



Study on the Characteristics of Traditional Fishermen Entrepreneurs on the Coastal of Kema Tiga Village, North Minahasa Regency, North Sulawesi-Indonesia

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ABSTRACT

This research seeks to delineate the entrepreneurial traits of conventional capture fisherman in Kema Tiga Village, Kema Sub-district, North Minahasa Regency. The study was carried out from April to July 2024 employing a qualitative descriptive methodology. Data gathering methods encompassed direct observation, in-depth interviews, questionnaires, and literature research to acquire thorough information. The research sample comprised 20 fishermen chosen by purposive sampling, based on characteristics including over 10 years of fishing experience and residence in Kema Village. The study's results revealed that fisherman in Kema Tiga Village demonstrate entrepreneurial traits, including self-confidence, risk-taking propensity, perseverance, innovation, and achievement motivation. This research concludes that traditional catch fisherman has the capacity to enlarge their company scale. Assistance through entrepreneurial training and suitable development techniques can aid traditional capture fishermen in leveraging the current fisheries potential

INTRODUCTION

Indonesia is a maritime nation that depends on the fishing sector to bolster its economy. Data from the Central Statistics Agency (2022) indicates that Indonesia is an archipelago nation including 17,001 islands, with its territorial seas encompassing 6.4 million km², significantly exceeding the land area of Indonesia. The seas of North Sulawesi Province has significant potential and provide optimal circumstances for the advancement of the fisheries sector, rendering it a prospective target for growth in both capture and aquaculture, owing to the vast aquatic expanses in this region (BPS, 2021). North Sulawesi Province is bordered by the Sulawesi Sea and the Maluku Sea, both abundant in fish and other marine resources, rendering it a pivotal region for fisheries operations.

Kema Tiga Village, situated on the coastline of North Minahasa in North Sulawesi Province, possesses considerable potential in the fisheries sector, especially for traditional fishing businesses. Entrepreneurial fishermen in this community not only bolster the local economy but also significantly contribute to the sustainability of marine resources. In 2021, data from the Central Statistics Agency (BPS) indicated that the fishing sector in Indonesia accounted for around 3.2% of the Gross Domestic Product (GDP), with traditional fishermen being a vital component of this sector (BPS, 2021). Kema Tiga Village is renowned for its plentiful natural resources and its coastal position in North Minahasa. A notable asset of the community is its plentiful marine harvest. The fish species captured comprise *Malalugis* (*Decapterus macarellus*), *Tude* (*Rastrelliger* sp), and *Deho* (*Euthynnus affinis*), all of which are pelagic, indicating the village's significant fisheries potential in North Sulawesi (DKP Sulut, 2020). Kema Tiga Village is a coastal settlement predominantly inhabited by fisherman. This village has emerged as a hub for commercial and industrial fishery activities, featuring a fish auction that facilitates the buying and selling of catches, attracting traditional markets and communities from North Minahasa to procure fish. This indicates that fishermen in this hamlet engage in daily fishing to generate earnings for the advancement of their fishing enterprises, so enhancing the economic circumstances of their families.

Traditional fishermen in Kema Tiga confront obstacles stemming from environmental alterations induced by human activities, including overfishing and marine pollution. Research conducted by the North Sulawesi Provincial Marine and Fisheries Office indicates that the fish population in Kema's waters has diminished by 30% during the past decade (North Sulawesi Marine and Fisheries Office, 2020). The presence of traditional fisherman in Kema Tiga also enhances the development of marine-based tourism. This community, renowned for its natural beauty, has emerged as a prominent tourist attraction for both domestic and international visitors. Such social and environmental situations may induce complacency among the community, thereby diminishing their diligence in pursuits. Comprehending the traits of entrepreneurship is crucial for economic considerations; so, conventional fisherman residing along the shore of Kema Tiga.

The village must comprehend the traits they possess as fisherman to enhance their business potential. By understanding the characteristics of traditional capture fishers, the factors that drive their success and the challenges

they face can be identified, allowing for the creation of more effective policies to support traditional capture fishers (Alim, M. 2020). Understanding the traits of traditional fisher entrepreneurs can facilitate the development of tailored empowerment initiatives, including business skills training, finance access, and suitable technology.

Through this study, it is expected to provide a clearer picture of the entrepreneurial characteristics of traditional capture fishers in Kema Village, as well as recommendations for developing policies that support the sustainability of the fisheries sector. This research will also contribute to studies on fisher entrepreneurship in other coastal areas of Indonesia.

LITERATURE REVIEW

This literature review seeks to analyse diverse theories and prior research pertinent to the traits of traditional small-scale fisheries businesses. Traditional fisheries entrepreneurs are typically linked to fishing practices that employ rudimentary methods and materials, while holding significant cultural and economic importance. Mulyani (2019) asserts that traditional fishers possess profound local knowledge regarding fish migration patterns and marine ecosystems, which underpins their decision-making in fishing endeavours. In an economic framework, conventional fisheries entrepreneurs frequently have difficulties in obtaining cash and technology. Supriyadi (2020) asserts that restricted access to market knowledge and contemporary technologies hinders indigenous fishers from competing with larger commercial entities. This leads in their entrapment in a cycle of poverty, where the income generated is inadequate to satisfy daily living requirements.

The social dimension significantly influences the traits of fisher entrepreneurs. Rahman (2021) indicates that traditional fishing communities typically had robust social structures, necessitating solidarity and cooperation among fishers. Fishers often establish clubs or cooperatives to facilitate equipment procurement, information exchange, and sale of their catches. This signifies that cooperation among fishers is essential for improving their competitiveness (Daleno, et al. 2018). Furthermore, the sustainability of marine resources has emerged as a critical concern in the study of fisher entrepreneurship (Indara, et al. 2017). FAO (2020) asserts that sustainable fishing techniques are crucial for safeguarding marine ecosystems and sustaining the viability of traditional fishers.

Consequently, it is imperative for fishermen to adopt sustainable principles in their fishing techniques. This study aims to elucidate the factors affecting the entrepreneurial traits of traditional fishers, thereby contributing to the formulation of policies that promote the sustainability of the fisheries sector in Kema Village and other coastal regions of Indonesia (Kaunang & Ompi, 2023).

METHODOLOGY

Location of the Research

The study was carried out in Kema Tiga Village, Kema Subdistrict, North Minahasa Regency. This study was conducted over a duration of four months, **from April to July 2024.**

Methodology of Research

The employed research method is qualitative, utilizing a descriptive approach. Abdussamad (2021) claims that qualitative research is a methodology that emphasizes the examination of natural occurrences or happenings in situ.

Method of Data Collection

The employed data gathering methods were primary and secondary. Primary data was collected via questionnaires given and interviews performed with fishing respondents in Kema Tiga Village. Secondary data was acquired from literature reviews derived from relevant internet sources, scientific publications, and textbooks. The research methodologies implemented are as follows:

1. Performing direct observation at the research site.
2. Gathering data using interviews and disseminating questionnaires to acquire primary data.
3. Acquiring data via literature reviews to substantiate primary data.
4. Recording all research activities undertaken.
5. Analyzing and processing the collected data.

Sampling Method

The sample method employed in this study is Purposive sample (Judgemental Sampling). Purposive sampling is a technique employed to select study samples based on certain criteria, aiming to acquire sampling units that possess particular qualities, as elucidated by Sugiyono in Fakhri (2021). The population of capture fishermen in Kema Tiga Village, Kema District, North Minahasa Regency, comprises 40 individuals. The researcher choose to select 20 respondents. The selection of these 20 fishermen was predicated on their over 10 years of experience and their residency in Kema Tiga Village, which equips them with a superior understanding of the conditions and circumstances of the marine fishing areas.

Data Analysis

This study employs descriptive analysis as its data analysis method, which seeks to delineate the current conditions (Pranatawijaya et al., 2019). This study employs a Likert scale to analyse the traits exhibited by fisherman. Additionally, an analysis is conducted to comprehend the traits of capture fisherman in Kema Village, Kema District, North Minahasa Regency. In this study, each participant responded to questions using a 5-point Likert scale, comprising: strongly agree (SA), agree (A), somewhat agree (SW), disagree (D), and severely disagree (SD). The Likert scale is an instrument utilized to assess an individual's or a collective's perceptions, attitudes, or views concerning an event or social phenomenon. This study employs a Likert scale to assess a positive metric, assigning scores of 5, 4, 3, 2, and 1 to each remark (Pranatawijaya et al., 2019; Yan Huang & Xiao, 2022).

Table 1. Likert Scale Instrument

No	Instrument Item	Scale
1	Strongly Agree	5
2	Agree	4
3	Disagree	3
4	Not Agree	2
5	SangStringly Not Agree	1

Source : Pranatawijaya, et al (2019)

The data analysis used is descriptive analysis, which was analyzed using the Likert Scale (Sengkey et al., 2017) as follows:

$$\text{Characteristics of an entrepreneur} = \frac{\text{Total Score of Data Collection Results}}{\text{Total Ideal Score (highest)}} \times 100\%$$

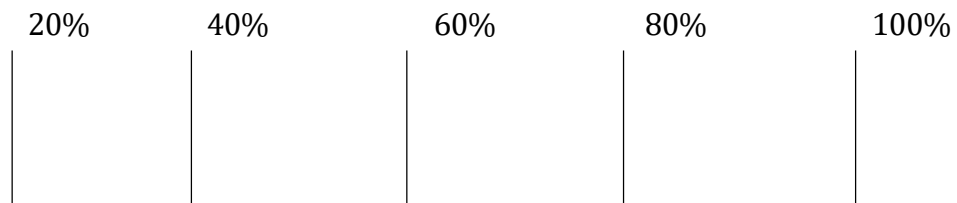


Figure 1. Score Interpretation

Explanation of Score Interpretation:

Number 20% = Strongly disagree

Number 21%-40% = Disagree

Number 41%-60% = Somewhat disagree

Number 61%-80% = Agree

Number 81%-100% = Strongly agree.

RESULTS AND DISCUSSION

Research Area Description

Kema Tiga Village is situated in Kema District, North Minahasa Regency, with a total population of 3,748 individuals, organised into 14 neighbourhoods or hamlets (Kema 3 Village Data, 2023). The village's advantage stems from its plentiful marine catches, positioning it among the regions with the highest fisheries potential in North Sulawesi. The community is located in a seaside region, where most inhabitants are employed as fisherman.

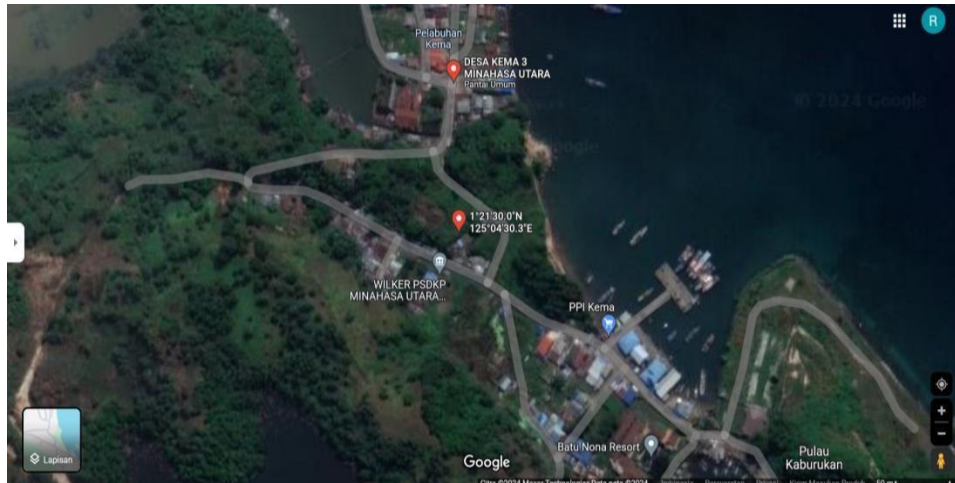


Figure 2. Research Location in Kema Tiga Village

(Source: <https://maps.app.goo.gl/BAXA83oLXnKS8HxFA>)

Respondent Characteristics by Age and Education

The characteristics of respondents can be examined through two primary variables: age and education. An individual's age frequently influences their capacity to engage in many activities. As humans age, they generally accumulate greater experience; yet, their physical strength may diminish. Conversely, a higher level of education is typically correlated with enhanced individual knowledge (Firmansyah, 2015; Adriansyah, 2020).

Table 2. Respondent Characteristics

No	Name	Gender	Age	Last education
1	Abdul Papulu	Male	40	SD
2	Jefri Hata	Male	40	SMP
3	Idrus Lakoro	Male	60	SMA
4	Subianta	Male	42	SD
5	Usman	Male	48	SD
6	Karmin	Male	40	SMP

7	Haris	Male	40	SD
8	Ulak	Male	49	SD
9	Anjas Mokoagow	Male	40	SD
10	Aan	Male	28	SMA
11	Onal	Male	38	SD
12	Irland Badarab	Male	41	SMA
13	Adhar Poliato	Male	42	SMP
14	Sahril Monoarfa	Male	29	SMA
15	Rahman	Male	30	SD
16	Ikram	Male	35	SMP
17	Labene	Male	37	SD
18	Trisman	Male	38	SD
19	Mulkan Lakoro	Male	33	SMA
20	Ramadhan Sugio	Male	30	SD

Source: Primary Data Acquisition (2024)

Table 2 indicates that the fishermen are aged between 28 and 60 years, suggesting that they remain in their productive years and possess knowledge and experience about seasonal fish patterns, fishing techniques, and fluctuating sea conditions. Nevertheless, the fishermen in this community possess limited educational attainment, with the average highest degree of education being elementary school (SD). This undoubtedly impacts fishermen's capacity to remain abreast of technological advancements in the fisheries business regarding contemporary equipment and current information. Fishermen with limited educational backgrounds frequently encounter constraints in the skills and knowledge required for effective company management. The absence of entrepreneurial education can impede their comprehension of financial management, marketing, and other essential business techniques for success (Yan et al., 2022). Upon completion of data collection and processing, the findings from the questionnaire were summarised as follows:

Table 3. Statements of capture fishermen in Kema 3 Village

No	Statement	Value	Description
1	Confident		
	a. I believe that my business can grow	100	Strongly disagree
	b. I have negotiation skills in selling the catch	88	Strongly disagree
	c. I am able to solve problems on my own without the help of others	93	Strongly disagree
2	Dare to Take Risk I am short on funds.		
	a. I still go to sea even when the weather is unstable	30	Disagree
	b. I am willing to take a loan for capital when	87	Strongly disagree
	c. I am always ready to face the risk of loss	90	Strongly disagree
3	Never Give Up.		Strongly disagree
	a. I am determined to keep learning from failures that occur in the fishing business	97	Strongly disagree
	b. Even though I often face low catches, I remain enthusiastic about running my business	94	Strongly disagree
	c. Even though fuel prices are getting higher, I continue to run my business.	91	Strongly disagree
4	Initiative		Strongly disagree
	a. I actively take steps to address problems before they get worse	95	Strongly disagree
	b. I do not wait for orders to act; I always take the initiative myself	94	Strongly disagree
	c. I am able to create simple bookkeeping for my business	82	Strongly disagree
5	AAchievement/effort motivation		Strongly disagree
	a. Having a high motivation to achieve success	99	Strongly disagree
	b. I feel driven to continuously improve my performance as a capture fisherman	97	Strongly disagree
	c. Having the determination to develop the catch outside the local area	86	Strongly disagree

Source: primer Data (2024)

Alongside the surveys administered to fishermen, first field observations were undertaken to directly assess fishing techniques, social interactions among fishermen, and the environmental conditions surrounding the fishing sites. Data collecting occurred during a four-month period, from April to July 2024, to guarantee that the acquired data were representative and precise. Furthermore, a study of documents was performed on the yearly reports of the Department of Marine and Fisheries, together with pertinent statistical data to substantiate the research conclusions. This study employed data triangulation (Dewi & Thomas, 2017; Kaunang, S., et al., 2024) to guarantee the quality and trustworthiness of the data, involving the comparison of information from many sources. This measure was implemented to mitigate bias and enhance the precision of the results. Additionally, input from the questioned fisherman was gathered to verify that the data interpretation aligned with their experiences. (Jaja & Purbasari, 2019).

Characteristics of Respondents from Experience

This study employed a Likert scale to assess the attributes of the fishermen. Subsequently, elaboration was conducted to enhance the understanding of their characteristics, facilitating the assessment of the degree to which the fishermen exhibit entrepreneurial traits (Lorena, 2019). The primary characteristics include confidence in business growth and a strong motivation to attain success. The data presented in Table 3 indicate that the capture fishermen in Kema Tiga Village, Kema District, North Minahasa Regency, exhibit entrepreneurial characteristics. The characteristics of traditional capture fisheries entrepreneurs in Kema Village are influenced by several factors, including local knowledge, resource access, and socio-economic conditions. Fishermen in this village predominantly utilise traditional fishing gear, such as nets and rods, which exemplify local knowledge in fishing methodologies. Understanding fish migration patterns and weather conditions is essential for fishermen to identify optimal times and locations for fishing (Rahmasari, 2017). Many fishermen in Kema encounter difficulties in securing capital necessary for acquiring modern equipment. Many individuals depend on personal savings and loans from family members or microfinance institutions. This aligns with Supriyadi's (2020) findings, which indicate that access to capital constitutes a primary challenge for traditional fishermen.

Social factors significantly impact the traits of fisher entrepreneurs (Sambagu et al., 2024). Research indicates that the fishing community in Kema exhibits a significant degree of solidarity, characterised by mutual assistance in various domains, including information sharing and marketing of their catch. This establishes a robust social network, enabling fishermen to adapt more effectively to fluctuations in market conditions and environmental changes (Oda et al., 2017; Daleno et al., 2018).

Conversely, environmental issues like overfishing and marine pollution impact fishermen's yields. Data from the North Sulawesi Marine and Fisheries Office indicate a 30% decline in the fish population in the Kema waters over the past decade (North Sulawesi Marine and Fisheries Office, 2022). This has a direct effect on fishermen's income, which has significantly declined. It is essential for fishermen to adopt sustainable fishing practices to conserve marine resources (Ishak & Siang, 2015; Rahmasari, 2017).

CONCLUSION AND RECOMMENDATION

This Study Yields the Following Conclusions:

1. Fishermen in Kema Tiga Village Three exhibit entrepreneurial traits such as self-confidence, risk-taking, perseverance, initiative, and achievement motivation.
2. Respondents reported that most fishermen exhibit a high level of confidence in their capacity to develop their businesses. They can independently resolve issues without external support, even when confronted with adverse weather conditions.

The research indicates that the entrepreneurial traits of traditional capture fishermen in Kema Tiga Village, North Minahasa, are shaped by multiple factors, such as local knowledge, resource accessibility, and socioeconomic conditions. Fishermen in this village possess extensive knowledge of the marine ecosystem and sustainable fishing practices. Nonetheless, they encounter difficulties regarding access to capital and contemporary technology. This research also aims to enhance policy development for the fisheries sector and provide a reference for future studies on fisher entrepreneurship in other coastal regions of Indonesia. It is essential to implement management and marketing training programs and to establish organized fisher groups to enhance the effectiveness of assistance. Processing the catch enhances value addition and increases the income of fishermen.

FUTHER STUDY

This research is currently experiencing delays, necessitating further investigation into the characteristics of fishermen entrepreneurs engaged in traditional fishing in Kema Tiga Village, North Minahasa Regency. Such efforts aim to enhance the study and provide additional insights for readers.

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