

Community Empowerment for Salt Farmers Through Cooperative Institutions

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Abstract— *This research is intended to analyze the factors that influence the empowerment of salt farmer communities. The variables studied are the Core Activity Variables and the Relational Environment as an independent variable, which is associated with the Empowerment Variable as the dependent variable, and is moderated by the Cooperative Variable. The analytical approach used in this research is quantitative by analyzing the results of the questionnaire using Structural Equation Modeling - Partial Least Square (SEM-PLS). The samples used were 100 salt farmers. The results showed that: Core activities have a significant effect on empowerment, and their influence is strengthened by cooperative variables, while the Relational environment variable does not affect empowerment, so cooperative variables cannot be placed as moderating variables.*

Keywords—*Core Activities, Relational Environment, Empowerment, Cooperatives*

I. INTRODUCTION

The concept of empowerment has been widely studied by researchers from many disciplines, including management, community development, gender equality, health sciences, community development, and others [1- 5].

In the perspective of community empowerment and psychology, another interesting research is the research presented by Maton. Maton (2008) suggests four factors that can influence an organization in empowering its members. The four factors are a group-based belief system, an opportunity role structure, core activities, and a relational environment [6].

Cooperatives in some studies are considered as organizations that can empower their members. Among these studies: Woldu et al. (2013) which results in the finding that agricultural cooperatives are considered an important foundation that can help small farmers overcome obstacles that prevent them from taking profits [7].

Cirebon Regency, which is the object of this study, is the largest salt producing region in West Java with a total production of around 62,000 tons or about 69% of the target set by the relevant agencies in the period of 2017, which is as much as 90,300 tons. The number of salt farmers involved in the production was 777 people. Salt production in Cirebon Regency is spread in six sub-districts, namely: Losari, Gebang, Pangenan, Mundu, Suranenggala, and Kapetak (Dinas Perikanan dan Kelautan (DKP) Kabupaten Cirebon). There are six cooperative organizations engaged in salt ponds, with an estimated 300 members (Dinas Koperasi dan UKM Kabupaten Cirebon).

II. LITERATURE REVIEW

A. Empowerment

Empowerment is most often defined as the mechanism by which people, organizations and communities gain control over their affairs. Whereas Robbins, Chatterjee, & Canda (1998) states that empowerment is a process carried out by individuals or groups, where marginalized individuals or groups can gain control of their lives and environment, and can gain access to resources and basic rights of life [4]

In addition to policies at the political level (Perkins, Brown, & Taylor, 1996; Bond & Keys, 1993), the success of empowerment is inseparable from the active participation of objects that are empowered. Active participation includes physical and non-physical activities. Nonphysical things include related to changes in the behavior of the object being empowered. Referring to the results of the Maton study, this research will focus on proving that the core activities and relational environment can be applied in the context of empowering salt farmers through cooperative institutions.

B. Core Activities

Maton (2008) suggests that the core activities are the basic institutions used in achieving the main goals of empowerment. The involvement of the object of empowerment in a core activity is influenced by three elements, namely interest, the learning process, and quality. The object of interest in the empowerment process is achieved through the interrelation of two things, namely the achievement of individual goals and cultural background. They are willing to do activities together due to the belief that they will achieve individual goals together according to their abilities [6].

Research on the importance of the core activity factors of an empowerment has been revealed by Wiber, Charles, Kearney, & Berkes (2009) who examined the empowerment of fishermen stating that coordinating fishing activities became a very important factor in empowering fishermen; Lyons, Carothers, & Coleman (2019) who argue that the factors that directly enable individuals and communities to act to achieve their goals include: activities, knowledge systems, political participation, and governance [8-9].

H1: Core Activities have a positive influence on Community Empowerment.

C. Relational environment

The relational environment includes the quality and nature of interpersonal relationships and between groups in

an environment. A high-quality relational environment provides the interpersonal relationships and resources needed to increase substantially control over one's life and environment. Important factors of the relational environment include caring relationships and a sense of togetherness (Maton, 2008). Attentive relationships including peers and mentors in the environment; each seems to uniquely contribute to empowerment. This is proven by research: Yalegama, Chileshe, & Ma (2016) identified three determinants of empowerment success, namely: community environment, organizational management, and community involvement [10].

H2: The Relational Environment has a positive influence on Community Empowerment

D. Cooperative

In some studies, cooperatives are considered as an organization that can empower its members. These studies include: Woldu et al. (2013) which results in the finding that agricultural cooperatives are considered an important foundation that can help small farmers to overcome obstacles that prevent them from taking profits through empowering farmers so that they can increase the collective bargaining power of farmers and reduce the risks they face [11]; Satgar and Williams (2011) which stated that cooperatives are one of the strategies to empower Africans especially in the agricultural sector in the apartheid era [12]; and Hogeland (2006) one of the roles of cooperatives is to empower farmers in providing market access [13]. From the concepts that have been built above, the construct of this study can be described as follows Figure 1.

H3: Cooperatives can moderate the effects of core activities and the relational environment variables on the empowerment variable.

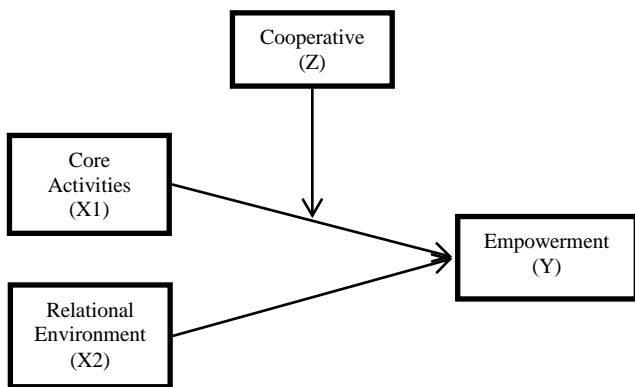


Fig. 1. Research Framework

III. RESEARCH METHODS

This research is descriptive-verification, so the research method uses descriptive-survey and explanatory-survey methods, namely data collection in the field is carried out on salt farmers in the Cirebon Regency, which is the object of research. Data collection on salt farmers is related to research variables, namely Core Activities and Relational Environment on Empowerment, which is moderated by Cooperative Variables. Furthermore, it is analyzed with the statistical analysis technique of Structural Equation Model-Partial Least Squares (SEM-PLS) to draw a conclusion. Hair (2010) explains that determining the number of samples for SEM is 5 to 10 times the estimated parameter. This study has a loading factor of 12 and 6 path coefficients so that there are

18 parameters. Based on these guidelines, the number of samples = 5 × 18 parameters = 90 respondents. In this study, the number of samples used was 100 respondents. Measurements were made with a Likert scale. The scale used has 9 categories, namely: (1) Very Disagree, (2) Strongly Disagree, (3) Disagree, (4) Fairly Disagree, (5) Neutral, (6) Fairly Agree, (7) Agree, (8) Strongly Agree, and (9) Very Agree. Hypothesis testing is done if the testing has been done on the validity and reliability of measuring instruments to see the data-filling questionnaire by respondents, as well as prove statistical calculations that the questionnaire is valid and reliable.

IV. RESULTS AND DISCUSSION

A. Description of Research Object

Cirebon Regency is a part of West Java Province which is located in the eastern part and is a boundary, as well as the gate of Central Java Province. The area of the Cirebon Regency is around 990.36 Km2 with a total of 40 sub-districts. Based on its geographical location, Cirebon Regency is in the position of 108°40' – 108°48' East Longitude and 6°30' – 7°00' South Latitude, bounded by Indramayu Regency in the north, Majalengka Regency in the northwest, Kuningan Regency in the south and Kuningan Regency in the south and bordering the Cirebon Municipality and Brebes Regency in the east of the Cirebon Regency topography is divided into 2, namely the subdistrict area that lies along the northern coastline including the lowlands which have an altitude between 0-10 m above sea level, while the subdistrict area is located in the south has a height of 11-130 m above sea level (cirebonkab.go.id).

The object of this research is salt farmers in Cirebon Regency. Salt ponds in Cirebon Regency are spread over seven districts including Kapetakan, Suranenggala, Gunungjati, Mundu, Losari, Pangenan, and Gebang. In table 4.1. described the amount of production, land area, land potential and many farmers in 2018.

TABLE I. TOTAL PRODUCTION, LAND AREA, POTENTIAL LAND AND NUMBER OF FARMERS IN 2018

No.	District	Number of Production (tons)	Land Area Production (Ha)	Potential Land (Ha)	Number of Farmers (person)
1	Kapetakan	2.014,00	288,00	400,00	386
2	Suranenggala	642,00	16,00	284,00	14
3	Gunungjati	138,00	10,00	50,00	4
4	Mundu	4.922,00	41,00	62,00	118
5	Losari	30.561,20	38,00	250,00	194
6	Pangenan	334.490,00	1.550,00	1.200,00	1.900
7	Gebang	53.994,00	136,00	420,00	210
Jumlah		426.761,20	2.079,00	2.666,00	2.826

Source: Dinas Perikanan dan Kelautan (DKP) Kabupaten Cirebon

B. Description of Respondents

In this study, the respondents questioned were 100 fish farmers. Data on farm performance in general can be seen in table 4.2. The following:

TABLE II. BASIC STATISTICS SAMPLES OF CIREBON SALT FARMERS

No.	Remarks		Amount
1	Gender	Male	85
		Female	15
2	Education	Elementary Level / Equivalent	53
		Junior High School / equivalent	32
		Senior High School / equivalent	15
		College	0
3	Status of cooperative membership	Cooperative members	28
		Nonmember of the cooperative	72
4	Job Status	Main job	81
		Side job	19

Source: Data processed

In table 4.22 illustrated that the number of respondents as many as 100 people consisting of 15% are female farmers, and the remaining 85% are male. The age range of most respondents was in the age range of 36-55 years, which was 76 people. In education, most respondents had an elementary school education of 53 people while those who graduated from high school were 15 people and there were no farmers who graduated from college. The status of cultivated land is mostly arable land (tiller farmers), as many as 46 people, the rest are privately owned or leased land. Cooperative membership status is known that there are only 28 people who are members of cooperatives, the rest are not members of cooperatives.

Basic statistics from the sample studied, showed that farmers were still dominated by men. This shows that the farmer's work is menial work, such as preparing farmland, harvesting, transporting crops and others. The farmer's education level is more at the elementary school level. This proves that the higher a person's level of education, the wider the opportunity to get a job. Judging from the cooperative membership status, the farmers have not used the cooperative much to work together to improve their economic capabilities. This is evidenced by the low participation of farmers in becoming cooperative members.

TABLE III. STRUCTURAL MODEL TEST RESULTS

Structure	Influence		Coefficient of Effect (γ)	t-statistics	R-Square (R^2)
1	Core Activities	→ Empowerment	0.420	3.076	0.473
	Relational Environment	→ Empowerment	-0.151	0.226	
	Cooperative	→ Empowerment	0.304	2.691	
2	Core Activities	→ Cooperative	0.132	1.624	0.176
	Relational Environment	→ Cooperative	-0.428	5.011	

Source: Data processed

Structural model test results show the value of R-Square on the model of the influence of Core Activities on Empowerment by being moderated by cooperative variables of 0.473. That is, the model obtained has a good level of goodness-fit. The variability of the empowerment construct can be explained by the Core Activities construct which is moderated by the Cooperative Construct of 47.3% and the remaining 52.7% is influenced by other constructs not

C. Effect of Core activities, and Relational environment on Community Empowerment moderated by Cooperative Variables

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1) Measurement Model Test Results

An indicator has good validity if the factor weight (loading factor) > 0.70, Average Variance Extracted (AVE) > 0.50, and Communalities > 0.50. Measurements of construct reliability values are carried out through composite reliability (CR) measurements by calculating each construct indicator. A construct is said to be reliable or has good reliability if the value of CR > 0.70 or > 0.60, and AVE > 0.50. Based on the estimation results from the SmartPLS 2.0.M3 application program, the output obtained by calculating the Core Activities, Relational environment, Empowerment, and Cooperative measurement models shows loading factor indicators > 0.70, AVE > 0.50 and CR values > 0.70. This means that all indicators are valid as a measurement tool and have consistency in measuring each dimension or construct that has good reliability.

2) Structural Model Test Results

Core Activities and Relational Environment are independent variables, Cooperatives are moderating variables that can strengthen the influence and clarify the effect of independent variables on the dependent variable. Empowerment is the dependent variable.

The structural model test aims to determine the value of R-Square (R^2), the relationship between variables and the significance value. R-Square values indicate the ability of exogenous variables to explain variations in endogenous variables. The relationship between constructs is said to be significant if the value of t-statistics / t-count > t table (1,966 at $\alpha = 0.05$) or 2.0 (Yamin, 2011). Structural model test results through the path coefficient or influence coefficient (γ) and the coefficient of determination / R-Square (R^2) which is a Goodness-fit Model test are as follows:

examined in this model. Core activities significantly influence empowerment, while the Relational Environment variable does not significantly influence. This is evident from the t-statistics Relational Environment for Empowerment of 0.226 (less than 1,966).

R-Square value on the model of the influence of Core Activities and Relational Environment on cooperative variables is 0.176. In this model, Core activities have no

significant effect on cooperatives, while the Relational Environment variable has a significant effect. This can be seen from the t-statistics Core activities on Cooperatives amounting to 1,624 (less than 1,966). That is, the variability of Cooperative constructs can be explained by the Relational Environment construct of 17.6% and the remaining 82.4% is influenced by other constructs not examined in this model.

Based on the results of descriptive analysis and testing of structural models, it is known that: Core activities have a significant effect on empowerment, and their influence is strengthened by cooperative variables. This means that the empowerment process will run effectively if individuals who join the empowerment process are interested in doing activities together, with the hope of achieving their life goals. Another thing that supports effective empowerment is a continuous learning process so that it has an impact on increasing the skills and knowledge of the objects being empowered. Core activities in the context of salt farmers in the Cirebon District can be proven by the number of respondents as much as 81% answering that being a farmer is the main occupation. This means that by becoming salt farmers, respondents have the hope to change their lives for the better, without leaving the cultural aspects, which have been passed down from generation to generation. Most of the farmers are born and grow big in the pond environment, so that the technical activities of the ponds such as making salt ponds, channeling seawater to salt ponds, and other technical activities are commonly seen and carried out daily. The results of this study indicate harmony with the results of the study of Maton (2008) which states that Core Activities have a positive effect on Empowerment.

Other results show that cooperative variables can moderate the relationship between core activities and empowerment, meaning that by joining into cooperative members, salt farmers can be empowered more effectively. The cooperative can help its members improve their economic lives, through the assistance of facilities in the form of capital assistance, assistance in the development of farm technical capabilities, and other facilities. Unfortunately, only 28% of the total respondents had joined the cooperative. The results of this study are consistent with the research of Woldu et al. (2013), which states that cooperatives are considered as organizations that can empower their members.

Other results from this study reveal that the Relational environment does not affect empowerment, so that cooperative variables cannot be placed as moderating variables. Relational environment is related to caring, and a sense of togetherness. This means that caring and a sense of togetherness do not affect empowerment. In the context of the empowerment of salt farmers in Cirebon Regency, caring and a sense of togetherness is no longer a principle that is held in high esteem, even though Indonesia is very well known for its characters of *silih asah silih asih silih asuh* which means sharing, loving and caring for one another. This can be proven by the reduction in cooperation among salt farmers. The current values are capitalistic values, where all work carried out is an object of transaction that is valued solely with money. The results of this study do not confirm research conducted by Maton (2008), which states that empowerment is influenced by the relational environment.

Besides, this study refutes several other studies as stated by Yalegama, Chileshe, & Ma (2016) that the determinants of empowerment success are: the community environment, organizational management and community involvement.

V. CONCLUSION

The results of this study indicate that the core activities variable has a positive effect on empowerment and is strengthened by cooperatives as a moderating variable. This means that hopes and aspirations for a better life in the future have triggered salt farmers involved in the empowerment process. On the other hand, the existence of cooperatives in the empowerment process will strengthen the empowerment process, through the provision of facilities to salt farmers such as training in technical aspects of the farm, providing working capital, expanding marketing access and others.

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