# THE IMPACT OF MICROFINANCE UPON THE PERFORMANCE OF NON-AGRICULTURE MSEs FINANCED BY AMANAH IKHTIAR MALAYSIA

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## INTRODUCTION

Microfinance Institutions (MFIs) and microfinance schemes have rapidly developed in recent times. There has been rapid growth in client numbers, who are mostly the poor, the vulnerable, and women. Not only that, but the growth in gross loans portfolio and total assets has also increased. The development of microfinance is very rapid especially in developing and poor countries, with concentrations in Latin America, Asia and South America, and in fact growing in developed countries such as North America and Europe. The Microcredit Summit 2011 campaign report shows that up to December 2009, the poor clients coverage exceeded 190 million clients and more than 128 millions were the poorest whose majority or more than 104 million (81.70%) were women[1].

In the context of the Malaysian rural area specifically, although most of the people have physical assets, they lack human capital in the form of certain basic skills to use the available assets as factors of production to produce output. In some situations, they do not even have both of these assets and this results in worse effects on their lives. In other situations, even though they possess both of these assets, they are unable to exploit the

[1] This figure is based on the reports of more than 730 microfinance institutions (MFIs) in the world at the Microcredit Summit Campaign Report 2011.

assets due to the lack of financial capital. Arguably, capital is an important factor in determining the probability of sustainable livelihood of small enterpreneurs (Evans and Jovanovic 1989).

In the developing and less developed countries, firms and households face unstable prices of basic resources such as land, capital and labor. In addition, there are additional problems of unstable commodity prices, shortage in skilled labor supply, high unemployment rate and low productivity. Micro-small, medium, and large enterprises produce similar products in the same market but with different factor efficiency cost especially in terms of technology. This implies different returns due to inefficient use of resources. Meanwhile, the sustainability of micro and small enterprises, need continuous capital support from MFIs. This shows the important role of microfinance in developing micro and small enterprises (MSEs) which represent about 97.7 percent of Malaysian enterprises, with the value of MSEs services sector being around 73.2 percent, agriculture sector MSEs at 69.4 percent, and manufacturing sector MSEs at 50.0 percent (Department of Statistics Malaysia, 2003).

Microfinance is not new in Malaysia. It has been operating in various institutional forms, such as non-governmental organizations (NGOs), credit associations, Cooperative Bank and small cooperatives such as farmers' cooperative, etc. Among the most well-known are the Majlis Amanah Rakyat (MARA) and Credit Guarantee Corporation (CGC), which provide small capital to traders. The Agriculture Bank of Malaysia (BPM)[2], Lembaga Pertubuhan Peladang (LPP) dan

[2] Presently known as Agrobank

Federal Land Development Authority (FELDA) provide credit to the agricultural sector. Yayasan Usaha Maju Sabah (YUMS), Koperasi Kredit Rakyat (KKR) and Amanah Ikhtiar Malaysia (AIM) are among the non-governmental organizations (NGO) which play a role in the microfinance market in Malaysia.

MFIs usually focus on the growth of MSEs. According to the International Labor Organization (ILO, 2002), MSEs could create employment opportunities of less than 10 percent to outsiders in addition to the borrowers' own family. Even though the employment level is seen as low in the MFIs' market segment, this market is nevertheless sufficiently big and has the potential to increase employment opportunities.

In developing countries, microfinance is generally associated with poverty reduction since poverty levels are rather high. In developed countries however, microfinance is targeted towards developing the capability of society to be self-employed. Their targets are the unemployed and the housewives. Their objective is to try to maximize the usage of available labor. The influence of microfinance is gaining importance especially after 15 years of its inception as a result of the program's success upon success. According to International Labour Office (ILO) (2002), nearly 90 countries have MFIs which provide microfinance services. These countries are mostly in Latin America and Asia.

## MICROFINANCE DEFINITION

Microfinance definition differs according to countries and organizations but its definition usually involves the following characteristics i) size: loans are micro and small-sized; ii) consumer targets are micro entrepreneurs and low-income households; iii) use of loans is to generate income, developing enterprises and certain societies use the loans for living necessities (nutrition/health/education); and iv) terms of loans are easy, flexible, without collateral and are suitable to local cultural environment (Roslan et al; 2005)[3].

In general, microfinance refers to banks or microfinance institutions which channel micro and small loans to the poor groups or MSEs at subsidized interest rates[4]. In a wider perspective, microfinance is a finance service (credit, savings, insurance and money transfer) to the poor people to enable them to carry out activities which could increase their household income. In this study, credit channeling is focused on the MSEs, where the owners originally come from the low income group.

Microfinance services are handled by MFIs, which have two main aims: first, to fulfil social responsibility; and second, to fulfil the aim of obtaining profit. The basis of their establishment is to fulfill the development agenda of eliminating poverty as well as making profits. Therefore, the efficiency and effectiveness of the MFIs are important so that the effort to develop financial

[3] According to some researchers, microfinance is the same as microcredit. Microcredit Summit, 2-4 February 1997, defined microcredit as "program for channeling small loans to poor society for self-employment projects which could generate income, help themselves and their families".

[4] For example, Bank Pertanian Malaysia (now Agrobank) under the microfinance scheme gives loans to MSEs at government-subsidized interest rates of four percent (2003 – 2005). Agrobank now has its own microfinance scheme using the bank's own capital at 18 percent interest rate.

system is achieved and at the same time, the system is able to fulfill the needs of the majority of the MSEs.

One problem faced by the low-income group and micro entrepreneurs is access to credit. Formal finance institutions fail to provide the financial services needed by these groups and their enterprises (Fasorantini et al. 2006 and Rweyemamu et al. 2003). This is because they are lacking in assets to be offered as collateral, have weak or scant financial records and possess limited savings history which consequently deny them the credit from a formal financial system. This happens because the conventional bank system at the time did not have the mechanism to fulfill the micro loan needs of these groups. As an alternative, the micro and small entrepreneurs and poor households sought loans from loan sharks such as "along" who charged high and unreasonable interest rates.

Realizing those needs, the government, with its socio-economic objective to attain equality in growth and development, has provided the support needed in microfinance activities in Malaysia. This is not only to enable microfinance to fulfill the gap in the supply of financial services not covered by the conventional banking institutions, but also as a tool to increase social stability through an increase in the living standards of the low-income group and MSEs.

In Malaysia, microfinance activities are in reality relatively less developed compared to a few developing countries such as Bangladesh, the Philippines, and Indonesia. These three countries receive significant support from their governments. This support is important to ensure the

workings and sustainability of the microfinance system. The current policy of the Malaysian government is to focus on providing financial services to micro entrepreneurs at low cost. Meanwhile, government assistance is used as a catalyst to increase microfinance activities at the start of their operations since the operation cost of implementing this scheme is higher than other schemes.

The MFIs are not continuously assisted by the government. On the contrary, the goverment's role is only to establish a condusive mechanism for the growth of the MFIs. This condusive environment promotes healthy competition amongst the microfinance practitioners and this has a postive effect on the MFIs in generating profits and sustaining their activities. Thus, to ensure the sustainability of the MFIs, the government may allow them to be market-oriented in their operations. This allows the MFIs to maintain their sustainability by using their own internal resources. According to Megicks et al. (2005), MFIs which are market-oriented could increase their performance outreach and operational efficiency.

In June 2003, the Malaysian government, through the Central Bank of Malaysia (BNM), introduced the Microfinance Project. This project aims to provide strength to the microfinance framework by erecting the necessary infrastucture to foster the microfinance industry development in the country. The framework covers specific product development, policies and procedures for microfinance management, institution organizational structure as well as supervision and framework on the procedures for microfinance enforcement and supervision. This framework also acts as a guide and reference in fulfilling the standards in the

implementation of financial institutions and MFIs development according to the best method for providing microfinance services. For this purpose, BNM with the cooperation of the relevant ministries has taken the effort to widen financial access to micro entrepreneurs (Che Zakiah Che Din, 2004).

Similar to other countries, various microfinance programs in Malaysia have served to provide financial assistance to the low-income group as well as urban and rural MSEs in the hope of eliminating the poverty phenomenon[5]. This is also parallel to the government policies which focus on stimulating the agricultural sector and rural development to increase food sources and reduce poverty, in addition to creating jobs (Roslan et al. 2007).

Presently, there are two large NGOs which are active in providing microfinance services: Institusi Amanah Ikhtiar Malaysia (AIM)[6] and Tabung Ekonomi Kumpulan Usaha Niaga (TEKUN)[7]. AIM focuses on providing financial services scheme to poor households, particularly to bring them above the poverty line level. Most of the AIM participants have

[5] It must be stated here that meaningful participation of the Malaysian banking sector in microfinance is relatively new. Nevertheless, microfinance itself has long existed and plays a role in reducing poverty and income equality which are two main agenda of the nation's development policy. In the 1960s and early 1970s, many government agencies offered microfinance to rural agricultural households to eliminate poverty and reduce income inequality. These agencies not only provide technical assistance, but also provide monetary assistance and services such as normally provided by the MFIs. However, the financial scheme or loan designs are very much different with the social orientation concept as practiced by most MFIs in the world including AIM.

[6] AIM was established under the "Trustees (Incorporation) Act 1952 (Revised 1981)" [Trustees (Incorporation) Act1952]. Their customer targets are those in the poorest group i.e. have income below 2/3 of the current Poverty Line. In terms of business or enterprise, there is no condition. In practice, AIM customers are varied since those who fulfil the condition as the poorest group are eligible to be members.

[7] TEKUN was established under Limited by Guarantee Company Act. Most of these bodies are in clubs and welfare foundation classes. In practice, their client focus is in the services sector.

achieved the MSE level and up to July 2008, AIM has almost 200,000 participants. Meanwhile, TEKUN provides microfinance services especially to bumiputera MSEs. Other MFIs which are also active in providing microfinance services are Yayasan Usaha Maju (YUM) in Sabah and Koperasi Kredit Rakyat (KKR) in Selangor, but their operational coverage is small-scaled compared to AIM and TEKUN.

In general, commercial banks in Malaysia are not significantly involved in microfinance. Their involvement is limited to broadening certain market segments only. This is obvious when comparing the ratio of microfinance portfolio to other relatively small schemes portfolio. Among the earliest banks involved in microfinance were Agrobank and Bank Simpanan Nasional (BSN); even this was on the directive and funds from the government to provide microfinance services. In May 2003, the government announced a stimulus package as an internal economic growth resource to avoid over- dependence on external resources. A total of RM500 million (USD132 million) was given to Agrobank while another RM300 million (USD79 million) was given to BSN to be loaned out to small enterprises, which are unable to borrow from formal finance institutions for not meeting the conditions set by the banks. Agrobank focuses on providing financial services and savings facility to small-scaled farmers while BSN offers savings facility and consumer loans to petty traders.

Presently, microfinance services are increasingly growing in Malaysia. Many finance institutions, commercial banks especially, such as CIMB Bhd, Maybank Bhd, Bank Rakyat, Public bank, Bank Islam and others, have begun to offer microfinance services. The motivation for offering microfinance services is fueled by the potential long run profit as well as fulfilling their social responsibility. Table 1 shows the features of microfinance products offered by three

local commercial banks. Public Bank Berhad offers two microfinance schemes. The interest rate of the first micro scheme offered is between two to three percent a month. For the second scheme, the interest rate is BLR + 1.3 percent and the borrower must also pay a fee of 3.5 percent of total loan amount. This cost is high since the risk undertaken is also high. Other banks which offer microfinance scheme under the umbrella of CGC are RHB Bank Berhad, Maybank Berhad, Bank Rakyat and CIMB Berhad.

**Table 1: Microcredit Schemes of Local Banks**

| | Public Bank Berhad | CIMB Bank | Maybank |
|---|---|---|---|
| Scheme | PBMicrofinance | Xpress Cash Personal Term Loan) (Micro-finance) | Small Entrepreneur Guarantee Scheme (SEGS)<br>• SEGS - Bumiputera 1 00% guarantee |
| Scheme Objective | Provide financial assistance to micro enterprises that want to enlarge their business and need easy and quick access to financing | Easy financing to small businesses and low-income individuals | To help small entrepreneurs with viable projects to obtain financing at reasonable cost |
| Loan amount | Up to RM50,000 | Between RM3,00 – RM50,000 | Between RM10,000– RM50,000 |
| Loan period | Up to 60 months | Between 6-60 months | 60 months |
| Interest rate | Scheme1: Without SEGS* 2% - 3% per month (monthly rest)<br>Scheme2: With SEGS BLR +1.5% p.a. (monthly rest) | Repayment as low as RM3.63 per day (loan RM3,000@3%(daily rest basis) for 60 months | BLR + 1 .5% |
| Eligibility | | • Minimum income RM800 per month<br>• 21 – 60 years<br>• No processing fee<br>• One guarantor is needed for loan exceeding RM5,000 | Entrepreneurs registered under ROB, etc |

*SEGS = Small Entrepreneur Guarantee Scheme (Non-Government Aided Fund)

Sources: Maybank, Public Bank, CIMB Bank

**Definition of Micro and Small Enterprise (MSE)**

There is no specific definition for MSEs in Malaysia. Different organizations accord different meanings according to the objective of the organization. The Small and Medium Enterprises Development Corporation (SMIDEC), one of the government agencies responsible for developing the MSEs in Malaysia, defines MSEs based on the number of workers and sales turnover and according to the category of the enterprises. For the manufacturing sector, manufacturing-related services and agriculture-based enterprises, the definition is as follows:

> "Small and medium enterprises (SMEs) in the manufacturing sector, manufacuring-related services, and agriculture-based enterprises are enterprises with full-time workers not exceeding 150 workers or with sales turnover not exceeding RM25 million"

For the services sector, main agriculture, and information and communications technology (ICT) sectors, the definition is as follows:

> "SMEs in the services sector, main agriculture, and information and communications technology (ICT) are enterprises which have full-time workers not exceeding 50 people or sales turnover not exceeding RM5 million"

Further explanations concerning the definition of SMEs are as stated in Table 2. The Department of Statistics Malaysia, on the other hand, classifies SMEs into four categories: i) micro, ii) small, iii) medium, and iv) large. Micro enterprises are firms which have five or less workers, while small enterprises are firms which have five to 49 workers. Firms which have

between 50 to 199 workers are categorized as medium enterprises and firms which have more than 200 workers are categorized as large firms.

**Table 2a: SMEs Definition (Based on the number of full-time workers)**

| Saize enterprise | Sector | | |
|---|---|---|---|
| | Basic agriculture | Manufacturing (including agriculture-base) and Manufacturing-related services | Services sector (including ICT*) |
| Micro | Less than 5 workers | Less than 5 workers | Less than 5 workers |
| Small | Between 5 to 19 workers | Between 5 to 50 workers | Between 5 to 19 workers |
| Medium | Between 20 to 50 workers | Between 51 to 150 workers | Between 20 to 50 workers |

Sources: http://www.EKSinfo.com.my/index.php?ch=2&pg=16&ac=102&lang=bm

**Table 2b: SMEs Definition (Based on total annual sales)**

| Saiz enterprise | Sector | | |
|---|---|---|---|
| | Basic agriculture | Manufacturing (including agriculture-base) and Manufacturing-related services | Services sector (including ICT*) |
| Micro | Less than RM200,000 | Less than RM250,000 | Less than RM200,000 |
| Small | Between RM200,000 to less than RM1 million | Between RM250,000 to less than RM10 million | Between RM200,000 to less than RM1 million |
| Medium | Between RM1 million to RM5 million | Between RM10 million to RM25 million | Between RM1 million to RM5 million |

Source: http://www.EKSinfo.com.my/index.php?ch=2&pg=16&ac=102&lang=bm

Based on definition by both agencies, there are similarities in terms of the micro- enterprise definition, which is an enterprise having five or less paid workers in the formal sector. However, micro enterprises also exist in the informal sector and are included in this definition. Meanwhile, in the informal sector, there are part-time workers and unpaid workers categories. However, there is no formal categorization of the informal sector in Malaysia, yet it can be categorized as workers who are self-employed. They are made up of unpaid family workers, such as petty traders, food sellers, and insurance agents.

However, in this study, the units of analysis are made up of registered MSEs and those receiving financing from AIM. Most of the enterprises are micro-sized while a small portion are small-sized based on the number of workers and total annual sales, as stated in the definition above. Meanwhile, the MFIs which financed the enterprises fulfilled the characteristics as defined by Roslan et al. (2005), as stated earlier. In addition, the definition is packaged together with the social orientation method of the MSE entrepreneurs (AIM, Kajian Impak 6, 2010).

**ENTERPRISE, OUTPUT, EMPLOYMENT AND PRODUCTIVITY RELATIONS**

Based on the Department of Statistics Malaysia (2005) census, SMEs recorded 99.2 percent of the overall 552,804 associations in Malaysia, covered in the 2005 census, based on the 2003 census framework. SMEs in the services sector category recorded the largest number at 86.6 percent, manufacturing sector at only 7.2 percent and agricultural sector at 6.2 percent.

In terms of size, most of the SMEs are categorized as micro enterprises since they constituted 79.4 percent of the total, small enterprises recorded 18.3 percent, followed by medium

enterprises at 2.3 percent. In the services and agriculture sectors, micro- enterprises are dominant at 80.0 and 93.1 percent, respectively. In the manufacturing sector, micro-enterprises formed only 54.9 percent of the total.

In terms of ownership, a majority of the SMEs are privately-owned (68.4%), private limited (21.3%), partnership (9.7%) and others (0.6%). As for ownership according to activity category, a majority of the firms are privately-owned with 86.8 percent for agriculture, 68.8 percent for services and 47.7 percent for manufacturing.

Value added in the manufacturing sector shows that the SMEs contribute a large portion of value added which is at 96 percent. In contrast, the services sector shows a rather balanced contribution to value added with small enterprises at 38.2 percent, micro enterprises at 35 percent, and medium enterprises at 26.0 percent. Referring to the agriculture sector, small enterprises are the largest contributor to value added at 47.9 percent followed by medium-sized enterprises at 30.6 percent and micro-enterprises at 21.5 percent. This shows that the contribution to value added by the MSEs is higher compared to medium-sized enterprises at 74 percent (services sector) and 69.4 percent (agriculture sector). However, in the services sector, the ratio is 50:50. Therefore, the level of development of the MSEs is important not only to increase value added but to increase their size to become medium enterprises (Table 3).

**Table 3: Value added by sector and size, 2003**

| Size enterprises | Sector | | |
|---|---|---|---|
| | Manufacturing (%) | Services (%) | Agriculture (%) |
| Micro | 4 | 35.8 | 21.5 |
| Small | 46 | 38.2 | 47.9 |
| Medium | 50 | 26.0 | 30.6 |

Source: Department of Statistics Malaysia, 2005

In terms of economic sector, the MSEs' productivity is the highest in the manufacturing sector at RM3.9 million in output value and RM1.2 million in value added for each enterprise. This is followed by the services sector with RM0.5 million and RM0.2 million for output value and value added, respectively. Meanwhile, the agriculture sector recorded the lowest in both figures at RM0.3 million of output value and RM.1 million in value added. Amongst sectors, the manufacturing SMEs recorded the highest value for output value and value added for each worker at RM203.5 thousand and RM60.2 thousand, respectively. The second highest productivity is in the manufacturing sector at RM93.2 million in output value and RM46.8 million in value added per worker. Meanwhile, the agriculture sector recorded the lowest productivity at RM73.1 million in output value and RM34.8 million in value added per worker in 2003 (Department of Statistics Malaysia, 2005).

**Table 4: Employment and salaries/wages by sector, 2003**

| Sector | Total employment ('000) | | | Full-time workers ('000) | | | Salaries & wages (RM million) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | SMEs | % | Total | SMEs | % | Total | SMEs | % |
| Manufacturing | 1,663 | 760 | 45.7 | 1,598 | 699 | 43.7 | 3,0300 | 11,220 | 37.0 |
| Services | 3,125 | 2,320 | 74.2 | 2,450 | 1,690 | 69.0 | 53,883 | 29,814 | 55.3 |
| Agriculture | 250 | 142 | 56.8 | 177 | 72 | 40.7 | 1,892 | 866 | 45.8 |
| Total | 5,038 | 3,223 | 64.0 | 4,225 | 2,461 | 58.3 | 86,075 | 41,900 | 48.7 |

Source: Department of Statistics Malaysia, 2005

Overall, the SMEs are the major employer in the employment market which provides 3.2 million of employment opportunities or 64 percent of total employment in the country (Department of Statistics Malaysia, 2005). Further, according to the Department of Statistics, services sector contributes the highest employment at 74.2 percent, followed by the agriculture sector at 56.8 percent and the manufacturing sector at 45.7 percent.

Employment along sectors and size shows that services sector MSEs are the highest contributor to employment at 78.6 percent followed by the manufacturing sector MSEs at 63.7 percent and the agriculture sector MSEs at 56.3 percent (Table 4 and Table 5).

**Table 5: Full-time workers by sector and size, 2003**

| Size enterprises | Sector | | |
|---|---|---|---|
| | Manufacturing (%) | Services (%) | Agriculture (%) |
| Micro | 6.2 | 32.6 | 23.5 |
| Small | 57.5 | 46.0 | 32.8 |
| Medium | 36.2 | 21.4 | 43.6 |

Source: Department of Statistics Malaysia, 2005

A majority of the manufacturing sector SMEs employment is made up of paid workers or 732,026 (96.3%) out of 760,459 workers. The SMEs are the largest employers at 89.5 percent of total employment. The SMEs' full-time paid workers are 698,679 workers (95.4%) of a total of 732,026 workers. The remaining 3.7 percent of employment is made up of working owners and unpaid family workers (Department of Statistics Malaysia, 2005).

It is clear that in addition to other factors, the role and influence of microfinance upon the growth of the MSEs are important. The MSEs, are in turn the pillar of strength of a country's economy, specifically in Malaysia. It is evident that even though the role and contribution of an individual MSE, especially in employment absorption, is small but as an aggregate, they are the largest contributor to employment compared to medium and large enterprises. Meanwhile, the MSEs have shown an improvement in production growth and productivity and this will become even more apparent if they are continuously supported with microfinance facilities.

The dynamic role played by the MSEs in economic development has been proven by output increase and employment absorption, which subsequently reduce unemployment problem (Fasorantini, 2006). He further added that without adequate capital flow, it is difficult to increase the income of the MSEs and the poor groups. Nevertheless, with continuous financing through microfinance, the capital liquidity problem could be reduced. However, with the reduction in the budget, the issue of the effectiveness of the microfinance arises. Does an increase in financial liquidity have a positive impact on the performance of the MSEs? Therefore, in this article, the researcher attempts to study the impact of microfinance on the performance indicators (average revenue, assets, savings, labor productivity, labor and work hours) of the MSEs funded by the Amanah Ikhtiar scheme.

## MICROFINANCE AND MSE PERFORMANCE RELATIONS

Many studies have shown the effectiveness of microfinance in influencing the growth of MSEs, particularly in the developing countries and poor countries. Among these, Yasmine F. (2008)

studied the effect of microfinance on program participants in Cairo, Egypt. She used a sample of 100 women comprising 50 women as microfinance participants (have participated in microfinance for more than three years) and another 50 women who just joined the program as control group. Data analysis used correlation and regression methods. The regression method employed income, assets, children's schooling, health, and harmony index as the dependent variables. Meanwhile, microfinance was the independent variable and control variables were age, education, marital status, and number of children. The results confirm the findings reported in previous studies, that there exists a strong relationship between microfinance and children's schooling, income and assets, but fail to confirm the effect of microfinance in improving health level and family harmony.

Copestake J, et al. (2001) estimated rural Zambia microcredit program impact on business performance and quality of life indicator (wellbeing) in Zambia. The three study objetives were 1) to identify the characteristics of borrowers in terms of gender, relative poverty and age of business and estimate the program depth outreach; 2) identify and estimate the direct impact of the loan on borrowers, their business and their households; 3) identify the indirect impact of the microfinance program. The findings of the study are overall, the microfinance program has a positive impact on participants' income, household lives and enterprises.

The European Commission (2003) states that even though microfinance impact on employment level is small, the condusive industrial environment is supportive to future employment level. The study found that microcredit finance in European industry targeted one or two worker

recruitment including the owner himself. The main economic sectors targeted are consumer services sector, business-to-business services, retail trade, and crafts sector.

The European Commission (2003) further states that in Slovenia, a trial microfinance scheme at the national level was introduced in 1996 by the Small Business Development Centre and National Unemployment Office, with the main objective to increase new employment opportunities in the country. This scheme was introduced in five regions where the participants were given financial resources at two percent interest rate per annum with six months repayment period. This scheme received high demand among the population. At the end of the project, about 548 new jobs were created.

The study by McKernan (2002) used primary data of participants and non-participants of Grammen Bank to analyze the effect of credit and non-credit on productivity. Credit means the given capital loan and non-credit is services other than the capital loan. Total effect was measured using profit estimation equation and non-credit effect was measured using conditional profit on productive capital equation. Productive capital and participation in the program were the endogenous variables. The findings indicate that there exists a significant positive effect of participation and non-credit on self-employment profit.

Aneel Karnani (2007) agrees with most studies which found microfinance delivers many benefits, but says that for growth purposes, the amount is limited. He states that with scant capital, little skills and without economic skills, a business has low productivity and this will not

bring the business owner out of poverty. According to the author again, creating stable job opportunities with reasonable wage rates is the best way to bring them out of poverty. Therefore, he asserts that governments must provide effective public services and this is a critical factor to improve the productivity and capabilility of poor workers.

Inchauste and Kitagawa (2007) used primary data and discovered that there is no significant relationship between credit and micro-enterprise productivity, when all formal and informal micro-industry resources are aggregated. In contrast, formal micro- enterprises show there exists a significant positive relationship with credit usage but informal micro-enterprises show an insignificant relationship with credit usage. This also shows there exists a relationship between credit usage and firm performance, depending on firm heterogeneity, financial resources and the location of a firm's operations.

The study by Ma Lucila A. Lapar (1994) estim ated the effect of credit on productivity and growth of Rural Non-farm Enterprise Sector (RNEs). Endogenous variables were included in the regression model to estimate the sample's heterogeneity. The credit variable included in output supply estimation function was able to differentiate actual credit effect on the productivity of credit receivers and non-receivers. The findings indicate that credit receivers have higher productivity compared to non-receivers. The credit factor also had a significant effect on latent productivity. Indirectly, output also increases as a result of credit usage. Other factors which contribute to output (positively) are family workers, paid workers, total assets, working capital and year of operation.

Barnes and Carolyn (2001) suggested that microfinance has a positive impact on work hours through an increase in work hours but does not have an impact on workers' recruitment in household enterprises. The study by Hossain et al. (1997) found that credit finance in the Philippines has an increasing effect on work hours in credit-assisted activities but a decreasing effect on other economic activities.

Naushad Khan et al. (2007) analyzed the effect of microfinance program of the Rural Sarhad Support Programme (SRSP) on livestock enterprises development in six villages in the Abbottabad region, Pakistan. The study was carried out in April 2006. From the survey, it was found that SRSP channeled credit to 60 households as pioneering participants for livestock enterprises development. The findings show that 33 percent of the microfinance participants succeeded in increasing their income and this had a positive effect on consumption and education of children in the households. This study suggested steps, such as provisions of credit to potential borrowers, training services to the people in the community to develop livestock enterprises, and supervision of credit usage.

**METHOD, DATA AND ANALYSIS**

This article studies the impact of microfinance on average revenue, assets, labor productivity, labor work hours and savings. This is because according to the Neoclassical theory, capital is an important factor in shifting production growth, in addition to other factors. Furthermore, in studies on the MSEs and the low-income group, microfinance is the main resource used in purchasing capital goods to increase production capacity. Nevertheless, in today's changing

world, microfinance is not the sole contributor to the effectiveness of the MSEs' performance, but it is an important factor towards improving the technology of production. Therefore, by using microfinance factor, we could explain the effectiveness of AIM financing program on the MSEs, in addition to a few other factors. The program participants were compared with non-participants; those who did not receive micro-financing package from AIM, as the control group (CG)[8]. Most researchers (such as Kessy dan Temu (2010), Khandker et al. (1998), Dunn (2005) and others) have employed this method to evaluate the impact of a program.

To further validate the effectiveness of microfinance on the MSEs' performance, a comparison between internal *sahabat* groups was made. Group 1 is *sahabat* who have joined the program for one to five years and group 2 is *sahabat* who have joined the AIM for more than five years. Using this method is expected to reduce "social orientation bias" which could lessen the influence of microfinance in the analysis. The information on the groups surveyed was obtained from the survey data of AIM 6th impact study, 2008 which consists of MSEs' non-basic agriculture[9] for the Kedah and Kelantan regions. The selection of Kedah and Kelantan regions is because they are among the earliest states having the AIM scheme and have the highest participants in the scheme. Meanwhile, as comparison, information on a total of 76 respondents which form the control group (non-*sahabat*) was collected in December 2011 and February 2012

[8] Those in the control group were individuals who were eligible to participate in the AIM scheme but did not join it. This means that the homogeneity level of the control group and the study group is high and extremely suitable to be made as comparison.

[9] Basic agriculture means all agricultural activities involving production at the farm stage which are directly sold without processing to increase the value added.

in the districts of Sungai Petani and Kubang Pasu, Kedah, using the ”snowball” sampling technique.

Among the information obtained were revenue, assets, household labor work hours, savings, loan and experience (year) joining AIM. Revenue refers to average revenue per month in the study year. Assets refer to the value (RM) of capital goods at the time of the survey. Labor work hours refer to the household average hours spent in business/production per week. Savings refer to the respondents' current savings at the time of the survey. Finally, labor productivity refers to average revenue per month divided by household average work hours per month. Prior to the data analysis stage, these data were transformed to ”natural logarithmn” so that their distributions approach the normal distribution. The analysis used the t-test for independent samples to determine the difference in the means of two independent samples.

**FINDINGS OF THE STUDY**

The respondents' profile shows that 86.7 percent were AIM *sahabat* and 13.3 percent were non-*sahabat*. Those who were AIM *sahabat* received loans from AIM to start or expand their enterprise/business. The non-*sahabat* group (did not receive AIM financing) acted as the control group to be compared with the AIM *sahabat* group. The t-test was used to determine whether there is a significant difference in the indicator growth between the group financed by AIM and the group not financed by AIM.

Table 6a shows the statistical output of the groups of 495 AIM *sahabat* respondents and 76 AIM non-*sahabat* respondents. The average performance indicators of the MSEs show that AIM *sahabat* respondents performed better than non-*sahabat* respondents. This means that the average income, assets, savings, productivity and work hours of AIM *sahabat* are better compared to the non-*sahabat* group which did not receive AIM financing

**Table 6a: Group statistics**

| Indicators | Group | n | Mean | Standard Deviation |
|---|---|---|---|---|
| Average revenue | Non-*sahabat* | 76 | 7.23 | 0.48 |
| | AIM *Sahabat* | 495 | 7.69 | 0.94 |
| Assets | Non-*sahabat* | 76 | 8.74 | 1.11 |
| | AIM *Sahabat* | 495 | 9.23 | 1.31 |
| Labour productivity | Non-*sahabat* | 76 | 2.14 | 0.56 |
| | AIM *Sahabat* | 495 | 2.60 | 0.93 |
| Savings | Non-*sahabat* | 76 | 5.96 | 1.50 |
| | AIM *Sahabat* | 495 | 6.94 | 1.32 |
| Work hours | Non-*sahabat* | 76 | 3.70 | 0.41 |
| | AIM *Sahabat* | 495 | 3.74 | 0.45 |

To make it more meaningful, the groups' statistical outputs were tested using Levene's test. This test is used to evaluate the homogeneous variance assumption (O'Neill and Mathews, 2002). Levene's test shows that the significant values towards average revenue, assets, and labor productivity indicators did not have equal variances (i.e. sig. value < 0.05). Meanwhile, work hours and respondents' savings have equal variances (i.e. sig. value > 0.05). This test indicates

that the evaluation for the t-test must refer to the row marked “equal variances not assumed”. On the other hand, work hours and savings indicators must refer to the row marked “equal variances assumed” (Table 6b).

**Table 6b: Levene’s test for equality of variances**

| Indicator | F-value | Sig. |
|---|---|---|
| Average revenue | 19.957 | 0.000 |
| Assets | 8.729 | 0.003 |
| Labour productivity | 14.740 | 0.000 |
| Savings | 3.732 | 0.055 |
| Work hours | 0.491 | 0.484 |

Table 6c is used to test the hypothesis of whether there exists a significant difference in the means of performance indicators of AIM *sahabat* group and non-*sahabat* group MSEs. Average revenue indicator shows that there is a significant difference in the means (i.e. sig. value 0.00 < 0.05 two-tails) of AIM *sahabat* and non-*sahabat* MSEs. Assets, productivity, and savings indicators also show that there exists a significant difference (i.e. sig. value 0.00 < 0.05 two-tails) between AIM *sahabat* and non-*sahabat* MSEs. In contrast, the work hours indicator shows that there is no significant difference in the mean (i.e. sig. value 0.457 > 0.05 two-tails) of AIM *sahabat* and non-*sahabat* MSEs. This means that the null hypothesis ($H_o$ : there is no significant difference in the work hours mean of the two MSE groups) fails to be rejected at the 0.05 significance level.

**Table 6c: T-test for the equality of means**

| Indicator | Assumption | t-value | d.f | Sig. (2-tailed) | Mean difference | Standard Error diff. | 95% confidence interval of the diff. | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Upper limit | Lower limit |
| Average revenue | Equal variances assumed | -4.229 | 532.00 | 0.000 | -0.466 | 0.110 | -0.683 | -0.250 |
| | Equal variances not assumed | -6.587 | 186.42 | 0.000 | -0.466 | 0.071 | -0.606 | -0.327 |
| Assets | Equal variances assumed | -2.982 | 445.00 | 0.003 | -0.481 | 0.161 | -0.798 | -0.164 |
| | Equal variances not assumed | -3.328 | 119.55 | 0.001 | -0.481 | 0.145 | -0.767 | -0.195 |
| Labour productivity | Equal variances assumed | -4.208 | 569.00 | 0.000 | -0.462 | 0.110 | -0.677 | -0.246 |
| | Equal variances not assumed | -6.021 | 147.94 | 0.000 | -0.462 | 0.077 | -0.613 | -0.310 |
| Savings | Equal variances assumed | -5.648 | 525.00 | 0.000 | -0.984 | 0.174 | -1.327 | -0.642 |
| | Equal variances not assumed | -5.128 | 83.01 | 0.000 | -0.984 | 0.192 | -1.366 | -0.603 |
| Work hours | Equal variances assumed | -0.744 | 569.00 | 0.457 | -0.041 | 0.055 | -0.149 | 0.067 |
| | Equal variances not assumed | -0.799 | 105.09 | 0.426 | -0.041 | 0.051 | -0.143 | 0.061 |

The above findings are strengthened by comparing groups within AIM *sahabat* itself. These groups are differentiated by the participation period in AIM. Group 1 is for those who have joined AIM for a period of one to five years and group 2 is for those who have joined AIM for more than five years. The rationale is the longer the period of participation in AIM, the higher the cumulative total funds received from AIM to be used in production. Similar to Table 1, performances indicators in Table 4 also show that all indicators for group 2 are higher compared to group 1.

**Table 7a: Group statistics**

| Indicator | Period joining AIM | n | Mean | Standard deviation |
|---|---|---|---|---|
| Average revenue | Group 1 (1 – 5 years) | 218 | 7.38 | 0.78 |
| | Group 2 (more than 5 years) | 277 | 7.94 | 0.98 |
| Assets | Group 1 (1 – 5 years) | 218 | 9.13 | 1.24 |
| | Group 2 (more than 5 years) | 277 | 9.30 | 1.35 |
| Labour productivity | Group 1 (1 – 5 years) | 218 | 2.32 | 0.75 |
| | Group 2 (more than 5 years) | 277 | 2.83 | 1.00 |
| Savings | Group 1 (1 – 5 years) | 218 | 3.73 | 0.43 |
| | Group 2 (more than 5 years) | 277 | 3.75 | 0.47 |
| Work hours | Group 1 (1 – 5 years) | 218 | 6.38 | 1.23 |
| | Group 2 (more than 5 years) | 277 | 7.38 | 1.21 |

Slightly different than Table 6b, Levene's test in Table 7b shows that the significance value towards average revenue, assets, savings and work hours indicators have equal variances (i.e. sig. value > 0.05). Meanwhile, labor productivity and loan indicators do not have equal variances (i.e. sig. value < 0.05). This test indicates that the evaluation for the t-test must refer to the row denoted "equal variances assumed". Meanwhile, labor productivity and loan indicators must refer to the row denoted "equal variances not assumed" (Table 7b).

**Table 7b: Levene's test for equality of variances**

| Indicator | F-value | Sig. |
|---|---|---|
| Average revenue | 2.326 | 0.128 |
| Assets | 0.882 | 0.348 |
| Labour productivity | 7.329 | 0.007 |
| Savings | 0.177 | 0.674 |
| Work hours | 1.288 | 0.257 |

T-test shows that there is a significant difference (sig. value < 0.05) in performance indicators (average revenue, labor productivity and work hours) between the two MSE groups. This shows that group 2 or *sahabat* MSEs have better performance compared to group 1 *sahabat* MSEs. However, an opposite finding is obtained for asset and savings indicators. T-test shows that there is no significant difference in these indicators between group 1*sahabat* and group 2 *sahabat* (Table 7c).

**Table 7c: T-test for equality of means**

| Indicator | t-value | d.f. | Sig. (2-tailed) | Mean difference | Standard error diff. | 95% confidence interval of the diff. | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower limit | Upper limit |
| Average revenue | -6.715 | 456.00 | 0.000 | -0.567 | 0.084 | -0.732 | -0.401 |
| | -6.882 | 455.97 | 0.000 | -0.567 | 0.082 | -0.728 | -0.405 |
| Assets | -1.224 | 370.00 | 0.222 | -0.167 | 0.136 | -0.434 | 0.101 |
| | -1.235 | 364.69 | 0.218 | -0.167 | 0.135 | -0.432 | 0.099 |
| Labour productivity | -6.292 | 493.00 | 0.000 | -0.510 | 0.081 | -0.670 | -0.351 |
| | -6.506 | 491.92 | 0.000 | -0.510 | 0.078 | -0.665 | -0.356 |
| Savings | -0.566 | 493.00 | 0.571 | -0.023 | 0.041 | -0.104 | 0.057 |
| | -0.573 | 484.17 | 0.567 | -0.023 | 0.041 | -0.103 | 0.056 |
| Work hours | -8.745 | 457.00 | 0.000 | -1.003 | 0.115 | -1.229 | -0.778 |
| | -8.735 | 429.88 | 0.000 | -1.003 | 0.115 | -1.229 | -0.777 |

## DISCUSSION AND CONCLUSION

The findings of several indicators are as expected and parallel with previous studies. However, the researcher also discovered several unexpected findings. Not all performance indicators of the MSEs differ significantly between *sahabat* group (microfinance receiver) and non-*sahabat* group or between group 1 *sahabat* and group 2 *sahabat*. The average revenue and labor productivity of

AIM *sahabat* MSEs are statistically more highly significant than non-*sahabat*. The same indicators show that statistically, the performance of group 2 *sahabat* MSEs is more highly significant compared to group 1 *sahabat*. These findings are parallel with the findings by Yasmine F. (2008), Roberta Gatti and Inessa Love (2006), and Copestake J, et al. (2001), among others.

Meanwhile, the asset and savings indicators of AIM *sahabat* group are statistically more highly significant compared to the non-*sahabat* group. These findings are also as expected by the researcher based on the rationale that a significant growth in average revenue probably would increase assets. Similarly, labor productivity which shows labor efficiency or skills would increase total revenue. Meanwhile, the work hours spent for production indicator show that there is no significant difference between these two groups. The rationale is probably an increase in labor productivity (as a result of the microfinance programme) allows them to utilize more skills instead of increasing their work hours (physical labor).

The findings on average revenue, savings, and assets indicators for the *sahabat* 1 and *sahabat* 2 MSEs are different compared to the findings in *sahabat* group and non-*sahabat* group, where all three indicators are significant. This probably happens because in the *sahabat* group itself (group 1 and group 2), the microfinance was used to buy assets, therefore the assets value in both groups does not differ by much. Likewise for savings, where both groups were very active in savings, ensures there is no significant difference between the two groups.

Overall, microfinance plays an important role in enhancing the performance of the MSEs, in addition to other factors stated earlier. Continuous microfinance flows have contributed to the significant growth in average revenue, assets, labor productivity and savings of the MSEs compared to the non-financed MSEs. These results are strengthened by the comparison within AIM *sahabat* group MSEs. The findings show that average revenue, labor productivity and work hours of the group 2 *sahabat* MSEs are higher compared to those of group 1 *sahabat*.

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