

Socio-economic Determinants of Coastal Fisherman: Evidence from Indonesia

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Abstract: Socio-economic determinants are still become serious issue. This study aims to provide information about socio-economics aspects of coastal fisherman. The research used constructivism paradigm using descriptive qualitative and quantitative methods. The results show that socio-economic determinants of coastal fisherman are low-income category, low level of education (primary school), working age is still productive, less diverse of technology utilization and are still strongly depending on the 'tengkulak' (middleman). This implies that the government needs to concern on these determinants in order to increase coastal fisherman welfare.

Keywords: *Poverty, socio-economic, coastal fisherman*

I. Background

Socio-economic determinants are still become serious issue in developing countries. The context of coastal communities to date is still one of the topics of discussion that need to be studied, especially Indonesia which is one country that has a water area 3 times of land area (Manggaberani, 2016 and Lasabuda, 2013). This means that Indonesia is indeed worthy to be declared a Maritime Continent. The area of the waters is so large that the people of Indonesia are known as the king of the sea. The phenomenon of poverty in Indonesia as described implies the birth of various poverty reduction programs including the reduction of poverty programs in urban, rural and coastal areas with the livelihoods of the majority of fishermen (Akpalu, 2011). But on the other hand, there are problems that need to be studied in the waters themselves, especially fishermen whose living resources are in these waters are become, coastal fishermen. Based on several research reports Wasak (2012), provide information that the life of fishermen in the coastal areas, especially in Indonesia, especially in South Sulawesi can be said not only not well-off, but also still in backwardness. The social limitations experienced by the fishermen community did not materialize in the form of alienation. However, it is more manifest in their inability to take part in the widespread social development of society. In the economic aspect, coastal communities are considered weak in dominating the market economy and weak in developing their organizations and communities. The condition of the low social and economic limitations suffered by fishing communities

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is caused by complex factors. These factors are not only related to environmental conditions. But the limitations of human resources, limited capital, lack of market access (Haryono, 2005).

The importance of social practice is emphasized in the context of social relations through a social approach (Turgo, 2016; Kuivanen *et al.*, 2016). The social approach given to coastal communities is slowly affecting their lifestyle. Associated with the coastal community's economy, the main problems that occur are very limited and uncertain fishermen's working hours, and unsuitable production yields when measured from the sale price. In addition, fishing families also have relatively low socioeconomic conditions and access to public health services (Arsyad *et al.*, 2020). Portraits of the coastal fishermen of this country with socioeconomic conditions are very worrying and eventually trigger social inequalities and instability in their environment. This is what happened to Coastal Fishermen in Bontosunggu Village, Tamalatea Sub-district, Jeneponto Regency and Ujung Labuang Village, Sub Pinrang Sub-district. The weak socio-economic condition of the fisherman causes the helplessness in achieving welfare for their families. In addition to Bontosunggu Village, Tamalatea Subdistrict, Jeneponto Regency is the public spotlight on the weak socio-economic case of coastal fishermen. Ujung Labuang Village, Suppa Sub-District, Pinrang District is the next section recorded as a district with socio-economic condition classified as poor. The people of Ujung Labuang village mostly work as fishermen with below average income level. Weak economic conditions lead to an inability to meet the needs of even future investments for their descendants.

Social economic slump can trigger social inequality. Therefore, identifying economic and social relationships, will provide a clearer picture of community life about the problems and how the problems of fishermen can be slowly overcome (Halfacree, 2007). Factors causing poverty are cultural problems, unproductive lifestyles, low levels of education, dependence on middlemen, and low technological mastery. Referring to the previous explanation, the problems that have been described above, this study aims to provide information about socio-economics determinants of coastal fisherman.

II. Methods

Determining the location of the survey, researchers pay attention to three elements, namely places, residents and activities in the area. Places, occupants, and actions are the elements used by researchers in collecting data. The researcher identifies the perceptions of the inhabitants' desire to be involved if the village becomes a marine tourism destination. Another data is the community's understanding of the physical state of the village area. The research was conducted in Bontosunggu Village, Tamalatea Subdistrict, Jeneponto Regency, and Ujung Labuang Village, Suppa Subdistrict, Pinrang Regency of South Sulawesi Province Indonesia. Types and sources of data used include qualitative, quantitative, primary and secondary data, using data collection techniques such as interviews, observation and documentation. The number of respondents as many as 40 respondents. The research employed constructivism paradigm using descriptive qualitative and quantitative methods. The method of

constructivism uses a case study approach to understand the subject and the object in depth in a process of analyzing the research results.

III. Results

3.1 Revenue determinant of fisherman

Based on the results of data collection of 80 fishermen in Bontosunggu Village (BV) and Ujung Labuang Village (LV). Each group numbered 40 people (Figure 1). It shows that the income level of the fishermen in both study villages is both in the low category (IDR500,000-1000,000) with the total of 22 respondents (55.0%) and 16 persons (40.0%) in Bontosunggu and Ujung Labuang Villages.

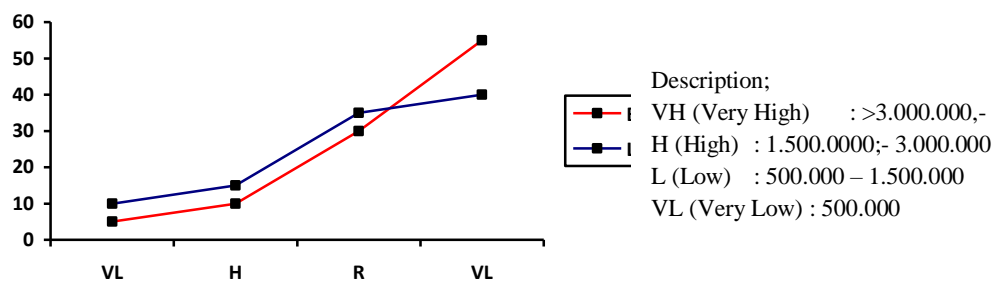


Figure 1. Income Level of Coastal Fishermen

3.2 Educational factor

Based on the results of data collection of 80 respondents on fishermen in Bontosunggu Village (BV) and Ujung Labuang Village (LV) Each group amounted to 40 people (Figure 2). It indicates that the educational level of second-ranked fisherman children is in category I (primary school), with a total of 20 respondents (50.0%) and 15 people (37.5%) of children only able to complete primary school education Bontosunggu Village and Ujung Labuang Village and only 5.0% are able to achieve category IV of higher education (Diploma/Degree).

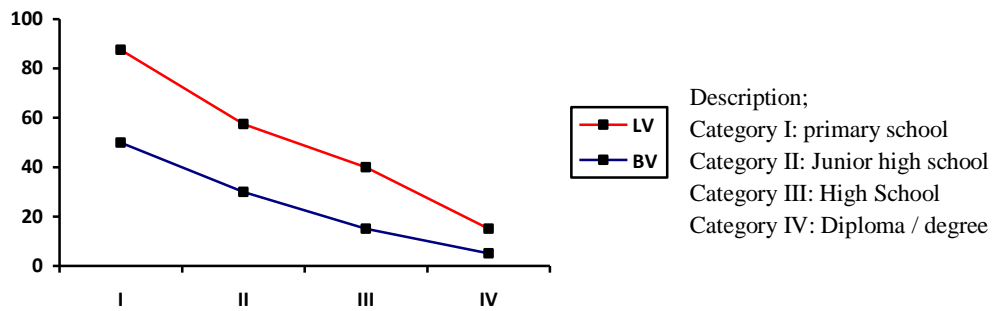


Figure 2. Level of Education of Coastal Fishermen's Children

3.3 AgeFactor

Based on the results of data collection of 80 fishermen in Bontosunggu Village (BV) and Ujung Labuang Village (LV) Each group amounted to 40 people (Figure 3). This indicates that the age of the fishermen in both study villages are both in the productive category (40-15 years) with a total of 19 respondents (47.5%) and 20 (50%) in Bontosunggu and Ujung Labuang Villages. Most of them work productively with physical and strong pool power.

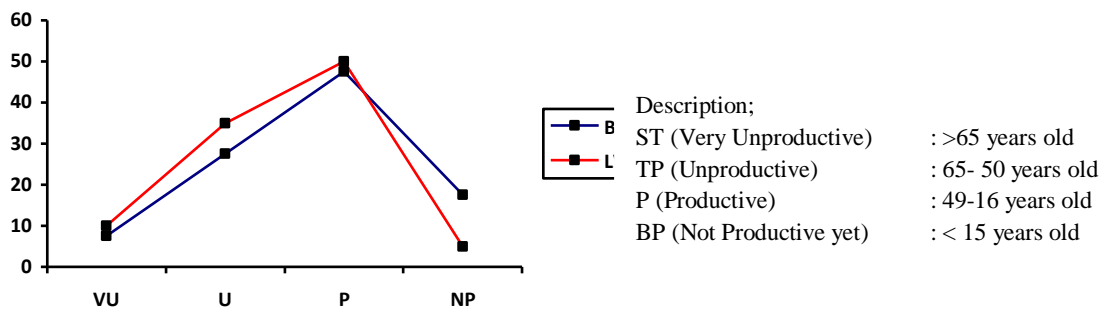


Figure 3. Age Level of Coastal Fisherman

3.4 Job opportunity factor

Based on the results of data collection of 80 fishermen in Bontosunggu Village and Ujung Labuang Village Each group amounted to 40 people (Figure 4). It indicates that other types of work or sideline conducted by fishermen in both study villages are average working as farmers (category II) and breeder (category III) with total respondents 18 people (45%) and 20 persons (50%) in Desa Bontosunggu and Ujung Labuang Village. Side jobs are undertaken in Desa Bontosunggu mostly as farmers. As in Ujung Labuang village, most have side jobs as a breeder because in the village mostly have the main livestock poultry such as ducks and chickens.

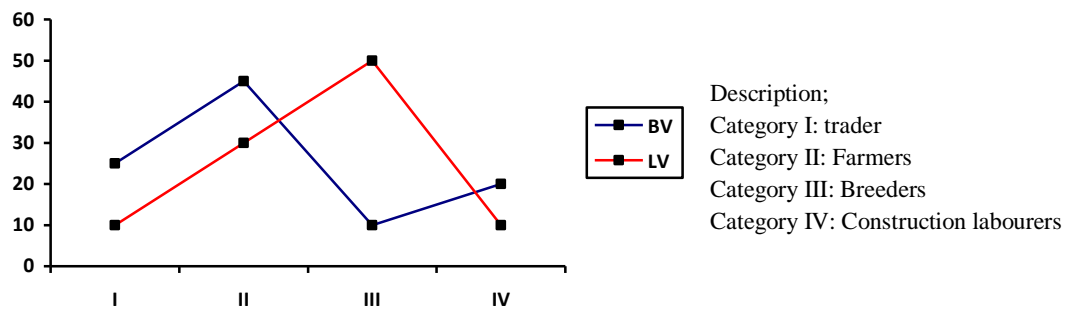


Figure 4. Fisherman Occupation

3.5 Market distribution factors

Based on the results of data collection of 80 fishermen in Bontosunggu Village (BV) and Ujung Labuang Village (LV). Each group numbered 40 people (Figure 5). This indicates that the market distribution of fishery products in both study villages is in very low categories (market distribution of products within the sub-district) and low (product market distribution in the sub-district) with a total of 21 respondents (52.5%) and 20 people (50%) in Bontosunggu Village and Ujung Labuang Village. Fishermen from Ujung Labuang Village distribute their products to neighbouring villages.

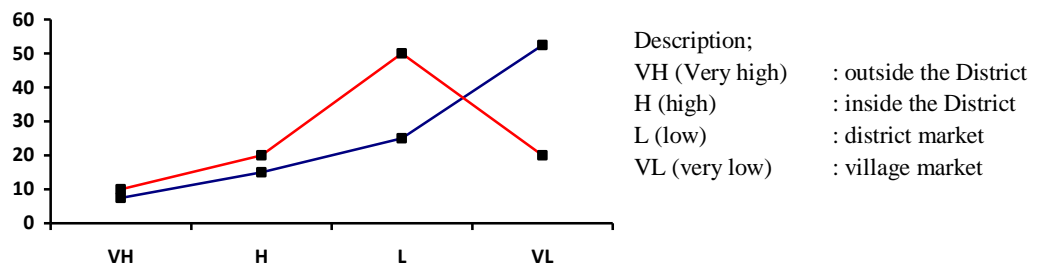


Figure 5. Distribution of fishery products Markets

3.6 Technological utilization factor

Based on the results of data collection of 80 fishermen in Bontosunggu Village (BV) and Ujung Labuang Village (LV) Each group amounted to 40 people (Figure 6). It shows that the utilization of fisherman technology in both study villages is in a less diverse category with a total of 18 fishermens (45%) and 27 people (67.5%) in Bontosunggu and Ujung Labuang villages. It is based that the average

coastal fisherman does not master the technology in catching and processing fish. Fishermen still catch fish by using nets. For the processing itself, there is no technology used. The average fisherman only processes the catch as a salted fish.

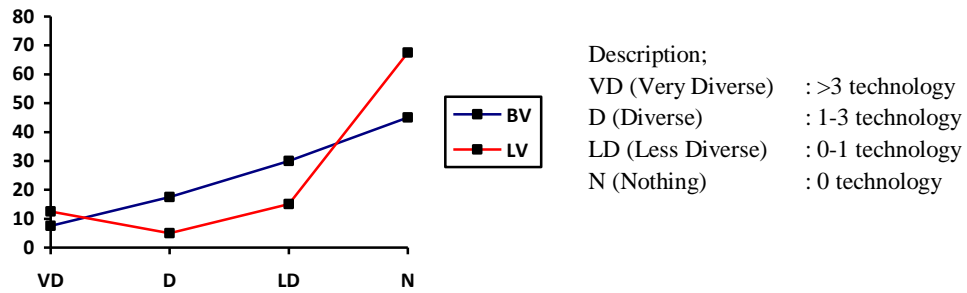


Figure 6. Mastery of Coastal Fishermen Technology

3.7 Factors of dependency on middlemen

Based on the results of data collection of 80 fishermen in Bontosunggu Village (BV) and Ujung Labuang Village (LV) Each group amounted to 40 people (Figure 7). This indicates that dependence on fishermen middlemen in both study villages is very dependent on the total of 25fisherman (62.5%) and 20 persons (50%) in Bontosunggu and Ujung Labuang villages. This is based on the average of coastal fishermen shackled debt to middlemen which makes the fishermen do not get a profit according to the sale of catching.

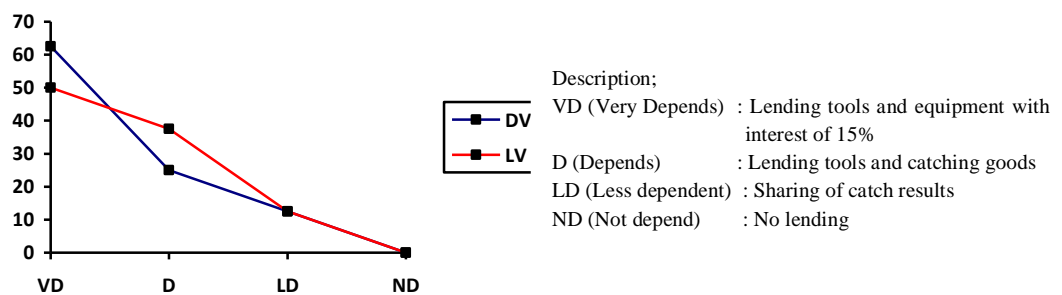


Figure 7. Dependency of coastal fishermen to middleman

IV. Discussions

4.1 Life as a fisherman

Occupations at sea, such as catching activities, become the domain of men because the characteristics of this work require strong physical ability, speed of action, and high risk. In poor fishermen's households, women, fishermen's wives, take strategic roles to maintain the integration of their households. The modernization of fisheries with serious implications for the poverty process has placed women as the primary responsibility for the survival of fishing households (Kusnadi, 2003). It is interesting that poor fisherman communities, they always enjoy their life. But, they are experiencing due to the existing social structure. Poverty might happens because of the prevailing social structure between rich and poor. These conditions, it is prone to happen in a family of fishermen, who do not have boat or fishing gears (Njoku, 2004). The roots of poverty is the perception of fisherman communities themselves, nor the views of the poor against or life survival strategy (Santiago and Roxas, 2012). There are several points of view, such as the agrarian populist.

The life of fishermen in Bontosunggu Village, is still living on the poverty line. But there is a fundamental difference between the fishermen who are located in both villages. Broadly, Suppa District, Pinrang Regency, South Sulawesi Province is more advanced with some adequate facilities. As for some means of residents in the District Suppa, Pinrang District such as irrigation and drainage networks, Hatchery, local feed industry. Not only the facilities and infrastructure, but the potential of human resources is sufficient (Asbar *et al.*, 2015). Particularly in Kecamatan Suppa, the number of workforce/adults reaches 15,054 people (adult men) (CBS of Pinrang District, 2012). In contrast to the fisherman's life in Bontosunggu Village, Tamalatea Subdistrict, Jeneponto Regency has a lower standard of living. With the condition of natural resources, facilities and infrastructure and human resources more qualified, Ujung Labuang, District Suppa Pinrang more advanced.

4.2 Determinant of fishermen life

Poverty is a problem that is essentially a very simple intervention of the State in public life generally, rural communities. The point of view of poverty is the core cultural issues. People are poor because they do not have a high work ethic, do not have the entrepreneurial spirit, and low education, not even related to the quality of human resources (Maanen, 2006; Cahaya, 2015). Fishermen face the risk of mortality and high financial risks as a result of their variation in income from year to year high. (Sethi, 2010). The catch shows an inter-income variability (Kasperski and Holland, 2013). Revenue factors become one of the most frequently measured parameters to show the well-being of fisherman. This indicates that Bontosunggu and Ujung Labuang villages are both below the poverty line. Payne (2000) noted that marine fisheries remain one of the poorest sectors. Low-income fishing communities, about two-thirds of the national per capita income and have less revenue stability due to widespread seasonal fluctuations. Some of the factors that become the benchmark of fisherman's income is business capital, length of time to go to sea, and long time in doing fish (Halim, 2013).

Based on the data of the results of this study can be compared that the level of socioeconomic or income and education of coastal fishermen in Ujung Labuang show slightly more advanced than the

fishermen in Bontosunggu. However, both villages are still in low education level category. In general, being unable to attend school and lack of education leads to inadequate quality of fishermen and their ability is severely limited to small and traditional experiences (Katz, 2013). Socioeconomic or income conditions greatly affect the level of formal education of fishermen's children (Maddox, 2006). The majority of the fishermen had no education. Most of the sampled fishermen were compelled to enter into the fishing profession in their early stage due to poor economic status of their parents and lack of awareness about education (Hossain *et al.*, 2015).

Age factor is a factor that is influenced by work experience or duration of being a fisherman. The longer a fisherman seeks his livelihood at sea the greater his experience level will be. Based on the results most Bontosunggu and Ujung Labuang village have side jobs as a breeder because in the village most have the main livestock poultry such as ducks and chicken. Fishermen from Ujung Labuang Village distribute their products to neighbouring villages. This category difference is based on the business of the fisherman in making the sale. Fishermen prefer to sell around their respective villages for several reasons ie (a). The distance to the outer regions makes it far longer to travel (b). Higher transportation costs lead to a lack of profit and even have a considerable impact on losses for fishermen (c). Trips with great distances will have an effect on the quality of fish and seafood being sold because it will be rotten and damaged when it comes to distant sales locations.

Both fisherman villages do not have technology in both study villages is in a less diverse category with a total of 18 fisherman (45%) and 27 people (67.5%) in Bontosunggu and Ujung Labuang villages. It is based that the average coastal fisherman does not master the technology in catching and processing fish. Fishermen still catch fish by using nets. For the processing itself, there is no technology used. The average fisherman only processes the catch as a salted fish.

This is based on the average of coastal fishermen shackled debt to middlemen which makes the fishermen do not get a profit according to the sale of the catch. Fishermen who borrow capital to the 'tengkulak' (middleman) are required to sell the catch to the tengkulak at a price determined unilaterally. There are three reasons for the existence of middlemen still take place in Indonesia in general. First, the fishermen who do not have the capital to go to sea do not know the information of the capital lending institution (Sari *et al.* 2016). Syafrini (2014) also mentioned that the official capital borrowing institutions, such as the Coastal Community Empowerment Program are also not often perceived by fishermen as an institution that benefits the interests of the group alone so that the institution tends not to flourish. Secondly, there is no guarantee for fishermen during the famine season or little catch. The famine season is a classic problem experienced by fishermen (Solihin, 2004). In this season, fishermen barely do fishing activities, so their income is also relatively non-existent. This situation forces fishermen to carry out various adaptation activities in order to survive, such as diversifying jobs, selling valuables, and borrowing money. Third, the source of capital loan other than the tengkulak has difficult processes and requirements. This is because the terms of borrowing from an official institution such as a bank is a condition that can not be met by fishermen. This is in accordance with research Imran (2003), which explains that fishermen cannot borrow the capital to go to the bank in the absence of collateral. Finally,

fishermen are forced to turn to middlemen who want to lend unconditional capital difficult. Consequently, the fisherman must be willing not to be involved in the regulation of his own catch.

4.3 Management of coastal area

The structural poverty of fishing communities due to their dependence on the structure of the fishing season and potential fishery resources that are shared (common property); and the nature of open access to the sea causes the occurrence of overfishing throughout the research area. The dominance of the poverty problems in the lives of fishermen is exposed to coastal areas that have the potential richness and diversity of natural resources (Cahaya, 2015). Therefore, Management planning for coastal areas integrated with environmental objectives and involving all related sectors (Post and Lundin, 1996). In the management of coastal areas, it is necessary to note several things, among others, the successful management of coastal areas is based on the tradition (local knowledge), related to natural resources and its management; The management of coastal areas is a matter of concern; Planning techniques need to be developed in an innovative way to solve coastal environmental problems; and Coastal area policies and programs should always be evaluated and monitored to provide a measure of success (Kay and Alder, 1999)

The studies that have been conducted in the two villages with different districts have become the latest study and reference for future government study in giving attention to the socio-economic condition of Coastal Fishermen of South Sulawesi. Mainly Bontosunggu Village, Tamalatea District, Jeneponto Regency and Ujung Labuang Village, Suppa Sub-District, Pinrang Regency, so hopefully there is a step and the right solution to be the root of problem solver. Regarding to this matter, it is suggested that in determining the poor households receiving the government supports, accurate measurement should be completely implemented in accordance with the indicators that have been issued by the National Development Planning Agency.

The community empowerment, generally that can be applied in Bontosunggu and Ujung Labuang, among others; pproach through the role of government and banking (capital), increasing of marketing network; stop depending on the tengkulak to get the capital source; equity of education, facilities and facilities for all coastal communities; community empowerment centered on local fishermen through socialization, counselling, or technology transfer from upstream to downstream; increasing the economic growth of fishermen by producing valuable products; to increase the fisherman's economic growth by fishing groups; keep on the environment clean and protect from dirty area and diseases.

Management of empowering were involving all related sectors. The strategy of empowering the coastal community in a sustainable manner is not only viewed from the purely economic aspect but also needs to consider the sustainable aspect of fisheries, such as fish resources, technology, social, Communities empowerment (Nanis, 2014). According to Nunan (2006), to empower the fishermen community is by using an approach that is productive, which will strengthen the local fishermen group. The approach taken will be focused on improving the fishermen's welfare and the management of the natural resources with the participation of the local communities.

V. Conclusions

The results show that socio-economic determinants of coastal fisherman are low-income category, low level of education (primary school), working age is still productive, less diverse of technology utilization and are still strongly depending on the 'tengkulak' (middleman). This implies that the government needs to concern on these determinants in order to increase coastal fisherman welfare, reducing poverty in other words.

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