

Economic Activities of Bajo Fishermen's Wives and Their Contribution to Household Income in Muna District of Southeast Sulawesi, Indonesia

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Abstract: *The research aimed to find out economic activities of Bajo fishermen's wives and their contribution to household income. Primary data were obtained from 48 respondents who were selected using simple random method. Data were analyzed using analysis of income and contribution to the total household income. Research results showed that economic activities performed by Bajo fishermen's wives were selling fish, selling coral-reef seaweed, selling firewood, and selling cookies and cakes. Contribution of income of housewives from selling fish and selling firewood to household income was under "low" category, whereas contribution of income from selling coral-reef seaweed and selling cookies is "very low." Overall, contribution of income of housewives from doing economic activities to household income was low. This finding implies that there is opportunity to develop further such economic activities to provide more improved income to the Bajo women. It is recommended that Bajo fishermen's wives perform economic activities to utilize their own resources by taking into account the sustainability of marine resources.*

Keywords: *contribution, income, Bajo, fishermen's wives, Indonesia*

I. Introduction

Bajo people were initially dwelling in the house-boat called *Bido*, moving in a group from one place to another according to their preference of fishing grounds. Known as Bajau in Malaysia (Madlan *et al.*, 2014), historically they lived in the house-boat since they were born until their death. For this reason, Bajo people is often called *Sea Nomads* (Sopher in Suyuti, 2011) or *sea gypsies* (Brown in Suyuti, 2011). Bajo is one of the ethnics who rely their livelihood on sea creature and they are well known as skilled sailors and breath-hold divers (Abrahamsson and Schagatay, 2014; Suryanegara, Suprajaka, and Nahib, 2015). According to Priantono in Suyuti (2011), Bajo or sama Bajo is one of the ethnics in Indonesia whose communities can be found in all parts of the country. Bajo people build their home out on stilts over the ocean near the shore, and they rely primarily on sea for their livelihood. They were often called as Sea Nomad because for most of their history they have been a nomadic, seafaring people living off the sea by trading and subsistence fishing.

Bajo community is often categorized as poor fishers and they are living below the poverty line. The residents of contemporary Bajau villages are characterized by high infant mortality, low levels of formal educational achievement, and other indicators of poverty (Chou 1997). In Philippines, Bajau have been known for its impoverishment and marginalization (Aoyama and Anombo, 2010). In Indonesia, Bajo fishing communities are considered one among few segments in the social structure that have not optimally enjoyed or sufficiently benefited from development. As Crabbe (2006) has argued, the Bajau are trapped in a "development cycle" of increased aspirations, lack of capital, dependence on wage labor, and natural-resource depletion with the increased degradation of the coral reefs. In such condition, they have to rely on their own capability and strengths to manage marine resources to meet their needs. Currently from the total of 229,479 households of indigeneous people living in 2,650 communes, approximately 30% are Bajo people. According to Fitriana and Stacey (2012), the number of ethnic Bajo in Indonesia is estimated to be between 90,000–150,000. They live, among others, in Riau (known as duano), North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, East Nusa Tenggara, Maluku, and North Maluku (Department of Social Affairs in Nuryadin, T.L., 2010).

Most production and income generating activities in coastal areas involve women and gender division of labor (Ariff *et al.*, 2010). Fishing is a male dominated sector while women work in the land. Such roles have placed women as the dominant actors in coastal livelihood strategies. The impact of this labor distribution system is that women is dominant in domestic economy activities and in making important decisions in their households (Kusnadi, 2001). Generally housewives perform productive activities with great amount of time

allocation to complement household livelihoods. Women's involvement in economic activities will increase family income which can be used to meet daily necessities of the family members.

The complex reality of life of the housewives of Bajo fishermen deserves further investigation to understand all kinds of roles they performed. Damayanti (2009) uses the concept of "three dual roles" to describe types of roles of fishermen's wives. In this regard, fishermen's wives have three roles which are performed simultaneously, namely reproductive, productive, and social roles. Reproductive roles are taking care of children and family, while productive roles include activities related to the production of goods, trade and income generating activities such as salting fish, selling fish and making various types of fish based foods. Social role is like attending religious gathering and cultural ceremony. According to Susoliwati (2006), there are three reasons that may motivate fishermen's wives to involve also in economic activities, namely: 1) to meet the economic needs of households; 2) to utilize skills they have had; and 3) to feel responsible to the family. This is line with Ulhaq (2008) who stated that the reason for fishermen wives to sell fishes was because that was her obligation as wife and has been agreed together with her husband.

In West Muna District in Southeast Sulawesi Province, many Bajo fishermen's wives are involved in various economic activities (productive activities). Such livelihoods are done with the objective to earn income to help improve the welfare of their households which are still in poor category. However, there has been lack of data regarding the amount of income that fishermen's wives have earned from their economic activities, and the extent of their contribution toward the total household income. Therefore, this research specifically aimed to analyze the amount of income of fishermen's wives from their economic activities and the contribution of that income to the improvement of household income.

II. Methodology

The research was done during the period of Jan-Mar 2016 in Napano Kusambi Subdistrict, West Muna District, Southeast Sulawesi Province. West Muna District is a newly established district from the proliferation of Muna District. The district is situated in 4°15' - 4°30' south latitude and 122°15' - 123°00' east longitude. Napano Kusambi Subdistrict is located in the northern part of the district, and has an area of 77.19 km². The majority of the population are engaged in agriculture and fisheries. The subdistrict consists of six villages, one of which is located in the coastal area and inhabited by Bajo community. For their daily livelihoods, generally men work as fishermen and their wives perform various economic activities to increase household income.

Data and information were collected using questionnaire based interview method. Data and information collected were characteristics of fishermen's wives, types of economic activities, cost, revenue, and income. Interviews were held with fishermen's wives and supported by direct observation toward various economic activities performed by women. Data were collected from primary sources, namely 48 fishermen's wives who became the respondents of this research. Respondents were selected through simple random sampling out of the population of 192 housewives in Latawe Village, Napano Kusambi Subdistrict, West Muna District. Data were analyzed using income analysis and contribution analysis. Analysis was done based on the type of economic activities done by fishermen's wives.

1. Income analysis with the following formula (Soekartawi, 2002):

$$I = TR - TC$$

Where: I = Income (Rp/year)

TR = Total Revenue (Rp/year)

TC = Total Cost (Rp/year)

2. Analysis of contribution of income of Bajo fishermen's wives to household income with the following formula:

$$C = \frac{I}{HI} \times 100\%$$

Where C = Contribution (%)

I = Income of housewives (Rp)

HI = Total Household Income (Rp)

Further, the contribution of income of Bajo fishermen's wives was classified based on the criteria proposed by Sumantri (2004) as follows:

Table 1. Criteria for Contribution of Income of Bajo Fishermen's Wives

No	Criteria	Percentage of Contribution (%)
1	Very low	1 – 19
2	Low	20 – 39
3	Fair	40 – 59
4	High	60 – 79
5	Very high	≥ 80

III. Results and Discussion

3.1. Characteristics of Respondents

All respondents interviewed are Bajo fishermen's wives who have been doing economic activities to obtain income. Table 2 shows that the majority of respondents (91.67%) are in the range of age of 15-55 years (with the average of 40.94 years), whereas respondents with the age of more than 55 years account for 8.33%. This indicated that most housewives are in their productive age. With respect to the education level, half of respondents (50%) completed elementary school, 12.55% completed junior elementary school, 4.12% completed senior high school, and 33.33% never attended formal education. This indicates that majority of respondents had attended formal education, even though only until the levels of elementary and junior high schools.

Table 2 shows that slightly more than half of respondents' households (58.33%) have family members of 4-6 persons, with an average of 5 persons. Households with members being less than 4 persons account for 22.92%, while those with members more than 6 persons are 18.75%. Further, the majority of respondents (58.33%) have been doing economic activities for more than 10 years, and the remaining (41.67%) have been for 5-10 years, with the average of 13.71 years. This indicates that on average housewives have sufficient experience in conducting their current livelihood strategies.

Table 1. Characteristics of Bajo housewife respondents

Characteristics	Number	Percentage
Age (years)		
15 – 55	44	91.67
> 55	4	8.33
Education		
None	16	33.33
Elementary School	24	50.00
Junior High School	6	12.55
Senior High School	2	4.12
Family members (persons)		
< 4	11	22.92
4 – 6	28	58.33
> 6	9	18.75
Length of experience of doing economic activities (years)		
5 – 10	20	41.67
> 10	28	58.33

Source: Field survey, 2016

3.2. Income of Bajo fishermen's wives

Unlike findings of Carsten (1997) that Bajo women were associated with domestic harmony and community solidarity and hence were excluded from marketing activities, the survey results showed that Bajo housewives have performed economic activities, namely selling fish, selling coral-reef seaweed, selling firewoods, and selling cookies. The cash income from these trade activities is used to support family's daily expenses. Bajo housewives' income constitutes financial returns that the housewives have earned from the economic activities they have been doing, and are obtained after deducting revenue with the total cost spent for the business. Revenue is the multiplication of the quantity and price of products, while the total costs are the accumulation of variable cost and fixed cost.

Table 3. Average revenue, cost and income per year of Bajo housewives

Economic activities	Revenue (Rp)	Cost (Rp)	Income (Rp)
Selling fishes	30,375,000	28,326,163	2,048,837
Selling coral-reef seaweed	600,000	217,554	382,446
Selling firewoods	1,592,308	8,283	1,584,025
Selling cookies	921,429	659,699	261,730

Notes: field survey, 2016

Table 3 shows that economic activity that provides the highest revenue for the Bajo fishermen's wives is selling fish (Rp30,375,000). This is because selling fish is done throughout the year leading to higher quantity of fish being sold. Types of fish sold vary depending on the season and catches. Economic activity which provides the second highest amount of revenue is selling firewood (Rp1,592,308). Firewoods are collected by cutting trees which are still abundant in the village where they live, so that they can sell firewoods in the large amount. Revenue from selling cookies is Rp 921,429, and that from selling coral-reef seaweed is Rp 600,000 per year, which is the smallest among the four types of livelihood activities. Selling seaweed is done by women through collecting seaweed grown in the coral reefs available in the sea around their settlement. Therefore this activity is done only in the certain period of time when the seaweeds grown in the coral reefs are ready to be harvested. For this reason, the amount of seaweed collected and sold is relatively small.

Table 3 shows that the highest cost per year spent by Bajo fishermen's wives is selling fish (Rp 28,326,163) followed by selling cookies (Rp 659,699), selling coral-reef seaweed (Rp 217,554), and selling firewood as the lowest (Rp 8,283). The amount of total cost for selling fish and selling cookies are affected by the amount of variable costs to buy fish and raw materials for cookies making, respectively. The costs for selling seaweed and selling firewood are relatively lower as they depend only on the fixed cost from the depreciation of some tools used in doing such activities. Based on the amount of revenue and cost, the amount of income that fishermen's wives have earned can be calculated. Table 3 shows that the highest income of fishermen's wives from doing economic activities is obtained from selling fish (Rp2,048,837), followed by selling firewood (Rp1,584,025), selling coral-reef seaweed (Rp382,446), and selling cookies (Rp261,730). Income of fishermen's wives serves as an important complementary to the household income and support the realization of daily living costs of family members, especially during east monsoon. During east monsoon which is popularly known among fishermen as *paceklik* season, fishermen usually cannot go fishing due to big waves, so that they could not obtain any income.

3.3 Bajo Fishing Household Income

Household income of Bajo fishermen is the total income of all members of a household, which can be obtained from the income of husband, wife, and other household members. Research results that Bajo household income only comes from income of husband as fisherman and income of wife who performs such economic activities as selling fish, selling coral-reef seaweed, selling firewoods, and selling cookies.

Table 4 shows that the highest income of husband is obtained by wives whose economic activities are selling cookies (Rp 4,714,286), while the lowest income of husband is with the wives who do fish selling (Rp 4,037,500). However, the difference in the amount of husband's income is not large. Household income ranges from Rp4,582,446 to Rp6,195,563, whereas the highest household income is obtained by housewives who sell firewoods (Rp6,195,563) and the lowest by housewives who sell coral-reef seaweed (Rp4,582,446). Regardless of the types of women economic activities, the average income of husband is Rp4,470,833, the average income of housewives is Rp1,332,530, so that the average household income is Rp5,803,363 per year or Rp483,614 per month.

Table 4. Average annual income of each Bajo fishing household according to economic activities of housewives

Economic activities of fishermen's wives	Husband's income Rp)	Wife's income (Rp)	Household Income (Rp)
Selling fish	4,037,500	2,048,837	6,086,337
Selling coral reef seaweed	4,200,000	382,446	4,582,446
Selling firewoods	4,611,538	1,584,025	6,195,563
Selling snacks	4,714,286	261,730	4,976,016
Average	4,470,833	1,332,530	5,803,363

Source: field survey, 2016

If linked with the average number of family members of 5 persons, then the average percapita monthly income is Rp96,723. This amount is lower than poverty line standard in Southeast Sulawesi, namely Rp 165,208/capita/month, or poverty line standard in Indonesia of Rp211,726/capita/month (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2011). In other words, in spite of the involvement of women in economic activities, Bajo fishing households are still living in poor condition. This is in agreement with Hamzah (2009) that the most Bajo fishermen had income which was below the poverty line. A study by Firmansyah (2006) shows that fishermen's income from fishing activities is still below the the amount of provincial minimum wage. Therefore, many efforts need to be done to increase the income of housewives in order to improve the welfare of the fishing households.

3.4. Contribution of Bajo Fishermen's Wives to Household Income

Contribution of income of Bajo fishermen's wives is the amount of contribution or proportion of income of fishermen's wives from the economic activities they performed toward the household income, stated

in percentage (%). In this regard, household income is overall income earned by men (husband) from fishing and women (wives) from doing economic activities (selling fish, selling coral-reef seaweed, selling firewoods, and selling cookies).

Table 5 shows that contribution of wives' income to the household income varies, ranging from 5.26% to 33.66%. The highest contribution is found with women who sell fish (33.66%), while the lowest is seen from women who sell cookies (5.26%). Nevertheless, the level of contribution of income of women from doing economic activities to the household income is "low" or "very low." The "low" contribution is shown by fishermen's wives who perform economic activities of selling fish and selling firewoods, while the "very low" contribution is on fishermen's wives whose economic activities are selling coral-reef seaweed and selling cookies. Overall, regardless of types of activities, contribution of fishermen's wives' income to the household income is categorized as low (22.96%). In spite of such low contribution, the wives' income is helpful and strongly supports the meeting of daily basic needs. Such contribution is seen clearly during East monsoon or *paceklik* season, where husband as fishermen cannot go fishing, or if they can the catches are minimum, leading to their lower returns from fishing activities.

Table 5. Average contribution of income of Bajo fishermen's wives to household income according to economic activities they have performed

Economic activities of wives	Income (Rp)	Household income (Rp)	Contribution (%)	Category
Selling fish	2,048,837	6,086,337	33.66	Low
Selling coral-reef seaweed	382,446	4,582,446	8.35	Very low
Selling firewoods	1,584,025	6,195,563	25.57	Low
Selling snacks	261,730	4,976,016	5.26	Very low
Average	1,332,530	5,803,363	22.96	Low

Source: Field survey, 2016

IV. Conclusion

Based on the research results it can be concluded that economic activities performed by Bajo fishermen's wives consist of selling fish, selling coral-reef seaweed, selling firewood, and selling cookies. Contribution of income of fishermen's wives from selling fish and selling firewoods to the total household income is still the "low" category, whereas contribution of income from selling coral-reef seaweed and selling cookies is very low. Overall, contribution of fishermen's wives' income from the economic activities they performed to the total household income is low on average. This shows that there are chances to develop adaptive livelihood strategies of Bajo women in order to improve their income and hence their contribution to the household income and welfare. It is suggested that Bajo women keep doing their economic activities by utilizing the resources they own but taking into account sustainability of natural resources. Further research needs to focus on factors affecting income of Bajo women from livelihood activities they performed.

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