Analysis of Business Continuity in Industry Seafood Processed Product Based on Community in Bungin Island, West Nusa Tenggara Province

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Authors’ contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Aims: This study aims to analyze the sustainability of community-based industrial businesses on Bungin Island, West Nusa Tenggara province, seen from two dimensions, namely the sustainability of the economic dimension and the sustainability of the social dimension.

Place and Duration of Study: The sample of this research is the community of criteria is the Bungin island community which is a member of the industrial community that processes marine products into finished products with a total of 100 respondents. Collecting data in this study using a questionnaire for survey the community perspective. The answers to each question were measured using a Likert scale. Ordinal data from the Likert scale is transformed using the Method of the Successive Interval approach.

Methodology: The data processing method in this study uses the composite index of each variable of the economic dimension and social dimension.

Results: The results of this study are that from the economic dimension, there are several variables that become obstacles to business continuity, namely access to financial institutions with an index of 0.395 and the constraint from the social dimension is the relatively low level of education of community members with an index of 0.348. While there are several variables that support the sustainability of community-based seafood processing businesses on Bungin Island, namely active members seeking market information (0.72), actively expanding business (0.706), labor availability (0.706) and member welfare (0.89).
Keywords: Seafood processed product; business continuity; and method of successive interval.

1. INTRODUCTION

The industry is an important part of the economic sector. The main activity in this sector is processing raw materials or raw materials into semi-finished goods and finished goods so that they have more added value [1]. According to Law Number 3 of 2014 Republic of Indonesia regarding Industrialization rules in Indonesia, the industry is all forms of economic activity that processes raw materials and/or utilizes industrial resources so as to produce goods that have added value or higher benefits, including industrial services. Based on these two understandings, the main concept in the industry includes 2 (two) important things, namely the processing process and the creation of higher added value. Both give the meaning that the industrial sector is one of the important sectors in improving the economy both regionally and nationally.

West Nusa Tenggara Province is a province that has abundant potential for raw materials to support the industrialization process, especially industrialization in the marine and fishery sector. Based on the West Nusa Tenggara (NTB) Province Long-Term Development Plan Phase IV, marine and fishery development is directed to support the establishment of a solid economic structure based on competitive advantages in various regions supported by qualified and competitive human resources. The level of education services and the ability of marine and fisheries science and technology are increasingly advanced and the welfare of the marine and fisheries community is increasing and contributing to reducing the unemployment rate and the poor, especially in coastal areas, so it is necessary to build an industrial model that empowers the surrounding community, namely community-based industrial processes.

As an area with great potential for marine products, in the province of West Nusa Tenggara, it is necessary to build a community and village-based marine product industry center in the context of community empowerment. Community empowerment in coastal areas can be done by developing populist businesses that involve community members in the form of a community so as to improve the welfare of members in the industrial community. It should be taken into consideration for every community-based industry that a good business is a business that considers aspects of business sustainability in the long term such as looking at the sustainability of the economic dimension and the sustainability of the social dimension.

The development and sustainability of the business cannot be separated from the various factors that influence it. In the case of community-based industries, there are several determinants of the sustainability of community-based seafood processing industry on Bungin Island, namely (a) production aspects, (b) management and financial aspects, (c) environmental aspects, (d) family aspects, (e) aspects of market and marketing, (f) aspects of business partnerships, (g) aspects of economic conditions, and (h) aspects of government policies, Hartomo et al. [2]

Meanwhile, in the Sumbawa Regency area, namely Bungin Island, there are communities that initiate the marine product processing industry where there are many marine product processing products into finished goods that have added value, where these products are produced independently by several communities on Bungin Island. Another reason for choosing Bungin Island as the object of this research is because almost all of the residents of Bungin Island are catching fish fishermen. From the explanation above, it is very relevant to conduct studies related to the sustainability of community-based industrial businesses on Bungin Island. So that the output of this strategy can be applied in similar industrial communities in other places. The Purpose pof this reseach is to know the main factor of business continuity of seafood processing Process in the Bungin island based on perspective of respondent.

Table 1. Total of fish potentiation in West Nusa Tenggara Province 2013 – 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Total of Fish Potention (ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1,022,374.69</td>
</tr>
<tr>
<td>2014</td>
<td>1,118,047.16</td>
</tr>
<tr>
<td>2015</td>
<td>1,278,669.32</td>
</tr>
<tr>
<td>2016</td>
<td>1,356,827.58</td>
</tr>
<tr>
<td>2017</td>
<td>1,207,077.14</td>
</tr>
<tr>
<td>2018</td>
<td>1,297,325.30</td>
</tr>
</tbody>
</table>

Source: Ministry of Marine Affairs and Fisheries Republic of Indonesia [3]
2. LITERATURE REVIEW

Table 2. Previous studies related to this research

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>Author</th>
<th>Metodology</th>
<th>Result</th>
<th>Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sustainability Index Analysis of Lobster Reaching Business in Lombok Island, West Nusa Tenggara Province</td>
<td>Ervin Nora Susanti, Rina Oktaviani, Sri Dominicus Savio Priyarsono</td>
<td>This research using Method of Successive Interval (MSI) and index continuity counted using Composite Index</td>
<td>The continuity index of Economic dimension is 0.58, social dimension is 0.56 and environmental dimension is 0.54. that's mean all dimension is Medium Sustainability business indication.</td>
<td>In this research, the sustainability aspect is measured only based on the perception of farmers, so further research is needed that involves data that physical parameters and the aquatic environment.</td>
</tr>
<tr>
<td>2</td>
<td>A Rating Factor of Business Continuity for Creative Industries in Surakarta Municipal</td>
<td>Denny Dwi Hartomo &amp; Malik Cahyadin (2013)</td>
<td>Research analysis method is analytic hierarchy process (AHP) with sampling method is purposive sampling</td>
<td>Priority factors of business continuity for creative industry in Surakarta Municipal are family, environmental condition, government policy, economic condition, business partnerships, management and financial, production, market, and marketing.</td>
<td>With using AHP Method, this research doesn’t classified the kind of busines contuitity, low sustainability, medium sustainability or high sustainability business</td>
</tr>
<tr>
<td>3</td>
<td>Analysis of Seaweed Farming Business Sustainability in the East Sumba, East Nusa Tenggara</td>
<td>Permana Ari Soejarwo, Risna Yusuf &amp; Armen Zulham [4]</td>
<td>Research analysis method in this research using Rapid Appraisal For Fisheries (RAPFISH)</td>
<td>The condition of seaweed farming on economic factors has a sustainability index value of 69.73, which is categorized as sufficiently sustainable.</td>
<td>In this research doesn’t use environmental variable for calculating the value of business continuity</td>
</tr>
</tbody>
</table>

3. METHODOLOGY

The type of research in this study is descriptive research analysis, the population in this study is the marine product industry community on Bungin Island, the sampling method in this study is purposive sampling, purposive sampling is one type of sampling technique commonly used in scientific research. Purposive sampling is a sampling technique by determining certain criteria [5]. The criteria are the people of Bungin Island who are members of the industrial community that process marine products into finished products with a total of 100 respondents. Collecting data in this study using a questionnaire, the answers to each question are measured using a Likert scale with an answer range of 1 to 5 consisting of (5) strongly agree, (4) agree, (3) undecided (2) disagree, (1) strongly disagree. In this research already to do validity test and reliability test for the questionnaire using SPSS program.

The business continuity index is measured using a composite index based on Likert scale data [6]. Likert scale data in the form of ordinal data obtained from respondents who are members of the marine product processing industry community on Bungin Island, West Nusa Tenggara province. The selection of variables in this study refers to the research of Susanti et all. [7]. The statement of business continuity of community-based industries on Bungin Island is formulated in eleven business sustainability
variables consisting of two dimensions of business sustainability. The variables for each dimension of business sustainability are:

Likert scale data sourced from research questionnaires is still in the form of ordinal data so it is necessary to transform using the Method of Successive Interval approach [8]. The transformation is carried out to calculate the average value \( (\bar{X_j}) \), the minimum value of \( X_j \), and the maximum value of \( X_j \), and standard deviation value.

\[
I_{ji} = \frac{X_j - \text{Min } X_j}{\text{Max } X_j - \text{Min } X_j} \tag{1}
\]

Another calculation

\[
I_{ji} = \frac{\text{Max } X_j - X_j}{\text{Max } X_j - \text{Min } X_j} \tag{2}
\]

\[X_{ji} \] = Measurement results for variable \( j \) and member
\[\text{Min } X_j \] = The lowest value of measurement for variable \( j \)
\[\text{Max } X_j \] = Highest value of measurement for variable \( j \)
\[J \] = variable to 1, 2, ..., \( n \)

The composite index value for the sustainability of community-based industrial business on Bungin Island, West Nusa Tenggara province is in the range of 0 to 1. The classification of the Composite Index according to the criteria of Gunduz [9] is divided into three index. For the calculating Composite Index of Business Continuity using Microsoft Excel

a. 0 – 0.40 Low Sustainability Composite Index
b. 0.41 – 0.67 Medium Sustainability Composite Index
c. > 0.68 High sustainability Composite Index

<table>
<thead>
<tr>
<th>Economic Dimensions</th>
<th>Social Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Access to Financial Institutions</td>
<td>a. Labor availability</td>
</tr>
<tr>
<td>b. Other income alternatives</td>
<td>b. Education determines business</td>
</tr>
<tr>
<td>c. Active to expand business</td>
<td>c. Spend time in community of industri</td>
</tr>
<tr>
<td>d. Facilities and infrastructure</td>
<td>d. Active in community of industri</td>
</tr>
<tr>
<td>e. Active to promote the product</td>
<td>e. Welfare is the main goal</td>
</tr>
<tr>
<td>f. Active for seeking market information</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3. Sustainability variable of economic dimension and social dimensions**

**Fig. 1. Composite Index for variable of economic dimension**
4. RESULTS AND DISCUSSION

The discussion in this study will present a composite index of the sustainability of the community-based marine product management industry on Bungin Island, West Nusa Tenggara province which is described into two parts, namely the sustainability of each variable in the economic dimension and the sustainability of each social dimension.

a. Sustainability of Economic Dimension

Based on the composite index value of the sustainability variable of the economic dimension in the community-based seafood processing industry. There is a variable with a low sustainability composite index, namely access to financial institutions with a composite index value of 0.395 and belongs to the low sustainability index. The following is the distribution of variables for the sustainability of the economic dimension based on the distribution according to Gunduz [9].

1. Low sustainability index (0 -0.40) on economic dimension variable: access to financial institution (0.395)
2. Medium sustainability index (0.41 – 0.67) on economic dimension variables: Facilities and infrastructure (0.498), variable other income alternatives (0.637) and variable active to promote the product (0.668)
3. High sustainability index (>0.68) on economic dimension variables: active for seeking market information (0.72), and variabel active to expand business (0.706)

The composite index value of the variable access to financial institutions (0.395) which is very low reflects that the community-based seafood processing management industry on Bungin Island has difficulty accessing external capital from various financial institutions. This is due to the fact that many marine product processing industry communities are not registered with the cooperative and MSME services as well as the industry service, resulting in industrial groups on Bungin Island having difficulty getting assistance from the government in terms of business capital. Another cause that complicates access to financial institutions is the administrative requirements if the product processing industry community wants to apply for a loan for capital to bank or non-bank financial institutions, such as conventional banks and savings and loan cooperatives. This needs to be the main focus for the government in the welfare of industrial community groups by collecting group data so that each business capital assistance program can be channeled to the industrial community on Bungin Island.

Capital is one of the important keys in the sustainability of a business. Without sufficient capital, business activities cannot run properly. Likewise with the community-based seafood processing industry, to be able to build, run and develop its business, it requires capital from external institutions such as financial institutions and capital assistance from the government because the ability of capital itself is very limited in expanding the business. In order to meet the required capital, the government through a work program seeks to assist by establishing various policies that favor community-based businesses that will prosper the members. Programs to help the industrial community on Bungin Island in terms of capital are not only carried out by the government but also by non-governmental organizations such as savings and loan cooperatives, microfinance, and so on.

Meanwhile, for the variables of facilities and infrastructure (0.498), other income alternatives (0.637) and the variable active to promote the product (0.668) which are in the medium sustainability composite index, it indicates that production factors are still not optimal in optimizing the sustainability of the marine product processing industry on Bungin Island. In terms of capital, it is exacerbated by the condition of facilities and infrastructure that are less supportive such as roads, the availability of clean water in terms of managing marine products into finished products. In general, Bungin Island has several obstacles in general, namely inadequate road access and limited availability of clean water, because on Bungin Island there is no source of clean water for both household and industrial activities.

The majority of the people of Bungin Island work by processing marine products into products that have added value, and relatively have no alternative income from other sources, this can be seen from the composite index value of the other income alternatives index which is low at around 0.637. While the variable active to promote the product (0.668) is still quite low because the promotion model carried out by the marine product industry community on Bungin
Island is carried out conventionally. So far there has been no industrial community that has carried out massive promotions using social media so that the promotion of marine processed products from Bungin Island is still not optimal.

The high sustainability value of the composite index is reflected by the variable active active for seeking market information (0.72), and the variable active to expand business (0.706), this is due to the high enthusiasm of the Bungin island community in expanding their business despite having difficulties in accessing funds to financial institutions. Members of the industrial community on Bungin Island always update market information because it will be related to sales and look for new relationships as outlets where product sales are spread across the province of West Nusa Tenggara.

b. Sustainability of Social Dimension

Based on the graph above, which displays the composite index value for each social dimension variable, the variable that reflects the low value of social sustainability, namely education determines business with a composite index value of 0.348. The following is the distribution of the variable sustainability of the social dimension.

1. Low sustainability index (0 - 0.40) on the social dimension variable: education determines business (0.348)
2. Medium sustainability index (0.41 – 0.67) on the social dimension variable: active in group (0.496), and variable spend time in community of industry (0.635)
3. High sustainability index (>0.68) on the social dimension variable: labor availability (0.706), and variable welfare is the main goal (0.89)

The variable education determines business has a low composite index value of 0.348, this indicates that the business continuity of the industrial community processing marine products on Bungin Island is not determined by education level. Based on observations made during the research on Bungin Island, it was found that the average education level of community members on Bungin Island was elementary school graduates. And spread throughout the community on Bungin Island. It is also built with the local community's perception that education does not determine the sustainability of a business they build in the form of a community.

In terms of the activeness of members of the marine product processing community on Bungin Island, it is in the moderate sustainability index with details of the social dimension variables, namely the active in group variable (0.496), and the spend time variable in the community of industry (0.635). This phenomenon occurs because the production process is often hampered due to the availability of raw materials that follow the development of the season, so that the activity of community members is determined by the scale of production. When raw materials such as fish are available in abundance, this community will carry out production constantly, but when the raw materials available are few, community members choose to stop carrying out the production process.

Composit Index for Variable of Social Dimension

<table>
<thead>
<tr>
<th>Variable</th>
<th>Composite Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welfare is the main goal</td>
<td>0.89</td>
</tr>
<tr>
<td>Active in community of industri</td>
<td>0.496</td>
</tr>
<tr>
<td>Spend time in community of industri</td>
<td>0.635</td>
</tr>
<tr>
<td>Education determines business</td>
<td>0.348</td>
</tr>
<tr>
<td>Labor availability</td>
<td>0.706</td>
</tr>
</tbody>
</table>

Fig. 2. Composite Index for variable of social dimension
Meanwhile, on the other hand, the social dimension sustainability index is very high, seen from the labor availability variable (0.706) and the welfare is the main goal variable (0.89). Bungin Island people who are members of the community that process their marine products think that this business is very significant in improving the welfare of community members. The condition on Bungin Island in general has a surplus of labor, it can be seen that many young people who are in the labor force from Bungin Island do not have permanent jobs.

5. CONCLUSION

The community-based industrial community on Bungin Island has several obstacles in business continuity, both from the economic and social dimensions, constraints from the economic dimension, namely access to financial institutions which is quite difficult to obtain additional capital in expanding the scale of business, given the availability of private capital owned by each community, in the seafood processing industry is very limited. It is hoped that the data collection on the industrial community on the island of Bungin will make it easier for the community to obtain additional capital in financial institutions.

Meanwhile, the constraint from the social dimension is that the education level of community members is relatively low and the average is elementary school graduates, making it difficult to innovate in terms of business development. In general terms, both from an economic and social perspective, community-based seafood processing businesses on Bungin Island have a high composite index, so that although there are constraints in terms of capital and relatively low education of members, community members are active in seeking market information, as well as the availability of surplus labor and increased welfare of members by joining the community together to process marine products into products that have added value.

In this research, the sustainability aspect is measured only based on the perception of community of business in the Bungin island, so further research is needed that involves data that physical parameters like amount of production, scarcity and the sea environment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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