

$$GR = 1 - \sum_{t=1}^{k} (f_t - f_{t-t})(y_t + y_{t-1})$$

where k is total class/group; f_t is a proportion of the number of cumulative households in the *t-th* class; y_t is a proportion of the number of income households in the *t-th* class. The criteria of inequality is evenly distributed (x = 0), low inequality (0 < x <0.4), moderate inequality (0.4 < x < 0. 5), high inequality (0. 5 < x < 1), and unevenly distributed (x = 1).

There are two criteria used to measure the level of poverty used in this study. First, the criteria of the Asian Development Bank (ADB). This criterion uses a poverty line were households with per capita income of less than US $ 1.90/capita/day (ADB 2018) are classified as poor, and instead. Second, the criteria of the Biro Pusat Statistik (BPS). The poverty line set by the Lahat Regency BPS is IDR 419 658/ capita/month (BPS, 2019). Households with a per capita/month income less than these are classified as poor.

RESULTS AND DISCUSSION

Farmer characteristics

A summary of the characteristics of farmer respondents in this study is presented in Table 1. In terms of age, rice farmers in Lahat Regency could be classified as productive ages. The percentage of rice farmers under 65 years was 92% with an average age of 57 years. For the sharecroppers, the average age was 54 years with the number of aged under 65 years as much as 97%. At this productive age, farmers will be able to work productively and be able to work actively to cultivate agricultural land which is their responsibility (Mubyarto, 1989; Simanjuntak, 1985).

Judging from the level of education, most farmers own the level of junior high school education. The owner farmer had up to junior high school education (37.74%), while sharecroppers were mostly elementary school education (34.58%). The level of education is often associated with the ability of farmers to make

Table 1 Characteristics of owner and sharecroppers

No.	Information	Owner (n=53)			Sharecropper (n=107)		
		People	(%)	Average	People	(%)	Average
1	Age (Year)						
	20-45	15	28.30		41	38.32	
	46-65	34	64.15	57	63	58.88	54
	66-85	4	7.55		3	2.80	
2	Education (Year)						
	Primary School	9	16.98		37	34.58	
	Junior High School	20	37.74		27	25.23	
	Senior High School	15	28.30		31	28.97	
	Diploma-Bachelor	3	5.66		4	3.74	
	Under Primary School	6	11.32		8	7.48	
3	Family Dependents (People)						
	(1-3)	25	47.17		37	34.58	
	(4-6)	28	52.83	4	68	63.55	4
	(7-8)	0	0		2	1.87	
4	Farming Experience (Year)						
	(1-15)	20	37.74		50	46.73	
	(16-30)	28	52.83	24	51	47.66	24
	(31-50)	5	9.43		6	5.61	
5	Land Area (ha)						
	(0,25-0,5)	40	75.47	0.39	85	79.44	0.37
	(0,75-2)	13	24.53		22	20.56	

decisions, especially those related to farming, and diversify their household income. The number of family dependents is the number of family members whose living expenses are borne by the family head. The average number of dependents of owner farmers and sharecroppers was 4 people. The largest distribution was in the category of 4-6 people per household, namely 52.83% for the owner farmers and 63.55% for the sharecroppers. The number of family dependents was closely related to the large economic burden for the farmers.

From the aspect of farming experience, these two categories of farmers had the same farming experience for about 24 years. The experience of farming is also a supporting factor for farming success, the experience of rice farming will greatly help farmers in making decisions on steps to be taken in the next period, for example, how to process land, planting, and the use of good production facilities such as labor, fertilizers, seeds, pesticides, and others. The land area cultivated by owner farmers is an average area of 0.39 ha, while sharecroppers cultivate an average area of 0.37 ha. Most farmers use land in the range of 0.25 - 0.5 ha both for owner farmers and sharecroppers. Rosyadi (2017) found that extensive land ownership has a significant influence on household poverty, in addition to the education factor of the household head.

Production cost

Rice production costs cover all costs sacrificed by rice farmers during the production process until harvest. The cost component of rice farming consists of fixed costs and variable costs. Table 2 presents the cost structure of rice farming production per planting season per farm. There was a slight difference in the number of variable costs incurred by owner farmers and sharecroppers before profit-sharing. Profit-sharing is a form of agreement between two parties, namely landowners with preceptors who agree to make natural profit-sharing (Scheltema, 1985). In the case of sharecropping in the study area, profit-sharing of land use with a profit-sharing pattern was 50% for the landowner and 50% for the sharecropper, while all production costs in this pattern were share.

Fixed costs are fully not borne by the sharecropper, where the means of production used and land taxes are borne by the landowner. Therefore, there was a difference in the total costs incurred by the owner farmers and sharecroppers, namely IDR 2,835,667.68 and IDR 1,138,873.83. Cultural factors that form the basis of cost-sharing. Some studies mention the existence of a culture of profit-sharing that determines landowners bear all fixed costs in production (Pane, 2014; Malik et al., 2018).

Table 2. Average production cost, revenue and income per planting for owner and sharecroppers

Description	Owner	Sharecropper	
		Before Profit-sharing	After Profit-sharing
Variable Cost			
a. Seed	279.735,85	248.135,51	124.067,76
b. Fertilizer	980.754,72	837.957,94	418.978,97
c. Pesticides	52.872,64	54.328,27	27.164,14
d. Labor	1.492.724,06	1.137.325,93	568.662,97
Total	2.806.087,26	2.277.747,66	1.138.873,83
Fixed Cost			
a. Depreciation	14.343,53	0	0
b. Tax	15.236,89	0	0
Total	29.580,42	0	0
Total Cost	2.835.667,68	2.277.747,66	1.138.873,83
Revenue			
a. Production	1.618,77	1.372,43	686,21
b. Price	5.933,96	5.869,16	2.934,58
c. Revenue	9.697.735,85	8.044.626,17	4.022.313,08
Income			
a. Per Planting	6.862.068,17	5.766.878,50	2.883.439,25
b. Per Month	2.287.356,06	1.922.292,83	961.146,42

Revenue and income

Farm revenue is the total amount of money received by farmer after selling whole farm products, while the farm income is the remains after the total costs incurred during the production process are subtracted from the revenue. The revenue and income obtained by the owner farmers were slightly more than the sharecroppers before profit-sharing. This is due to the difference in the amount of production (246.34 Kg/ha) and the difference in price received (IDR 64.8 / kg). The difference that caused the owner farmers was able to obtain revenue and income of IDR 9,697,735.85 and IDR 2,287,356.06 and sharecroppers IDR 8,044,626.17 and IDR 1,922,292.83 before profit-sharing. The difference in price received between the owner and sharecroppers is caused by the difference in access to sell the produced rice, where most of the owner farmers have better access so they can obtain a selling price higher than the price received by the sharecropper (Hadikusumah, 2013).

Income inequality

The growth in the difference in the amount of income among the community groups is getting bigger, causing inequality. The consequence that is formed is that the existence of groups of people is getting richer and groups of people who are getting poorer. Table 3 depicts the income in the Lahat Regency of South Sumatera Province is moderate (0.53> 0.5), meaning that there is a significant difference in the amount of income among rice farmers. Specifically, the inequality that occurred in the rice farmer groups of owners and sharecroppers is medium-sized, where both groups had a Gini index value> 0.5. Inequality is caused by a slight difference from the acquisition of the final results received by the owner and sharecroppers. The finding of the slight difference in the amount of production and the selling price received by each farmer creates a gap in the income received. Hadikusumah (2013) explained that the same event had occurred in another location, where the gap created between farmers was caused by the difference in selling prices received by farmers.

Table 3. Income inequality and poverty distribution for owner farmer and sharecropper

Description	BPS		ADB	
	Frequency	Percentage	Frequency	Percentage
Owner				
Poor	25	47,17	32	60,38
Not Poor	28	52,83	21	39,62
Sharecropper				
Poor	62	57,94	93	86,92
Not Poor	45	42,06	14	13,08
Inequality (Gini Index)				
Owner		0,51		
Sharecropper		0.54		
Combined		0.53		

Poverty distribution

The poverty that occurs in Lahat Regency rice farmers was quite high based on BPS (52.55%) and ADB (73.65%). Sharecroppers are the biggest contributor to the poverty distribution that occurs. High poverty is caused by the amount of income obtained is still very minimal from the limit determined by BPS or ADB. Also, the lack of other sources of income (outside of rice farming) causes this to happen. Rahayu et al. (2013), Sugiyarto et al. (2015), and Hutapea & Raharjo (2016) found a large role for income from other sources (outside farming) in determining the amount of household income. The amount of total income from the household will be a benchmark in determining the categories of poor or not poor both according to BPS and ADB.

CONCLUSION

Inequalities that occur in rice farmers in the Lahat Regency of South Sumatera Province fall into the moderate category. However, high poverty occurred on rice farmers, where sharecroppers as the largest contributor to the distribution of the poor category. Inequality and poverty that occur are caused by differences in income received, and no additional income from activities outside of rice farming.

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