



The Income of Salt Farmers in Madura: an Explanation of Profit-Sharing System

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A B S T R A C T

This study aimed to determine and analyze the level of income generating of salt farmers in Madura. This research was conducted with a qualitative approach. The qualitative approach in this study was to match empirical reality with the prevailing theory using de-scriptive methods. This research was located in the Sumenep Regency. Data collection techniques carried out by observation, interview, and documentation. Data analysis was performed descriptively-qualitatively. The results showed that the income of salt farmers in Madura was determined from the pattern of profit-sharing that had been chosen, name-ly the cost of salt production would be borne by landowners and sharecropper where the amount depended on the agreed pattern of profit-sharing. There were three pattern of profit-sharing between landowners and sharecropper in salt production, namely the pattern of dividing two (paron), the pattern of sharing for three (telon), and the pattern for five (leman).

Keywords: Income, Profit Sharing System, Salt Farmers

Kode Klasifikasi JEL: O13; Q15

INTRODUCTION

As a maritime country with an area that is largely ocean, Indonesia is rich in marine resources both biological and non-biological (Jamil et al., 2017). One of the non-biological marine resources owned by Indonesia is salt. Indonesia has a lot of economic potentials derived from marine resources. In Indonesia, one of the producers of salt is Madura, Madura is an island known as the "salt island", Madura holds the largest salt potential in Indonesia which reaches 15,000 hectares of salt land and become the largest salt supplier in Indonesia (Umam, 2019). Total of salt production on the island of Madura in 2015 reach 914,484 tons.

Madura Island is one of the largest salt producers in Indonesia with Sampang and Sumenep districts being the largest salt producers. It is well-known that Madura Island is an island surrounded by the sea with administrative boundaries of Madura Island, namely the northern boundary is the Java Sea, the southern boundary is the Madura Strait, the eastern boundary is the Java Sea, and the western boundary is the Madura Strait (Ihsannudin et al., 2018). This fact makes Madura Island has a comparative advantage in salt production. From the four districts in Madura, Sumenep Regency is the third largest salt producer in Indonesia, this is based on the 2014 performance report of the Ministry of Maritime Affairs and Fisheries, where a quarter of salt ponds and National salt production are produced on Madura Island.

The salt commodity is very important because of its benefits for people's lives. In addition to household consumption, salt is also needed as a raw material for various industries including for preservation or chemical mixtures (Trikobery et al., 2017). The need for so much salt consumption requires the State to make maximum efforts to meet the needs of the National salt. The fact that

Indonesia's territory is surrounded by oceans with natural conditions and weather that is very supportive of salt production, Indonesia should be able to meet the needs of the National salt with its own salt production, but in reality, up until now, Indonesia is still importing salt. The fact shows that Indonesia's salt production is still very low, even though Indonesia's salt potential is high because it is a maritime country, it shows that the salt industry is one of the ironic portraits of the industry in Indonesia (Holis et al., 2019). The need for large salt with a small salt production until the salt needs in the country can not be fulfilled, this is caused by several factors (Riddiford et al., 2016). However, the abundant salt need is not directly proportional to the domestic salt price. The average income earned by farmers in the business of making salt from being cultivated in one production is IDR 17,294,563/m². Collector traders buy farmer's salt starting from IDR 35,000/sack to IDR 40,000/sack. So we need a comprehensive national policy that is in favor of salt farmers in terms of price.

Technology has become one of the obstacles, besides salt farmers experiencing various other obstacles in producing salt, among others, weather factors, government policies deemed not take sides with salt farmers, sales, prices, access to information, access to marketing and so forth (Turjono & Mustofa, 2015). Komaryatin (2012: 292) said that small scale salt entrepreneurs who live in rural areas are faced with low technology mastery, weak capital ownership, lack of access and information to the market, and limited business management skills. Based on the 2017 salt balance, total salt usage is 3.6 million tons, this amount is met from imports of 2.2 million tons and domestic salt production is only 916.9 thousand. Salt production is inseparable from the people's salt business which is run by salt farmers. The existence of salt farmers is very

important in national salt production. Based on the results of previous studies it is known that salt farmers are divided into three categories, namely (1) laborers/workers; (2) owner; and (3) owner and worker. Owners are those who have ownership rights and control over the land used to produce people's salt. Landowners as well as workers, in addition to being landowners they also work to produce salt. Whereas labor farmers are salt farmers who do not own land, but merely work on or sell the services of laborers who work to make crooked salt to landowners.

The income of salt farmers is seasonal and depends on the production season when the production season has a long heat, the income level is high. In addition, income is influenced by production results and market prices. The quality and quantity of production result greatly affect the market price of each season. The level of income of salt farmers varies, in the category of farmer workers, the income of hired laborers/sharecroppers based on the profit-sharing system, income of cohesive laborers, namely daily wages, laborers transporting income per sack, while paid foreman laborers every harvest.

Qureshi et al., (2019) presents the results of a baseline study carried out to understand farmers' perceptions about the existence of salinity in their farmlands and its impact on agricultural production and household food security. The strategies adopted by farmers to deal with the salinity and food insecurity problems are also discussed. The survey data were collected from a total of 300 farmers from five districts of Ethiopia. Farmers were selected using a random sampling from a household list. Focus Group Discussions were conducted with farmers in each district to investigate their perceptions of the soil salinity, its impacts and their adaptive strategies. Data were collected using a semi-structured questionnaire and

analyzed using SPSS descriptive statistics and chi-square test.

Farmers' responses showed that they were concerned about increasing soil salinity problems and its impact on their crop productivity and well-being. The results show that observing white crust and dark brown color of the soil are the major indicators used by farmers to identify salinity on their fields. Poor irrigation and drainage management problems are perceived as the main causes for salinity development. Salinity directly effects crop productivity and household incomes, which leads to food insecurity. The crop production losses due to soil salinity ranged from 10 to 70%. Performing off-farm jobs, selling household assets and joining food aid programs are the common coping strategies adopted by farmers. Farmers' perceptions on salinity should be used as an entry point by different stakeholders to develop strategies for the salt-affected areas.

Zakki & Sayyida, (2016) examined in this is how the influence of the type of business, venture capital and land ownership as well as its impact on the income of family welfare salt farmers, in order to know the influence of the type of business, venture capital and capital ownership to revenue and its impact on family welfare salt farmers. This research was conducted in the District Kalianget in the Pinggirpapas Village and Karanganyar village. In studies using quantitative descriptive research. The focus of this study examines the type of business, working capital, capital ownership, income and family welfare salt farmers. Samples were taken from two villages 100 salt farmers. The results of this study based on the analysis of logistics only land ownership is a factor which significantly affect the welfare and logit models produce Odds ratio here indicates the value of the tendency of a salt farmers who rent land to be living with the condi-

tion is very prosperous by almost 5 times more than salt farmer working other people's land. While the salt farmers who own land, tend to be more prosperous. This is indicated by the magnitude of the odds ratio which gives the meaning that the salt farmers who own land who live in a very prosperous condition of nearly 7 times more than farmers who enforces other people's land.

Chandra & Sao, (2020) the present study was conducted as part of a project implemented by Namac (a Small Salt Producer Company located in Gujarat, India) to replace diesel pumps with solar pumps for salt production in the region of Adesar in Gujarat. The study highlights the impact of this intervention and identifies the shortcomings, benefits, feasibility and acceptability of solar pumps. Purposive sampling technique was used to select ten salt farmers for the study. Data revealed that the cost of salt production reduced considerably. The study provides useful insights for facilitating a sustainable livelihood model. The findings can benefit salt farmers, organisations working on sustainable livelihoods, research scholars, academicians, and policy-makers.

Holis et al., (2019) study aims to analyze the economic activities of salt farmers in Pamekasan Districts in order to evaluate the optimization of salt farmers' activities through internal and external factors, so that development strategies can be designed so that the activities of salt farmers are more optimal and support the welfare of salt farmers in Pamekasan. This research analysis uses qualitative descriptive analysis, IFE and EFE matrix analysis and SWOT qualitative analysis. Based on the results of the study it can be concluded that the level of optimization of economic activity and welfare of salt farmers in Pamekasan Districts is in quadrant I, which is aggressive (all forms of activity will be

optimal and welfare is achieved). Strategies that can be used as a policy to improve the optimization of salt farmer activities are: Expanding the salt market share, Increasing the productivity and quality of salt quality and the interests of salt farmers, Creating farmer groups and Collaboration with all parties.

Kurniawan et al., (2019) study is to analyze the quality of the sea salt produced by using the Green House Prism Method in Sedayu Lawas village. Prism Green House is a renewable innovation in the salt production by using the greenhouses and geomembrane plastics. The measuring parameters in this study are temperature, salinity, Mg content, Ca content, NaCl content and water content. The result indicates that salinity of the salt water from young water reservoir pond is 23-24 ppt. The salinity of water from the old water reservoir pond is 34-42 ppt. Average contents of NaCl, Mg and Ca of the young sea salt water are 115.000 mg/L, 313,6 mg/L and 202,3 mg/L, respectively. The average contents of NaCl, Mg and Ca of the old sea salt water are 129.333,3 mg/L, 313,6 mg/L and 214,3 mg/L, respectively. The analysis of sea salt shows that the content of NaCl, Mg, Ca and water are 87,56%, 2,15%, 3,45% and 5,86%, respectively. The results of this study indicate that the quality of the sea salt produced from the Green House Prism in the Sedayu Lawas village is included in the K1 Quality based on the SNI 4435:2017.

Ihsannudin et al., (2018) discuss about the strategies to empower salt farmers through improving the access of lands, proposing culture-institutional and economic subsystem approach. This strategy can be formulated by investigate the condition of the cultural-institutional and economic subsystem of salt farmers. In addition, also discussed the factors that cause the incapacities of the farmers to improve their welfare. The result based on cultural subsystem show that salt

production is part of the Madura culture that deeply entrenched. Then, based on institutional subsystem show salt farmers can be divided into two type: the farmers that own their lands and peasant farmers (mantong). Meanwhile, based on economic sub system describe the existing salt production system is traditionally managed, highly dependent on the weather and climate condition. An empowerment strategy for the landowners is to get land registration to access the capital. While empowering for mantong directed to acquire redistribution on land reform object. Salt land that has been certified can be consolidated which contribute to increasing the quantity and quality of salt production and reduce transportation costs. Then salt that has been certified can be be used for collateral in order to access capital.

Salt production in Madura uses a profit-sharing system, where the profit-sharing system for salt production in Sumenep has three patterns. There are pattern for two/paron (1:1), pattern for three/telon (2:1) and pattern for five (3:2). In the profit-sharing system, the marketing of salt produced tends to be controlled by landowners, who also act as wholesalers and middlemen (Rochwulaningsih, 2013). The different pattern in this profit-sharing system affect the rights and obligations of each profit-sharing actor on salt production in Madura. In addition, the profit-sharing system indirectly affects the level of income received by sharecropper and landowners, as the two main actors of the profit-sharing system.

RESEARCH METHODS

The research method used in this research is a descriptive qualitative approach. Qualitative method is a method used to obtain in-depth data and examine the condition of natural ob-jects, where the researcher is a key instrument, while the descriptive research is a research method

that examines an object, or a condition of the status of a group of people, with the aim to make a description or picture systematically and factually about the facts under study (Antonites, 2016). This study consists of primary and secondary data, the authors obtain primary data through observation, interviews and distributing questionnaires. Whereas secondary data is obtained through publications, documents and from relevant books. The location of this research is in Pinggirpapas and Karanganyar Village in the Kalianget subdistrict, Sumenep Regency. The two locations were chosen because the majority of the villagers work as salt farmers and the fact that Sumenep Regency is one of the largest salt producing districts on the Madura island and Indonesia.

The population of this research is the sharecropper in the salt production of the villages of Pinggirpapas and Karanganyar in Sumenep Regency. Sampling will be done by using purposive sampling technique, where sampling is based on certain considerations. Respond-ents in this study are salt farmers who carry out production by applying a profit-sharing system. Observation is a complex process composed of various processes and the most important is the observation process (Qureshi, 2017). Field observations were carried out to observe the real conditions in the field in order to explore information about the system of production sharing between sharecropper and landowners in salt production in Madura so that it is known which pattern is most beneficial for the sharecropper.

An interview is a meeting of two people to exchange information and ideas through questions and answers, so it can be constructed the meaning in a certain topic (Suryati et al., 2016). Interviews were conducted in a structured manner with parties deemed to have knowledge and

under-standing of the profit-sharing system in salt production in Madura, namely between share-cropper and landowners. The questionnaire was used as a tool to find out the opinions of respondents about the level of income, advantages, and disadvantages of each pattern of profit sharing (Adiraga & Setiawan, 2014). This questionnaire completes the results of the interview and observation. The questionnaire is a data collection technique by giving several questions or statements to be answered by respondents (Ashenafi & Bedadi, 2016). Descriptive analysis of data has been done, namely by collecting and compiling data that has been available, then analyzed and interpreted (Antonites, 2016). This study uses a qualitative de-scriptive analysis, which will illustrate some of the pattern that occur in the profit-sharing mechanism in salt production in Madura so that it can be seen which pattern are beneficial for farmers that working on salt production in Madura.

Some stages in this research include the first stage is the introduction which contains the background of the problem and the formulation of the problem. Researchers conduct field and literature study which will be identified problems that exist in the field, then formulate research prob-blems. The second stage is the stage of collecting data by the method of observation, inter-views, and distributing questionnaires. The third stage is data analysis. The collected data will be analyzed using qualitative descriptive analysis. The fourth step is to conclude the results of the analysis that has been done.

RESEARCH RESULT

The number of respondents used in this study was 35 people. Where all of the respondents are sharecropper. Characteristics of sharecropper who will be explained in this study include the age

of the respondent, the level of education, farming experience, the length of the profit-sharing system and the area of land cultivated.

The age of the sharecropper is mostly in the range of 20-50 years and is included in the productive category. Someone enters a productive age if it exceeds the minimum age limit specified and does not exceed the maximum age limit. The level of education is measured based on the last formal education ever obtained and completed by the respondent. Based on the results of the study, the level education of most sharecropper is an elementary school. Work experience is the length of time the respondent has been a salt farmer, calculated in units of time (years), from the first time he became a salt farmer until the study was conducted. The work experience of sharecropper in salt production can be said to be quite long, which ranges from 5-40 years totaling 22 people. The average area of land cultivated by farmers is 1 Ha. Only a few farmers work with a land area of more than 1 Ha but less than 2 Ha. The greater the land area, the more salt production results.

The people's salt business is a business that has been going on for a long time, especially for coastal areas. Salt business is generally carried out by using a profit-sharing system between landowners and workers. This is due to the limited land and capital owned. Limited land and capital make the sharing system run by two main actors, namely landowners and workers, or better known as sharecropper.

1. Landowner

The landowner is someone who has ownership rights and is the ruler of the land used to produce coarse salt. Salt land owned in his name can be obtained from an inheritance, ground the village treasury, or purchase proceeds. The work done

can be in the form of own salt business, which is making salt that you do yourself; salt rental business means that the land is leased to people; or a salt business with profit-sharing, which is a salt business in which the landowner asks the farmer to work on the land which is hoped to be able to obtain a profit or yield on the salt land.

Table 1
Characteristics of sharecropper

Characteristics	Pattern for two		Pattern for two		Pattern for five	
	Total	%	Total	%	Total	%
Age (Years)						
20 – 50	1	50	2	40	13	46,4
51 – 60	1	50	2	40	11	39,3
> 60	-	-	1	20	4	14,3
Total	2	100	5	100	28	100
Level of education						
No school	-	-	2	40	5	17,9
Elementary School	1	50	3	60	12	42,9
Secondary School	1	50	-	-	8	28,5
Bachelor	-	-	-	-	3	10,7
Total	2	100	5	100	28	100
Work Experience (years)						
< 5	-	-	1	20	-	-
5 – 20	1	50	1	20	14	50
21 – 40	1	50	3	60	12	42,9
> 40	-	-	-	-	2	7,1
Total	2	100	5	100	28	100
Land area (Ha)						
≤ 1,00	1	50	5	100	25	89,3
1,01 – 2,00	1	50	-	-	3	10,7
> 2,01	-	-	-	-	-	-
Total	2	100	5	100	28	100

Source: Data processed by researchers

2. Sharecropper

Sharecropper are salt farmers who work with landowners to make coarse salt with a profit-sharing system. Sharecropper has only one factor of production, namely labor, while landowners have capital in the form of land and money for production costs. Sharecropper usually has middle to lower economic conditions. The level of income of sharecropper is determined by the pattern of profit-sharing agreed between the landowner and the farmer.

The cooperative relationship between the landowner and the sharecropper of the land will usually last a long time, the longer they work together with the closer the relationship between them (Qureshi et al., 2018). This will affect his work contract in the coming season. The better the work of a sharecropper, the work contract (unwritten) is also clearer. Each sharecropper will only work on one mantong (1 land), the average area of one mantong is one hectare (Ha). A mantong usually consists of 8-10 partition.

Costs are all expenses for the production process activities which are usually stated in units of money according to the prevailing market price. Costs incurred in salt production include (Suhendra, 2016):

1. Rental costs, these costs will arise if the land used for salt production is rented or leased to the landowner.
2. Geomembrane is the media used to produce salt. Now salt production uses geomembrane, the purpose is to have a good quality of salt production that not dirty because the media used is not direct soil. Geomembrane has an economic life of approximately five years, this depends on the level of thickness.
3. Equipment costs, which are windmills, shovel boards, and tools to measure water temperature.
4. Repair costs are costs to repair damaged equipment, such as buying duct tape and glue if the geomembrane is

leaking.

5. Wage costs for porters.

6. Costs for worker consumption.

Production costs will be borne by the landowners and sharecropper. The amount of costs the responsibility of the owner and sharecropper depends on the profit-sharing system agreed by both. According to sharecropper, the costs incurred at the beginning of production an average of IDR 1,000,000 (one million rupiahs) for the consumption of workers and buying glue and tape to repair the geomembrane. The condition that often occurs in the field is that the sharecropper who do not have money for capital, the entire capital will be given a loan by the owner. After the salt is sold, the farmers' income will be deducted by a number of debts and some will pay by installments every harvest.

One of the determinants of the income level of landowners and sharecropper in the salt business is the profit-sharing system. Determination of the profit-sharing system based on an unwritten agreement between the landowner and sharecroppers. An unwritten agreement has no legal force, at any time the sharecropper can leave his job (Turjono & Mustofa, 2015). The landowner will offer the pattern of profit-sharing to the sharecroppers, if they agree then it will be done. There are several landowners and sharecroppers who still have family relations, for example, the landowner is the uncle of the sharecroppers, the landowner is a brother of the sharecroppers (Arwiyah et al., 2015).

Usually, the agreement between the landowner and the sharecropper lasts long or long enough. Sometimes these agreements occur from generation to generation or inheritance, such as land bequeathed to their children, the profit-sharing agreement follows (Chandra & Sao, 2020). The agreement between the

landowner and the sharecropper includes a capital agreement and profit-sharing. The capital in question is capital that is used to finance the salt production. The amount of capital distribution will follow the profit-sharing system agreed between the landowner and the sharecroppers (Ahmed et al., 2003).

The profit-sharing system between owners and sharecroppers in the Pinggirpapas and Karanganyar villages there are three, namely the pattern for two (paron), the pattern for three (telon) and the pattern for five (leman). The number of sharecropper with a pattern for two (paron) amounted to two people, five people with a pattern for three (telon) and the remaining twentyeight people used a pattern for five (leman). The number of respondents in each profit-sharing system can be seen in table 2.

as 30 percent. The smallest number of sharecroppers applying the pattern for the two is 5.7 percent.

1. Pattern for two (paron)

In this pattern, not only are the proceeds shared equally, but all costs will be borne both by the landowner and the sharecropper. Capital comes from landowners and sharecroppers with a pattern for two (paron), for example buying geomembrane for IDR 5.000.000, then the capital of the landowners and sharecropper is equal to IDR 2.500.000. However, the cost of repairing equipment and geomembrane as well as labor consumption costs such as food and drink will be borne by the sharecroppers. Whereas for workers there are no costs or fees because the sharecropper work together, meaning they will help each other. The pattern for two is the

Table 2
Respondents and Profit-sharing Systems

Profit-Sharing System	Total of Sharecropper	
	Individual	Percentage (%)
System for two	2	5,7
System for three	5	14,3
System for five	28	80
Total	35	100

Source: Data processed by researchers

From the results of the study note that the profit-sharing system that is mostly chosen by landowners and sharecropper is the pattern for five or leman (Madura language). Sharecroppers who use the pattern for five as many as twentyeight people or 80 percent, while for landowners as much as 60 percent. Sharecropper with a pattern for three amounted to 14.3 percent and landowners who used the pattern for three as much

profit-sharing system that halves and divides the average sales of salt. For example salt sales of IDR 10.000.000, the landowner and sharecroppers will get the same amount of IDR 5.000.000.

2. Pattern for three (telon)

In this pattern, the sharecropper do not bear the costs of purchasing geomembranes. Capital for the purchase of geomembrane, windmills and other equipment is borne by the owner. As

for the repair of tools and consumption of workers borne by sharecropper. The pattern for three is dividing the sale of salt by a ratio of two to one (2:1), two parts for landowners and one part for sharecroppers. For example, salt sales of IDR 9.000.000, the landowner gets IDR 6.000.000, while sharecropper of IDR 3.000.000.

3. Pattern for five (leman)

This pattern is almost the same as the pattern for two, namely the costs will be borne by the landowner and sharecroppers, but with a pattern for five (leman). For example, they buy geomembrane for IDR 5.000.000, the landowner's capital is IDR 3.000.000 and sharecropper of IDR 2.000.000. As for other costs such as equipment repair costs and labor, consumption costs will be borne by the sharecroppers. The division of business results with a pattern of five that is dividing the results with a ratio of three to two (3:2). Three parts for landowners and two parts for sharecroppers. For example salt sales of IDR 10.000.000,- then the owner gets the results of IDR 6.000.000, while sharecropper of IDR 4.000.000.

CONCLUSION

The amount of sharecropper income in salt production in Madura is very influenced by the profit-sharing system agreed between the landowner and the sharecropper, where there are three commonly used profit-sharing systems, namely the pattern for two (half), i.e. the proceeds from the sale of salt will be halved by the same amount, for production costs will also be halved except the cost of repairing tools, damage to geomembrane and labor consumption costs will be borne by the sharecropper. The pattern for three (telon) is to divide sales results by a ratio of 2:1. Two parts for landowners and one for sharecropper. Production costs will be borne by the landowner, while for the cost of repairing

tools and labor consumption costs borne by the share-croppers. Pattern for five (leman) is a profit-sharing system in the ratio of 3:2. three parts for landowners and two parts for sharecropper. Production costs will be divided by the same ratio of 3:2, for the cost of repairing equipment and consumption of workers borne by sharecropper.

The cost of salt production will be borne jointly by the landowner and sharecropper, the amount of which depends on the pattern of profit-sharing agreed by both parties. The most profitable profit-sharing scheme for sharecropper in salt production in Madura is a profit-sharing system with a pattern for two because the profit-sharing system with this pattern will provide the greatest income for sharecropper. For Sharecropper There should be a written agreement between the landowner and the sharecropper so that the rights and obligations of both parties, especially the sharecropper, are still protected. In the agreement, it is necessary to explain the rights and obligations between the landowner and the sharecropper.

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