Gender, Subsidies and Financial Capital Impact on Microfinance Institutions Performance

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ABSTRACT

Objective – The purpose of this study was to investigate the influence of gender, subsidies, and financial capital on microfinance institutions performance.
Methodology/Technique – Multiple linear regressions were used to analyze data. The type of data which used is secondary data from historical financial statements obtained from the Department of Cooperatives and SME's Jember.
Findings – The study shows that gender and subsidies have negatively affected to ROA. Once applied physical capital and age as control variables strengthened the significance of the effect of both on ROA. Financial capital has significant positive effect on ROA.
Type of Paper: Empirical

Keywords: Gender, Subsidies, Financial Capital, ROA, Microfinance Institutions.
JEL Classification: D2, D24, G21.

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1. Introduction

Poverty in Jember is quite surprising considering that Jember is one of the biggest recipients of general allocated funds and also the district which has high local revenue (Sukarno and Damayanti, 2012). This high rate of poverty involves women as an inseparable part of poverty problems. One of the causes of women's poverty is the limitation of accessing the economic resources so that financial institution such as the establishment of microfinance institution (MFI) developed very well and earned a positive response in Jember district (Retno and Maheni, 2013).

The encouraging development of MFI shows the excellent performance of the institution. Wijono (2005) found that the development of MFI is in the same direction with SME's development. Sukarno and Damayanti (2012) study shows that the ratio value of MFI's financial is always increasing and is able to meet the performance standards of microfinance institution issued by IFAD.

Meanwhile, Caudill et. al. (2012) prove that microfinance institution which has greater distribution proportion for women have better performance, whereas the government subsidy even lead to a decrease in the cost efficiency of the institution.

This research refers to a study conducted by Sukarno and Damayanti (2012) and Caudil et al (2012) with the adjustment to independent variable used i.e. gender, subsidy, and financial capital. Meanwhile, the dependent variable uses MFI performance that proxied by profitability (ROA). Based on the description above, the problem in this research is whether gender, subsidy, and financial capital affect on MFI's performance.

2. Review of Related Literature and Hypothesis

Wijono's Research (2005) found that the development of MFI turned out to be in line with the development of UKM so that it can be stated that MFI as one of pillars of the national financial system. To achieve this goal, there are two things which worth recommended. First, strengthening the institutional aspect of MFI as it has been running in formal financial institution i.e. accelerating the RUU endorsement about MFI. However, Wardoyo and Prabowo's study (2006) actually showed that the efforts to strengthen MFI were not maximally contributed to the development of SME's. Furthermore Maika and Kiswanto (2007) proved the disbursement of loans by microfinance institution for poor women was able to increase the operating income and also subjectively improve the welfare of the family including respondents' condition in particular as well as the family condition in general such as food consumption and children's education inside the households.

Caudill et. al. (2012) proved the existence of gender influence, subsidy, financial capital, physical capital, amount of loans and labor towards micro finance institution's performance in East Europe and Central Asia. Meanwhile Parianom (2013) found that there is an amount improvement of micro finance institution which brought the impact of the welfare improvement of the population in those districts. By referring to exposure theory and empirical prove above so the researcher formulates the hypothesis as follows:

H_{a1}: Gender, Subsidy and Financial Capital give positive influence on profitability.

3. Data and Research Methodology

3.1 Population and Research Sample

To achieve the research objectives, the population used is the whole MFI in Jember which has complete financial report for five consecutive years since 2010 until 2014 i.e. 149 MFI. Data of all members of the population can be obtained and used so that sample is not required. The observations made over five years in a row, so that the number in this research is as much as 745 observations.

3.2 Data Analysis Method

Multiple linear regressions in this research refers to Caudill et. al. (2012) research but with a modified formulation of multiple linear regression to explain further about the understanding of the formula and the enrichment of the discussion about the result of the analysis by comparing before and after the usage of control variable in the formula. The modification which produces the new formula is as follows:

$$ROA = \beta_0 + \beta_1 * G + \beta_2 * S + \beta_3 * FC \tag{1}$$

$$ROA = \beta_0 + \beta_1 * G + \beta_2 * S + \beta_3 * FC + \beta_4 * PC + \beta_5 * A \tag{2}$$

In which:
- Gender (G) is used to assess loans percentage which disbursed by MFI for women.
- Subsidy (S) is used to measure the amount of government's budget to give capital injections to MFI.
- Financial Capital (FC) is used to measure the real burden amount issued by MFI shared with the financial capital's stock.
- Return on Asset (ROA) is a ratio which measures the ability to gain business profit and MFI's efficiency in the utilization of total assets.

- Physical Capital (PC) is the difference between operational expense and MFI's labor expense divided net fixed assets.
- Age (A) is represented by how long MFI operates.
- Hypothesis test uses α test criteria, if the level of significance (ρ) > α value then Ho is rejected, whereas if the level of significance (ρ) < α value then Ho is accepted

4. Result and Analysis

4.1 Data

The processing of these data analyzes the annual financial report from 149 MFI in Jember district. The period used is for five years (2010-2014) with the total number of the observations is 745.

Table 1. Result Analysis of Multiple Linear Regression

Variable	Model 1			Model 2		
	Coef. Reg	Sig	VIF	Coef. Reg	Sig	VIF
Constant	0.402	0.68		0.532	0.00	
G	1.000	0.00	1.00	1.760	0.00	1.28
S	2.723	0.49	1.00	5.150	0.01	1.01
FC	1.538	0.00	1.00	0.290	0.00	65.7
PC				0.810	0.00	65.2
A				0.075	0.00	1.09
Adj R^2	0.987			0.997		

Table 2. Result Analysis of Multiple Linear Regression

Variable	Model 1			Model 2		
	Coef. Reg	Sig	VIF	Coef. Reg	Sig	VIF
Constant	0.670	0.00		-0.043	0.70	
G	1.859	0.61	1.02	1.014	0.00	1.02
S	7,148	0.00	1.01	3.159	0.43	1.01
FC				0.024	0.15	1.03
PC	1.003	0.00	1.00			
A	0.098	0.00	1.02	1.539	0.00	1.01
Adj R^2	0.996			0.987		

The equation of regression model based on Table 1 and Table 2 can be described as follows:

(1) $$ROA = 0,402 - 1,000\ G + 2,723\ S + 1,538\ FC$$

(2) $$ROA = 0,532 - 1,760\ G - 5,150\ S + 0,290\ FC + 0,810\ PC - 0,075A$$

(3) $$ROA = 0,670 + 1,859\ G - 7,148\ S + 1,003\ PC - 0,098\ A$$

(4) $$ROA = -0,043 - 1,014\ G + 3,159\ S + 0,024\ FC + 1,539\ A$$

4.2 The Hypothesis Test

This research uses two models which analyze the correlation of gender, subsidy, and FC with ROA which divided into a model before and after uses control Variable PC and Age. The hypothesis test model (1) by referring to Table (1) can be explained the effect of independent variable gender, subsidy and FC towards dependent variable ROA. Based on the T test results in Table 1 and significance level of 0,01 (1%), it is known that gender give significant negative effect on ROA which means rejecting H_{01} and accepting H_{a1}. Meanwhile,

subsidy independent variable gives insignificant positive impact on ROA which means accepting H_{01} and rejecting H_{a1}. Moreover, FC gives significant positive effect towards ROA.

Furthermore, to eliminate bias from the regression equation in model (1) analysis is by adding control variables PC and Age. Based on the results of the analysis which summarized on Table 1, it shows a high correlation of variables FC and PC thus causing multicollinearity. After that treatment is given to relieve multicollinearity symptom and from the repair process then obtained the result as summarized in Table 2. The new model created by eliminating FC variables from previous model is preferable so that can be explained the hypothesis test i.e. subsidy and age give significant negative effect, meanwhile PC give significant positive impact towards ROA at 0,01 (1%) level which means rejecting H_{01} and accepting H_{a1}. Furthermore, gender gives insignificant negative effect towards ROA.

4.3 Result and Analysis

Gender in this research shows the loans portion for poor women. Gender is predicted to give significant positive effect towards MFI financial performance which proxied by ROA. The result of this research shows that gender gives insignificant positive effect towards ROA which means the coefficient effect of gender is 1,859 and considered zero. This means that even though there is an increase or decrease in loans disbursement for women, ROA remained immobile. Thus gender changes do not affect the achievement of ROA MFI. This finding contrasts with the research results of Caudil et al (2012) which show that gender improves the efficiency of financial performance of microfinance in East Europe and Central Asia. Difference in study results is possible because of microfinance membership characteristics in East Europe and Central Asia has more balanced proportion between men and women members. Meanwhile MFI in Jember mostly even almost entirely has women members and possibly the loan disbursement that received is not entirely used for business. This occurs because the initial holding of this MFI was held by Department of Cooperative and SME's of Jember District is for women's poverty alleviation program in Jember.

Meanwhile, the subsidy as a form of government support in the development of MFI which aims to reduce poverty found significant negative effect on ROA, which means if the government subsidy is added, it will decrease ROA MFI. This result supports Caudill et al (2012) finding which shows subsidy, in fact, even causes high expense that incurred by MFI. MFI in this study indicates the same thing possibly because MFI that become object of this research is MFI that survived and developed well for the last five years, even some of them had been existed for 8 years. Data from Department of Cooperative and SME's Jember district shows that subsidy which disbursed Jember Government is about 10-25 million per year for each MFI but the cash flow for each MFI reach the range of 12 million until 1 billion rupiahs per year within the last five years. This shows MFI operational is going well so if the government increase the disbursement of subsidy, then the MFI financial performance can possibly decreasing because it disturbs the autonomy and independence of MFI management. Thus, MFI in Jember is actually potential to strengthen national finance pillar as stated by Wijono (2005).

Financial capital shows different phenomenon between two other independent variables (gender and subsidy). FC give significant positive effect towards ROA which means the more efficient MFI uses the capital, The more ROA will increase, and vice versa. But if the PC variable control and age applied in the model, in fact, high correlation happens between FC and PC. This is actually common thing when it happens in the research in financial subject which uses financial data. Indicator calculation of FC and PC uses the same element i.e. total asset. Nevertheless, researcher still tries to do treatment procedure to relieve the multicollinearity symptom by issuing FC and PC variable interchangeably. The treatment result shows that issuing FC is preferable because it produces higher adjusted R^2.

5. Conclusion

Based on the analysis result, it can be temporary concluded as gender effect and subsidy gave negative effect on ROA. Once applied, control variable PC and age even more strengthen the significance of both towards ROA. Financial capital gives significant positive effect towards ROA. However, after variable control exists, in fact, it causes high correlation between FC and PC. But this thing occurs naturally in the research of financial subject because both variables are using total asset in the calculation process.

This research still has so many limitations, so it is suggested for further research to examine further the accuracy of PC and age as control variables in this research and apply in other regions in Indonesia as comparison, whether it produces the same phenomenon or not.

Acknowledgements

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