

An Analysis of Financial Literacy and Household Saving among Fishermen in Indonesia

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Abstract

Financial literacy literatures suggested that people in many countries were financially illiterate. Even though financial literacy had quoted mostly in many research, this concept rarely examined on the population group of fishermen. The purpose of this study was to examine their personal financial literacy and the relationship between the financial literacy and household saving. The data for this study were gathered during January-June 2014 through questionnaires, conveniently distributed to a population group of fishermen in the age of 25 to 50 years old in Regency of Brebes, Tegal and Pekalongan, Central Java, Indonesia. Variables used in this study were financial literate and household saving. Results from 258 samples confirm that financial literacy was positively related to household saving. Eighty five percent of fishermen were illiterate and most of them had no saving account. We also find that financial inclusion played a crucial role to fishermen in saving their money. The results of this study suggested for policy makers to increase financial literacy of fishermen by implementing various financial education programs and financial inclusion by adding geographic penetration of banks and credit availability.

Keywords: financial literacy, financial illiteracy, financial inclusion, household saving, Indonesian fishermen

1. Introduction

Financial literacy is playing more important role in many countries associated with the various problems particularly global financial crisis. In some countries, financial literacy programs are carried out to make the people financially literate, so finally it will increase the prosperity and welfare.

Several conditions such as the ease of obtaining credit due to tighter competition of financial institutions (Beal & Delpachitra, 2003) and the aggressiveness of marketing activities as well as the growth of financial products and services (Marcolin and Abraham, 2006) reinforce the assumption that financial literacy is a must.

Low financial literacy can be a serious problem for the households with because they tend to obtain the loan at high interest rate (Brown & Graf, 2012; Gathergood, 2012; Lusardi and Tufano, 2009), They do not plan pension (Bucher-Koenen and Lusardi, 2011; Lusardi & Mitchell, 2005, 2011; MCJ van Rooij, Lusardi A., & RJM Alessie, 2011), They do not diversify the low portfolio (Guiso & Jappelli, 2008), and They have little amount of savings (Beckmann, 2013; Delafrooz & Paim, 2011; Jappelli & Padula, 2013; Kharchenko, 2011; Lusardi, 2008b; Mahdzan & Tabiani, 2013; Spataro & Corsini, 2013).

Some surveys have consistently shown the low level of financial literacy in the countries with high income. In the countries with middle and low income, the condition is even much lower (Xu & Zia, 2012). Based on the research conducted by Cole, Sampson, and Zia (2009) in India and Indonesia, it was shown that financial literacy was low in both countries. Jappelli's study (2010) conducted in 55 countries including Indonesia from 1995 to 2008 concluded that there was a positive relationship between economic literacy with math skills (based on PISA tests). With test scores under 400, Indonesian economic literacy was considered as the low.

Jappelli (2010) also showed that the number population in urban areas was positively correlated to financial literacy. In several countries which the most population lives in the big cities (Australia, Belgium, Hong Kong, et cetera), a relatively high financial literacy is owned by their people. With the percentage of the urban population under 60%, the economic and financial literacy of Indonesian society is under 4 or it is considered as relatively low.

The research conducted by DEFINIT (2013) also concluded that average Indonesian people had relatively low financial literacy index. The study involved 450 households in Medan, Jakarta and Surabaya. It also provided the conclusion that the higher the level of education and income, the higher level of financial literacy. In addition, low financial literacy level also correlated with less ownership of financial products such as stocks, bonds and mutual funds.

The lack of number of people who become customers of banks or investors in capital market was in line with the statement of Cole et al. (2009) that financial literacy was a predictor of demand for financial services. Low level of

financial literacy was an obstacle to the use of financial services.

Several studies of financial literacy have been carried out on some object such as a student (Beal & Delpachitra, 2003; Chen & Volpe, 1998; Jang, Hahn, & Park, 2014; Nidar & Bestari, 2012), workers (Karunarathne & Gibson, 2014) and households (Beckmann, 2013; Brown & Graf, 2012; Harris, Loundes, & Webster, 2002; Hilgert, Hogarth, and Beverly, 2003; Lusardi, 2008b; Van Rooij, Lusardi, and Alessie, 2012). However, the research on financial literacy in fishermen communities has not been conducted, yet.

This study was conducted to determine the influence of saving ownership financial literacy of fishermen communities in Indonesia. Fishermen communities was selected as the object because it was backgrounded by the real fact of their low economic welfare level. In addition, they still utilize very minimal banking services. The research question formulated was: "Does financial literacy among fishermen influence their household saving?"

2. Literature Review

There are many concepts of financial literacy ranging from financial awareness, financial knowledge, financial skills and financial ability that is, in practice, it is often overlapping (Xu & Zia, 2012). The terms of financial literacy, financial education and financial knowledge is often interchangeably in some literature (Huston, 2010).

In addition to the concepts and definitions which are still different, there has not been the standard instrument used to measure the level of financial literacy, yet (Huston, 2010). So, some researches on the theme of financial literacy used different assessment. Lusardi (2008) classified the level of financial literacy into two levels, basic and advanced.

Basic financial literacy includes knowledge about the level of interest rate, effects of inflation, and the concept of diversification of risk. While advanced financial literacy includes knowledge about relationship of risks and benefits; mechanism of bonds, stocks, and fund management and so underlying asset assessment.

Huston (2010) recommended that financial literacy measurement was done by using at least four basic domains, finance, borrowing, saving/investing and protection. While Bumcrot, Lin, and Lusardi (2013) measured the financial literacy index by using five questions about interest rates, inflation, risk diversification, the bond's price, and mortgages.

For the factors that influence financial literacy, few studies have been conducted to determine these factors. Several factors that are proven to have a significant effect was the work (Bhushan & Medury, 2013; Worthington, 2006), age (Arrondel, Deblich, and Savignac, 2014; Beckmann, 2013; Lusardi & Mitchell, 2011; Worthington, 2006), gender (Almenberg & Dreber, 2012; Arrondel et al., 2014; Fonseca, Mullen, Zamorro, & Zissimopoulos, 2012; Hassan Al-Tamimi and Al Anood Bin, 2009; Kharchenko, 2011; Lusardi & Mitchell, 2008), education (Hassan Al-Tamimi and Al Anood Bin, 2009; Lusardi, 2008a; Mandell and Klein, 2009) and income (Bhushan & Medury, 2013).

Several studies of financial literacy has been conducted by some objects of study. Related with financial decisions, some research on financial literacy had been conducted to determine the relationship of financial literacy and variables associated with financial decisions such as saving (Beckmann, 2013; Delafrooz & Paim, 2011; Jappelli & Padula, 2013; Kharchenko, 2011; Lewis & Messy 2012; Lusardi, 2008b; Mahdzan & Tabiani, 2013), retirement planning (Bucher-Koenen and Lusardi, 2011; Clark, 2012; Crossan, Feslier, & Hurnard, 2011; Dvorak & Hanley, 2010; Klapper & Panos, 2011; Lusardi & Mitchell, 2005; MCJ van Rooij et al., 2011), insurance (Mahdzan & Victorian, 2013), investing in the stock market (Almenberg & Dreber, 2011; Japalelli & Padula, 2013; Müller & Weber, 2009; Spataro & Corsini, 2013; M. van Rooij, Lusardi A., and R. Alessie, 2011), and so on.

Previously, some studies on financial literacy had been carried out on some objects such as a student (Beal & Delpachitra, 2003; Chen & Volpe, 1998; Jang et al., 2014; Nidar & Bestari, 2012), workers (Karunarathne & Gibson, 2014) and households (Beckmann, 2013; Brown & Graf, 2012; Harris et al., 2002; Hilgert et al., 2003; Lusardi, 2008b; Van Rooij et al., 2012). However, the research had not been conducted on financial literacy for fishermen communities. This study was conducted to bridge that gap. The hypothesis of research proposed was: Financial literacy influences savings ownership on fishermen household.

3. Methodology

The objective of this study was to determine whether financial literacy, influenced fishermen's household saving. Financial literacy level is the variable that will be calculated using measurements of the basic literacy level of Lusardi (2008a). Basic financial literacy includes knowledge about the level of interest rate, effects of inflation and concept of diversification of risk, namely:

- 1) Suppose you have Rp. 1.000.000 in a savings account and the interest rate is 5% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: a. more than Rp 1.050.000; b.

- exactly Rp 1.000.000; c. less than Rp 1.050.000?
- 2) Imagine that the interest rate on your savings account is 1% per year and inflation rate is 2% per year. After 1 year, would you be able to buy: a. More than; b. Exactly the same as; c. Less than today with the money in this account?
 - 3) Do you think that the following statement is true or false? "Buying a single company stock, usually provides a safer return than a stock mutual fund."

The number of correct answers presented from to these questions will indicate the level of literacy. The higher (or lower) point obtained, the higher (or lower) level of financial literacy of the respondents. With three questions, the level of financial literacy that will be generated in this study were between 0-3. Household saving is the ownership of a bank savings products which were divided into two categories: (1) do not have savings, and (2) have savings.

The data for this study were collected through questionnaires during January-June 2014. They were conveniently distributed to a population group of fishermen in the age of 25 to 50 years old in Regency of Brebes, Tegal and Pekalongan, Central Java. The third area was chosen because it is the region harbors a lot of fish and fishing in Central Java. The sampling technique used was accidental sampling. To test the influence of financial literacy level on the ownership of financial products, analytical tools applied was logistic regression.

4. Results and Discussion of Findings

From this a study through 258 samples, it was described that the level of education of fishermen was very low. Fourteen percent of fishermen were high school graduates and the rest were not graduated from high school. They do not continue their education to a higher level of education because they come from poor fishing families who do not have money for school.

Table 1. Education Level of Fishermen

	Frequency	Percent	Valid Percent
Valid Graduate High School	38	14.7	14.7
Not Graduate High School	220	85.3	85.3
Total	258	100.0	100.0

The age of fishermen who went to sea to catch fish between was 25-40 years, while those aged over 40 years worked on the mainland to sell the catching results or doing odd jobs to repair the boat. They mostly did not have other skills that their free or idle time could not be utilized to generate additional income. Other family members, especially women also can not help because according Wasak (2012) fishermen work synonymous with men's work. Thus, vocational education should be given to fishing communities in order to be able to use their spare time to earn extra income.

Table 2. Financial Literacy Score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid .00	12	4.7	4.7	4.7
1.00	182	70.5	70.5	75.2
2.00	24	9.3	9.3	84.5
3.00	40	15.5	15.5	100.0
Total	258	100.0	100.0	

Eighty five percent of fishermen were considered illiterate because they could not answer questions regarding basic financial literacy correctly. This fact is of concern because of low financial knowledge will make the fishermen could not take advantage of income received to save or invest.

They which were classified as literate were fishermen graduated from high school, stay in area with presence of school and financial institution in it, and having children who attend school activities. This shows that education is a way that can be used to solve problems of financial literacy as stated by Mandell, L., & Klein, L. S. (2009).

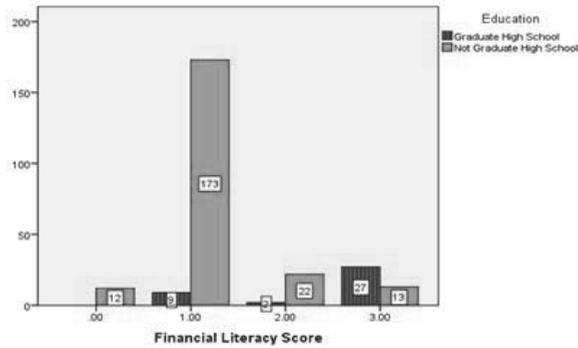


Figure 1. Financial Literacy Levels Based on Education

In addition, the area has a lot of schools and financial institutions also provide a role for financial literacy. Of the three regions, Pekalongan is an area that has a number of schools and financial institutions more than other regions and proved that the city has the highest level of financial literacy.

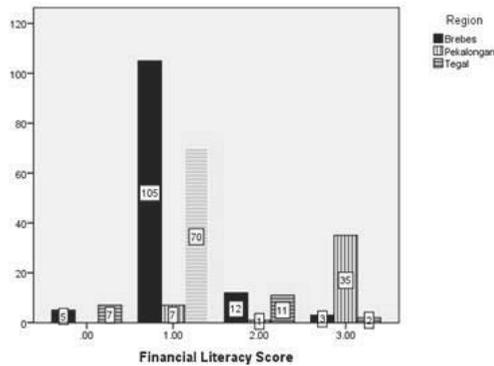


Figure 2. Financial Literacy Levels Based on Region

High financial literacy is also owned by those who have children in school. This shows that the higher the level of financial literacy, the higher the person's interest to send their children.

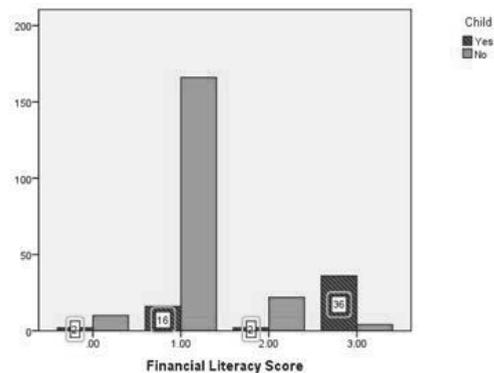


Figure 3. Financial Literacy Levels Based on Children Who Attend School Activity

A regression equation analysis (Table 3) result that financial literacy is statistically significant due to have a smaller probability of 0.05 ($p < 0,05$). It can be concluded that the higher level of financial literacy, the higher opportunity to save income.

Table 3. Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a FinancialLiteracy	2.321	.289	64.406	1	.000	10.186
Constant	-4.361	.448	94.636	1	.000	.013

a. Variable(s) entered on step 1: FinancialLiteracy.

Regression equations were derived from the results of these calculations are $Y = -4.361 + 2.321x$. It means that if a person is not literate, then there would be no interest in saving. This is consistent with the results of research Beckmann (2013) and Jappelli & Padula (2013) that low financial literacy will make someone have a little money to save. When a person becomes literate, then the probability of saving is equal to 1 or definitely will save. But it can only happen if a financial services institution is located closely to the place where they live. The characteristics of fishermen communities, especially in Regency of Brebes and Tegal are reluctant to come to a financial institution. They prefer to be served and it causes moneylenders more preferred by them. This is consistent with the study of Brown & Graf (2012) and Gathergood (2012) that low financial literacy will make a person can borrow money at high interest rates.

5. Conclusion and Limitation

This study was conducted to examine financial literacy and the relationship between the financial literacy and household saving among Fishermen in Indonesia. This study found that of most fishermen in Indonesia have a low level of financial literacy as it also comes from a poor fishing family. This shows that education is a way that can be used to overcome poverty.

The study showed that they which were classified as literate were fishermen graduated from high school, stay in area with presence of school and financial institution in it, and having children who attend school activities. The study further showed that if a person is not literate, then there would be no interest in saving. But it can only happen if a financial services institution is located closely to the place where they live.

Nevertheless, this research still has limitations that sample size is still small, the choice of location, time and variable limited. Further research is recommended to investigate the literacy of selected aspects of behavior, especially regarding what would be done if the income of fishermen fishing gradually improved. In addition, other studies could also be carried out on women because of their fishermen who manage the family finances.

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