

The Economic Welfare of Fishermen Households in Indonesia

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ABSTRACT

This research will prove the relationship between economic behavior, economic morale and entrepreneurial spirit in improving the economic welfare of fishermen households. The researcher proposes a model, and wants to show the concept of new indicators on the economic well-being of fishermen's household. The study population was 327 fishermen. Using structural equation model analysis, convenience sampling method for 160 respondents. The proposed model shows that entrepreneurial spirit is the main determinant of the economic well-being of fishing households. The model can also prove that indicators, fishing equipment, catches, and processed products contribute positively to the economic well-being of fishing households. Where this is a new thing proposed in this study. The practical implication of the research is that fishermen should improve their economic morale, by increasing the quality and quantity of catches, by trying to have more modern fishing equipment, by utilizing the sources of capital they have.

Keywords

Economic behavior, economic morale, entrepreneurial spirit, economic well-being of fishing households.

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Introduction

Fisheries resources are very potential resources. The weakness of the population of the coastal area in obtaining sources of production, to meet the economic needs and poverty pressures experienced, is a problem. Low productivity and income levels, limited education, knowledge and skills and weak capital are common characteristics inherent in fishing communities. These limitations and shortcomings result in a low standard of living for fishermen. Moreover, fishing communities have a closed nature, so they are unable to find new ideas. In addition, the exploitative relationship between capital owners and fishermen, as well as seasonal fishing businesses, makes it difficult for small-scale fishermen in coastal areas to get out of poverty and debt bondage. Indonesia has a number of 17,504 islands, each of which has a cost that is inhabited by fishing communities that are not yet prosperous, with minimal income. Due to the vast coastal area in Indonesia, this research was conducted in Sampang Regency, East Java Province, Indonesia, which has considerable potential in the fisheries sector. Fisheries in this Regency include marine fisheries, public waters, and ponds. Therefore, the utilization of fish

resources should be rationally optimized, so as to increase the income and welfare of fishermen households.

Literature Review and Hypotheses

Economic behavior is behavior that shows the response of individuals or households as producers and consumers to changes in market power that occur, which is based on the aim of maximizing satisfaction (Fariyanti, 2008). Economic behavior is productive behavior. In conjunction with the concept of human resource development, productive work is a work situation in which high factors of job security, appropriate work ability, insightful, comfortable environment, adequate skills, harmonious working relationships, and being able to condition work humanely. The form of fishermen's productivity is related to internal problems. The level of internal productivity is the level of achievement of targets as planned outputs over a certain period of time. To realize the achievement of fishermen productivity targets, indications that must be considered include the level of effectiveness of going to sea, time to go to sea, motivation to go to sea, allowance for part of income, diversification of production of sea catches.

The spirit of entrepreneurship will largely determine success in business activities both from the planning, implementation, and evaluation of the business undertaken. The suboptimal success achieved is generally due to the incomprehension of the principles of entrepreneurship, the lowered ability to create business networks, and the lack of effective and efficient negotiation techniques. Schumpeter (1949), said that innovation is the application of technological knowledge in the economic world. Entrepreneurial innovation will lead to a monopoly position for the originator, which will produce profits above normal profits and this is a stimulus for prospective innovators.

Basically, the entrepreneurial spirit encourages someone to be willing and able to work hard, persevering and resilient, willing and able to deal with problems with their own abilities, have the courage to step forward and take risks, be creative and innovative, have leadership abilities, and always want to be more successful. Entrepreneurship reflects the quality and ability of a person to face challenges and risks, take advantage of opportunities, and achieve success. The entrepreneurial spirit itself is not a guarantee of the success of an activity (business), but it is often a prerequisite that must be met in order to become a successful entrepreneur. An entrepreneur has high mental strength, so that it is possible to slide forward beyond the capabilities of the average other human being (Lambing and Kueshi 2004; Seyoum et al., 1998).

Prayitno (2001), showed a strong relationship between the behavior of fishermen, who experienced a decrease in income due to pond abrasion and rob. Experiencing negative behavior changes that are, a priori, apathetic, and some even experience mental disorders. Changes in the economic behavior patterns of the fishing community have been an effort to always be able to maintain life in accordance with the demands of social life, culture, as well as the economy which

is always changing towards a better, modern and practical. Haryono (2005), shows that the life of fishermen is very dependent on the nature (season), which results in irregular income of fishermen. To maintain the economic viability of the household, fishermen diversify their work, both related to service activities and beyond. Rahim et al. (2018), found that the potential business sector that can be developed by young people in coastal areas is fishing. Nuthall (2001), states that psychological factors that are reflected in a person's managerial ability will affect business results. Baum et al. (2001), prove that character, especially competence and motivation have a positive effect on business growth. Based on the description above, the hypothesis is as follows:

H1: The economic behavior of fishermen has a positive effect on the spirit of entrepreneurship

There are two forms of fishing households. First is the fishing households that use the factors of production in the presence of the motorization process. This group appears the owner of the ship called the skipper, while those who come with the ship or the crew. The two groups of fishermen who worked on the fishing production process without motor boats. As is the case with the first type of group, the second group of fishing households acts as the owner of the ship, and some functions as the crew. An understanding of the shape of a fisherman's household resulting from the life process of a fisherman is very important given the dualism of the fisherman formation process. In the case of fishermen's households, it can be seen as simultaneously a fishing company (producer), labor and consumers (Nakajima, 1986; Sadoulet and de Janvry, 1995; Afonso & Silva, 2019; An, 2019; Akin Arikan, 2019).

Nazmar (2014), states that, in an effort to improve the fisheries household economy, it can be done by: utilizing free time by developing off-fishing businesses; providing technology training accompanied by assistance with the necessary

facilities and ongoing guidance and assistance; professional development and assistance, given the limited resources available; utilize local raw materials and create added value from fishery products; and providing capital assistance, given the limited capital owned. Dahuri (2010); Islam et al. (2017), states that poverty must be overcome, and the poverty experienced by fishermen should be eliminated.

Miftakhuddin and Mudzakir (2012), stated that the role of the wife in the fisheries household economy is quite large. The wife of a fisherman is quite productive in earning a living to meet the needs of his household. Rindawati (2012), one of the efforts made as an improvement in the economic welfare of fishermen households is the existence of efforts to develop productive activities, with the distribution of credit used to establish businesses in the fields of catching, processing, to marketing seafood that aims to change the fishermen's economy with increase revenue. Based on the description above, the hypothesis is as follows:

H2: Economic behavior has a positive effect on the economic well-being of fishing households

Moral economy is an economic action carried out by economic actors in accordance with ethics or rules of conduct, behavior in patterns of action and thinking that are considered good and right in economic activity. Moral values are placed above economic considerations in every decision to run a business. Scott (1994) states that economic morale and work ethic are important in increasing economic productivity. Habibi (2013), proves that the moral economy in fishing community groups is static. Moral economics are not weathered by changes in the structure of social relationships that develop. If there is an individual who leaves the moral obligation that should be carried out, he will lose his reputation as an honorable citizen or get rumors of an immoral citizen. Moral is a good deed done as a habit. If morals characterize economic activity, a moral,

economic concept will be created, as a whole of economic activity which is based on morals.

Anderson and Smith (2007), said there should be morals in entrepreneurship, because morals are good deeds. Pinkerton (2015) states that small-scale fisheries and the moral practices of small fishermen tend to be underestimated under the neoliberal regime. Triadhi et al. (2018), shows the relationship between community empowerment, entrepreneurial orientation on the welfare of fishermen. Hikmat (2001) states that empowerment is an effort to actualize the potential that is already owned by the community. Emami and Nazari (2012), stated that religious beliefs are important for entrepreneurs, as well as the importance of religious beliefs for other businesses. Andjarwati (2017), proves the existence of a moral, economic relationship with the level of entrepreneurship, and economic behavior of fishermen. Based on the description above, the hypothesis is as follows:

H3: Economic morals have a positive effect on the entrepreneurial spirit of fishermen

H4: Economic morale has a positive effect on the economic well-being of fishermen households

Tigar (2012) states that an important entrepreneur has mental attitude, leadership, management, and technical skills. But the most important thing is a mental attitude, because no matter how good a person has technical skills, but if the mental attitude is not good, then the business will not be able to run well. Wilson et al. (2001), states that to maximize profits, environmental management decisions and the decision making process are positively related to technical efficiency. Lee and Tsang (2001), showed that experience, network activities, and the number of work partners, had a positive impact on business growth, and increased income. Weeratunge et al. (2014), shows that small-scale fisheries contribute a lot to the economy, society and culture. Based on the description above, the hypothesis is as follows:

H5: Entrepreneurial spirit has a positive effect on the economic well-being of fishing households

Research Methods

This research is a causal research. The study population was 327 fishermen in Sampang Regency, Indonesia. The analysis technique uses SEM analysis with the help of Amos software. Estimation uses the Maximum Likelihood Estimation (MLE), and the number of samples studied was 160 respondents, obtained from 16 x 10 research indicators, in accordance with the SEM provisions (Hair et al., 2013). While the sampling method uses convenience sampling.

Instrument and indicator variables

This study uses a questionnaire with a 5 level Likert scale. Economic behavior variables, use 4 indicators adopted from Fariyanti (2008), namely: social interaction, weather anticipation, processing, and increasing added value. Moral economics using 3 indicators adopted from Borba (2008), namely: consumption, production, and distribution. Sipirit entrepreneurship using 5 indicators adopted from Lambing and Kueshi (2004), namely: self-confidence, task and outcome oriented, risk taking, innovation, and future oriented. Fishermen Household Economic Welfare uses 4 indicators adjusted from Miftakhuddin and Mudzakir (2012), namely: capital, fishing gear, and from Prayitno (2001) namely: catches, and processed products.

Result and Discussion

Descriptive data analysis

Analysis of descriptive data on 160 respondents showed that: Characteristics of respondents according to gender were all male namely 100.0%. Characteristics of respondents based on age at the age of 17-30 years = 28.8% of respondents, and dominant in the age range 31-40 years = 54.4%. The education level of the majority of respondents was Junior high school, which reached 51.2%, while the rest had 33.8%

High school education and 15.0% Primary school. The length of respondents being fishermen is in the range of 1-2 years, 19.4%, less than 1 year, 7.5%, 2-5 years, 35.6%, and more than 5 years as much as 37.5%.

Table 1. Characteristics of respondents (N = 160)

Characteristics	Profile	Frequency	Percent
Gender	Men	160	100.0
	Women	-	-
Age (years)	17-30	46	28.8
	31-40	87	54.4
	41-60	27	16.8
Education	Primary	24	15.0
	school	82	51.2
	Junior	54	33.8
	high		
Long been a fisherman (years)	High	12	07,5
	school	31	19,4
		57	35,6
	< 1	60	37,5
	1 - 2		
	3 - 5		
	> 5		

Source: Own survey

Instrument Validity and Reliability Test

From the results of the Pearson product moment correlation analysis (Table 2), it is known that all questions items in the questionnaire have a significant correlation at 5% error rate, so it can be said that all question items are valid (Hair et al., 2013).

Table 2. The validity and reliability test

Research variables	Indicator	Question Number	Pearson correlation
Economic behavior	Eb1	01-02	0.879**
	Eb2	03-04	0.657**
	Eb3	05-06	0,808**
	Eb4	07-08	0.667**
	Me1	09-10	0.832**

Moral economy	Me2	11-12	0.717**
	Me3	13-14	0.609**
Entrepreneurial spirit	Es1	15-16	0.800**
	Es2	17-18	0.650**
	Es3	19-20	0.711**
	Es4	21-22	0.667**
	Es5	23-24	0.707**
Fishermen Household Economic Welfare	Fe1	25-26	0.744**
	Fe2	27-28	0.710**
	Fe3	29-30	0.812**
	Fe4	31-32	0.809**

** . Correlation is significant at the 0.01 level (2-tailed).

Confirmatory factor analysis

The results of the confirmatory factor analysis of the research, measurement model are shown in Table 3. The construct validity and reliability are two tests to evaluate the ability of measured variables in forming latent variables (Hair et al., 2013). From the analysis data (Table 3), all manifests have a loading factor with a probability of less than 0.05, which indicates that the manifest is significant in forming latent variables. It is also seen that each latent variable has a construct critical ratio of more than 0.2, which means it comes from one dimension (unidimensional)

Table 3. Confirmatory Factor Analysis

Research variables	Relationship	C. R.	Loading Factor	Probability
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Economic behavior	Eb → Eb1	2.000	0.854	0.000
	Eb → Eb2	5.214	0.689	0.000
	Eb → Eb3	8.126	0.807	0.000
	Eb → Eb4	8.115	0.802	0.000
Moral economy	Me → Me1	2.000	0.668	0.000
	Me → Me2	6.857	0.737	0.000
	Me → Me3	7.682	0.872	0.000
Entrepreneurial spirit	Es → Es1	2.000	0.645	0.000
	Es → Es2	8.454	0.714	0.000
	Es → Es3	7.815	0.615	0.000
Fishermen Household Economic Welfare	Fe → Fe1	7.847	0.659	0.000
	Fe → Fe2	9.810	0.898	0.000
	Fe → Fe3	2.000	0.759	0.000
Economic Welfare	Fe → Fe4	7.092	0.688	0.000
	Fe → Fe5	8.014	0.694	0.000

Source: Own survey

Goodness of Fit Test

The results of data processing using a sample of 160 indicate Chi-square is 107,212 with a probability of 0.061. Meanwhile, from GFI, AGFI, TLI, CFI, RMSEA and CMIN /DF respectively 0.926, 0.913, 0.967, 0.975, 0.061, and 1.636 all within the range of acceptable values (Hair et al., 2013). The results of the analysis are shown in Figure 1.

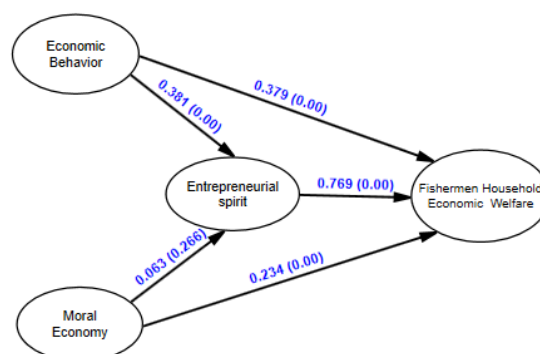


Figure 1. Coefficient of Research Model Path

Hypothesis testing

Hypothesis testing is done based on the estimated value of the significance of the

parameters of the research model shown in Table 4.

Table 4. Hypothesis Testing

H	Relationship	Standardized Coefficient	C.R	P	Decision
H1	Eb → Es	0.381	4.218	0.000	accepted
H2	Eb → Fe	0.379	3.673	0.000	accepted
H3	Me → Es	0.063	1.516	0.266	Reject
H4	Me → Fe	0.234	2.210	0.000	accepted
H5	Es → Fe	0.769	8.105	0.000	accepted

Eb: Economic behavior, Me: Moral economy, Es: Entrepreneurial spirit, Fe: Fishermen Household Economic Welfare.

Empirical results show that the economic behavior of fishermen influences and contributes to an increasing entrepreneurial spirit of fishermen. This result gives the meaning that if the fishermen's economic behavior is able to be directed and developed it will be able to trigger and increase the entrepreneurial spirit of the fisherman.

The dominance of social interaction indicators on the results of this study, informs that, the issue of social interaction is a major problem that should be done by fishermen, by trying to make an association or organization as a place to meet (interact) with other fishermen, also trying to eliminate differences in economic degrees between fishermen, in order to be able to cooperate with one another. Interaction among fishermen will open communication and opportunity to share important information, so if there are problems between fishermen related to behavior, they will be immediately resolved. This can be done through social gatherings that have already been formed, or in the form of community consultation. With intensive communication and mutual acceptance, the ongoing social interaction will be good. Next, the processing of catches, and weather anticipation, also need to get the attention of the fishermen. The process of processing

catches becomes very important because, by carrying out the process of catching, the catches will be better, and will get tilapia added, thus fishermen will get a better income.

Empirical results also show that the economic behavior of fishermen influences and contributes to increasing fishermen household economic welfare. The results of this evidence give, meaning that, when fishermen carry out good economic behavior, it will have an impact on the economic well-being of fishing households. This is obtained because the fishermen attend training in terms of technological progress, and fishermen are able to do processing quickly with the latest technological systems, will have an impact on the added value of the catch. Added value can also be obtained from empowering fishermen's wives through vocational training, by following training fishermen's wives will be able to produce products that can increase income.

Not many researchers have conducted research on the moral economy of fishermen. Moreover, research that links the moral economy of fishermen with entrepreneurial spirit, and fishermen household economic welfare, therefore the use of moral economy variables in this research model, becomes a novelty. The results of research have shown that the moral economy does not significantly influence Entrepreneurial spirit. This shows that the entrepreneurial spirit of the fishermen, occurs not because of the economic morale of fishermen, but because of other factors.

Where moral economy is about what causes fishermen to behave, act and indulge in economic activities (Scott 1994; Habibi 2013). The results of this study, found that what actually happened was that the fishermen pressed the cost of living to survive the conditions of poverty (poverty) they faced.

The dominance of distribution indicators in the results of this study, informs that, the problem of catch distribution becomes a major problem that should be done by fishermen, by trying to open cooperation with other companies (institutions or agencies) in order to facilitate the distribution of production results, also trying to have transportation facilities, so that the distribution of production goods is easy to do. What if the distribution of catches takes place is not good, and even tends to be slow, will have a negative impact on the catch, where the catch can be rotten, and can not be sold or consumed. It is also important that fishermen should be able to increase the quantity and quality of their catches, so that they can produce better catches. Therefore, fishermen need to strive to have skills in supporting higher quality production systems.

The relationship between entrepreneurial spirit, and fishermen household economic welfare has been widely studied in the literature, but by using capital, fishing equipment, catches, and processed products as indicators of variable economic welfare of fishing households, it has not been widely discussed. This research finds new things, and proves that these four indicators, as indicators that contribute positively to the economic well-being of fishermen households. Empirical results show that entrepreneurial spirit is influential and contributes to increasing the economic well-being of fishing households. This has become one of the new findings in this study. With the significance of entrepreneurial spirit on the economic well-being of fishermen households, this explains that the entrepreneurial spirit is already possessed by fishermen, and this

entrepreneurial spirit needs to be improved, so that the economic welfare of fishermen households will also increase. Therefore, fishermen need to be motivated and trained to be able to try and be able to utilize financial institutions such as cooperatives, banks, and others. Also fishermen are given an understanding in order to avoid capital loans with large interest.

Conclusion

From the results of tests on the model in this study, able to explain the relationship between economic behavior, moral economy, entrepreneurial spirit, and fishermen household economic welfare in Indonesia. The results of this study are significant contributions, especially in the development of economics, which relate to Entrepreneurial spirit, and Fishermen Economic. The welfare of fishing households is a serious concern for the government at this time. To improve the welfare of fishermen households, the management of marine products is handed over and carried out by local fishermen, taking into account environmental and sustainability aspects. Where the size of the fish caught should not be less than 15 cm in body size or laying fish. This is done to maintain the continuity of fish life, which has an impact on the quality and quantity of fish caught by the fishermen.

This research is able to offer and produce concepts about entrepreneurial spirit, and the economic well-being of fishermen households. In the conceptual model offered, the use of capital indicators, fishing equipment, catches, and processed products as indicators of the economic well-being of fishermen households. It also shows the theoretical implications that the entrepreneurial spirit of fishermen is the main determinant of the economic well-being of fishermen households. The economic behavior of fishermen is the second determinant of the economic well-being of fishermen households.

The findings of this study carry practical implications that fishermen should pay attention

and improve economic morale, which until now has not had a maximum impact on the economic well-being of fishermen households. This can be done by increasing the quality and quantity of catches, so that it can produce a lot of catches and, try to have more modern fishing equipment, by utilizing available sources of capital, and should avoid loan sharks.

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