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Salt Productivity Investigation from the Human Resources Aspect

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A B S T R A C T

The territory of Indonesia is a country that has the fourth longest coastline in the world. This vast sea should be able to produce salt abundantly. This natural resource has not been processed optimally so that until now salt has become an imported commodity. This problem has not been able to find the right solution so that Indonesia does not need to import salt. Man's role is a very decisive thing in every production activity that he does. This research will explain salt productivity in terms of human resources. This research method is quantitative research, data analysis using multiple regression analysis. Age and skill have a positive and significant effect on the productivity of salt farmers. Experience has a negative and significant effect on the productivity of salt farmers. Age is related to the energy possessed to work on salt fields, to be able to increase salt production it takes strong energy and physical strength. Skills are needed in making technical steps about environmental situations and weather changes that occur. so with a strong physique and good skills it is expected that salt productivity will increase.

Keywords: *Age, Experience, Skill, Productivity.*
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INTRODUCTION

Indonesia is an archipelagic country with 17,506 islands in it. The territory of Indonesia is a country that has the fourth longest coastline in the world, which is 95.181 km^2 (Baihaki 2013). This vast sea should be able to produce salt abundantly. This natural resource has not been processed optimally so that until now salt has become an imported commodity. This year Indonesia plans to import 4.5 million tons of salt, on the other hand, domestic salt production only reaches 3.5 million tons (cnn Indonesia 2021). The reason Indonesia is still importing salt is because the national production capacity of salt is still low and not yet optimal. This problem has not been able to find the right solution so that Indonesia does not need to import salt and should even become a salt exporting country.

There are 7 provinces in Indonesia that produce salt, one of which is Central Java. Salt farmers located in the coastal area of Java Island, Pati Regency are the largest salt producers in Central Java, and rank third nationally after Madura and Indramayu. Being the largest salt producer in Central Java, however, its production has declined sharply. Salt production in Pati Regency is centered in four (4) sub-districts, namely Trangkil, Batangan, Wedarijaksa and Juwana. There are 6,753 salt pond farmers spread over 4 sub-districts. These four districts are located in rural areas where salt-producing communities generally do not rely on income from salt as their main source of income.

Based on interviews conducted by researchers on several salt farmers, it was explained that in one year it is only about 5-4 months to start preparing the land and until the land can produce salt. This is because the production of salt is very dependent on the dry season that lasts for one year. In a relatively short time this is used by farmers to be able to maximize the production of the salt. So it can be said that this salt-making business is not the main livelihood of the community. Before the salt production season arrived, their livelihoods included traders, rice farmers, school teachers, and others. From the salt farmer side, there is a different discourse with the government. Where many farmers still save last year's production and have not sold it because the price of salt is still very low. Based on the recognition of salt farmers, the low price of salt is a result of imports. This causes a decrease in the enthusiasm of farmers in producing their salt products.

Productivity is defined as a person's achievement in producing better production. The purpose of measuring productivity is to optimize the factors that support productivity and minimize the factors that hinder it. If productivity increases or decreases, it will be able to analyze what factors are the cause so that productivity will remain stable and even increase. Salt productivity is influenced by many factors, which can be categorized into 2, namely material and immaterial factors. Material factors include weather, land area, salt table area, production method, drying time, technology used. Immaterial factors include the age of salt farmers, work experience, work skills. Many studies were conducted because they saw the potential of the Indonesian region which has a long coastline but still cannot maximize salt production and even still relies on imports to meet the needs of the domestic industry.

The results of research conducted by Iswanto & Purmalino (2019) showed that the age of salt farmers, land area, salt table area, production method, drying time was positive and significant on the productivity of salt land in Indonesia. Lestari & Christy (2020) examined the factors that influence the difference in salt productivity in Indonesia and Australia, which found that technology, seawater sources, cost

of production, natural conditions, and the products produced affect salt productivity. The results of research from Kumala & Sugiarto (2012) show that rainfall is a very influential factor on salt productivity.

One of the factors that affect productivity is age (Tanto, et al, 2012), this is evidenced by research conducted by Sujaya, D.H et al (2012) which found age has a positive and significant effect on productivity. Kumbadewi, et al (2016) examined the effect of age, work experience on productivity, the results show that these variables significantly affect productivity. The productive age in Iswanto's & Purmalino (2019) research can significantly increase the productivity of salt land.

Work skills affect work productivity as evidenced in research conducted by Latifah. S (2020). The results of research from Kurniawati & Yuliando (2015) show that Human Resources have a significant role in the performance of MSMEs. And these results support that non-material factors play a more important role than financial factors.

These salt farmers come from various backgrounds of different ages, with varied experience and skills in processing salt which were learned from family and neighbors with their production increasing from 2016-2019, but decreasing in 2020. This decline is interesting to study. Productivity can be influenced by physical and non-physical factors. Many salt productivity studies look at the determinants of productivity from physical factors. However, there are still few who research non-physical factors. Salt farmers live in rural areas along the coastline far from cities. This work has been done from generation to generation since their ancestors. This study wants to find out whether the declining salt productivity comes from the human resource factor? This research will explain salt productivity in terms of human resources. Man's role is a very decisive thing in every production activity that he does.

Every business has a different measure of productivity level due to the various rules of each business including the elements used in their production practices (Syverson, 2011). Productivity can be seen from 2 sides, namely through a quantitative approach and a qualitative approach (Plag, 2020).

Regulation of the Minister of Manpower and Transmigration of the Republic of Indonesia Number Per 21/ Men/2009 concerning Guidelines for Productivity Services, defines productivity as a mental attitude that always strives to improve the quality of life in a sustainable manner through increasing efficiency, effectiveness and quality. Productivity is a comparison between the input and output of a production process within a certain period (Mangkuprawira, 2007). Productivity according to Sukirno, 2005 in Herdiansyah & Unesa : 2011 is explained as production created by a worker in a certain period. Productivity can be classified into 3, namely the first is traditionally a ratio obtained from the comparison of what is produced to all production equipment used. Both productivity are categorized as mental attitudes which hold that the quality of life today must be better than yesterday, and tomorrow's results must be better than today. The three productivity are seen as interactions that occur from 3 factors, namely investment, company management and labor.

Productivity is the desire and effort made by everyone in order to improve the quality of life and livelihood. Work productivity will reach its peak in the early 30s and will decline at the age of 40 (Herdiansyah & Unesa : 2011). Productivity is concluded as the number of products produced compared to the time required to produce a number of products, both in the form of goods and services. Productivity is defined as a measure of the extent to

which an activity is able to achieve the targeted quantity and quality Wiranti: 2016). Productivity will not be maximized if the existing human resources do not try to seriously optimize their mental attitude.

Agricultural production factors consist of technical and non-technical factors, where technical factors include soil, climate, technology used, while non-technical factors include production facilities, farmer skills (Nurmala, et al in Sakinah: 2021). Productivity related to education, farming experience, land area, working capital, labor and technology used affect farming productivity (Sakinah. 2021). In an effort to increase agricultural production, it is necessary to have an innovative attitude from farmers, including how they must adopt modern technology. The production factors that determine agriculture consist of five (5) factors, namely genetic factors, labor factors, natural factors, management factors and capital factors.

Age is the length of a person's life calculated from the year of birth (Kumbadewi, L.S et al: 2016). With increasing age, it will decrease physical and thinking abilities which will affect the decrease in productivity achieved (Sujaya, D.H, et al: 2018). The productive age is the age between 15-65 years (Iswanto: 2019), meaning that age outside this category is considered an unproductive age. Someone who is in the productive age category will have an increase in productivity compared to those who are old, because physical influences become weak and there are limitations (Aprilyanti. S: 2017). Younger farmers will be more innovative, motivated and willing to take risks (Musafiri: 2016). The decline in productivity in elderly workers is reflected in jobs that require learning and speed, but when a person ages, he is still able to maintain his productivity, it occurs in jobs that require experience and important verbal skills (Herdiansyah: 2011). Age structure can affect the productivity of craftsmen in producing a product. If the age of the worker increases, the productivity level will increase because the worker is of a productive age and when he gets older, his work productivity will decrease due to limited physical factors and the occurrence of errors that will affect it (Kumbadewi, et al: 2016).

Work experience is a measure of the length of time or working time that has been taken so that a person is able to understand the tasks of a job and has done them well (Kumbadewi, L.S et al: 2016). The length of a person's work (service period) is positively related to his work productivity. Experience according to Dewi & Yuliarmi (2017) is the number of types of work carried out by a person, as well as the length of time a person works in each job. The more experience a person has in working, it will have an impact on the breadth of knowledge in the field of work and improve that person's skills.

The relationship between farmers and the amount of production is explained that the experience of farming has a positive relationship, namely the longer a person farms, it can be said that the person is able to deal with activities in farming (Dewi, et al: 2017). Work experience will affect the behavior of farmers in managing their farming business, farmers who have been in business for a long time will tend to have a lot of experience who will make decisions faster in their farming business. The expertise of workers can be seen from their work experience. A person's work experience is not limited to the length of time a person works, but the skills, expertise and abilities of a person can reflect work experience (Herdiansyah: 2011). Someone who works for a long time in one type of work will cause him to know and be more skilled in doing his job.

Work skills are the ability to carry out work in accordance with existing implementation instructions or technical instructions. Work skills can boost

productivity. Good work skills can improve product quality. Skills can be improved through practice (Wiranti, 2016). Skills are the ability to carry out tasks or work using existing limbs and equipment (Wiranti : 2016). Work productivity and work skills are interrelated variables. Productivity will be achieved if the workforce has work skills that are applied in their work (Latifah, S: 2020).

Someone who has good work skills will have more attention, thoroughness, enthusiasm and creativity in carrying out work, and this will encourage greater output in a certain period of time. With the skills possessed, it is hoped that someone will carry out their work productively and be able to overcome existing obstacles and achieve goals more quickly (Ulum. AFK, et al: 2018).

METHODOLOGY

This research method is quantitative research, data analysis using multiple regression analysis. The population here is the salt farming community in Pati Regency. The data used is primary data using random sampling in 2 sub-districts that produce salt in Pati district, namely Trangkil sub-district and Wedarijaksa sub-district. The samples used were 70 salt farmers. Prior to testing, the classical assumption test, statistical test, hypothesis test, t test, and coefficient of determination test were carried out.

Productivity Indicators (Sutrisno: 2011): a. Ability to carry out work, b. Always improve the results achieved, c. Passion at work, d. Development of challenges and expectations, e. Improved quality and quality, f. Efficiency.

Age indicator (Chotimah: 2016): a. Age of the farmers, b. Experience, c. Responsibility. Work experience indicator (Sedarmayanti : 2013) : a.Length of time - a measure of the length of time a person takes to understand and carry out a job well, b.The level of knowledge and skills a person has, c. One's mastery of the work and techniques of existing equipment. Setiyarti, et al (2020), indicators of skills from the dimensions of skills are : a. Skills in mastering the job, b. Ability to complete work, c. Accuracy in completing work

Multiple linear regression analysis is an analysis that aims to determine the effect of one variable on other variables. In regression analysis, the influencing variable is called the independent variable (independent variable) and the affected variable is called the dependent variable (the dependent variable). If there is only one dependent variable in the regression equation, it is called simple regression. Meanwhile, if the independent variable is more than one, it is called multiple linear regression equation. To determine the impact of age (X1), work experience (X2) and work skills (X3), on productivity (Y1) in the salt-making business in Pati Regency, the following multiple linear regression analysis was used (Ghozali, 2013):

$$Y = a + B1\ X1 + B2\ X2 + B3\ X3 + e$$

RESULT AND DISCUSSION

Table 1
Gender of Responden

Gender	Total	Persentage
Female	5	7,2%
Male	65	92,8%
Total	70	100%

Resource: Primary data prossesed 2021

From table 1. Respondents consisted of 70 people people who come from salt-producing districts. This data is dominated by men. Men tend to do farming, and women only help.

Table 2
Age of Responden

Age	Responden	Persentage
< 25	6	8,57%
25-34	20	28,57%
35-45	13	18,57%
>45	31	25,72%
>55	13	18,57%
Total		100%

Resource: Primary data prossesed 2021

Based on table 2, the age of the respondent is dominated by people aged over 45 years, this shows that the respondent's age is still in the productive age, which is between 15-65 years (Iswanto: 2019).

Table 3
Validity Result

Variable	Item	R count	R table	Criateria
Productivity	Y1	0,504	0,2042	Valid
	Y2	0,737	0,2042	Valid
	Y3	0,818	0,2042	Valid
	Y4	0,575	0,2042	Valid
Age	X1.1	0,765	0,2042	Valid
	X1.2	0,540	0,2042	Valid
	X1.3	0,522	0,2042	Valid
	X1.4	0,641	0,2042	Valid
Experience	X2.1	0,775	0,2042	Valid
	X2.2	0,682	0,2042	Valid
	X2.3	0,607	0,2042	Valid
	X2.4	0,711	0,2042	Valid
Skill	X3.1	0,705	0,2042	Valid
	X3.2	0,784	0,2042	Valid
	X3.3	0,805	0,2042	Valid
	X3.4	0,765	0,2042	Valid

Resource: Primary data prossesed 2021

Based on table 3 above, it can be concluded that all questions for the variables of productivity, age, experience and skills are said to be valid, because r count (Pearson correlation) > r table.

Table 4
Reliability result

Variable	Alpha count	Alpha table	Criteria
Productivity	0,725	0,6	Reliable
Age	0,719	0,6	Reliable
Experience	0,707	0,6	Reliable
Skill	0,756	0,6	Reliable

Resource: Primary data prossesed 2021

The results of the reliability test in table 3 show that the alpha value for all variables counts > 0.6. Thus it can be concluded that all variables are reliable and deserve further testing.

The data to be processed is continued tested for normality using the Kolmogorov-Smirnov test, the initial data is not normal, the transformation has been carried out to Ln form but still not normal, and finally takes steps to delete extreme data. . The results of the normality test obtained a sign value of 0.086 > 0.05, which means the data is said to be normal and can be used for further processing.

Based on the results of data processing using multiple linear regression obtained the following results:

Table 5
Result of multiple linear regression analysis

Model		Unstand. Coefficients		Stand. Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-17,554	4,718		-3,720	,000
	Ln_X1	2,939	1,089	,261	2,698	,009
	Ln_X2	-4,940	1,462	-,382	-3,379	,001
	Ln_X3	14,399	1,776	,828	8,106	,000

Resource: Primary data prossesed 2021

From multiple linear regression analysis, the regression equation can be obtained as follows:

Y = -17,554 + 2,939 x1 -4,940 x2 + 14,399 x3

The constant of -17.554 states that if the independent variable is considered constant, then the productivity variable of salt farmers is -17.554.

Effect of Age on Productivity of Salt Farmers

Age has a positive and significant effect on the productivity of salt farmers with sig 0.009 < 0.05 and t count value of 2.698 > 1.669 t table, which means hypothesis 1 is accepted. Age is associated with a person's physical ability to complete his work. The productivity of salt farmers is in dire need of physical labor in producing salt. Someone who is in the productive age category will have an increase in productivity compared to those who are old, because physical influences become weak and there are limitations (Aprilyanti. S: 2017). Productive age ranges from 15-65 years, the average age of salt farmers who produce salt is between that age

range. The results of this study are in line with research from Iswanto & Purmalino (2019).

The Effect of Experience on the Productivity of Salt Farmers

Experience has a negative and significant effect on the productivity of salt farmers with a sig of 0.001 <0.05 and a t-count value of -3.379> 1.669 t table, this means that hypothesis 2 is rejected. Experience in this study has a negative and significant effect. This result is not in accordance with the theory which states that the more people have work experience, the more productive their business will be. Research from Purnomo, et al (2021) shows that work experience has a negative but not significant effect on chili farming productivity, which explains that the longer experience of farmers does not guarantee chili productivity. Farmers in Pati district have been doing this salt-making business for decades, so they feel they are used to it and do not need experience. The experience they have today is not considered to be able to increase salt productivity. Farmers produce salt based solely on their habits, and consider this activity as a routine of several months in 1 year during the dry season. The way they work is still traditional and not able to keep up with the standards demanded by the industry. The gap between farmers' production and the quality demanded by the market is what should be sought solutions that are with the use of technology that meets the standards so that salt produced can be accepted by the national market. On the other hand, changes in the use of technology used will increase the productivity of salt. Suhendra, A. (2016) explained that geomembrane technology can increase productivity.

The Effect of Skill on the Productivity of Salt Farmers

Skills have a positive and significant effect on the productivity of salt farmers with sig 0.000 < 0.05 and t arithmetic value of 8.106 > 1.669 t table, which means that the third hypothesis is accepted. Skills are defined as the ability to carry out work using available limbs and equipment. The more skilled salt farmers are, the more they will be able to increase their production. In completing a job requires qualified skills so as to produce good production. Sakinah (2021) explains that non-technical factors such as skills will affect agricultural productivity.

Coefficient of determination Result

The coefficient of determination test obtained the adjusted R square result of 0.506 meaning that the variables of age, experience and skills can explain the productivity of 50.6% and the remaining 49.4% is explained outside the research variables.

CONCLUSION

Local salt production should be increased in quantity and quality in order to meet domestic needs and prosper salt farmers. The productivity of salt farmers is influenced by various things, both physical and non-physical. This study examines the effect of non-physical factors in increasing the productivity of salt farmers. The results of this study concluded that all variables had a significant effect on salt productivity, with details of age and skill variables having a positive and significant effect on salt productivity, while the experience variable had a significant negative effect on salt productivity. The salt farming community is more likely to rely on labor related to the age of the farmer and how the skills are in producing salt, this is because this business has been carried out for generations from generation to generation so it is a job that has become routine and has been embedded in their lives during the dry period. Age is related to the energy possessed to work on salt fields, to be able

to increase salt production it takes strong energy and physical strength. Skills are needed in making technical steps about environmental situations and weather changes that occur. How to manage water, soil, and weather changes, farmers must understand and be agile to keep managing their land well. Experience negatively affects salt productivity because farmers assume that in doing salt production they do not need experience, because this is part of their habit alone during the dry season. The suggestion for further research is to conduct a more complete study of material and immaterial factors on salt productivity, so that it can be seen what factors actually affect salt productivity, so that salt production is expected to increase not only for local, national production scales, it should even become a commodity. export. The limitations of this research, considering that this pandemic is still happening, so for interviews to get explanations from salt farmers directly are still limited.

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