

SUSTAINABILITY OF AGRIBUSINESS MICROFINANCE INSTITUTIONS (AMFIS) IN BOGOR

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ABSTRACT

Microfinance service is one of the approach to reduce number of poverty by providing financial service to low income society. The increase demand of microfinance, will require microfinance institution to keep their sustainability both financially and outreach. Purpose of this study is to analyze the factors affecting Agribusiness Microfinance Institution (AMFI)s' sustainability in Bogor District. The concept of the sustainability microfinance in this study analyzed holistically by combining financial sustainability and outreach sustainability. This combination by the previous research has not been much analyzing the sustainability of both aspects. The factors influencing agribusiness microfinance institutions' sustainability identified by panel regression. Sampling technique used is purposive sampling, from survey result obtained 15 agribusiness microfinance institutions who have complete financial reports for two years from 2016 to 2017. Result of research sustainability index of agribusiness microfinance institution in Bogor District ranged between 0,02 to 0,71; with an average score of sustainability index as much as 0,27. This indicated agribusiness microfinance institutions' performance are relatively low. The regression result showed the amount of total loan, total equity and agribusiness microfinance institutions' age were significant positive contributor to AMFIs' sustainability in Bogor District..

Keywords: Microcredit; Microfinance institution; Rural finance; Sustainability

JEL Classification: G21, G23

1. INTRODUCTION

Microfinance has become a solution to reduce poverty and financial inclusion improvement in

several countries. Microfinance is focusing on providing credit to society with low income who did not have any access to formal banking. Formal banking usually reluctant to give loans to low-income society due to several reasons. First, high transaction cost per loan, the total loan, which was given relatively smaller compared to the total cost spent per transaction (Conning, 1999; Hermes & Lensink, 2007; Paxton & Cuevas, 2002). Second, determining the risk over prospective borrowers and supervision over client progress, at which point indigent clients conceive higher risk because most of them worked in the informal sector (Hermes & Lensink, 2007). Third, lack of assets owned by a household with low income thus ownership degree of collateral which usually had small value or even barely valuable (Dokulilova, Janda, & Zetek, 2009; Hermes & Lensink, 2007). Microfinance institutions able to reduce loan transaction costs so poor households can access the loan comfortably, cheaply, and fast. Many kinds of research in the whole world have proved micro-financial program success; it begins by the success of Grameen Bank whose successfully serve low-income society in Bangladesh.

Credit issuance to low-income society is expected to supply them enough income, thus allowed them expanding their business, improving their life quality, and escape from poverty. The government distributed capital loan aid to microfinance institutions to resolve the reluctance of formal banks in giving loans to low-income society. There is hope by the presence of microfinance institutions in the rural area will simplify financial service access to society.

Bogor District is one of the areas with a high poverty level, wherein most of the poor society works in the agriculture sector. The number of poor inhabitants in Bogor District in 2016 was 490,80 (in thousand people). Number of poor society in Bogor District was the most significant amount compared to other districts in West Java Province (BPS, 2016). Bank contribution to development is crucial to arouse the wheels of the economy. Banking as a financial institution will attract the business world, becoming partners to escalate their investment so reciprocally obtain profit. In 2017 the number of credit given by commercial banks in Bogor District had reached 54,728 billion Rupiah, with 32,73 percent used as working capital; 14,09 % for investment; and 53,18% remains used for consumption. When viewed from the banking credit composition in the commercial bank based on the economic sector in Bogor in August 2017; trading, hotel, and restaurant obtain the biggest credit portion (52,39%). The second position in obtaining credit portion was the processing industry sector (19,20%); while the agriculture sector of only 1,75% (BPS, 2017). Credit inequality to agriculture sector indicated that agriculture sector still has limited access to formal financial services.

Agribusiness Microfinance Institution (AMFI) is one of the institutions providing financial services to particularly farmers in rural areas. The presence of AMFI has become one of the solutions in financing the agriculture sector in a rural area due to its strategic role as the

connector in the economic activities of farmers' society. AMFI also played an essential role in strengthening farmers' institutional in developing agribusiness, which can not be separated from farmers' access weakness to various productive resources, namely: capital, technology and market information (Hermawan & Andrianyta, 2012).

Based on the data of Food Crop, Horticulture, and Plantation Agency of Bogor District, who has been providing capital aid to established Agribusiness Microfinance Institution since 2008 until 2015 as many as 201 farmer group alliance spread over 30 sub-district. It means that the budget intended for each farmer group as capital aid was as much as one hundred million Rupiah, therefore the amount of total fund which has been distributed for Bogor District area has reached the value of 20,1 billion Rupiah. From the evaluation result, in its progress since 2016, only 81 farmers group alliance (40,3 %) have already formed as Agribusiness Microfinance Institution. This indicated that several Agribusiness Microfinance Institutions were having the sustainability of business problems.

The role of Agribusiness Microfinance Institution in supporting farmers, encourage AMFI to have a good performance institutionally, so the purpose of portray AMFI as supporting institution of banking intermediation function will be achieved in a good manner. Therefore, the role of Agribusiness Microfinance Institution in Indonesia is very potential for further development if AMFI able to resolve the weakness in its operational. Agribusiness Microfinance Institution in conducting the business must gain profit, so their activities continue (sustainable), and their ability to provide service for the customer will be improved (outreach).

Microfinance institution sustainability is crucial, as it was stated by Schreiner (2002). Microfinance institution sustainability will improve a broader outreach of services to poor society and impact poverty alleviation. A great budget issued by the Ministry of Agriculture to grow and develop Agribusiness Microfinance Institution (AMFI); certainly the program that have been conducted must be sustainable, so the benefit from micro financial service can be perceive widely by the society and finally able to decrease poverty. In regards to and consideration of the Agribusiness Microfinance Institutions' strategic value as the micro-financial institution that had access to poor farmers in rural areas, this study will analyze the factors affecting Agribusiness Microfinance Institutions' sustainability in Bogor District.

The arrangement of this paper as follows: section 2 discussing relevant literature with the topic of microfinance institutions sustainability; research methodology presented in section 3; section 4 presents research results and detail discussion regarding the result of this study. Finally, the conclusion presented in section 5 along with a further scope of research expansion.

2. HYPOTHESIS

Microfinance has been identified as an important tool in improving poor society's productivity as well as escalating economic development. The idea of microfinance based on the concept that poor society's inability in accessing financial services is a severe obstacle for their economic enhancement, life change and obtaining adequate resources in order to start a new business or developing existed business to enhance their economic condition (Zeller & Meyer, 2002). Microfinance service is considered one of the key strategies in poverty countermeasures and the benefit of micro- financial services in improving poor society standard of living has been widely expressed by many studies in various countries.

General comprehension regarding microfinance institution sustainability is that if a microfinance institution capable of covering all their expenses yet still able to gain profit, thus the microfinance institution remain operated and developed in the future without any dependency upon governments' subsidy or any other fund aid (CGAP, 2009; Sim & Prabhu, 2014). According to (Borbora & Sarma, 2011; Mulyaningsih, 2016), microfinance sustainable when their operational income from the loans given is enough to cover all their operational expenses. Yaron (1994) identified four conditions for microfinance institution to be able to sustain, namely: 1) Microfinance institution must have loans' positive interest rate which is enough to cover all unsubsidized costs (for subsidized microfinance institution) to maintain their equity level. 2) Institution was capable of achieving high repayment level. 3) An institution must offer a higher savings interest rate to attract the society to voluntarily saving their money so it would escalate a significant loan portfolio. 4) The institution must be efficient (including low transaction and administration cost) in relate to the mechanism of the screening process, loan process, withdraw accounts receivable from the customer, as well as mobilize and serve savings.

Several researches, stated that the indicator of microfinance institution sustainability marked by financially sustainable (financial viability and self sufficiency) as stated by Asare (2018), Mahapatra & Dutta (2016), Molinero, Cinca, & Nieto (2007), even though microfinance institution sustainability was not only sustainable financially but also sustainable in terms of outreach. Microfinance institution sustainability often marked by the occurrence of mission drift (Hulme & Mosley, 1996), whereas a microfinance institution focused on their financial sustainability, so the institution will search low risk customer as well as increasing their loan interest to gain profit. However, this policy will decrease the possibility of poor society in accessing micro-financial services. A trade-off occurred between financial and outreach sustainability. Several studies have been conducted to prove whether a trade-off occurs or not. Louis, Seret, & Baesens (2013) conducted a study to test whether the escalation of microfinance institutions' focus on financial sustainability will reduce their outreach to poor society. The result

has shown that researchers unable to support the hypothesis that trade-off occurs between financial sustainability with Microfinance Institutions' outreach towards poor society; on the contrary, there was evidence of a positive and significant relationship between social efficiency and financial performance. The result was supporting the conclusion of Mersland & Strøm (2010), Quayes (2012), but the contrast with the findings by Cull, Demirgüç-kunt, & Morduch, (2007), Hermes, Lensink, & Meesters, (2011), Masood & Ahmad (2010).

A trade-off between financial sustainability and outreach sustainability has been a controversy among microfinance experts. At the moment, microfinance institutions must increasingly consider profit maximization and social mission as part of their operation. Microfinance institutions' sustainability is not only in the matter of financial sustainability but also must sustainable in outreach as well (Morduch, 2000; Rhyne, 1998). The improvement of outreach to the poor society can not be achieved without a solid microfinance institutions' financial sustainability. Therefore, the real challenge for microfinance institutions at the moment is to be able to reach and assist poor society. However, at the same time, the institution must conduct its financial operation sustainably. Although the emphasis is increasingly developing towards financial sustainability and outreach, not much research conducted in this matter. Performance of these two dimensions contribute benefits for the society in general because it shows that microfinance institution was able to provide contribution over poverty alleviation by utilizing resources effectively and efficiently. The concept of the triangle of microfinance introduced by Zeller & Meyer (2002), it is the concept that underlies this study. The three primary purposes of microfinance institution are as follow:

1. Able to reach clients (poor society) in a large number
2. Enable poor society to escape poverty
3. Creating a sustainable financial institution

In accordance with the purpose of the microfinance institution, this study discussing sustainability from this aspect of financial and outreach. Various researches have been using this aspect to monitor microfinance institution sustainability. The theory of outreach is the more poor society serve by microfinance institution, the better is the outreach, particularly to the poorest customer among the poor (Conning, 1999; Schreiner, 2002). The outreach of micro-financing divided into two parts, namely the profundity of the depth of outreach and breadth of outreach. Indicator of the depth of outreach can be seen from the average value of the financing provided by financial institutions to their customers, the smaller the loan, the deeper the outreach (Cull et al., 2007; Hermes et al., 2011; Mersland & Strøm, 2010). Meanwhile, the indicator of the breadth of outreach can be seen from the number of a total customer, which given financing/active debtor; the more number of debtors, the more extensive the outreach (Bhanot & Bapat, 2015).

Ledgerwood (1999) stated that three dimensions of outreach indicators are loan outreach; client and staff outreach; and savings outreach. Schreiner (2002) stated that the indicator of outreach sustainability aspect consisted of six dimensions, namely benefit, cost, depth of outreach, breadth of outreach, time, services, and type of services provided by microfinance institutions. Financial sustainability often used in several kinds of research were operational self-supporting (Operational Self Sufficiency/OSS) and Financial Self- Supporting (Financial Self-Sufficiency/FSS). (Barres, 2006) And various researches (Okumu, 2007; Ruben & Schers, 2007) prefer using the OSS instead of FSS as the indicator of microfinance institution sustainability performance. Meanwhile, Yaron (1994) stated that microfinance institution sustainability indicated by independency towards subsidy or donor.

Microfinance institution has been proven by many researchable to reduce the number of poverty, thus at present microfinance institution demanded to keep sustainable. Therefore it is essential to be aware of the factors influencing microfinance institution sustainability. Various researches have been conducted regarding the factors affecting microfinance institution sustainability. Asare (2018) was examining influential factors affecting microfinance institution sustainability in Ghana. His study result reveals that financial technology (mobile money) positively influence microfinance institution sustainability. Kimando, Kihoro, & Njogu (2012) studying regarding the factors influencing microfinance institution sustainability in Murang City of Kenya. The study result discovers that financial regulations, the number of customers served, financial outreach, and credit volume, which was transacted were the factors affecting microfinance institution sustainability. His recommendation was that microfinance institutions must open a lot of branches so that the microfinance institution can broaden its outreach, which will improve microfinance institution sustainability. Bhanot & Bapat (2015) presenting that credit portfolio, number of debtors, 30 days risky portfolio, and return of asset were the factors contributed to microfinance institution sustainability. Mahapatra & Dutta (2016) analyze the factors determining microfinance institution sustainability over 65 microfinance institutions in India, the study result that loan average, microfinance institutions' size, transaction cost per debtor and total loan were affecting microfinance institution sustainability in India. Nanayakkara (2017) presented that gender (female), debtor literacy, efficiency, and microfinance institutions' age were the factors influencing microfinance institutions' performance.

In accordance to the main purpose of the microfinance institution, this study novelty is creating an index of microfinance institution sustainability holistically, which embraces both financial and outreach sustainability, wherein previous research has not much discussed regarding this issue. The index made also will be utilized to reveals the factors influencing microfinance institution sustainability. Other than that, this research also includes farmer debtor variable and area aspect to discover the influence over microfinance institution sustainability. Microfinance

institution commercialization demands the institution to be sustainable both financially and in outreach, which will be widely affecting poverty alleviation.

3. METHODOLOGY

This paper measures sustainability more comprehensively, in terms of microfinance institution sustainability not only sustainable financially, but also including sustainability in outreach. One of the purposes of this study is creating a sustainability index for agribusiness microfinance institutions in Bogor District. Composite index formed with the compilation of several indicators becoming a single index to simplify multidimensional measurement (such as sustainability index) (Nardo et al., 2008). After obtaining the sustainability index, panel regression analysis will be used to discover the factors influencing agribusiness microfinance institutions in Bogor District. The data used in this research were secondary data in the form of financial statements of agribusiness microfinance institutions from the year 2016 to 2017. Sample collection technique in this research conducted by purposive sampling with the criteria of agribusiness microfinance institutions with complete financial reports during two financial years from 2016 to 2017. Survey result data obtained from 81 agribusiness microfinance institutions registered in Food Crop, Horticulture and Planatation Agency of Bogor District, after which only 15 agribusiness microfinance institutions able to provide complete financial reports.

Sustainability index measured through three indicators, namely ratio of Operational Self-Sufficient (OSS) – OSS ratio indicated microfinancial institutions' ability to generate profit which is enough to cover all expenses (benefit/cost); average loan (Average loan per borrower/ALPB) – which reflect depth outreach; and number of active debtors (Number of active borrowers/NAB) – which reflect breadth of outreach (Bhanot & Bapat, 2015). Then all three indicators value standardized and after that indexed. Sustainability index calculation was using the composite index with an arithmetic average, the formulation as follow:

$$SI = 1/3 [X1 + X2 + X3] \tag{1}$$

Remarks: SI = Sustainability Index of Agribusiness Microfinance Institution; X1= financial sustainability index (B/C), X2 = depth outreach sustainability index (Average loan balance per borrower), and X3 = breadth outreach sustainability index (number of active borrowers). Each component index mentioned is a ratio between the difference of an indicator value with its minimum value and the difference of maximum value with a minimum value of the indicator concerned. The formulation presented as follow:

$$\text{Index } X(i) = [X_i - X_{\min}] / [X_{\max} - X_{\min}] \tag{2}$$

The sustainability index obtained then will be used in the regression equation to discover the factors affecting agribusiness microfinance institution sustainability. Analysis conducted with panel model regression Pool Least square (PLS). The dependent variable is an index score of agribusiness microfinance institution sustainability (Y). Meanwhile, the independent variable (Xi) was based on a literature review available in this domain. In this research, we tried to reveal whether there is a regional influence to agribusiness microfinance institution sustainability with regression equation model by dummy interaction as follow:

$$Y_{it} = \beta_{0i} + \beta_1 \ln GLP_{it} + \beta_2 \ln GLP_{it} * D_{it} + \beta_3 \ln TEQ_{it} + \beta_4 AGE_{it} + \beta_5 AGE_{it} * D_{it} + \beta_6 NOE_{it} + \beta_7 EDU_{it} + \beta_8 NOM_{it} + \epsilon_{it} \tag{3}$$

Remarks: β_0 = Intercept, β_1 – β_{10} = Regression Coefficient Variable, ϵ = Error term, i = AMFI from 1 to 15, t = 2 years period of time (2016-2017). Dependent variable description along with the correlation hypothesis to independent variable presented in Table 1.

Table 1: Variabel used in panel regression

Variable	Operational Definition	Hypothesis	Reference
Gross Loan Portfolio (GLP)	Amount of money lend by AMFI to the customer (Rp.)	+	(Kimando et al., 2012; Quayes, 2012)
Total Equity (TEQ)	Amount of capital owned by AMFI (Rp.)	+	(Bhanot & Bapat, 2015; Cull et al., 2007; Quayes, 2012)
Age	AMFIs' Year of Establishment (Year)	+	(Bhanot & Bapat, 2015; Cull et al., 2007; Rahman & Mazlan, 2014)
Number of Members (NOM)	Number of AMFIs' member (Person)	+	
Number of employes (NOE)	AMFIs' number of employee (person)	-	(Kimando et al., 2012)

Education (EDU)	AMFIs' manager formal + education period of time (years)
Dummy Region (D)	Valued 1, if the location of AMFI is in Central Bogor area; valued 0 if other areas

4. RESULT AND DISCUSSION

Descriptive statistic analysis illustrated the character of the data sample, which was used in this study. Data used in this study were 15 agribusiness microfinance institutions, with the observation object were their 2 years of financial data starting from 2016 to 2017. After collected ultimately, the data was made into average, minimum value, maximum value, and deviation standard. Statistic descriptive of both independent and dependent variables presented in Table 2.

Based on Table 2, dependent variable used in this study is microfinance institution sustainability index contains 3 indicators, namely financial sustainability which was represented by Operational Self-Sufficiency (OSS) and outreach sustainability represented by Average Loan Balance per Borrower (ALPB) and Number of Active Borrowers (NAB). Operational Self-Sufficiency year 2016 – 2017 upon 15 agribusiness microfinance institutions indicate an average value of 1,36 with deviation standard of 0,46. Minimum value of OSS in the amount of 0,85 which means there was agribusiness microfinance institution encounter loss when their total cost was bigger compared to total income. The agribusiness microfinance institution that have OSS value smaller than one were AMFI Flamboyan, Sukagalih, Pandan Wangi and Jaya Bakti. Meanwhile, the maximum value of OSS as big as 2,98 belongs to AMFI of Tajur Tani. Average Loan Balance per Borrower (ALBP) is average loan of each agribusiness microfinance institution for one year. Most Agribusiness Microfinance Institution gave loans to their member as much as Rp 1.500.000,-. While the minimum value usually Rp 500.000,- and loan maximum value given by Agribusiness Microfinance Institution was as much as Rp 3.288.000,-. Number of Active Borrowers (NAB) is the number of active borrowers of Agribusiness Microfinance Institution for a year. Average of number of active borrowers for a year was 33 people. The highest number of borrowers was occupied AMFI of Rukun Tani who gave loan to 136 members for a year. This achievement considered as successful because it indicated that Agribusiness Microfinance Institution sustainability still continues, this can be seen from the number of active borrowers which means that capital loan of Rukun Tani AMFI keeps turning.

Table 2: Descriptive Statistic of dependent and independent variable

Variable Name	Obs.	Min	Max	Mean	SD
<i>Dependent Var.</i>					
Operational Self Sufficiency, (OSS) ratio (in%)	30	0,85	2,98	1,36	0,46
Average Loan Balance per Borrower (ALPB) (in Rp)	30	590 909	3 288 909	1 601 721	699 808
Number of Active Borrowers (NAB)	30	4	136	33,43	35,04
<i>Independent Var.</i>					
Gross Loan Portfolio (GLP in Rp.)	30	5 000 000	199 596 000	53 785 767	55 425 847
Total Equity (TER in Rp.)	30	101 150 000	260 635 000	123 273 144	37 001 830
Age	30	1	11	5,80	3,02
Number of Members (NOM)	30	23	320	83,53	68,96
Number of Employe (NOE)	30	2	4	2,73	0.78
Education (EDU)	30	9	22	13,27	3,02
Dummy Region , if value 1 = Bogor Central, if value 0 = the others	30	0	1	0.80	0,41

Source: Primary Data processed (2018)

The first independent variable used in the first regression equation is Gross Loan Portfolio (GLP). GLP is the total volume of loans given by Agribusiness Microfinance Institution to its members for a year. There was a wide variety in total loan volume; this can be seen from standard deviation value, which was very high, of Rp 55.425.847,- wherein minimum value of AMFIs' loan volume was at Rp 5.000.000,- from AMFI of Sukagalih and Harum Manis. Meanwhile the maximum value of total loan volume of Rp 199.596.000,- from AMFI Rukun Tani. Furthermore, Total Equity (TEQ) variable, the average value of AMFI Total Equity, was in the amount of Rp 123.273.144,- with deviation standard of Rp 37.001.830,-. The next variable is Agribusiness Microfinance Institutions' age of established; the 15 Agribusiness Microfinance Institutions averagely have been established for 5 years. Then Number of Employee (NOE) variable, the average number of administrators and employees from 15 Agribusiness Microfinance Institutions was 2 people which was consisted of manager and treasurer. Education variable is the period of time required by Agribusiness Microfinance Institutions' manager to finish their education in formal school. AMFIs' manager educational background averagely came from senior high school.

Descriptive statistic for Agribusiness Microfinance Institution sustainability index value can be seen in Table 3. Average of index value score of Agribusiness Microfinance Institution sustainability in Bogor District ranged between 0,021 to 0,706; with an average of index value of 0,28 in 2016 and 0,27 in 2017. The low score of Agribusiness Microfinance Institution

sustainability index in Bogor District indicated that the microfinance institution performance was still low.

Table 3: Statistic Deskriptive of AMFI sustainability Score Index

Sustainability Index	n	Min	Max	Mean	SD
2016	15	0.021	0.646	0.280	0.184
2017	15	0.075	0.706	0.274	0.210

Source : Primary Data processed (2018)

Based on sustainability index calculation result, the index value of Agribusiness Microfinance Institution ranked to reveal which AMFI have the best sustainability (presented in Table 4). The top three rank based on sustainability score index both year of 2016 and 2017 achieved by the same Agribusiness Microfinance Institution, sequentially they are AMFI of Rukun Tani, Tajur Tani and Mandiri Jaya. The three Agribusiness Microfinance Institution showed a relatively good sustainability compared to the other Agribusiness Microfinance Institutions in Bogor.

Table 4: Index Score of AMFI Sustainability in 2016 and 2017

Ranking	Index Score of AMFI Sustainability Year 2016	Name of AMFI	Ranking	Index Score of AMFI Sustainability Year 2017	Name of AMFI
1	0,646	Rukun Tani	1	0,706	Rukun Tani
2	0,567	Tajur Tani	2	0,680	Tajur Tani
3	0,449	Mandiri Jaya	3	0,485	Mandiri Jaya
4	0,407	Ranji Mukti	4	0,458	Ranji Mukti
5	0,351	Sejahtera	5	0,378	Antanan
6	0,349	Tani Berkah	6	0,234	Jaya Bakti
7	0,324	Antanan	7	0,216	Plamboyan
8	0,254	Plamboyan	8	0,199	Medal Sari
9	0,198	Usaha Tani	9	0,198	Usaha Tani
10	0,162	Sadar Tani	10	0,178	Tani Berkah
11	0,160	Jaya Bakti	11	0,126	Sejahtera
12	0,126	Harum Manis	12	0,125	Sadar Tani
13	0,097	Sukagalih	13	0,077	Harum Manis
14	0,081	Medal Sari	14	0,077	Pandan Wangi
15	0,021	Pandan Wangi	15	0,075	Sukagalih

Source : Primary Data processed (2018)

To discover the variables which affecting financial sustainability of Agribusiness Microfinance Institution in Bogor District, panel regression was conducted with regression results, as presented in Table 5.

Table 5: Regression Estimation Result

No	Variable Name	coefficient	P > t	
1	LnGLP	0,129	0,000	***
2	LnGLP*D	0,006	0,128	*
3	LnTEQ	0,227	0,062	**
4	AGE	0,017	0,109	*
5	AGE*D	-0,013	0,213	
6	NOE	-0,038	0,172	
7	EDU	0,005	0,385	
8	NOM	-0,000	0,882	
9	Constanta	-6,268	0,006	

Prob>F= 0,0000
R-squared = 0,9202;
Adj R-squared = 0,8897;
Number of Observation 30; ***Significant 1%; **Significant 5%; *Significant 10%.

Source : Primary Data processed (2018)

The regression result presented in Table 5. Value of Prob>F = 0,0000 smaller than α ($\alpha=5$ percent) indicate that independent variable simultaneously gave significant effect to the sustainability of Agribusiness Microfinance Institution. Value of AdjR- squared 0,8897 can be interpreted that financial sustainability value influenced by independent variables available at the regression model as much as 88,97 percent; meanwhile 11,03 percent affected by other variables. Therefore, it is assumed that the model generally is a good model and able to clarify the factors influencing the sustainability of Agribusiness Microfinance Institution.

Total loan (Gross Loan Portfolio/GLP). The total loan given by Agribusiness Microfinance Institution to its customer is the variable that positively correlated to Agribusiness Microfinance Institution sustainability with a significant degree of 1 percent. The bigger loan given in every year to the member, the higher AMFI sustainability would be achieved. The result of this study is in accordance with research by Bhanot & Bapat (2015), Kimando, Kihoro, & Njogu (2012), and Quayes (2012).

Total Equity (TEQ). The total of equity gave positive influence to the sustainability of Agribusiness Microfinance Institution in Bogor District with significance level of 10 percent. The bigger equity possessed, the better sustainable of an Agribusiness Microfinance Institution is.

This reality relevance to the researches conducted by Bhanot & Bapat (2015); Cutt et. al (2007); Quayes (2012).

Age of Agribusiness Microfinance Institution (AGE). Age is the variable which positively and definite correlated to Agribusiness Microfinance Institution sustainability on the significance level of 10 percent. Positive marked coefficient, this indicated that the longer Agribusiness Microfinance Institutions' age, the more likely it is to have better financial sustainability, therefore many Agribusiness Microfinance Institutions learned from the previous AMFIs' failure (Bhanot & Bapat, 2015; Masood & Ahmad, 2010).

From the regression result, it is visible that there was a correlation of area to the farmers variable in the sustainability of Agribusiness Microfinance Institution as much as 0,006 bigger in Central Bogor area compared to the other area (significance level of 15 percent). Which means that the total loan in Central Bogor area affecting 0,006 times greater than the other area to the sustainability of Agribusiness Microfinance Institution. This concludes that the total loan given to the member of Agribusiness Microfinance Institution in Central Bogor was more prominent compared to the other Bogor area in terms of Agribusiness Microfinance Institutions' sustainability.

5. CONCLUSION

Sustainability of Agribusiness Microfinance Institution not only indicated by financial sustainability; instead, it must be followed with outreach sustainability. Microfinance institution development at present demands every Agribusiness Microfinance Institution to conduct effective and efficient business. The sustainability index of Agribusiness Microfinance Institution, which was made in this study have already cover financial and outreach sustainability. Study result shows sustainability index of Agribusiness Microfinance Institution in Bogor District ranged between 0,021 to 0,706, and the average sustainability index score average in the amount of 0,27. An index score of Agribusiness Microfinance Institution sustainability was still relatively low; this indicated that the performance of Agribusiness Microfinance Institution still has not reached a maximal level. Three of the top Agribusiness Microfinance Institutions in Bogor District based on the index score result of sustainability were Agribusiness Microfinance Institution of Rukun Tani, Tajur Tani and Mandiri Jaya.

The factors of total loan, total equity and Agribusiness Microfinance Institutions' age was affecting positively to the Agribusiness Microfinance Institutions' sustainability. Panel regression results with an interaction model on total loan variable to regional indicating an effect occurrence of area affecting the sustainability in the amount of 0,006 greater in Central Bogor area compared to the other area (significance level of 15 percent). This means that total loan given to the members of

Agribusiness Microfinance Institutions in Central Bogor area affecting 0,006 times greater to the sustainability of Agribusiness Microfinance Institutions compared to the other area.

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