

The Importance of Islamic Microfinance Model as a Mean to Alleviate Fisherman Poverty in Pangandaran

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Abstract: The background of this research is poverty problem that have happened to traditional fisherman in Indonesia. Pangandaran is one of the districts in Indonesia which is still having problem in fisherman poverty. Based on previous research that fisherman poverty problem is caused by various factors like biological, technological, sosio-economic. Meanwhile, one of the types of sosio-economic problem is limited access to financial institution because the fisherman is party who is susceptible to bad credit. This research uses mix method with using quantitative and qualitative approach. Qualitative approach uses descriptive analysis, whereas quantitative approach uses mann-whitney u test, OLS and logit regression. The result of the study in the first step shows that fisherman poverty in Pangandaran is influenced strongly by family burden and financial access toward financial institution. On the other hand, the total of family labour and family burden influence income fisherman per capita. Meanwhile, there is significant difference between fisherman income who has an access and not. The research planning for the next will be focused on the design of the Islamic microfinance model and testing such Islamic microfinance model to fisherman in Pangandaran.

1 INTRODUCTION

Indonesia has 11 potential sectors in maritim. The amount of economic potential in maritim about US\$ 1.2 triliun per year. Job opportunities provided by this sector reaching 40 million people. Then, if able to optimize this maritim potential, unemployment and povert problem automatically will be eradicated (Nugroho, 2014).

However, it is ironic to see a fact that fishermen in Indonesia is a subsistence sector that shackled by the poverty problem. Fisherman's welfare level is generally lower than those who work not as fishermen. The data shows that the average fisherman's expenditure is only about IDR 561,000 per month, lower than those who are not fisherman with an average of IDR 744,000 per month. If reviewed further, the problem of fishermen that trapped in the poverty is caused by not having adequate access to education and health, and also difficulty in obtaining access to credit as most of banks assume that loans to fisherman is at high risk (Central Bureau of Statistics, 2013; Survey of Demography Institution of North Sulawesi (2014) in Harmadi, 2014).

West Java as the third province that has the great number of fishermen still has problem in poverty. Study conducted by Muflikhati et al. (2010) concluded that using poverty indicator from World Bank (1\$ US /day) that the number of poor fisherman in West Java at the rate of 45,7 %.

This study will be focused on sosio-economic problem that faced by fisherman itself. Islamic microfinance model, can simply be defined as a model of microfinance that can provide facilities or microfinance products for people who are in unlucky condition according to Islamic principles. Access to microfinance institution become so important for poor fisherman. Rahman (2010) concluded that microfinance programs based on Islamic principles or called by Islamic microfinance had improved life standard for rural society. Poverty upon fisherman in north and south beach area in West Java indicated by limited access to financial institution, because fisherman is one of the parties who is at high risk credit.

One of the policies that have been done before by the government in Indonesia as an effort to alleviate poverty on fisherman is in the form of direct assistance or fishing equipment that can be used to

get fish. On the other hand, microfinance model throughout the time used by only small and medium enterprises. Therefore, this study will explore as to how the fisherman as poor one can get access to financial institution in the model of Islamic microfinance which consistently will lift fisherman's life standard. However, for the first step of this study will analyze factors influencing fisherman poverty in Pangandaran, and also will analyze how fisherman get access to financial institution.

2 LITERATURE REVIEW

In this part will be flattened as to the concept of Islamic microfinance, the relationship between Islamic microfinance and poverty alleviation and also previous study that related to.

2.1 Concept of Islamic Microfinance

Microfinance is program that give small loan to the poorest to do business as mean to get an income to fulfil their basic needs and family (Rahman, 2010). Therefore, in 2005 world bank has stated that in 2005 as year of microfinance to campaign and extend poverty alleviation.

Grameen Bank is great model for microfinance in Bangladesh that conduct programs successfully, where Muhammad Yunus as the founder of Grameen Bank got nobel prize for reconciliation category in 2006. Muhammad Yunus tried to expose capitalism logic in banking practice. Capitalism clearly has born discrimination to the poor. The syllogism of banking capitalism of the strict premises as follows (i) Bank has to get profit without differentiating rich and poor people, (ii) Credit that given in great amounts and not reached by poor people, (iii) therefore, irrational if bank can give micro credit. The conclusion is rationally bank will not take sides for poor people (Wahid, 2014).

In practice, Gramen Bank pioneered by Muhammad Yunus in Bangladesh is not an Islamic financial institution, it means that bank still uses interest in providing financing to the poor. Therefore, there is a deep cares of conventional microfinance practices from Islamic perspective, as shown by Wilson (2007) that extending materialism and rural society consumerism and urban slums can damage social cohesion and frustrated in the long run.

Ahmed (2002) recorded some differences between conventional microfinance and Islamic microfinance as follows:

Table 1: Differences between Conventional and Islamic Microfinance.

	Conventional	Islamic
Liabilities (Source of Funds)	External funds, savings of clients	External funds, savings of clients, Islamic charitable sources
Assets (Mode of Financing)	Interest-based	Islamic financial instrument
Financing the Poorest	Poorest are left out	Poorest can be included by integrating zakah with microfinancing
Funds Transfer	Cash given	Good transferred
Deduction of Inception of Contract	Part of the funds deducted at inception	No deductions at inception
Group Target	Women	Family
Objective of Targeting Woman	Empowerment of Women	Availability of ease
Liability of the Loan (When given to women)	Recipient	Recipient and spouse
Work incentive of employees	Monetary	Monetary and religious
Dealing with Default	Group/centre pressure and threats	Group/center/spouse guarantee, and Islamic ethics
Social Development Program	Secular (or un-Islamic behavioral, ethical, and social development)	Religious (includes behavior, ethics, and social)

Source: Ahmed (2002)

2.2 Islamic Microfinance and Poverty Alleviation

Generally, the framework of Islamic microfinance in poverty alleviation as follows:

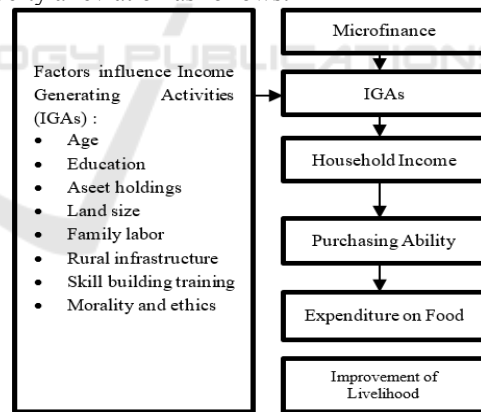


Figure 1: Conceptual Framework of Microcredit Programmes in Poverty Alleviation (Rahman, 2010).

Some previous studies showed that Islamic microfinance model can be one of the instruments in poverty alleviation as stated by Rahman (2010) who concluded that Islamic microfinance program has lift life standard or rural sosio-economic. With using 1020 farmer household in rural as research sample and econometric model, this study concluded that household income, productivity and job opportunity increase significantly. On the other hand, Islamic

microfinance program has increased spirituality with indicator diligence in worship. Finally, Islamic microfinance appears as a mean to boost economic activities more ethics in poverty alleviation.

The other study which relates to support this study is study conducted by Durrani (2011) using 100 sample of poor people in Pakistan. That study analyzed that microfinance is important element strategically and effectively in eradicating poverty. Meanwhile, socio-economic factors that considered in this study are reparation of life style, acomodation standard, income, life standard, purchasing power, expansion of business facility, good entrepreneur and technology. The study results showed that effective access and providing microfinance may help poor people to smooth consumption, risk management, step by step in asset holding, developing micro-business, improving productivity capacity, and enjoying life quality.

Beside that, Aslaam (2014) conducted empirical study in Pakistan. Respondent in this study is client and employee of Islamic microfinance in ten district in Pakistan. The total of respondent is 120. This study used Chi-Square test to analyze the data. The results concluded that Islamic microfinance has played role in improving life standard, income per capita, education level, ethics value, profitability, sustainability, infrastructure condition, job vacancy, and able to lead inflation and income inequality.

2.3 Fisherman Poverty in Indonesia

The study conducted by Agunggunanto (2011) using OLS regression and logit regression showed some conclusions as follwos having experience as fisherman directly and indirectly influence output of catching fish and get implication to fisherman income. On the other hand, total of family burden, use of technology, boot ownership, and cooperation assistance (dummy variabel) as factors influencing fisherman income and poverty in Demak, Central Java.

Another study conducted by Hamdani and Wulandini (2013) summarized that factors influencing traditional fisherman poverty in Muncar subdistrict are low education, productivity, fisherman behavioral and habitual in using income which is less intention for future needs, capital ownership, use of technology and it is not financial institution yet which has role in serving fisherman needs, distributing fish and facilitatng fisherman needs.

Then, there is also previous study that related to this study by Muflikhati et al. (2010) who conducted research in four subdistrict in beach area West Java,

they are Gebang subdsitric (Cirebon) Kandanghaur subdistrict (Indramayu) as representative for north beach area, and also Pelabuhanratu subdistrict (Sukabumi) and Pangandaran subdistrict (Ciamis) as representative for south beach area. Using sample 276 family. The result of study implied that if using economic measure, so fisherman family is more prosperity than non fisherman family. On the contrary, if prosperity is measured by lot of dimension, so fisherman family is lower than non. Generally, factors influencing prosperity are family burden, education, asset, income, and expenditure per capita.

Based on literature review toward previous empirical studies regarding poverty alleviaton especially in fisherman poverty known that is still limited related to model of Islamic Microfinance. Whereas, if this model is developed will able to help life quality for fisherman particularly for those who are a muslim. Besides that, Islamic microfiance model will give financial access coincide with moral injection in economic activities.

3 METHODOLOGY

Method used in this study is mixed methods or combination method. This research method is method which is based on pragmatism philosophy (composite positivism and postpotivism) (Sugiyono, 2011). Qualitative analysis uses descriptive study. Whereas, quantitative method that used is diferrence test,, OLS regression and logit regression.

Menawhile, the proposed hypotheisis for difference test as follows:

Ha: There is difference average income between fisherman who has access to financial institution and not.

Ho: There is difference average income between fisherman who has access to financial institution and not.

In this study for OLS regression model as follows:

$$\text{Log Y} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + e \quad (1)$$

Explanation:

Log Y : Log fisherman income per capita (IDR)

b_0 : Intercept

$b_1.. b_7$: Parameter coefficient

e : error

X1 : Age (year)

X2: Education (in dummy, 1 = non elementary, and 0 = elementary)

- X3: Duration of becoming fisherman (year)
- X4: Family burden (person)
- X5: Family labor (person)
- X6: Boat ownership (in dummy, 1 = one's own, and 0 = other)
- X7: Access to the Financial Sector (in dummy form, 1 = Access, and 0 = No Access)

Whereas, regression logit (binary) model proposed as follows:

$$\ln \frac{\rho}{1-\rho} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + e$$

Explanation:

ρ : Poverty Probability
 1 = Poor dan 0 = Non-Poor

Subject of this study is fishermen in Pangandaran West Java. The total of sample for this study is 100 fishermen with using purposive sampling.

4 DISCUSSION AND CONCLUSIONS

Based on data processing from fishermen, only 83 quisionares of 100 that can be accepted to analyze. The following are the results:

4.1 Demography Condition of Fisherman in Pangandaran

Most of the people living around Pangandaran beach work as fishermen. To fulfil life needs, they have to come to sea every day in the hope of getting a lot of fish for sale. However, the income of the fisherman is very dependent on the nature or weather conditions and the availability of fish in the sea, when the weather does not support for fishing or going to sea then the fishermen will be difficult to fulfil their daily needs. Such condition vulnerable cause poverty among fishermen.

Table 2: Demography Condition of Fisherman in Pangandaran.

No.	Variable	Interval	Average
1.	Age	17-60 Year	40 Year
2.	Education	Elementary – High School	Elementary
3.	Duration of Becoming Fisherman	1-42 Year	19 Year
4.	Family burden	0-6 Person	3 Person
5.	Family labor	0-4 Person	1 Person

If the level of welfare is measured by a larger dimension such as access to education, then the welfare of the fisherman is in low condition. The level of education has become one of the factors that caused the fishermen community in Pangandaran to be poor. Fisherman at Pangandaran is unlikely to find a better job with low education condition. When working as a fisherman is temporarily unavailable, then fisherman will work as pedicab driver or construction worker.

The low level of fishermen education in Pangandaran does not necessarily make the fishermen are not experts in mastering the techniques of fishing. Fishing skills are done through the process of socialization and enculturation from generation to generation.

4.2 Sosio-Economic Condition of Fisherman in Pangandaran

To know the condition of fisherman poverty materially in Pangandaran, the indicator used from the Central Bureau of Statistics. The poverty line according to Central Bureau of Statistics (BPS) for 2017 is IDR 361.496,00 / capita / month.

The following are data of poor and non-poor fishermen based on poverty line indicators issued by the Central Bureau of Statistics (BPS):

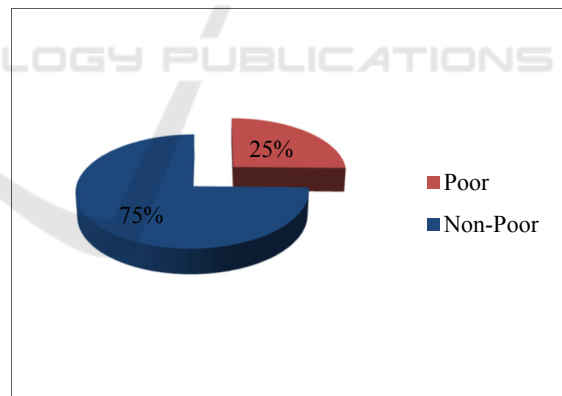


Figure 2: Percentage of Fisherman Poverty.

Fisherman in poor condition means that income per income below Rp 361.496,00 / month.

The level of morality is one of the factors causing one's poverty level. Study conducted by Rahman (2010) Revealed that moral and ethics influence positively to household income. Therefore, it is important to analyze the spiritual level of fishermen in Pangandaran. Here is the level of religiosity or spiritual fisherman based on data in the field:

Table 3: Religiosity Level of Fisherman in Pangandaran.

Statements	Regular 10 (0)	Very often 6 (4)	Very rare 4 (6)	Not at all 0 (10)
Saving prayer	19	40	24	0
Know hoe to recite the Holy Qur'an	3	26	50	4
Fasting	17	53	13	0
Inviting towards Islamic activities	6	10	58	9
Involvement with dowry	3	0	3	77
Wife and daughter (Wearing Hizab)	24	20	22	17
Not involve with interest	17	14	20	32
Misunderstanding with Wife	2	1	44	36
Involvement with social activities	23	30	30	0

Note: Figure in the parentheses are the score for dowry, interest, and misunderstanding with wife.

Based on the data above, it can be determined whether the spiritual condition of the fisherman is poor or not. Rahman (2010) explained that if the score of each respondent is below 70% then it can be categorized as someone experiencing poor spiritual. Here is the level of religiosity among fishermen:

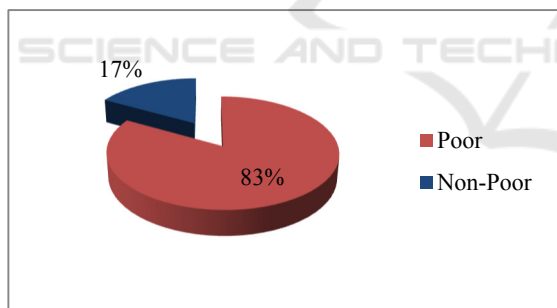


Figure 3: Percentage of Fisherman Religiosity.

The spiritual poverty level of fishermen in Pangandaran can be reflected from their bad habits such as gambling. Moreover, Majority of fishermen leave the obligations of Islamic teaching is caused by their condition is always in sea. Such conditions make some fishermen as a barrier to worship. Therefore, it can be concluded that the poor condition of the spiritual can bring negative or bad behavior that will impact to the difficulty of fishermen to get out of the poverty line.

4.3 Factors influencing Fisherman Poverty and Income in Pangandaran

To analyze the factors affecting fisherman poverty and income in Pangandaran is conducted by two testing approach namely OLS regression and logit regression.

The following is the OLS tests for factors affecting fisherman income per capita in Pangandaran:

Table 7: OLS Regression Test.

Model	Standardized Coefficients	t	Sig.	
	Beta			
(Constant)		21,401	,000	
X1 Age	-,026	-,189	,851	
X2 Education	,038	,349	,728	
X3 Duration of becoming fisherman	,006	,045	,964	
X4 Family Burden	-,380	-3,224	,002*	
X5 Family Labor	,298	2,468	,016*	
X6 Boat Ownership	,081	,712	,478	
X7 Financial Access	,134	1,176	,243	
Dependent Variable: Log_Income				
*Significant at 5%				
Model Summary				
R	R Square	Adjusted R Square	Std. Error of the Estimate	
,421 ^a	,178	,101	,50649	
ANOVA ^b				
Model	Sum of Squares	Mean Square	F	Sig.
Regression	4,154	,593	2,313	,034
Residual	19,240	,257		
Total	23,394			

Based on regression output that partially family burden and family labor affecting income per capita. The regression coefficient for family burden shows negative result, it explains that the more family burden, the lower fisherman income per capita. This is in accordance with the theory and concept that have been developed by Rahman (2010) and Agunggunanto (2011). Meanwhile, the regression coefficient for family labor shows positive result, it reveal that if there is family member who work, it will increase fisherman income per capita.

R-Square or coefficient of determination for this test is 17.8% which reveal that independent variables are able to explain dependent variable up to 17.8%. While for 82.2% is explained by other variables outside the study. Meanwhile, simultaneously in this model influencing toward dependent variable or fisherman income per capita.

The second test is logit regression which used to know factors influencing fisherman poverty in Pangandaran. The following is logit regression output:

Table 8: Logit Regression Test.

Variables in the Equation				
	B	S.E.	Wald	Sig.
X1 Age	,012	,034	,117	,732
X2 Education	-,327	,598	,299	,585
X3 Duration of becoming fisherman	,004	,035	,011	,918
X4 Family Burden	,604	,250	5,817	,016*
X5 Family Labor	-,746	,484	2,376	,123
X6 Boat Ownership	,088	,590	,022	,881
X7 Financial Access	-1,074	,620	2,998	,083**
Constant	-2,185	1,388	2,479	,115
Logit Regression Model: dependent variabel (1= poor, 0= non-poor)				
*Significant at 5%, **significant at 10%				
Model Summary				
-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square		
84,319 ^a	,109	,161		

Based on the test results can be concluded that the factors influencing fisherman poverty in Pangandaran are family burden as stated by Agunggunanto (2011) and financial access as stated by Rahman (2010). Independent variables simultaneously explain poverty up to 10.9%. While, and 80.1% is explained by others. Therefore, one of the proper efforts to create fisherman prosperity is to motivate fisherman to have access to financial instituion.

4.4 Financial Access of Fisherman in Pangandaran

Fisherman is a job that depends on the condition of nature. When the season to go to sea is famine, then the fisherman will have difficulty in earning income. Meanwhile, the needs of fisherman's life must still be fulfilled. The following is mechanism of financial acces for fisherman as mean to fulfil the nedds:

4.4.1 Rich Fisherman (*juragan*)

The easiest way to get a loan of money is through rich fisherman or usually called by boss. Fishermen who have not received the results can borrow money first to the rich fishermen (*juragan*). Furthermore the fisherman will pay for it when the season went to sea through wages received from skipper. Usually loan from *juragan* to fisherman without using interest.

4.4.2 Usurer

Another way to get loan easily is through usurer. In Pangandaran, usurer is still widely found. Loan system thourgh this scheme is required to pay interest.

4.4.3 Cooperative

Not all fishermen in Pangandaran are members of the cooperative. So that only members of the cooperative who get a loan facility. However, not all members of the cooperative know that cooperative has a role to lend money. Therefore, this cooperative is not optimal in empowering fisherman in Pangandaran.

4.4.4 Bank

The loan facility that became a fisherman's faovorit is a credit / loan provided by bank BRI through its program namely Kredit Usaha Rakyat (KUR). But, this loan is not given to all fishermen, there is special requirement. On the other hand, this intitution is required fisherman to pay interest.

4.5 Analysis of Differences for Fisherman Income based on Financial Access

Based on normality test using Kolmogorov-Smirnov getting sig. value at 0,000. That value is less than alpha 5%. Therefore, H_A is accepted and H_0 is refused . That means fisherman income is not normal distribution. Because of that data is not normal, then will use statistics with *Mann-Whitney U test*.

Table 10: Mann-Whitney U test.

Ranks				
Income	Financial	N	Mean Rank	Sum of Ranks
	Non-Access	44	36,18	1592,00
	Access	39	48,56	1894,00
	Total	83		
Test Statistics				
				Income
Mann-Whitney U				602,000
Wilcoxon W				1592,000
Z				-2,338
Asymp. Sig. (2-tailed)				,019*

Based on the results in the ranks table shows that groups of fishermen who have access to financial institutions up to 44 people. While those who do not have access to finance amounted to 39 people. Based on these results can be seen that almost 50% of the total of fishermen who become respondents do not have access to finance, especially to financial institutions. Furthermore, in the table of statistical tests can be seen that the significance value is at 0,019 less than alpha 5%. (0,019 < 0,05). This explains that there is differences between fisherman who has access to financial institution and not. In another words, that access to financial institution could increase fisherman income.

Thereby, one of efforts in increasing fisherman prosperous is through getting access to financial institution. Islamic microfinance can become instrument in alleviating poverty. Islamic microfinance model will help to improving life quality particularly for those who are a muslim materially and spiritually. Islamic microfinance will also lead fisherman with moral injection as mean to create good behavior and ethics in doing economic activities. Therefore, it is needed to create Islamic microfinance model as a mean to alleviate fisherman poverty in Pangandaran.

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