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# Bioscience Research

Print ISSN: 1811-9506 Online ISSN: 2218-3973

Journal by Innovative Scientific Information & Services Network



RESEARCH ARTICLE

BIOSCIENCE RESEARCH, 2019 16(4):3372-3386.

OPEN ACCESS

## Why is Trust worthiness Critical for the Food Security System of *Sama Bajo* in Coastal area of South-east Sulawesi Indonesia?

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Trust is one of six dimensions of social capital; it refers to the complexities of feelings that people have about their relationships. This article addresses the issue of trustworthiness between *Sama Bajo* and *Bagai* Land-dwellers in different social contexts related to the food system and survival in times of financial turbulence. The *Bajo* are minority groups often referred to as sea gypsies and who are also landless. This research was undertaken in two *Bajo* villages: (1) Mantigola *Sama Bajo* in Wakatobi Marine National Park (from March until May 2017); (2) Kangkunawe *Sama Bajo* in Tiworo Strait (from July until September 2017). Using 160 respondents, this research was analyzed by hybridization of a quantitative and qualitative research paradigm. The research findings highlight the two very different situations involving *Bajo* relationships with land-dwellers. Trustworthiness then becomes the basis of the economic transaction, which influences the *Bajos*' food security. We also find that frequency of interaction and intermarriage increase food security using the *Bajos*' food expense reduction.

**Keywords:** Trustworthiness, *Bajo*, Food Security, Wakatobi, Tiworo Straits.

### INTRODUCTION

Trust is one of six dimensions of social capital (Jones and Woolcock, 2009) which refers to complexities of feeling that people have about their relationship. Patulny (2009) said that there are divergent views over the nature of trust. However, Patulny (2009) argues that Fukuyama (1995); Putnam, (2000) see trust as a culturally and historically derived artefact. Later, Patulny (2009) highlights the similarity for economist perspective (e.g., Dasgupta, 1988; Gambetta, 1988) and also certain sociologist perspective (Coleman, 1990) which see trust as a logical construct based on information concerning the

trustworthiness of others. Trust is a part of relational aspect of 'subjective' dimension of social-wellbeing; expressed relational aspect include the relation of love and care, network of support and obligation, social, political and cultural identities (Weeratunge et al., 2013).

The *Sama Bajo* are one of the leading agents in the management of marine biodiversity; they usually regard trust as a sensitive dimension. Stacey et al., (2012) said that most of the *Sama Bajo* live in settlements in reef areas. The diaspora of *Bajo* inhabit all five provinces of Sulawesi and provinces of Nusa Tenggara Barat (NTB) and NTT, and they are generally landless.

Nagatsu (2007) cited in Clifton and Majors (2012) found that in 2000, the total estimated population of Bajo in Indonesia was approximately 193,147 people (9 percent of the total of Bajo population in south-east Asia). Eastern Indonesia has a massive community of diaspora Bajo. There are 90,522 people in Sulawesi or 60 percent of Bajo total population; 18,006 in Nusa Tenggara or 23 percent of the total of Bajo population in Indonesia and a tiny minority of the people of Bajo in eastern Indonesia (13,978 or 7.2 percent of the total Bajo population) was in Maluku and Papua. As a minority group that lives with the stigma of being destructive fishermen, trust for the Bajo is endogenously developed through social relationships not only within the kin relationship but also livelihood activity across *Sama* Bajo villages which involve land-dwellers connection. In addition to the stigma, their destructive fishing methods increasingly cause them to be marginalized (Ali Basriet *et al.*, 2017) and even criminalized Wianti, *et al.* (2012; 2018); they are seen as people who cannot be trusted or as liars. So that, trust is a sensitive dimension for the Bajo.

This paper looks for the connection between trust and food security on the *Sama* Bajo with the different social context of *Bagai* land-dweller. Previous research about social capital and food security found that in rural area, households with cognitive social capital, characterized by observance of generalized norms and mutual trust, were also more food secure than others (Sseguya, *et al.*, 2018). Further, during times of stress ('hungry' season) or shock (droughts and floods), social capital manifested by kinship ties, community solidarity and access to external networks potentially play a role in facilitating access to food for the affected households and communities. Access to information and resources from informal and formal networks is mediated by norms of reciprocity and mutual trust and solidarity at both household and community levels (Sseguya, 2009).



**Figure 1. Mantigola Village**  
(Source: Wakatobi Regency Map)

We explore on understanding how trust of the Bajo and also the land-dwellers result in food security system of the marginal Bajo. It is also important to examine that the different Bajo social contexts were based on various land-dwellers' stereotypes, and the type of natural resources extraction will affect *Sama* Bajo wellbeing. This research used the *Sama*Bajo's household income from fishing activity and the Bajo's household first food expense as the lens to examine their food security system. These indicators were adopted from Jonsson and Toole(1991) cited in Rahman and Ariani (2002). The ultimate research objective was to be able to answer the question about 'why is trustworthiness between *Sama* Bajo and land-dwellers in different types of natural resources critical for the food security system of *Sama* Bajo?'

## MATERIALS AND METHODS

This research used the comparative case study as a research method; a comparative analysis to obtain an in-depth and nuanced picture of trust as a part of the social interaction of the Bajo and its positive and negative consequences to their food system. The evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as more robust (Herriott and Firestone, 1983 cited in Yin, 2014).

From July until September 2017, fieldwork was carried out in two villages of *Sama* Bajo with the difference being one of local social context: (1) *Sama* Bajo Mantigola and Kaledupa land-dwellers in Wakatobi Marine National Park (WMNP) as restriction area (Figure 1); (2) and *Sama* Bajo Kangkunawe, BugisKasipute land-dwellers in *Sama* Bajo Kangkunawe local market in KasiputeBombana and MunaMaginti land-dwellers in Kangkunawe, Muna Strait, West Muna Regency, which is an open resources area (Figure 2).



**Figure 2. Kangkunawe Village**  
(Source: West Muna Regency Map)

Unit of analysis was household for the Bajo and land-dwellers. A total of 160 families were interviewed as respondents by questionnaire. There were 40 respondents in Mantigola *Sama* Bajo or 11.6% of 346 (BPS-Statistic of Wakatobi Regency, 2017) total households population; 40 respondents in Kangkunawe *Sama* Bajo or 13.9% of 288(BPS-Statistic of Muna Regency, 2017) total households population; 40 respondents of Kaledupa Land-dwellers or 10.7% of 374 (BPS-Statistic of Wakatobi Regency, 2017) total households population; and 40 land-dwellers, 20 households of Bugis Kasipute Land-dwellers or 0.6% of 3085 (BPS-Statistic of Bombana Regency, 2017) total households population, 20 households of MunaMaginti Land-dwellers or 12.5% of 319 (BPS-Statistic of Muna Regency, 2017) total households population. We chose the respondents by clustered random sampling. Also, we did in-depth interviews undertaken with several key informants who have in-depth knowledge about the history of bridging relations between *Sama* and land people.

For data analysis, we used the table of frequency and the Pearson Correlation Test to clarify the relationship between Bajos' trust and Bajos' food security, with the descriptive level test for  $p < 0.05$ . Qualitative data from the in-depth interview of seven key informants were used to support the quantitative data analysis.

## RESULTS AND DISCUSSION

### Understanding the historical relation of the *Sama* Bajo and *Bagai* Land-dwellers

In this paper, the land-dwellers' lack of trust of the Bajo people is discussed from three aspects. First, the dark history of the past; second, *Bagais'* beliefs affected by Bajo criminal behavior; third, the lack of faith in business commitment.

The relationship between the Bajo and the land people begins with economic exchange. When the Bajo lived as nomads, to get clean water, they anchored Bajo's *soppe* to the land-dwellers village and exchanged catches for foodstuff with land-dwellers. This exchange then became an interdependence relationship. After they were moved to permanent dwellings by Indonesian government design, the *Sama* built water villages along or near the coast; later they found it necessary to engage in monetary exchange because the value of the catch seemed to increase with the emergence of diverse needs. Not only did they need clean water but also fuel and basic foodstuffs and more recently later for

complex needs such as information, education, and health. Chou (1994) explained that this money circulation also is a driving factor for the *Sama* settle for a sedentary lifestyle. This barter/bargaining relation seems to underlie the bond between *Sama* and *Bagai*.

Even though the bond was intimacy and interdependency, the Bajo believed that their legitimacy relies on the sea as 'fishermen,' not for the land area as a peasant. The marine environment constitutes culturally defined living spaces (Chou, 1997; Lowe, 2003 in Stacey et al., 2012). Moreover, Stacey et al., (2012) described that in the words of the Bajo "*Lautmerupakandasarhidup*" (The Sea forms the basis of our life) and "Kita punya kebun di laut" (Our Garden is the Sea). All in all, most of the Bajo are landless (e.g., Mantigola Bajo) despite government regulation. Meanwhile, the land-dwellers have full power to control Bajo access to basic food needs such as rice, cassava, sago, and corn. The situation is not one where the balance is equal.

Stacey et al., (2018) constructed the idea about *Sama*-Bajau's social well-being which is linked to the four value sets of spatial mobility, autonomy and identity, resource use patterns and kinship ties. Besides, Stacey et al., (2018) highlighted that the four value sets would be different from various land-based societies. Likewise, Cooke (2004) found that Bajau Kaligau who develop livelihood diversification through seaweed cultivation on Banggi Island off Kudat, northern Sabah is not attained by economic factors alone but also by the meaning attached to the activity.

There is validity to this point of view; in August 2017, there was a case of fish poisoning from a Bajo Mola catch as a relative and patron of Mantigola *Sama* Bajo. Bajo fishers were suspected of using plant fertilizer (the Bajo people call it *dangke*) mixed with the bait (PatroliNews.com, 2017). Wianti et al., (2012) emphasized the fact that the Kaledupa people abuse Mantigola *Sama* Bajo and Sampela *Sama* Bajo as social and economic inferiors. The phenomenon is based historically, on the Bajo betrayal of their people in the KaharMuzakar rebellion approximately during the 1950s and 1960s (Stacey, 1999). Older generation Mantigola Bajo recall the disorder in their lives during the years 1956 and 1957. During the 'gerombolan,' some members of the Bajo community supported and took part in the associated rebellious activities and became the followers of KaharMuzakar, which was in

opposition to the Kaledupa land-dwellers and national government. Threatened with violent reprisals and attacked by the land-dwellers, the Mantigola Bajo were forced to abandon their settlement at Mantigola and move to Sampela *Sama* Bajo, now is *Sama* Bahari Bajo, under orders from the local Kaledupa army who wished to have tighter control on the Bajo (Stacey, 1999). However, Stacey (1999) said that support of *Sama* Bajo for the rebellion continued, and about a year later, with further threats from the Kaledupa government the Mantigola Bajo fled to Mola, under permission from the Wanci government who supported the rebellion. Today, it produced the social perception that both these *Sama* Bajo groups are indeed liars.

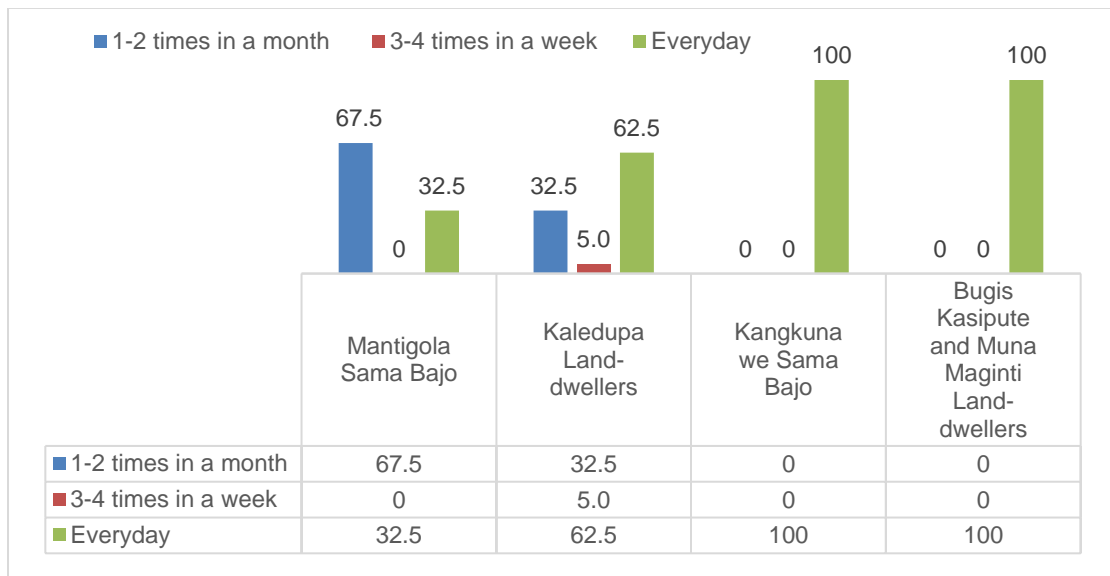
**The *Sama* Bajo and *Bagai* Land-dwellers Trustworthiness**

In our survey, we examined the social interaction between Bajo people and land-dwellers in two different social contexts. We emphasize in two things: (1) the intensity of the . 4).

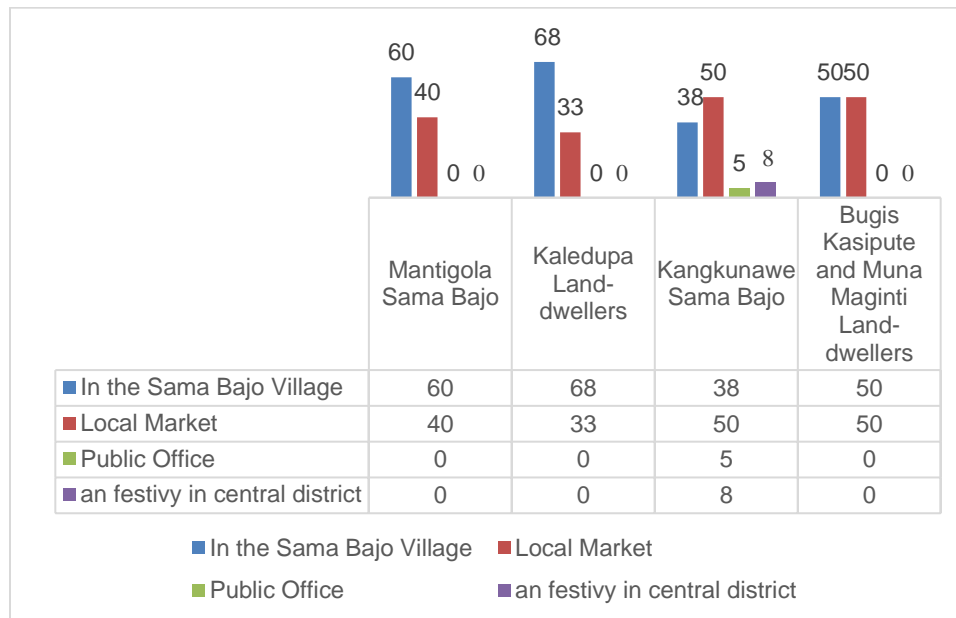
interaction (Fig. 3); and (2) the locations of the most frequent interactions between *Sama* Bajo people and land-dwellers (Fig. 4).

According to the research results, the interaction between Bajo Kangkunawe and BugisKasipute and Maginti land-dwellers tend to be more frequent than those between the Bajo Mantigola and Kaledupa land-dwellers (Fig. 4). Mostly *Sama* Bajo Kangkunawe said that they interact almost every day with MunaMaginti land-dwellers and BugisKasipute, and vice versa. The interaction occurs mainly within the *Sama* Bajo village for Bajo (38%), and for land-dwellers (50%) and in the local market, both the *Sama* Bajo and the Land-Dwellers were 50% (Fig. 4). One of the BugisKasipute land-dweller respondents said:

"we must interact with the Bajo as fish producer and fish sellers in the market; from them, we get fish and salty fish every day. Some of the Bajo fish sellers are my relatives. Sometimes before they leave the market and go back to their village in Kangkunawe, they buy something like sugar, eggs, oil, or rice in my shop".



**Figure 3: The proportion of Frequency of Interaction of Mantigola *Sama* Bajo, Kangkunawe *Sama* Bajo, Kaledupa Land-Dwellers, and Muna Maginti Land-Dwellers, 2017.**



**Figure 4: The frequency of place of most frequent interaction, Mantigola Sama Bajo, Kangkunawe Sama Bajo, Kaledupa Land-Dwellers, and Muna Maginti Land-Dwellers, 2017**

In contrast to the relation of Bajo Kangkunawe and Muna Maginti land-dwellers, Mantigola Bajo rarely interact with Kaledupa land people. The data indicate that 67.5% of respondents of *Sama* associate only 1-2 times in a month, 62.5% of respondents of Kaledupa land-dwellers interact with the *Sama* Bajo every day (Fig. 3).

Mostly the interaction takes place in Mantigola village (Fig. 4). The Kaledupa respondents said that they are involved in a high level of interaction mostly because they work in Mantigola as the teacher in elementary school or junior high school. Other land-dweller respondents who lived in Horuo Umala buy the catch from *palilibu* or the daily inshore coastal fishing activity of *Sama* Bajo (Stacey et al., 2018) and *meti-meti* or the Bajo woman traditionally livelihood by gathering diverse types of mollusca, little octopus in mudflats when shallow water (*metijauh*) in reefs areas (Stacey et al., 2018) especially in Kaledupareefs. and also as *Kasoami* producer is as an alternative food besides rice for Sama Bajo Mantigola. *Kasoami* is indigenous food from Butonese. It is made from cassava starch (we call it *kaopi*) and steamed it by

conical mold. In Wangi-wangi Island, the *Kasoami* pepe added oil, fried onions, and flat shapes, we call it with *pepe* '. The other respondents said because there is no market in Umala, if they need fish for lunch and dinner, they will come to Mantigola to find it. A slightly busier market is the Sampoawatu market, and the economic strains can be seen only when the Bajo from Sama Bahari come in with their catch. For Bajo Mantigola, Sampoawatu market is quite far from the village, so the Mantigola Bajo choose to wait for the fish buyers who come to Mantigola. We saw men from Sama Bajo Mantigola were very careful to sell fish catches, especially from the lower status levels.

The Bajo become stigmatized and stereotyped by their illegal actions. In the WMNP, no one is allowed to harvest turtles, some kinds of sea cucumbers, giant clams and certain types of fish. Unfortunately, sea turtles are part of the Bajo's cultural diet, and the meat commands a high price. Then there is the problem of illegal fishing methods, such as the using of cyanide and fish bombs. The stigma is not without foundation, but it has unfortunate consequences.

The notion that trust will be developed by reciprocity was examined between Sama Bajo and Land-dwellers. For this, our respondents were asked for a picture of agreement that they will help each if they were having difficulties. In the Bajo side, 78% of Mantigola Bajo agree that Kaledupa land-dwellers help them if they have distress (Fig. 5). They gave us an example of Kaledupa land-dwellers assistance especially when they undertake a marriage ceremony, but, what interesting is the Kaledupa people assisted must have a strong kinship relation with the Mantigola Sama. Similar to Mantigola Bajo, Kangkunawe Bajo tend to agree with the statement that Bagai helped them when they were in difficulties. 80% of Bajo Kangkunawe respondents agree with the statement (Fig. 5). The Bajo Kangkunawe said that almost MunaMaginti the land-dwellers assisted are family.

The results show a distinctly negative feeling of the Kaledupa land-dwellers toward the Bajo Mantigola: only 30% of the respondents of Kaledupa agreed with the statement that Sama Bajo help them when they are having difficulties. Further investigation of this 30% suggest a possible reason for any agreement, and we found that these are closely related to the familial relationship with the Sama through the marriage relationship between the Bajo and the Kaledupa People. One of the Kaledupa respondents who

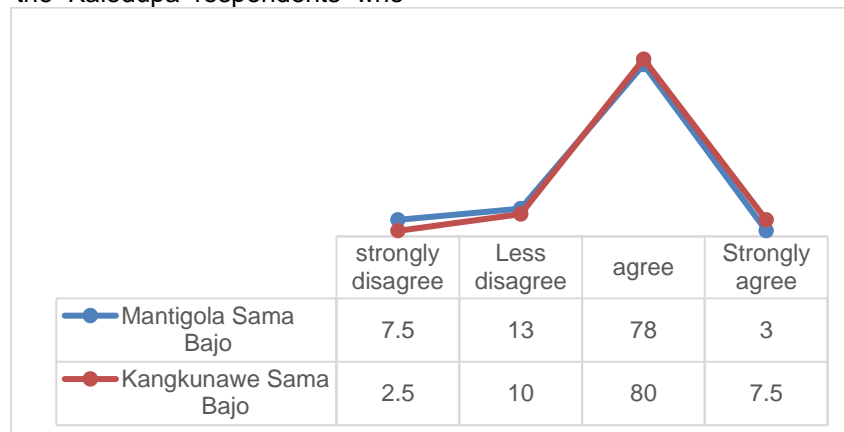
strongly agree with the statement pointed out:

*“some of the Wa’du are our family, we always help each other through hamba, and also always come to their village when there is a marriage or burial ceremony, and vice versa”.*

Findings suggest that a similar situation occurs with the Kaledupa land-dwellers. Those who gave a positive response, are always related. One of the respondents in this category said:

*“When Sama Bajo becomes our family, they have an obligation particularly to give each other help when another family is having trouble.”*

Stacey et al., (2017) found that besides fulfilling nutritional subsistence needs through their fishing, Bajo fishing households depend on market sales of fish and other marine resources for income, which they require to purchase complementary foodstuffs needed for nutritional security. Later, Stacey et al., (2017) pointed out that land-based households, on the other hand, depending on the supply of these products in the market to be able to buy and consume fish.



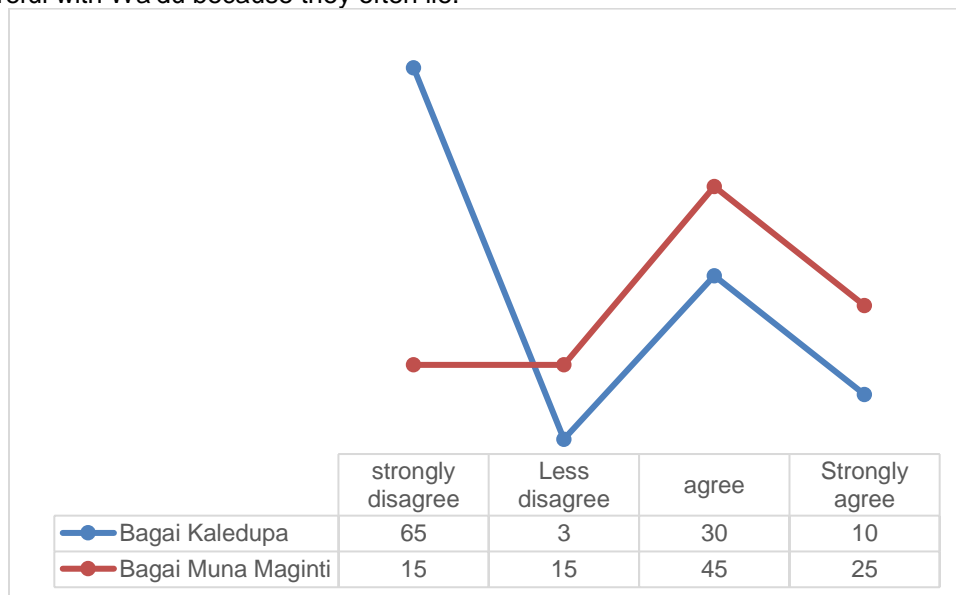
**Figure 5: Agreement Proportion of Sama Bajo that the Bagai Land-Dwellers Help Mantigola and Kangkunawe Sama Bajo when They Are Facing Difficulties, 2017.**

Accessing of food by the *Sama Bajo* especially essential carbohydrate, high energy foodstuffs is a driving factor which dictates they must interact with land-dwellers. Bajo people as producers of seafood protein must rely heavily on land people who provide these necessities. At the time of this transaction or exchange, the element of trust becomes all-important. Trust determines the sustainability of economic relations. For *Sama Bajo*, whose catch is uncertain, and when the sea is rough during the East-wind season for *Sama Bajo Kangkunawe* and the West-wind season for *Sama Bajo Mantigola*, trustworthiness becomes the determinant of food security.

Particularly disadvantaged are the *Bajo Mantigola* who are accorded the lowest level of trustworthiness by the *Kaledupa*. Sadly, the group of *Bajo* keeps themselves stereotyped as dishonest not just by history, but by continuing to commit illegal acts or not paying off debts to the *Kaledupa* who generally work as seaweed or crop farmers. Some respondents responded on the effect that:

"We are careful with *Wa'du* because they often lie.

If they promise or owe us for *Kasoami*; often they do not pay off their debts. We, *Kaledupa* people are assertive, so the *Bajo* people are afraid of us." The data in Figure 7 corroborates this argument. The data shows that 65% respondents of *Kaledupa* strongly disagree with the statement that *Mantigola Bajo* can be trusted when they promise something. Also, their criminality interferes with their ability to sustain their economy. Recently we heard that some of *Horuo* residents suffered poisoning some of them even died after consuming a fish catch sold by *Bajo Mantigola*. Later, we heard that *Mantigola Bajo* had used grass poison as a bait to catch the fish. As a result of this tragedy for a month, *Horuo* villagers did not buy fish from *Bajo Mantigola*. They told us that they were afraid of poisoning. It was a tragedy not only for those who died and their families but also for the *Bajo*. This unfortunate incident just serves to confirm the negative stereotype of all the *Bajo*, thanks to the grapevine.



**Figure 6; Agreement Proportion of Land-dwellers that the *Sama Bajo* Help *Kaledupa* and *MunaMaginti* Land-Dwellers when They Are Facing Difficulties, 2017.**

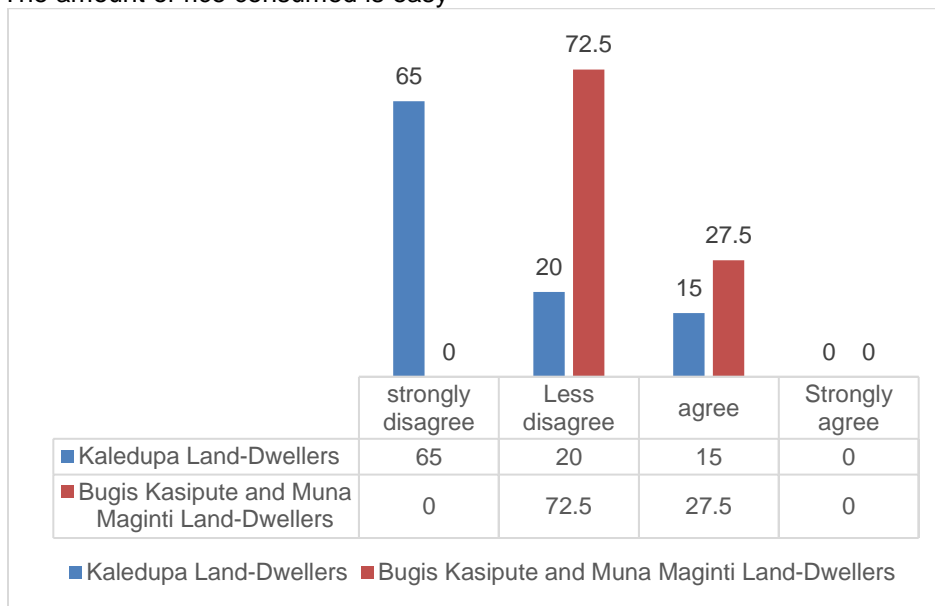
**Food Security of the Sama Bajo Households**

This study measures the level of household food security in two Bajo communities by using fishing income indicators in one month, and the proportion of Bajo households staple food expenditure (rice, corn, tubers, sago, instant noodles, and snacks for children) to total household expenditure in one month either. This food security indicator is adapted from the research of Jonsson and Toole which was also adopted by Maxwell et al., (2000). These indicators were discussed by Rachman and Ariani (2002). Calculation of household income obtained from fisheries activities considers the East monsoon and the West monsoon.

A significant source of limitation is due to the limited of food consumed by Sama Bajo households. A few of the respondents who are small-scale fisher and also the poorest Sama Bajo are difficult to remember the food they consumed. They only recognized the money which was spent to buy food. The amount of rice consumed is easy

to calculate. However, most of the respondents are confused to determine the amount of cassava starch (kaopi) and sago starch.

The results of this study indicate that some of the characteristics of the Bajo are the reality that their income is influenced by monsoon time and consumer of their products who are land-dwellers. Research findings found when the sea is rough (e.g., the West-wind season from November until March for Mantigola and Kangkunawe) there is a decline in the supply of fish, and the price is high; it means there is little cash to buy either first food or secondary food. For the Bajo Mantigola who live in the WMNP, it is more difficult, because the zoning has put pressure on Wakatobi Bajo culture as well as their fishing livelihood. Besides the fact that the economy is challenging, not only basic needs to become increasingly expensive but also there is no local market in Horuo; disharmony with Kaledupa land-dwellers is another reason for their extreme poverty.



**Figure 7: The proportion of Land-Dwellers' Agreement that Sama Bajo Can be Trusted when they Promise, 2017**

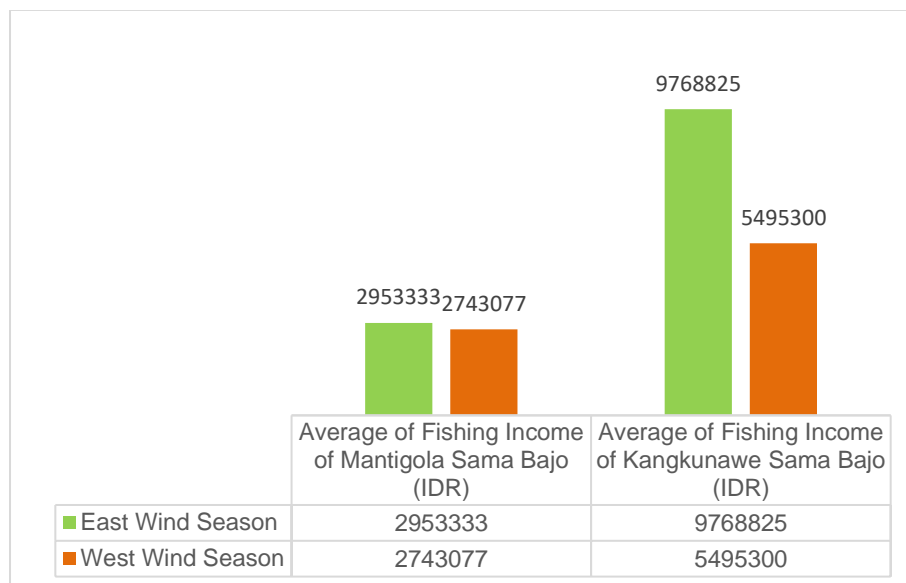
Kangkunawe Bajo seems not to have such difficulty in funding the expense of land-dwellers foodstuff as do the Mantigola Bajo, mainly when it is the low season for fishing. In the West-wind season as upwelling condition was approximately average sea surface temperature at 29.79°C and

Chlorophyll-a 0.15 mg m<sup>-3</sup> (Tajjuddah et al., 2012), the average Bajo Kangkunawe fishing income is IDR 5.495.300 per month. The average Mantigola Bajo fishing income is IDR 2.743.077 per month in the same timeframe (Fig. 8). Wianti et al., (2018) found that zonation of WMNP has a



significant impact on Bajo Mantigola livelihood. The positive effect is on fish availability. Ten years after the reinforcement of the zonation, the fish population seems to have increased, proven by Bajo Mantigola volume of catches today. Unfortunately, this positive side does not improve the Bajo Mantigola household income from a fishing activity because they are always in an inferior bargaining position when they sell their catch. Other reasons for their continued poverty include lack of physical infrastructure regarding their land village in Horuo, seasonal fluctuation in income, illiteracy rates and general dissatisfaction with top-down government decision-making. There is a difference in the inability of food accessibility, especially in turbulence time between two Bajo social contexts. In Kangkunawe, they tend to secure in purchase various foodstuffs when turbulence time in the East-wind season (Fig. 9). Almost all the Kangkunawe Bajo households can access five basic types of food, namely rice, sago, cassava, corn, and instant noodles. Bajo Kangkunawe households spent an average of IDR 565,600 to buy rice (1 \$= IDR 13,434 on January 31<sup>st</sup>, 2018), IDR 13,000 to buy sago starch, IDR 46,000 to buy cassava starch (kaopi), IDR 6,000 to buy corn, and IDR 86,400 to buy instant noodles. They access land staple food not only from BugisKasipute Land-dwellers through cash

or debt, but also from MunaMaginti through the domestic exchange as relatives. By contrast, the Mantigola Sama Bajo cannot access such a diversity of foodstuffs. They have access to rice, cassava starch (*Kaopi*), and instant noodles. Mantigola Bajo households spent IDR 448,000 to buy rice, IDR 223,000 for buying starch of cassava or *Kaopi*, IDR 101,000 for instant noodles. Mantigola Bajo obtain the foodstuffs (e.g., rice and instant noodles) for their diet in the west wind season, generally from Bajo Punggawa in Mantigola and mostly through debt. In the same vein, McWilliam and Wianti (2018) *Punggawa-Sawi* expresses the idea of an economic safety net but also a form of market-based interdependency founded on debt. Gibson *et al.* (2018) state that as a framework and mechanism for social resilience in the face of uncertainty and the vagaries of maritime-based fortunes, the *Punggawa-Sawi* relationship had proved its value over hundreds of years. But it comes at the cost of autonomy and the freedom to pursue alternative economic choices that might offer more attractive returns. Meanwhile, they obtain secondary food, e.g., the starch of cassava from Kaledupa land-dwellers in Horuo through cash and debt.



**Figure 8: The proportion of Average of Fishing Income (IDR) of Mantigola Sama Bajo and Kangkunawe Sama Bajo Based on Fishing Seasons, 2017**

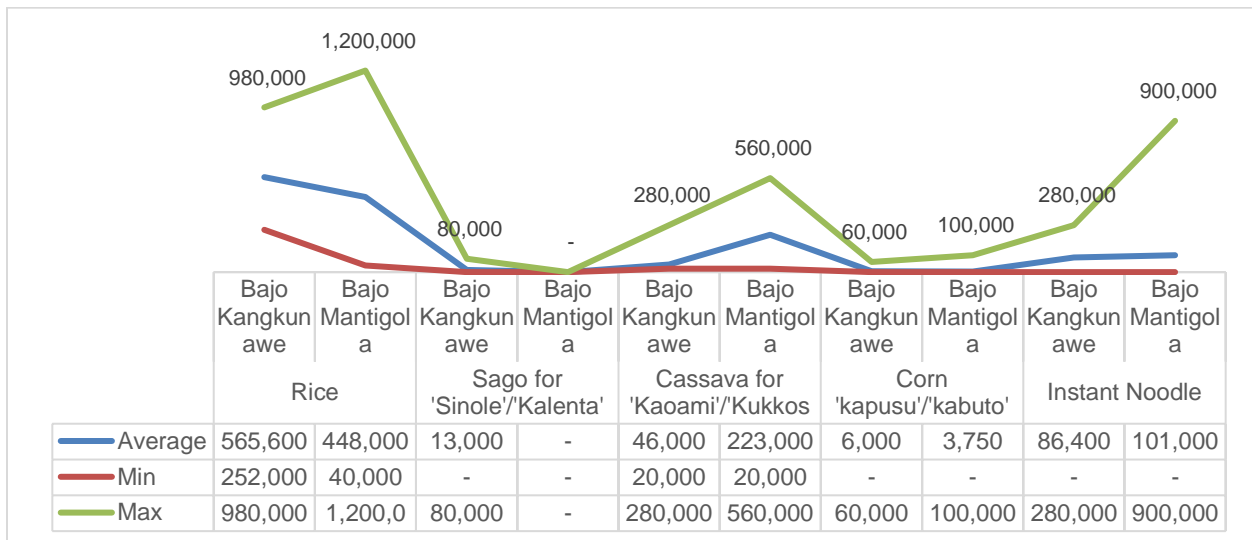


Figure 9: Comparison of Household Food Expenditure (IDR) SamaBajo Mantigola and SamaBajo Kangkunawe, 2017

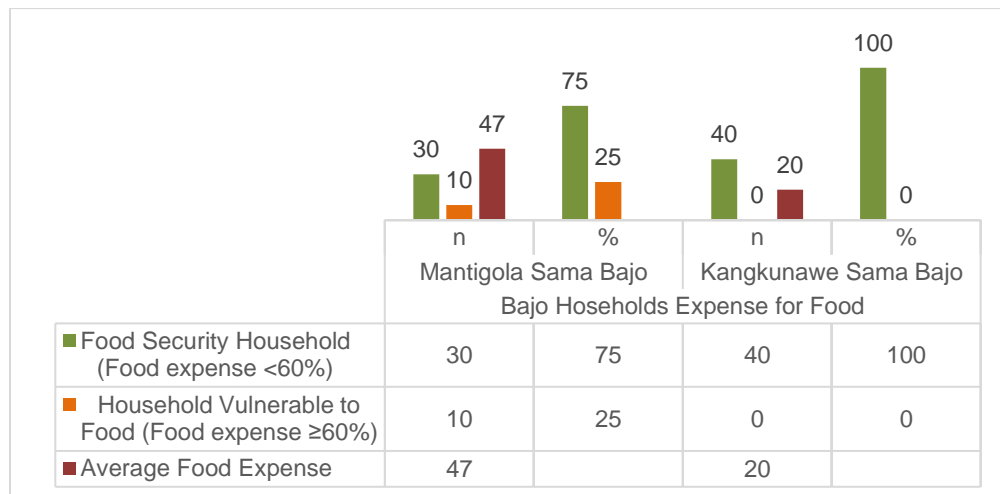


Figure 10: Comparison of Household Food Expenses Percentage (%) SamaBajo Mantigola and SamaBajo Kangkunawe, 2017

Another indicator to quantify the level of food security of the two Sama Bajo is the proportion of Bajo household food expenditures: rice, sago, corn, cassava starch, instant noodle, and snack for their children. These indicators and categories which are adopted from Jonsson and Toole in Maxwell et al., (2000) described the household food expense and about how the two Bajos access their food. Jonsson and Tooles' categories based on the percentage of food expenditure. Households who are secure in their diet have food expense less than 60 percent; meanwhile, the houses who are food insecure have food expense percentage equal to or more 60 percent. Figure 10 illustrates the discrepancy of Bajo household food expenditure in Mantigola and Kangkunawe.

The data shows that the Kangkunawe Bajo has lesser in food expense percentage or food secure than Mantigola Bajo. All of the Bajo households in Kangkunawe have food expense less than 60% (with average 47% of food expense). Meanwhile, in Mantigola Bajo, there are ten households or 25% which food cost more than 60% or vulnerable in food security (with an average of foodstuffs payment 20%). As we explained earlier the qualitative data-that Bajo Kangkunawe is easy to get foodstuffs through reciprocity action between the Sama Bajo and the Muna Bagai land-dwellers. Using this process, the Sama Bajo Kangkunawe can obtain sustainability of staple food stocks for their family. However, the Mantigola Bajo experience vulnerability conditions. These are not only because of lack of market sales of fish but also staple food reciprocity process with Bagai Kaledupa land-dwellers except the Bagai as the Bajos' relatives. Besides, other aspects of capital such as social capital, natural capital, physical capital, and human capital do not support the livelihood sustainability of Bajo Mantigola (Wianti et al., 2018). This vulnerability can ultimately lead to illegal fishing practices which damage more than the environment.

### **The Relationship between Trust and Food Security**

Previous research which was done by Wooley and Fishbach (2016) indicates that food could be used as a connecting device that increases consumers' cooperation and trust. Then, they also

point out that eating may thus serve as a powerful cue for signalling fondness and intimacy, and more fundamentally, trust and cooperation. While other researchers aim attention at affiliation goals for food preferential and behaviour (Lakin and Chartrand, 2003; Lakin, Chartrand, and Arkin, 2008; Mead, Baumeister, Stillman, Rawn and Vohs, 2011 in Wooley and Fishbach, 2016). This essay focuses on trust between the Sama Bajo and the Bagai land-dwellers, the frequency of interaction, and intermarriage as a milestone for Sama-Bagai intimacy which is related to the Sama Bajo food security. We summarize the correlation test results in table 1.

First finding, we presume that there is the relationship between land-dwellers' trust in the Bajo with the *SamaBajos'* household food income and the *Sama Bajos'* household food expenditure. In Bajo Kangkunawe, as predicted, the test results confirm that trust of Bagai land-dwellers is associated with the income and the food expenditure. The increase is in the trust mediated improvement of the Bajo fishing income (.318). Meanwhile, the trust of land-dwellers to the Bajo reduced food expense (-.346). In Mantigola, the trust of the *Bagai* land-dwellers is only related to food expense. The trust decreases the MantigolaBajos' food expense significantly (-.403). These results suggest that trust can increase the Bajos' food security through reduction of the Bajo food expenditure.

The second finding, we expect that there is a relationship between the Bajos' trust with their food security (Bajos' fishing income and Bajos' food expenditure). The results clarify that the Bajos' trust in Mantigola and Kangkunawe influence negatively both Mantigola and Kangkunawe Bajos'food expense (-.375; -.543 respectively). However, the correlation value in the Bajo Kangkunawe is stronger than Bajos' Mantigola value of correlation. The third finding, we predict that there is a positive relationship between the frequency of interaction between the Bajo and the land-dwellers and food security of the two Bajo communities. The results of analysis output affirm that frequency is only strong when it influences negatively MantigolaBajos' food expenditure (-.421) and the Kangkunawe Bajo (-.428).

**Table 1; Pearson correlation and Sig. (2-tailed) test results: Independent variables (trust of the Bagai land-dwellers, the trust of Sama Bajo, the frequency of interaction, and intermarriage) and dependent variables (Sama Bajo household fishing income and Sama Bajo household expenditure for food) in Mantigola and Kangkunawe.**

Independent variables	Food Security of Mantigola Sama Bajo				Food Security of Kangkunawe Sama Bajo			
	Dependent variables							
	Sama Bajo household fishing income		Sama Bajo household expenditure for food		Sama Bajo household fishing income		Sama Bajo household expenditure for food	
	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)	Pearson Correlation	Sig. (2-tailed)
Trust of the <i>Bagai</i> Land-dwellers	.114	.484	-.403	.010*	.318	.045*	-.346	.029*
Trust of <i>Sama Bajo</i>	.028	.862	-.375	.017*	.304	.057	-.543	.000*
Frequency of interaction	.084	.606	-.421	.007*	-.171	.292	-.428	.006*
Intermarriage relation of The Bajo and Land-dwellers	.216	.182	-.390	.013*	.296	.064	-.481	.002*

\*Correlation is significant at the 0.05 level (2-tailed)

Further, the fourth finding, it is about the relationship between intermarriage (the Bajo and the land-dwellers) related to food security. We find that when the Bajo get involved as land-dwellers' bound of an extended family through intermarriage, the Bajo can reduce their staple food expense. Reciprocity in Food exchange mechanisms could play as an important role to strengthen mutual trust for supporting the Bajos' staple food availability. Another important research finding from qualitative data gives information that Bajo women as important actors who negotiate 'trust' between Mantigola Sama Bajo and Kaledupa Land-dwellers, and trust between Kangkunawe Sama Bajo and MunaMaginti land-dwellers through the exchange that is embedded in the familial relationship. We saw the Bajo women in Mantigola as not only tough producers (through *meti-meti* or *nuba*) and also as sellers. They dare to stand up to pressure from Kaledupa land-dwellers and even that from local government. Moreover, Bajo women contribute to Bajo household food security system by ensuring household food availability from gleaning or *meti-meti* and trading purposes through kinship with land-dwellers.

### Conclusion and Recommendation

The research findings highlight two very different situations involving Bajo relationships with land-dwellers. The quality of these relationships reflects other aspects of the quality of their lives. In Bajo Kangkunawe, trust is the basis for the *Sama* Bajo source of income and obtaining foodstuffs from land-dwellers. But, the social relation between *Sama* Bajo Mantigola and Kaledupa land-dwellers showed that low level of mutual trust threatens the Bajo food system, particularly the expense of foodstuffs. Trustworthiness then becomes the basis of the economic transaction, which influences the Bajos' food security. We also find that frequency of interaction and intermarriage increase food security using the Bajo of food expense reduction. This research has revealed that trustworthiness is a system; it has described the process which gives rise to the degree of trustworthiness. This process has a multiplier effect not only for *Sama* Bajo food system and their social well-being but importantly also on the land-based food system.

### CONCLUSION

Furthermore, this research has highlighted but not explored the complexity of Bajo-land-dweller relationship; it has been problem-oriented rather

than solution-focussed. There is a lack of comprehensive analysis which focuses on social cooperation between *Sama* Bajo and land-dwellers. The Bajo woman is a significant actor in subsistence, commercialization and also as a guardian of *Sama* Bajo identity. Even as an essential actor for creating a collaborative network for improving the food security of *Sama* Bajo. But the future of the Bajo should not just be left to them; all parties have essential roles to play in cultural identity. The two case studies of *Sama* Bajo illustrate that to consider *Sama* Bajo as a homogeneous group ignores critical factors (e.g., history, and the law of restriction). These factors directly affect their food security and the levels of trust between each Bajo and the land-dwellers with whom they are associated. For those who make decisions, which affect all will not necessarily suit all.

### CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

### ACKNOWLEDGEMENT

We want to thank The Ministry of Technology and the Higher Education Republic of Indonesia for financial support in our preliminary research in 2017 and also our research project about Bajo social resilience in Wakatobi Marine National Park from 2018-2020 with the number of contract 056/SP2H/LT/DRPM/2018.

This paper had been presented to the 6<sup>th</sup> Asian Rural Sociology Association (ARSA) International Conference that was held on August 27<sup>th</sup>-30<sup>th</sup>, 2018, in Makassar, South Sulawesi, Indonesia. We also would like to express our gratitude for the ARSA conference reviewers for their pivotal reviews for this paper.

Later, we are grateful to Mrs. Pamela Davis not only for her critical stage of the manuscript revision process but also for her comment on the research ontology side with detailed. Last but not least, extraordinary gratitude is for the *Sama* Bajo for providing information about their social reality.

### AUTHOR CONTRIBUTIONS

LT, together with WNI, designed the research. WNI has done research instrument design. Furthermore, LT, WNI, TM, and ZM had analyzed the data. LT, WNI, TM, and S wrote the manuscript. All authors read and approved the final version

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