Working Paper in Islamic Economics and Finance No. 0703

The Impact of Islamic Micro-Financing on Business Performance of Micro-enterprise[1]

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Abstract

Considering the vital role of micro-enterprises to economic development, then the aim of this study is to analyze the impact of Islamic micro-financing on business performance of micro-enterprise (ME), based on the survey of several MEs in Central Java that acquire funds from Islamic-based micro-financing institutions. Three variables, i.e., income, profit and total assets as an independent to measure the business performance of ME. Then, we use the logistic regression method to differentiate between the high and low performance of ME. The results indicate that: first, the formal education and marital status produce a positive impact on business income performance of ME, while the age of entrepreneur has a negative impact. Second, the formal education level also has a positive impact on the business profit performance. Third, the size of financing, business experience, and formal education has a positive impact on the business asset performance. These results suggest that these variables constitute important variables in selecting ME to achieve the effectiveness of Islamic micro-financing.

1. Introduction

Though micro-enterprises (MEs), by definition are very small business, they are vital to economic development.[4] MEs play a major role in the macroeconomic of less-developed countries. For example, in California, 44 percent of all new job growth was created by MEs (CAMEO (2004)). It also generates extra income for owner and their families. In Indonesia, 30 percent of gross domestic product (GDP) was contributed by MEs (Budiantoro (2004)). Therefore, MEs development is very important to economic development.

However, MEs have difficulties in developing their businesses since they only have small amount of capital. Whereas, building a strong business presumably requires access to sufficient capital. As stated in Ramzan (1997), Roberts and Roberts (2003), and Afrane (2003), the injection of capital into ME not only had a positive impact on business turnover, but also on monetary value of ME inputs or raw material, monetary value of machinery and employment.

Within the ME field, micro-financing is the best known approach to providing financial services.[5] The provision of financial services would help MEs to start or to strengthen their business. We believe that the rate and level of success of early stages businesses would enhance the operational sophistication of ME and increase the operational effectiveness, and lead to improve their performance. So far, the studies on this impact are limited to several aspects: first, the studies focus on a sample of ME in different countries; second, the estimation methods are limited to linear regression; and third, the interest-based micro-financing.

Therefore, this study contributes to the existing literature by using the sample of *Baitul Mal Wat Tamwil*, BMT (a MFI in Indonesia) which offers an Islamic micro-financing. It is based on the argument that the interest charges would financially and spiritually burden the ME, then BMT offers a *murabahah* financing (debt-liked contract).[6] The difficulty in providing collateral encourage ME to utilize the profit-sharing financing (equity-liked contract such as *mudharabah* and *musyarakah* contracts).[7] By allowing the ME to acquire funds via *murabahah* or profit-sharing financings, both have different impacts on their operational effectiveness. Although, author like Iqbal and Llewellyn (2002) still doubt on the potential rise of the severe agency problems in profit-sharing contracts. The problem arises because the agent

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[4] Example, small number of employee (see, Anderson (2003), Puglielly (2003), Budiantoro (2004) and USAID (2005)), ME run by owner and conduct a common activities such as child care, catering, cosmetology, or cleaning services or operate with small start-up capital (see, Anderson (2003)).

[5] The terms micro-financing and micro-credit are often used interchangeably and yet they represent the provision of different and distinct levels of financial service. For example, under shariah principles, MFI provides the financing facilities to SSE to buy raw material or inject capital via mudharabah financing.

[6] Islam discourages its members taking of a debt (Academy for Learning Islam (2004)). Debt is heavy burden in Islam and people only take it as last resort with specific conditions (Ahmad (2003)).

[7] In profit-sharing financing, BMT also can exercise monitoring and follow-up supervision

often has superior information and expertise (which may the reason the principal employs him). The end result may well be to foster the development of many of these ME out of the ME category and the ME owners can build linkages to larger business and more profitable markets.

The remaining discussion of this paper is organized into four sections. Section I discusses the prior studies that will highlight the development, effectiveness and sustainability of micro-financing. Section II produces the impact assessment model and estimation method. Section III discusses the results of the study. Section IV provides the conclusions.

2.   Prior Studies

Related to ME development, effectiveness of micro-financing programs requires considerable attention so that the benefit of the programs can really be enjoyed by ME. So, they can improve their business and enhance the quality of life. Sustainability of micro-financing programs constitutes important component to support the achievement of ME development, since it constitutes long-term process in which MEs require long-term access to financial institution. It indicates that the measurement of effectiveness (to evaluate the benefit of the programs) and the prediction of sustainability micro-financing programs are required in developing MEs and MFIs. The expectation of ME development is that MEs can develop their business and MFI as an organizer of micro-financing programs do not face loss. Therefore, the benefit of the programs should have been greater than the cost.

Effectiveness is the ability of an organization to attain its predetermined goals or objectives (Sowlati, 2005). In general micro-financing programs concerned with business and job creation, income generation, and other outcomes are measurable at the level of the individual, the business, the community, or the economy. Therefore, the measurement of effectiveness (success) of micro-financing becomes important to examine whether the micro-financing programs have attained its predetermined goals. This activity requires the determination on the method of measurement and the indicators of effectiveness of micro-financing programs. According to Doyle and Black (2002), measuring outcomes requires establishment of a baseline and then followed with re-measurement over time.

Furthermore, related to the indicators of effectiveness, Anderson et al., (2002) connects the effectiveness with the primary objective of micro-financing programs: income and production enhancement. If it is directed toward management of micro-financing, it may be equally effective. According to Kuntjoro (1983) the success of credit program is not only determined by the increasing production, but also by the rate of repayment used as a standard of the financing program. Dumairy (1990) utilizes the percentage of bad debt as one of the indicators of the effectiveness (success) of the financing programs. Other indicator is the level of outreach (social benefit). This indicator was proposed by World Bank research for judging the success

of rural finance institution. The indicators of outreach include: increasing income of participants, the value and number of loans, saving account, the type of financial services offered, the number of branches, the annual growth of financial institution assets over recent years (Yaron, 1994).

From the previous discussion it can be concluded that the success of micro-financing can be indicated from two sides: from debtor and creditor. First, from debtor side, micro-financing can increase production, income and profit of ME. Second, from creditor side, the growth of asset and the rate of payment of the financing from debtor are also as indicators of effectiveness of credit. Therefore, it is needed to select the borrowers to help making better allocation for sustainability and effectiveness of the credit as they will be a vehicle for economic development. According to Marr (2002), strategies for full debt-repayment are crucial to the dynamic analysis of poverty impacts. Lee et al., (2002) states that risk management or credit scoring becomes a very important task as the credit industry.

The effectiveness of micro-financing is related to the sustainability of the program, because achieving the success, MEs need long-term access to financial services. Therefore, financial sustainability or self-sufficiency is a prerequisite for making micro-financial services permanent as well as widely available (ICC, 2001). Sustainability is about creating institutions that can provide a positive flow of benefit for as long as they are needed. According to Pissarides et al., (2004) a MFI can be said to be self-sustainable if, without the use of subsidies, grant or other concession resources, can profitably provide finance to MEs on an acceptable scale. Self-sustainability can be achieved via financial self-sufficiency and profitability. Otero (1998) reveals that to continue growth, MFIs require to generate profit, balance the social objectives of reaching low-income entrepreneurs with generating a return for its investors. The first attribute that distinguishes MFIs from others is what has come to be called dual mission of balancing a social agenda or social impact with its financial objective.

Furthermore, Greeley (2003) reveals that microfinance organization sustainability is fundamental to access fund and therefore it requires scaling up to achieve the goal. However, sustainability is only instrumental and not an intrinsic value in welfare sense. The conventional wisdom holds that programs to help the poor should be sustainable. According to Snow (1999) micro-financing programs become sustainable institutions when net benefits to the community exceed total cost. Benefits accrue to the community when new businesses are successful and income increases. Furthermore, Gaika (2003) states that the effectiveness of micro-financing depends on whether it has the flexibility to induce the participation of the poorest and whether it enables them to acquire the basic skill. Khandker (2003) states that improving skill of borrowers is needed to improve the productivity and income.

From the perspective of ME development, we can conclude that the effectiveness of micro-financing can be indicated by the success of business, income enhancement, rate of repayment and the benefit of the program to community, and the

sustainability of the credit programs constituting important component to achieve the goal of programs. Profitability is necessary to achieve self-sustainability. Therefore, analyzing the ability of MFIs profit generation is needed.

To achieve the profitability, financial resources should be allocated efficiently. Efficiency has important role related to profitability and sustainability. Increasing efficiency enables the MFI generates higher profit and this condition will create two benefits. First, the profit for savers and investors will increase, therefore, they are still interested in saving and investing their money in MFI. Second, the return earning of MFI will increase and can be used to add the capital that enable the MFI to operate in longer time, to reach more MEs so that eventually the sustainability can be achieved. Therefore, measuring and improving efficiency become important to encourage progress of MFIs to achieve sustainability. There is evidence from Vietnam, where three foreign NGO microfinance programs can achieve full financial sustainability since they are efficient in operation (MDE, 2005). Beside effectiveness, efficiency has become important issue in microfinance programs. For example, to evaluate the microfinance program, Concern Council (1999) focused on efficiency and effectiveness.

3. Impact Assessment Model and Estimation Method

To assess the direct impact of micro-financing on business performance, we adopt the model introduced by Copestake et al., (2001) to assess effect of the Peri-Urban Lusaka Small Enterprise (PULSE) lending. The business performance is measured by business profit, business diversification. The independent variables include: (i) pipeline (dummy variable), (ii) size of the first loan, (iii) size of the second loan, (iv) ages in business (year), (v) own business (dummy variable), (vi) got help (dummy variable), (vii) experience (dummy variable), (viii) training (dummy variable), (ix) sex of recipient (dummy variable), (x) married/partner (dummy variable), (xi) secondary education (dummy variable) and (xii) higher education (dummy variable). Dummy variable is assigned 1 if the answer is yes and 0 otherwise. The result of the study indicates that borrower who obtained a second loan experienced significantly higher average growth in business profit.

Furthermore, Mar (2002) suggests to include the business income in the model. Some studies found that micro-finance programs have positive impacts on micro-enterprise development - e.g., sales, profit, and asset accumulation (Woller and Parson, 2002). Therefore, in this study, we introduce three dependent variables, i.e., business income (sales), business profit and business asset. In this model, we measure the growth rate of business income, business profit, and business asset as the difference of business income, business profits, and business asset, where the difference refers to the difference of the first condition of the micro-enterprises since acquiring the Islamic financing and second condition when the survey was conducted.

The above model can be refined further. First, education can be counted based on how long the entrepreneur follows the formal education (in year). Second, the dummy variable for experience can not explain how long the entrepreneur involves in business activities. With dummy variable we can only explain the entrepreneur has experience or not. Therefore, there is no difference between entrepreneur that have long experience and short experience.

Furthermore, the model can be developed to estimate the impact of micro-financing on SSE development by adjusting with societal condition in the location of the research. For example, BMT also provide the religious class as part of giving motivation to the participant. This can be captured in business advice. In addition, we also include the type of financing (profit-sharing and non-profit sharing) to estimate the impact of different types of financing. Therefore, this study identifies ten independent variables, i.e.: (i) loan size, (ii) business experience, (iii) formal education, (iv) age of entrepreneur, (v) got help (dummy variable), (vi) sex (dummy variable), (vii) marital status (dummy variable), (viii) business sector (dummy variable), (ix) type of financing (dummy variable) and (x) business advice (dummy variable).

The linear regression model is found to have wide applications in many studies. However, this technique poses difficulties when a dependent variable can have only two values- an event occurring and not occurring. When the dependent variable can have two values, the necessary assumptions for hypothesis testing in regression analysis are violated. Another difficulty with the multiple analyses is that predicted value cannot be interpreted as possibility (Hasan et al., 2001). Therefore, by using linear regression we cannot predict whether the ME will achieve high business performance or low business performance as well as to identify the variable that influences the performance of the business. Whereas the success versus failure prediction model can help the BMT more accurately assess the probability of MEs to achieve high or low business performance. It can be used by BMT as the basis for selecting the potential MEs. The selection process will also affect the ability of MEs to repay the capital to BMT, the profitability of BMT and furthermore related to the sustainability of the programs.

Therefore, in this study, we use the logistic model.[8] It is used for predicting whether an event will or will not occur, as well as to identify the variables that are useful in making prediction. Logistic regression is a technique for making prediction when the dependent variable is a dichotomy, and the independent variables are continuous and/or discrete. The dependent variable takes the value of 1 for high business performance (if the value of the business greater than or equal to median) and 0 for low business performance (if the value of the business less than median).

When the dependent variable is dichotomy and the independent variables are any type, it is the form of binomial (or binary) logistic regression. As suggested by

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[8] Similar studies, among others are Lussier (2005), Persons (1999) and Chowdhury (2004), use the same estimation method.

Demaris (2004), we apply the maximum likelihood (ML) method to estimate the parameters. It is undertaken after transforming the dependent variable into logit variable (the natural log of the odds of dependent variable occurring or not). In this way, logistic regression estimates the probability of a certain event occurring.

4. The Results

This study drew upon primary data from BMTs and MEs which are financed by BMTs itself. Data from micro-entrepreneurs and BMTs were collected by structured questionnaire designed to capture the objective of the study. Interview to several managers or officials of the BMT have also been conducted to complete the data. Secondary data were also collected from Center for the Incubation of Small Business (PINBUK) of Central Java. Different geographic regions were selected to create a good sample of the various conditions of large Central Java province, and therefore, area sampling frame was used to determine the sample of participants and BMTs. Since Central Java is divided into six residencies, the areas of research were divided into six areas. Each residency is then divided into several regencies. The regency selection is needed, and the selection of regencies is based on the biggest number of BMT per regency. The sample of 60 BMTs and 204 MEs were selected based on the willingness to answer the questionnaire. The criterion of ME sample is the ME that has joined the Islamic micro-financing eight months or more, so that the impact of financing can be detected.

As shown in Table I, Islamic micro-financing practiced by the BMTs in Central Java is able to enhance business performance of ME. The results of paired sample *t* test show that the mean of the business income, profit and business asset in the first condition different significantly from the mean of business income, business profit and business asset in the second condition. The difference could be seen in column 4.

Table I: Summary of the paired samples *t* test of business income, profit and asset

Indicators	Mean 1 (Rp)	Mean 2 (Rp)	Differences of Mean (Rp)	T value
Business Income 1& 2	3,434,120.10	7,742,279.41	4,308,159.3	7.602***
Profit 1 & 2	803,379.90	1,877,972.79	1,047,592.9	8.418***
Business Asset 1 & 2	10,002,598.04	25,854,341.67	15,581,744.0	6.629***

Note: 1 and 2 represent the first and second conditions of the SSE since joining the BMT, respectively
*** represents 0.01 significance level

In general, MEs are also able to increase the number of employee from two persons to three persons after utilizing the Islamic micro-financing (with the difference of mean is one). This result indicates that Islamic micro-financing is able to improve business performance of ME effectively. The finding also indicates that

the application of interest free system which is accompanied by selection process, business control, incentive system and good relationship construction (cooperation) – is effective in developing micro-enterprises.

In order to predict the high or low business performance, this study uses logistic regression to develop the models. The logistic regression fits linear logistic regression models for binary response data using the method of maximum likelihood. The dependent variable of the model takes the value of 1 for high business performance (if the value of the business greater than or equal to median) and 0 for low business performance (if the value of the business less than median). This study develops three models - that is based on business income, business profit and business asset. The result of the logistic regression analysis is very useful to clarify the effectiveness of Islamic financing.

Varian Inflation Factor (VIF) was used to detect multicollinearity in logistic regression models. There is no formal cutoff value to use with VIF for determining presence of multicollonearity, but in the case of logistic regression, Values of VIF exceeding 2.5 are often regarded as indicating multicollinearity (Anonymous, 2006). Using collinearity diagnostic in linear regression (income performance as dependent variable) the values of VIF of each independent variable can be calculated. The results show that all of values of VIF of each independent variable (out of ten independent variables) are less than 2.5. It indicates that there were no multicollinearity between variables, and therefore based on these variables we can process to estimate the logistic regression

To analyze the factors affecting the business performance, this study used four types of test: Hosmer and Lemeshow Chi-square and Chi-square model test, Akaike's Information Criterion (AIC) selection, and Wald test. The results indicate that all of Hosmer and Lemeshow Chi-square the Model I, II, and III are not significant. The Hosmer and Lemeshow Chi-squares are 7.658 (Significance level = 0.468), 8.425 (Significance level = 0.393) and 8.987 (Significance level = 0.343) for Model I, II and III, respectively. It means that H_o fail to be rejected for all models, implying that the model's estimates fit the data at an acceptable level.

Furthermore, Chi-square model (the amount of improvement in chi-square) was used to detect whether the new model (that includes the ten independent variables) fits better than the model without ten independent variables (or constant only). The results show that the chi-square models (I, II and III) are significant. The chi-square models are 18.010 (Significance level = 0.01), 25.535 (Significance level = 0.01), and 45.353 (Significance level = 0.01) for Model I, II and III, respectively. The results indicate that the additional of the independent variables in the logistic model (I, II, and III) improves the fits of the models. In other words, the independent variables add significantly to the prediction of outcome.

Akaike's Information Criterion (AIC) was used to identify the parsimonious models, i.e., to find a relatively small set of explanatory variables that minimizes AIC. A model which minimizes the AIC is considered to be the most appropriate model (Sakamoto et al., 1986; Gujarati, 2003). Persons (1999) used AIC to identify

his logistic regression models. Based on AIC selection (Table II), the results indicate that there are three selected variables for Model I (formal education, age of entrepreneur, marital status), two selected variables (loan size, formal education) for Model II, and five selected variables (size of loan, business experience, formal education, type of financing and business advice) for Model III.

Table II: Estimated coefficient of logistic model to differentiate high business performance from low business performance

Variables	B Model 1	Exp (B) Model 1	B Model 2	Exp (B) Model 2	B Model 3	Exp (B) Model 3
Size of loan (00,000)	-	-	.012	1.012	.044	1.045
			(1.955)		(13.416)***	
Business experience	-	-	-	-	.067	1.070
					(5.084)**	
Formal education	.124	1.132	.185	1.203	.148	1.159
	(7.033)***		(12.423)***		(6.444)**	
Age of entrepreneur	-.033	.968	-	-	-	-
	(3.284)*					
Marital status	1.063	2.896	-	-	-	-
	(4.421)**					
Type of financing	-	-	-	-	.545	1.724
					(2.540)	
Business advice	-	-	-	-	.500	1.648
					(2.008)	
Constant	-1.011	.364	-2.120	.120	-3.398	.033
	(.965)		(14.945)***		(15.533)***	
Hosmer&Lemeshow - Chi-square	7.658[.468]		8.425 [.393]		8.987 [.343]	
Chi-square Model	18.010***		25.535***		45.353***	
AIC	272.716		262.307		245.595	

Note : Model 1 based on business income; Model 2 based on business profit; Model 3; based on business asset; (…) represent Wald test; ***, **, * represent 0.01, 0.05, 0.10 significance level, respectively. B = the coefficient of logistic regression, Exp (B) = odds ratio.

Based on the Wald test (Table II), indicates that there are three variables that have significant parameter estimates for Model I (formal education, age of entrepreneur, marital status)), one variable (formal education) for Model II, and four variables (size of loan, business experience, formal education and constant) for Model III. The findings and the interpretation for each variable are below.

Loan Size/Financing

The coefficient of loan size is not significant in Model II (positive sign); nevertheless it is significant in Model III (positive sign). It indicates that loan size has no impact on the odds of the business to achieve high profit performance (Model II), but it has a positive impact on the odds of the business to achieve high asset performance (Model III). The first result (Model II) is appropriate with the statement of Khan and Mirakhor (1994) - profit arise from an investment of financial capital (loan) combined

with entrepreneurial effort - and the statement of Afzalurahman (1997) - the profitability of capital use depends on the ability of employee (entrepreneur), the experience, and the situation of economy and politic of the country – he refuted the theory of capital productivity as the basic of acquiring interest of money. These arguments are also appropriate with statement of Schreiner and Woller (2003) who state**s** that the two prerequisites for entrepreneurial success are human and financial capital. Islam does not recognize capital and entrepreneur as two separate factors of production (Usmani, 2002).

Therefore, additional capital will produce a higher business income and profit if and only if the MEs have a good entrepreneurship and they work in the conducive economic and political environment. It means that additional capital (via loan) does not automatically improve the quality of the business without accompanied by a good entrepreneurship. Islamic financing is developed based on justice principles in which all of parties which involved in the business (business partner) have to enjoy a profit. The implication is that the selection of capable micro-entrepreneurs as business partner becomes important to achieve the profitable business which contributes benefit to all of parties. Furthermore, the enhancement of the ability of micro-entrepreneurs in improving their business performance (profit) via the construction of micro-entrepreneurs and assistance is also necessary.

The second result (Model III) indicates that the increase of loan positively affects the odds of the business to achieve high asset performance. This result is logically true –higher capital addition (via loan) evokes higher the asset of business. There is no doubt that the increase of loan fund (as additional capital) directly increases the asset of business.

Business experience

The coefficient of variable of business experience is significant with positive sign in Model III. It indicates that business experience has a positive impact on the odds of the business to achieve high asset performance (Model III). It means that the business experience of entrepreneurs is able to improve the business asset. The entrepreneurs, who have higher business experience, enable them to achieve higher business asset performance.

Formal education

All coefficients of formal education variable in Model I, II, and III are significant with the positive sign, and it is appropriate with the expected value. It indicates that formal education has a positive impact on the odds of the business to achieve high business performance - the higher level of education, the better performance of business income, business profit and business asset. Level of education affects the manner in which entrepreneur gathers and adjust himself or herself to the business environment. Level of education caters for the various dimensions of human development. Therefore, in the case in which generally the

level of education of micro-entrepreneur is low, the financing program needs wider range of available services (non financial services), such as vocational training, business advice, elucidation, marketing assistance to improve their business skill, so that they enable to improve their business performance significantly. The level of education of the participants of Islamic financing generally is still relatively low in which 83.2 percent of the participants has senior high school background and under, and there is only 16.8 percent of the participants have diploma background and above. It indicates that availability of wider range services (non financial) is still needed to enhance the ability of participants in developing their business.

Age of entrepreneur

The coefficient of age of entrepreneur variable in Model I is significant with negative sign. It indicates that age of entrepreneur has a negative impact on the odds of the business to achieve high income business performance. The negative sign of the estimated coefficient in Model I suggests that the higher the age of the entrepreneur, the lower their ability to improve their business would be. Although the higher age of entrepreneur, the better business consideration, it is generally regarded that older people tend to be more reluctant to change their attitudes, traditional ways and beliefs, and thus, they become less dynamic and more reluctant to adopt new approach and technology in running their business. Amounting to 33.8 percent of micro-entrepreneurs has been older than 40 years old. It indicates that there are many macro-entrepreneurs who may be reluctant to change their attitude as well as adopt new approach so that they may face difficulties in running their business. Therefore, there is a tendency that the older the entrepreneur the less business income they have.

Marital status

The coefficient of marital status variable in Model I is significant with positive sign. It indicates that marital status has a positive impact on the odds of the business to achieve high business income performance. It means that marital status is able to motivate the entrepreneurs to work harder (as the form of responsibility to his/her partner and maybe to his/her children) to achieve high business income. Nevertheless, it does not mean that the higher business income, can automatically achieve higher business profit or asset. It depends on the ability of the entrepreneurs in managing their business, since there were still many entrepreneurs who could not separate the business income and household income.

Type of financing

The coefficient of type of financing variable in Model III is not significant with positive sign. It indicates that type of financing has no impact on the odds of the business to achieve high business asset performance. Profit sharing financing (*mudharabah* and *musyarakah*) constitutes an ideal Islamic mode of financing and the other financing constitutes transitory steps towards the ideal Islamic system of financing, therefore the different types of financing should have affected the business performance. This condition may be caused by the un-fully implementation of Islamic

financing as stipulated and expected. First, 18.05 percent of MEs who took profit sharing financing stated that profit sharing ratio is determined by BMTs only, without bargaining process. It is clear that it affects (limits or reduces) the profitability and impedes the business asset growth of MEs. It depicts that there is no balanced bargaining position between BMT and ME. There is a tendency that the right of ME to bargain has been ignored. It is necessary for the validity of *mudharabah* and *musyarakah* that the parties agree, right at the beginning, on a definite proportion of the actual profit to which each one of them is entitled. No particular proportion has been prescribed by the *Shari'ah*; rather, it has been left to their mutual consent.

Therefore, the determination of profit sharing ratio by only one party – not by mutual agreement - indicates that micro-entrepreneurs are facing no-choice option in their application to get capital from Islamic financing. It is incompatible with the spirit of Islamic teaching which wants to eliminate all shades of injustice. The violation of the application of Islamic financing indicates that there is lack of understanding of the concept of *mudharabah* or *musyarakah* financing on both parties - micro-entrepreneur and BMT official. This condition also depicts the weak bargaining position of the micro-entrepreneurs.

Second, the application of profit sharing system is still vague. There are many micro-entrepreneurs who cannot differentiate between business income and household income, and therefore it is difficult to establish the exact share of profit. It causes the distribution the share of profit to BMT or micro-entrepreneur become vague. One of BMT has realized this condition, so that this BMT did not apply *mudharabah* and *musyarakah* financing.

Third, according the *Shariah* (Islamic financing) stipulation when the business faces losses; the capital losses is guaranteed by *shabibul mal* (BMTs) in the case of *mudharabah* financing, and the capital losses is guaranteed by *shahibul mal* (BMTs) and their partner (MEs) according to their share, in the case of *musyarakah* financing. Apparently, Central Java BMTs have not fully followed the Islamic financing stipulation related to the application of *mudharabah* and *musharakah* financing in when the MEs face losses in their business. Table III shows the statement of BMTs related to the capital losses.

Table III: The statement of BMTs related to the capital losses

Statement of BMTs	Mudharabah	Financing	Musyarakah	Financing
Capital losses is guaranteed ;	Frequency	Percent	Frequency	Percent
By BMT only	6	15	2	5.6
By BMT and participant	23	57.5	21	58.3
By participant only	10	25	13	36.1
Conditional	1	2.5	0	0
Total	40	100	36	100

Source: Primary data

Table III shows that BMTs have not fully comprehended and followed the *Shariah* stipulation yet, related to the distributing of capital losses in the case of *mudharabah* and *musyarakah* financing. In the case of *mudharabah* financing, the capital losses should have been guaranteed by BMT, nevertheless only 15 percent of 40 BMTs which applied *mudharabah* financing stated that capital losses is guaranteed by BMT. Furthermore, 57.5, 25 and 2.5 percent of BMTs stated that the capital losses is guaranteed by BMT and participant, by participant only, and conditional (depend on the situation), respectively. In the case of *musyarakah* financing, when business experiences loss, each partner should have suffered the loss proportionally according to the ratio of the investment. It means that both BMT and micro-enterprise bear the loss. Table 4 column five shows that there are 36.1 percent of 36 BMTs which applied *musyarakah* financing stated that capital losses is guaranteed by the micro-entrepreneur only. It deviates from the principle of *musyarakah* financing. The consequence of deviation of the application of *mudharabah* and *musyarakah* financing is the reduce of the business performance of micro-enterprises. In other words, the deviation of *mudharabah* and *musyarakah* financing application impedes the progress of micro-enterprises so that the effect of profit sharing financing in achieving high business performance is not showed up.

Fourth, similarly the application of non profit sharing financing especially *murabahah* and *bai'u bithman ajil* financing also have not fully followed the Islamic law (*Shari'ah*) yet. Several BMTs compel themselves to apply these financing in the condition BMTs are not enable to do it (unready). For example, in the case of BMTs can not provide the commodity needed by MEs (or the commodity is not existing), BMTs compel themselves by giving funds to MEs to purchase the commodity (and charging additional payment) without appointing MEs as a representative of BMTs to buy the commodity. In this case, actually BMT never sell any things to the MEs. This is against the basic principles of *murabahah or bai'u bithaman ajil* financing, since *murabahah or bai'u bithaman ajil* can be used only when the customer intends to purchase a certain commodity. This condition happens because of two factors; the lack of the comprehension of the BMTs official and the society concerning the concept of *murabahah* and *bai'u bithaman ajil* financing. The previous condition indicates that profit sharing financing could not be fully differentiated from non profit sharing, and therefore, it may evoke the type of financing does not affect business performance.

This finding demonstrates that the application of Islamic financing concept has not been fully complied the *Shari'ah*. Therefore, the construction to the BMTs related to the *Shari'ah* comprehension become important so that the objectives of the establishment can be achieved. Although the enhancement of the *Shari'ah* comprehension has been conducted by BMT association (for example in Kalaten and Wonosobo Regencies), generally the improvement of *Shari'ah* comprehension is still needed. It shows that the establishment of the *Shari'ah* committee council of BMTs is also needed to comply *Shari'ah* of Islamic financing. It is related to the standardization of the comprehension of Islamic financing to avoid misconception and misapplication of principles as stipulated by *Shari'ah*.

Business advice

The coefficient of business advice variable in Model III (positive sign) is not significant. It indicates that business advice has no impact on the odds of the business to achieve high business asset performance. There are two possibilities why this happens; First, The business advice from BMTs may fail to change the business behavior of entrepreneurs yet, since averagely the business experience of the BMTs' officials is not as good as the one of the entrepreneurs. The average of the age of BMTs and the average of business experience of micro-entrepreneurs show this. On average the age of BMTs is 6.5 years, while the business experience of micro-entrepreneurs is eight years. It depicts that entrepreneurs have better experience in running business than the official of BMTs. Second, the business advice from BMTs only affords to solve the temporary business problems, so that in the long run, the effect of the business advice on the business performance does not show up.

5.   Conclusions

MEs play a major role in the macroeconomic of less developed countries. Therefore, MEs development is very important to economic development. The success of SSE depends on the accessibility of capital, and hence, micro-financing becomes a crucial factor. Islam offers interest-free financing system for establishing justice and eliminating exploitation in business transaction as an alternative financing for MEs development. Nevertheless, many people still doubt on the applicability of *mudharabah* financing, as it may fail to overcome the agency problem. Therefore, the screening and monitoring of entrepreneur constitutes the important part of the application of Islamic financing. By utilizing the sample of BMT in Central Java, this study is aimed to produce the evidence on the ability of Islamic micro-financing to improve business performance of ME.

The results of Hosmer and Lemeshow Chi-square test of logistic regression indicates that the model's estimates fit the data at an acceptable level. Furthermore, the results of Chi-square model (the amount of improvement in chi-square) indicates that the additional of independent variables in the logistic model improves the fits of the models. In other words, the independent variables add significantly to the prediction of outcome. The results of AIC selection indicate that there are three selected variables for Model I (formal education, age of entrepreneur, marital status), two selected variables (size of loan, formal education) for Model II, and five selected variables (size of loan, business experience, formal education, type of financing and business advice) for Model III.

The results of Wald test show; first, Model I indicates that formal education and marital status have a positive impact on the odds of the business to achieve high business income performance, while the age of entrepreneur has a negative impact.

Second, Model II indicates that only formal education has positive impact on the odds of the business to achieve high business profit performance. Third, model III indicates that financing size, business experience and formal education have positive impact on the odds of the business to achieve high business asset performance. These results suggest that these variables constitute important variables in selecting ME to achieve the effectiveness of Islamic financing, and especially formal education level, since formal education level affects all of business performance.

The results of the study suggest that the achievement of high business performance of ME (effectiveness) was determined by the capability of entrepreneurs in running the business which reflected in the level of education. Therefore, in the case of low level of education, long life learning through training of the participants is important. Furthermore, selection process, business control, incentive system and good relationship construction (cooperation) have an important role in achieving effectiveness of financing.

The purification of the application of Islamic financing and the establishment of the *Shari'ah* committee council of BMTs is needed as the efforts to comply the *Shari'ah.* The committee is very useful in: (i) ensuring the activities and the products of BMTs is accordance with *Shari'ah*; (ii) guiding the employee to conduct the BMT programs.

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