



Social Capital and Blue Economy Policy: Answering the Paradox of Weakness and Opportunity of Fisherman

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Abstract. The decreasing number of fisherman shows the serious threats in implementing blue economy policy. This research aims to find the strategic value of local Capital that strengthens the independence of the community. It will support the blue economy policy. The research framework adopts the concept of a blue economy from Gaulli and the concept of social capital from Collier. Researchers use a quantitative paradigm with the application of SWOT analysis techniques. Then the researcher looks for the IFAS and EFAS values. These values become the determination of the Blue Economy policy strategy in the fishing villages studied. The unit of analysis is the fishing community groups in several villages in Pondok Kelapa District, Bengkulu. The population of the research was 127. The sample consisted of 94 fishermen (Kretjie Table with = 5%). The questionnaire was compiled based on information obtained from FGD activities. Validity and reliability tests were carried out before data collection. The validity test used was items check correlated (Spearman Rho) with the provisions of $df = 5\%$. The results show nil ai rho count greater than 0.300. The reliability test used is based on the split half technique. The test resulted in the value of Cronbach alpha = 0.893. The results showed the value of IFAS (-2, 5) and EFAS(4,5). The factors of independence, cooperation, mutual trust, attachment to groups, and adherence to consensus are strengths to overcome the threat of conflicts of interest, lack of resources, and even natural threats. The research has implications for deliberative and bottom-up blue economy policies and programs.

Keywords: Independence · Trust · Consensus · Deliberative Policy

1 Introduction

Problems of poverty, inequality, responsible consumption and production, and under-water life are points in the concept of Sustainable Development Goals (SDGs) that are closely related to the governance of coastal and maritime areas. The Blue Economy policy as an ocean-based and oriented economic activity based on optimizing social capital, minimizing waste and innovative development for welfare, economic growth and ecosystem sustainability is very synergistic with the SDGs concept. Its synergy lies in the principles of decentralization and accountability which must be the principles in

managing maritime resources wisely [1]. This principle is implemented in the paradigm of blue economy where the economic management of coastal areas must be carried out in a responsible and sustainable manner [2].

The coastal area in Bengkulu Province covers 6 (six) regencies and 1 (one) city. This shows that the distribution of the population of Bengkulu Province is mostly in the villages of the coastal region [3]. Bengkulu Province is the highest contributor to the poverty rate on the island of Sumatra (15.10%) in semester 1, March 2021. This is indicated by slum settlements in several coastal villages in Bengkulu as a result of the low level of community welfare. A very limited source of livelihood coupled with the low quality of human resources adds to the problems faced by this coastal area. Not to mention the frequent natural disasters and the dependence of fishermen on the climate, making the community's livelihood very limited.

Poverty alleviation in coastal village areas is a multidimensional study related to government policy interventions, development of economic institutions, nature and geography, but even so they are not separate and convergent with programs to increase community participation [4]. One of the strategic options for implementing the Blue Economy policy is empowerment and social change [5]. This choice according to Shah, etc. [6] is related to the importance of coastal communities in protecting maritime interests and assets. Research by Sari and Kaagungan [7] states the importance of strengthening local Capital in improving the welfare of coastal communities. According to Gelcich, et.al. Community participation allows for the role of preserving local values and kinship [8]. In the context of village communities according to Saich the problem of participation is; village leaders are self-oriented, more accepting of opinions from prominent people than ordinary people, prioritize financial gain, and are formalistic rather than dealing with actual problems [9].

Besides that, these values will prevent the practice of 'dehumanization' of coastal community economic activities. Meanwhile, the weakness of the policy strategy in managing fishing communities is the 'one recipe for all' strategy. Related to this, coastal villages in Bengkulu Province (as in several sub-ethnic Malays on the west coast of Sumatra) have social values and Malay cultural Capital that are still maintained today. Thus, matters related to diversity need to be considered and even used to support. The limitations of previous research that explored the practice of social capital of coastal communities in the context of supporting the implementation of blue economy policies meant that this policy lacked recommendations. Moreover, faced with the condition of Bengkulu Province where the position of poverty is along its coast. These two things make research that aims to design policies based on social capital of coastal village communities that are used to advocate for the blue economy paradigm become urgent to implement. Based on these conditions we propose a village research grant scheme research entitled: Social Capital and Blue Economy Policy (Answering The Paradox Of Weakness And Opportunity Of Fisherman Village In Bengkulu).

2 Literature Review

Several previous studies in the study of poverty alleviation in coastal village communities have been carried out using a multidisciplinary approach. Yulayanah and Sarofah's research [10] and Haloho's research [11] link the importance of collaborative governance in improving coastal village communities. Subsequent research from Masrun, et al. [12] regarding poverty alleviation through fostering small and medium enterprises in Lombok. Other research from Rahayu, et al. [13] explains geographical factors and infrastructure facilities that affect the poverty of coastal village communities.

Subsequent research from Sari and Kaagungan [7] stated the importance of local Capital in developing the maritime economy in order to increase people's income. Other research related to the participation of coastal village communities in increasing income and welfare, such as from Ammas [14] stated the importance of social capital in the protection and management of community-based fishery resources.

Alpizar's research states that the management of fishery/fishermen communities is still very rhetorical/panasea in nature, so a real and contextual analysis is needed. According to him, coastal communities can be grouped into communities based on location (place based community) and interest based communities.

Gelcich's research states the things that are necessary in developing social capital, namely: 1). Local/social attributes, 2). Economics, and 3). Historical context. The strategic matters that need to be developed are the network and practice relationship arrangements that mediate the fishermen/fisheries system and then determine alternative control mechanisms, cooperation mechanisms, pricing mechanisms that aim to increase the economic and social dignity of the maritime community. Several studies and research on the theme of blue economy such as Prayuda [5] and Banu [15] are still critical analysis. Research that tries to approach a blue economy policy is carried out by Suwarni [16] who implements the SKP2 program in an action program for marine product processing and community empowerment.

The current conditions which are full of resources being exploited in the midst of community poverty make research and action policies towards the implementation of blue economy policies must be implemented immediately. State of the art this research aims to develop a design for strengthening social capital to advocate for blue economy policies in coastal communities. This is very important because this upstream policy is strengthening social capital. Strengthening social capital (trust, norms, networks) will leverage community participation which in alarm will have a direct effect on policy support. The role of social capital as a leverage point is due to the fact that this dimension is a basic social characteristic of village indigenous peoples. Social capital consists of three dimensions of social interaction, namely scope, form, and channel [17]. The third dimension is described Fig. 1.

The blue economy model aims to increase human well-being and social equity, while significantly reducing environmental risk and ecological scarcity. This is in accordance with the principles of Law Number 32/2014 concerning maritime affairs. According to Banu [15] the objectives of the blue economy policy are: 1) A very abundant amount of fisheries production can be used as an export commodity which will generate foreign exchange; 2) Developing other maritime sectors as a foreign exchange

Externality	Durable Social Interaction		Durable Effect of Social Interaction	
	One –way Interaction	Reciprocal Interaction	One –way Interaction	Reciprocal Interaction
Knowledge Opportunity	Teaching Repeat Trade	Networks Networks	Copying Trust	Pooling Goosing Generating
Free Riding	Hierarchical Authority Institutions	Clubs	Deference	Norms, Rule Coordination

Fig. 1. Social capital form.

earner; 3) Encouraging the sustainability and preservation of natural resources as well as ecosystem.

3 Methods

The type of research used in this research is Case Study Research. Case studies are used in this research because the purpose of describing-explaining-predicting-controlling case phenomena and the data collection process is repeated [18]. The research design used a mixed method with a sequential exploratory design in which the qualitative approach preceded and was followed by a quantitative approach.

A qualitative approach is used to find factors and strategies and quantitative analysis aims to test/generalize policy scenarios/strategies [19]. The Sequential Exploratory Research Design is presented in the Fig. 2.

Data processing techniques are divided into two clusters, namely qualitative techniques where researchers will use qualitative analysis. The SWOT analysis is to find internal and external factors in the village. The data is coded and interpreted into factors and alternatives. After that, a mapping process or rich picture is carried out to find out the causal pattern between the variables. In the SWOT analysis, quantitative techniques were also used to determine the position of IFAS and EFAS values. IFAS is the acronym of Internal Strategic Factors Analysis Summary, which consists of the strengths and weaknesses of the Organization. EFAS is the acronym of External Strategic Factors Analysis Summary (External Strategic Factor Analysis), which consists of opportunities and threats to the Organization. Based on the weighting, the strategic pattern (integrative, intensive, diversified, defensive) will be known which will be concluded as the village’s position in quadrants 1, II, III, and IV.

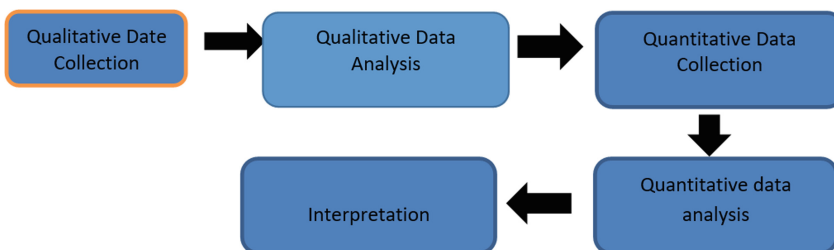


Fig. 2. Mix method design (the sequential exploratory research).

4 Results and Discussion

4.1 Results

The research was carried out in three villages in Pondok Kelapa District, Central Bengkulu Regency. The three villages are Pasar Pedati Village, Harapan Village, and Padang Betuah Village. The research was carried out for 3 months from March, April and June 2022 Throughout Pasar Pedati Village, Harapan Village and Padang Betuah Village as far as ± 12000 m “are beaches which are famous for the types of fish caught and various types of lobster as well as one of the supporting factors for the economy of the village community. Besides that, in 2008 stone waste appeared the coals along the coast of Pasar Pedati Village, but in 2009 there was marketing and the prices were very competitive, which has become a temporary source of livelihood for the residents of Pasar Pedati Village until now.

The climate of Pasar Pedati Village, like other villages in Indonesia, has dry climate and Rain, this has a direct effect on the plants on agricultural land in Pasar Pedati Village, Pondok Kelapa District”.

Fisherman is one of the many professions chosen by the people in Pasar Pedati Village with a total of 360 people. However, with the passage of time in 2018, many fishing communities have switched “professions” due to uncertain income, making it difficult for fishing communities to meet their daily needs. In 2022 the number of fishermen in Pasar Pedati Village, Padang Betuah and Harapan Village will greatly decrease, only around 20 people will remain in the same profession as fishermen.

Researchers found that social capital in Pasar Pedati Village has forms and roles in the lives of fishing communities. These results are to describe the data obtained by researchers from the results of research in the field (Fig. 3).

The field findings are from the results of several interviews conducted with fishing communities in Pasar Pedati Village, Harapan Village, and Padang Betuah Village



Fig. 3. Social capital in Village Fisherman Community.

regarding the forms and roles of social capital in supporting the blue economy which are still being applied by the fishing community in those villages, which is presented in the following Table 1.

Based on the results of focus group discussions with fishermen groups from the three villages, the mapping of strengths-weaknesses-opportunities-challenges faced is as follows:

Internal Factors

Strengths

- Fishermen are aware of complying with the rules in protecting marine ecosystems
- Gotong royong done by fellow fishermen
- High kinship of fishing community

Weaknesses

- Inadequate education and training of fishing communities
- The low level of welfare of fishing communities so that they still expect assistance from various parties
- Reducing the number of fishermen who frequently change professions

External Factors

Opportunities

- Trust built between capital borrowers (tauke) and fishermen

Table 1. The social capital in Fisherman Village of Desa Pasar Pedati, Desa Harapan, and Desa Padang Betuah Middle Bengkulu Regency.

Social Capital	The form of Social Capital	The role of Social Capital
Norm	<ul style="list-style-type: none"> • Rules in maintaining the cleanliness of the sea • Rules do not use fishing gear that destroys the sea such as trawls 	<ol style="list-style-type: none"> 1. The role of the norms (rules) that apply in the fishing community of Pasar Pedati Village are made by fellow fishermen to regulate the lives of fishing communities in protecting and making good use of the sea 2. “The role of norms (rules) in order to respect fellow fishermen without any distinction between one another 3. “The role of norms (rules) for problem solving can be carried out by deliberation to find a solution so that there are no conflicts among fishermen

(continued)

Table 1. (continued)

Social Capital	The form of Social Capital	The role of Social Capital
Trust	<ol style="list-style-type: none"> 1. The role of the norms (rules) that apply in the fishing community of Pasar Pedati Village are made by fellow fishermen to regulate the lives of fishing communities in protecting and making good use of the sea” 2. The role of norms (rules) in order to respect fellow fishermen without any distinction between one another 3. The role of norms (rules) for problem solving can be carried out by deliberation to find a solution so that there are no conflicts among fishermen 	<ol style="list-style-type: none"> 1. The role of the trust of fellow fishing communities to help each other in fishing activities 2. The role of trust from capital borrowers (tauke) to fishermen by providing boat loans so that fishing communities get income from fishing to meet their daily needs 3. The role of consumer trust in fishing communities in buying marine products (fish and lobster) because of good quality and quite affordable prices makes fishing communities earn income
Network	<ul style="list-style-type: none"> • Cooperation with fishermen • Cooperation with the commanding officer 	<ol style="list-style-type: none"> 1. The role of the network in the environment deep fishing community do mutual cooperation aims to relieve work during fishing activities and other activities. 2. The network role of government in collaborating to fishing communities to provide training and assistance in the form of tools catch like a fishing rod and network to the community fishermen in Pasar Pedati Village, Harapan Village and Padang Betuah Village “

- Trust built between consumers and fishermen
- Forge cooperation with the government in providing assistance

Threats (Threats)

- There is no written regulation governing sea management
- The inability of fishermen to pay loans to capital borrowers (tauke)
- There is competition in the market

The following are the results of the assessment of the internal Strengths and Weaknesses factors taken from FGD activities from the villagers of Desa Padang Betuah, Desa Harapan and Desa Pasar Pedati as described by the Fig. 4.

Based on the results of calculating the weights on the strengths, weaknesses, opportunities and threats to fishermen in those Villages, it can be seen that the strengths and weaknesses factors where the weight of 4 is the highest weight. Then on the opportunity



Fig. 4. Focused group discussion 2022.

Table 2. IFAS and EFAS of fisherman village.

IFAS	EFAS
S - W: 2	O - T: 2
Result (-2,5)	Result (4,5)

factor where the weight of 4 is the highest weight which has a very good response to fishermen in Pasar Pedati, Harapan and Padang Betuah Village while the threat factor gets a weight of 3 which is the highest weight.

The estimation of the questioners taken from the samples is presented Table 2.

The results of calculating the coordinates of the SWOT quadrant on the X axis (internal) it is -2.5 while on the Y axis (external) it is 4.5. Then it is described in the SWOT quadrant as diagram Fig. 5.

4.2 Discussion

The results of the SWOT analysis quadrant show that the social capital of fishing communities in supporting the blue economy in Pasar Pedati Village, Harapan Village and Padang Betuah Village are in quadrant IV where the social capital of the fishermen still has constraints or weaknesses but can take advantage of existing opportunities to become an advantage for the community fishermen in some of those villages however have to face a number of internal weaknesses. The focus of such a strategy is to minimize the internal problems of social capital in the fishing community in Pasar Pedati Village, Harapan Village and Padang Betuah Village so that they can seize opportunities to support a better blue economy.

The next step is to formulate alternative strategies in increasing social capital in supporting the blue economy using the SWOT matrix obtained by installing internal

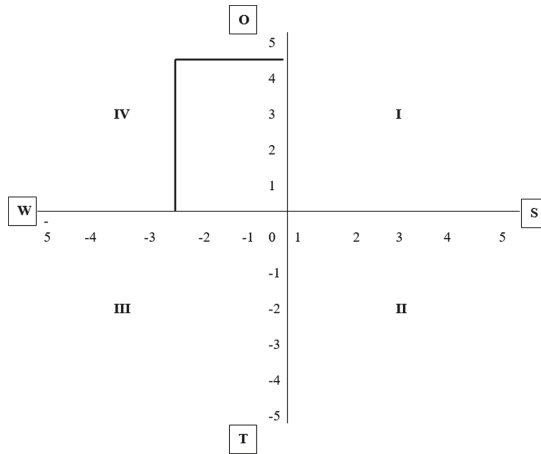


Fig. 5. SWOT quadrant analysis.

<p>IFAS</p>	<p>S (Strengths) 1. Fishermen have conscious compliance maintenance rules marine ecosystem 2. Gotong-royong fellow fishermen 3. High bond community kinship Fisherman</p>	<p>W(Weaknesses) 1. Education and training fishing community which is lacking adequate" 2. Low level well-being fishing community so still expect help from various parties 3. Decreased numbers the fisherman switch often profession</p>
<p>EFAS</p> <p>O (Opportunities) 1. Trust already formed between capital borrower (tauke) with fishermen in Harapan, Padang Betuah and Pasar Pedati Village 2. Trust that awake between consumers with fishermen in the village Cart Market 3. Establish cooperation with the government in giving help</p>	<p>SO(Strengths), (Opportunities) 1. Fishermen always obey the rules by not destroying the existing ecosystem 2. Always guarding mutual trust fishermen, capital borrowers (tauke), consumers and government to establish the cooperation</p>	<p>WO (Weaknesses),(Opportunities) 1. Upgrade Resource Human (HR) by giving education as well as providing adequate facilities so that fishing communities become superior and independent Human Resources (HR) 2. Society fishermen must have honesty that is always embedded from within in order to maintain good cooperation</p>
<p>T(Threats) 1. Written rules which governs marine management in Pasar Pedati Village not yet applied well 2. The inability of fishermen pay off loans to the borrower capital (tauke) 3. There is competition in Market</p>	<p>ST(Strengths), (Threats) 1. Always obey the rules In protecting the marine ecosystem so that the potential of the Source Natural Resources (SDA) can be utilized and developed with good 2. Increasing mutual cooperation between fellow fishermen at sea to increase catches" 3. Always building mutual cooperation fisherman so always Bond good family</p>	<p>WT(Weaknesses), (Threats) 1. Always obey the rules in protecting the marine ecosystem so that the potential of the Source Natural Resources (SDA) can be utilized and developed with good 2. Increasing mutual cooperation between fellow fishermen at sea to increase catches 3. Always building mutual cooperation fisherman so always Bond good family</p>

Fig. 6. Swot matrix strategy of blue economy policy in fisherman village of bengkulu tengah regency.

and external factors. The alternative strategy formulated is to support the turn around strategy. The results of the SWOT matrix can be seen in the Fig. 6.

5 Conclusion and Implication

5.1 Conclusion

The results of this study were obtained directly from the field and adapted to the theory that the researchers used, namely social capital according to Putnam and Fukuyama. That there are norms, trust and networks, but based on field findings obtained by researchers, there are still many obstacles to social capital in fishing communities in supporting the blue economy in Pasar Pedati Village, Harapan Village and Padang Betuah Village.

It can be seen from the results of the SWOT quadrant analysis, it shows that in quadrant IV where the social capital of the fishermen community in Pasar Pedati Village, Harapan Village and Padang Betuah Village still has weaknesses, including:

1. Inadequate community education and training, in accordance with the data and findings that researchers obtained in the field that the low level of education and the infrequent implementation of training activities for fishing communities in Pasar Pedati Village had a very impact on inadequate Human Resources (HR) superior.
2. The low level of welfare of the fishing community so that they still expect assistance from various parties because they do not have private fishing equipment requires the fishing community to cooperate” with the capital borrower (tauke) by entering into a “mutual agreement between the two parties, the results obtained will be shared an average of 50% for fishermen and 50% for capital borrowers (tauke) and expect assistance from the government to provide assistance to fishing communities in Pasar Pedati Village.
3. The reduced number of fishermen who often change professions due to the erratic weather every day makes their income decrease so much that they cannot fulfill their daily needs which requires fishermen in Pasar Pedati Village, Harapan Village and Padang Betuah Village to change professions.

On the one hand, it has opportunities because of a growing sense of trust between capital borrowers (tauke) and consumers towards fishing communities and the government being the party that helps fishing communities in Pasar Pedati Village Pasar Pedati Village, Harapan Village, and Padang Betuah Village in establishing cooperation to provide assistance in the form of fishing gear.

5.2 Implication

Referring to the conclusions stated above, the suggestions that the author can give as material for consideration of social capital in fishing communities in supporting the blue economy in Villages are as follows:

1. Norm: Applying written and unwritten norms (rules) wisely, always complying with the rules of protecting deep-sea ecosystems supporting the blue economy and the potential of Natural Resources (SDA) can be utilized and developed properly.

2. Trust: Always maintain trust between fellow fishermen, capital borrowers (tauke), consumers and the government so that good cooperation can be created.
3. Network: Providing education and supporting facilities for fishing communities to become superior and independent Human Resources (HR) and increase income for fishing communities in Pasar Pedati Village, Harapan Village, and Padang Betuah Village

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