

SUSTAINABLE MICROFINANCE INSTITUTIONS FOR POVERTY REDUCTION: MALAYSIAN EXPERIENCE

Adesina-Uthman Ganiyat Adejoke ^a

^a Faculty Economics and Management, Universiti Putra Malaysia, Malaysia.

^a Corresponding author: ubaydullah2002@yahoo.com

© Ontario International Development Agency. ISSN 1923-6654 (print)
ISSN 1923-6662 (online). Available at <http://www.ssrn.com/link/OIDA-Intl-Journal-Sustainable-Dev.html>

Abstract: The Microfinance industry has been identified as a developmental tool in the 21st century Worldwide to assist “unbankable” members of the society in poverty reduction. This has called for serious attention from market operators including investors and borrowers both local and international, policy-makers and the academia. Research has shown that Microfinance Institutions (MFIs) in Asian countries are performing better than MFIs from Easter Europe, yet Malaysian Microfinance institutions are not big participants in this respect. This paper in the light of the above, examines the sustainability of MFIs in Malaysia. Analyzing the current trends and empirical researches on sustainable financing to the Microfinance industry, it discusses especially, the Morgan Stanley arranged transaction for MFIs, a way of integrating MFIs into the mainstream capital market. Then it examines the source of financing in Malaysian MFIs using secondary data documentation from journals and articles. It was observed that Malaysian MFIs are not self sufficient. They depend heavily on government grants, donors, local financing and savings from members. Albeit, it was observed that cases of hard-core poor and incidence of poverty decreased as at 2004. It concludes with recommendations for the policy-makers and players in this industry in Malaysia that could assist them in positioning the country as an international Hub for Microfinance Industry.

Keyword: Micro credit, Outreach, Sustainability, Unbankable.

I. INTRODUCTION

The economically active poor in most economies of the world especially people in the rural areas are excluded from the formal financial sector [1]. Usually referred to as the “unbankable”, which mean that the formal conventional banking system has no provision for them, therefore they are excluded from their clientele. This must have accounted for low level of financial

literacy by this category of people in most economies. Surprisingly, this informer sector usually constitutes the larger percentage of the population especially in developing countries. From a recent research by United Nation with data from World Bank and International Labor Organization, in Sub-Saharan Africa, the informer sector constitute 80%; 70% in Indian, Indonesia, Pakistan, Philippine. Thailand, Turkey, and Brazil accounts for 50% while Mexico, Chile and Portugal have 40%, 38%, and 30% respectively [1]. Hence, different communities have been concerned about poverty alleviation which has led to establishment of local co-operatives, thrift and credit unions, in order to provide financing to the poor people in the society. Women have been found to constitute higher percentage of this group of people in many regions, thus falling into one association or another to pool their small savings together to assist one another based on trust. The most common example is the Rotating Savings and Credit Union where members lend their pool of savings to each member in the association until it went round the entire members. Social and economic development of members are the main goals of micro-credit organizations and not profit making. But in recent years, activities of these micro credit institutions have become so popular and they have doubled in number. It has only being within the last four decades, however, that serious global efforts have been made to formalize financial service provisions to the poor. This process began in earnest around the early to mid-1980s and has since gathered an impressive momentum. Today there are thousands of MFIs providing financial services to an over 400 million of the world’s poor. It has being reported that estimated that about 35% of the world 1.2 billion Muslims are poor [2]. What began as a grass-roots “movement” motivated largely by a development paradigm is evolving into a global industry informed increasingly by a commercial/finance paradigm. The growth of microfinance in the last ten years has been so extraordinary to the extent that it was accorded a global recognition. Such that 2005 was declared by

United Nations as the “International Year of micro-credit” and a Noble Prize Award was given to the founder of Grameen Bank in Bangladesh. The success of this industry in recent time has become a big attraction to international investment banks and lenders. Successful entrepreneurs like Bill Gates, Pierre Omydiar (the eBay founder) are now actively involved through their foundations in building up the scale of microfinance activities. World’s largest banks like Citigroup, Deutsche Bank, Commerce bank, HSBC, ING, ABN AMRO and Morgan Stanley have also entered the “double-bottom line” industry. Meanwhile, sustainability is no doubt a means to an end- that is to achieve outreach by microfinance institutions to their poor clients. Therefore the objective of this paper is to examine the state of microfinance institutions in Malaysia; their outreach to the poor households and most especially their sources of funds for sustainable financing. The next Section of the work examines the current trends in the global Microfinance Industry as a background to the discussion that follows on the industry in Malaysia. This is followed by the method; overview and analyzes of the industry in Malaysia in respect to incidence of poverty; sources of funds and sustainability; and the outreach of the major MFIs. The following section includes a discussion on capital market integration of MFIs aimed at providing a sustainable financing to MFIs and the last section presents discussions, conclusion with policy implementations.

New Paradigm in Microfinance

As mentioned earlier, the bottom-line objective of creating micro-credit was social objective, to provide access to capital to small entrepreneurs who cannot afford to obtain loans from commercial banks due to high transaction cost and the small size of their businesses. Among them are micro enterprises, small scale farmers, artisans, shopkeepers, low income earners, hard core poor individuals and day laborers etc. This inaccessibility to finance by the economically active poor has led to an alarming increase in the rate of poverty in the world. According to the United Nation, in 2002, almost one-fifth of the world population (1.3 billion people) was living in extreme poverty earning less than one dollar a day. This figure is higher than 2004 estimate of 984 million people. With the revision of International poverty line from \$1 to \$1.25 in 2008, 1.4 billion people are still living below the poverty line [3].

Meanwhile, the entrance of big investment banks and renowned entrepreneurs has brought a new dimension into the industry. The social objective paradigm is gradually being replaced and moving towards commercial objects as a result of big MFIs converting into commercial banks and or profit oriented institutions coupled with the entrance of international investors seeking good returns on their

investments. The nascent industry had been recognized for a repayment rate as high as 97% and a return on equity ranging from 20-40% [1]. This is only true of MFIs who are serving the higher income clients. A recent research [4] shows that only 1-3% of MFIs examined was financially self-sufficient and had positive net income. Today, no more than 1% of the world’s estimated 5,000 to 7,000 micro lenders are fully self-sustaining. Most are still heavily subsidized by donors and government agencies according to Smith [5]. Furthermore, it was reported that the worldwide loan portfolio of MFIs is about \$17 billion, expected to grow to between \$250 and \$300 billion in the next one or two decades with an estimated annual growth rates of between 15% and 30%.¹ A case where MFIs are able to finance itself without relying on donors, grants and subsidies from government and are yet be able to reach more people, cover their operating costs due to large number of staffs needed compared to conventional finance institutions due to low level of financial literacy of their customers and even make profits is referred to as sustainability of MFIs.

II. METHODS

Out of total number of five main microfinance institutions in Malaysia; only four were taken as sample for examination in the studies using secondary data. They are : Koperasi Kredit Rakyat (KKR –People’s Credit Cooperation); Amanah Ikhtiar Malaysia (AIM-Non Government Organisation); Pembiayaan Kredit Mikro of Bank Pertanian Malaysia (BPM-Malaysian Agricultural Bank); Tabung Ekonomi Kumpulan Usahawan nasional (TEKUN-The Economic Fund for National Entrepreneurs Group) and Yayasan Usaha Maju, Sabah. The last in the list was excluded due to its size and outreach. Two of these institutions are Non-Governmental Organizations-NGOs. They are known for their active engagement in microfinance activities at a considerable magnitude - the Amanah Ikhtiar Malaysia (AIM) and Tabung Ekonomi Kumpulan Usaha Niaga (TEKUN). Sources of statistic on Malaysian microfinance institutions are from [7] and United Nation Development Programme project document.

Overview of Microfinance institutions in Malaysia

The current stance of the public policy for microfinance in Malaysia is skewed towards operating a government-aided microfinance program to provide financing for micro enterprises at lower costs. It is pretty interesting to see that the myth of the directed credit paradigm is still alive [6]. For instance the largest MFI in Malaysia-AIM is heavily supported by the government and other related agencies. 80% of Small and Medium enterprises in Malaysia are micro enterprises with the banking

¹ See Ian C et al.

sector as the main source of financing [2]. There are some notable MFIs in Malaysia that are known for provision of micro-credit to the poor in the economy. These are: (a) Koperasi Kredit Rakyat (KKR – People’s Credit Cooperation) (b) Amanah Ikhtiar Malaysia (AIM-Non Government Organisation) (c) Pembiayaan Kredit Mikro of Bank Pertanian Malaysia (BPM-Malaysian Agricultural Bank) (d) Tabung Ekonomi Kumpulan Usahawan nasional (TEKUN-The Economic Fund for National Entrepreneurs Group) (e) Yayasan Usaha Maju, Sabah

Two of these institutions are Non-Governmental Organizations-NGOs. They are engaged actively in microfinance activities at a considerable magnitude - the Amanah Ikhtiar Malaysia (AIM) and Tabung Ekonomi Kumpulan Usaha Niaga (TEKUN). While AIM focuses on providing financing to poor households and micro borrowers mainly for rural poverty eradication, TEKUN specialized in the provision of small loans to micro enterprises of the indigenous groups (Bumiputera). There are also other NGOs that engage in microfinance activities such as Yayasan Usaha Maju (YUM) in Sabah, Koperasi Kredit Rakyat (KKR) in Selangor, but their activities are much smaller in scale compared to AIM and TEKUN [7]. They [7] analyze the Malaysian experience in this industry using the four major MFIs in Malaysia with diversified objectives of providing micro-credit to economically poor Malaysians and entrepreneurs in different sectors of the economy. Four of the above mentioned MFIs are included in the study. Only Koperasi Kredit Rakyat (KKR – People’s Credit Cooperation) is a co-operative society that was established to cater for the need of local people in the grassroots.

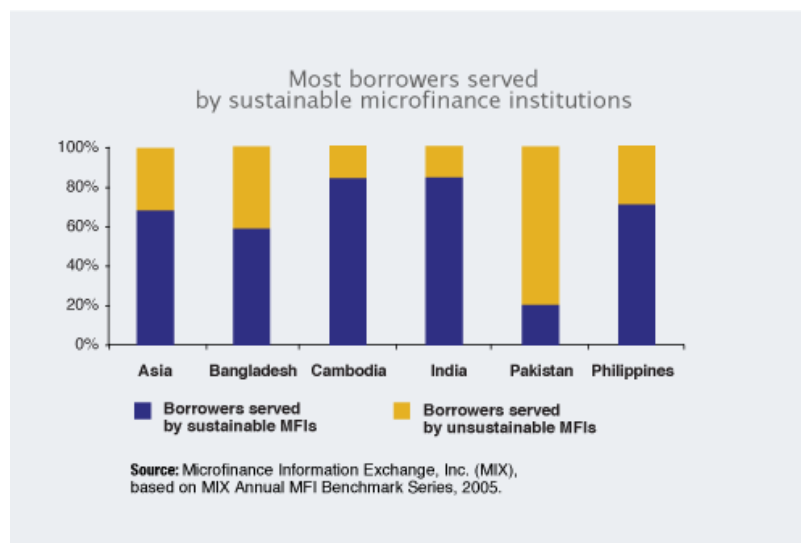
Sources of Financing

Kredit Rakyat (KKR –People’s Credit Cooperation) depends on members’ savings for sustaining its activities. Amanah Ikhtiar Malaysia (AIM) and Tabung Ekonomi Kumpulan Usahawan Nasional (TEKUN)-(The Economic Fund for National Entrepreneurs Group) are Non Government Organizations (NGOs) as mentioned earlier. These two NGOs and Pembiayaan Kredit Mikro of Bank Pertanian Malaysia (BPM-Malaysian Agricultural Bank) established on the 3rd June 2003 after the announcement of the economic package by the Prime Minister on 21 May 2003; depends on governmental grants and aids [8]. AIM’s grants are interest-free, its targets clientele are women and it fashions its operation after Grameen Bank of Bangladesh. Local financing and savings are the major sources of funding to Malaysian MFIs. In deepening the outreach of Micro credit providers, there is the need for sustainable sources of funding aside local savings and Government grants and aids. This is to ensure a better provision for the poor in the economy.

Outreach

Comparing the total number of poor that are been reached by MFIs within this region and that of Malaysia based on the total number of outreach of these major MFIs, reveals that Micro finance industry in Malaysia is relatively new. For instance in Bangladesh, Grameen bank ASA and BRAC have a total outreach of 4-5 million active borrowers; Bank Rakyat in Indonesia has up to 3.3 million borrowers [9]. There is the likelihood to conclude that MFIs in Malaysia are not among the sustainable microfinance institution in the region as depicted in figure 1.

Figure 1.



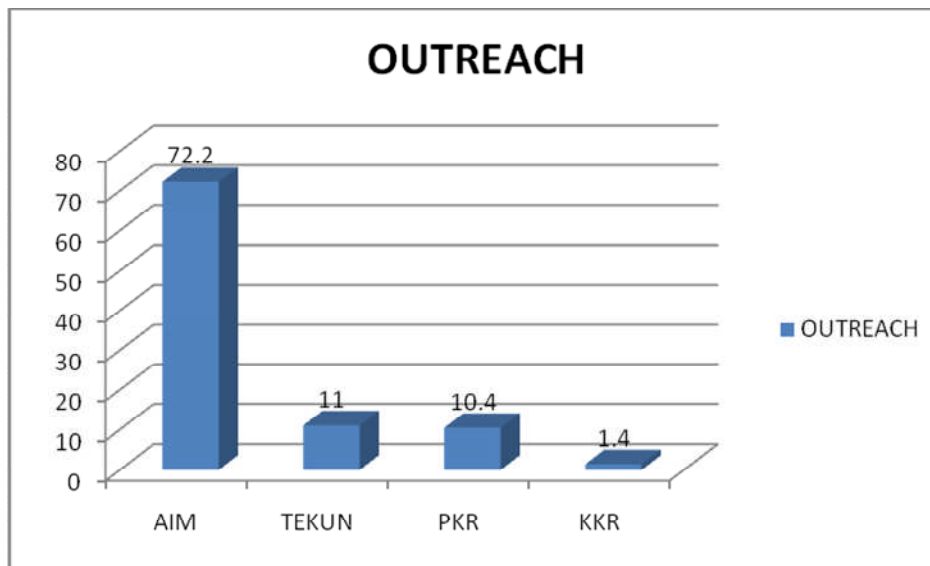


Figure 2. Number of borrowers served in Microfinance Institutions

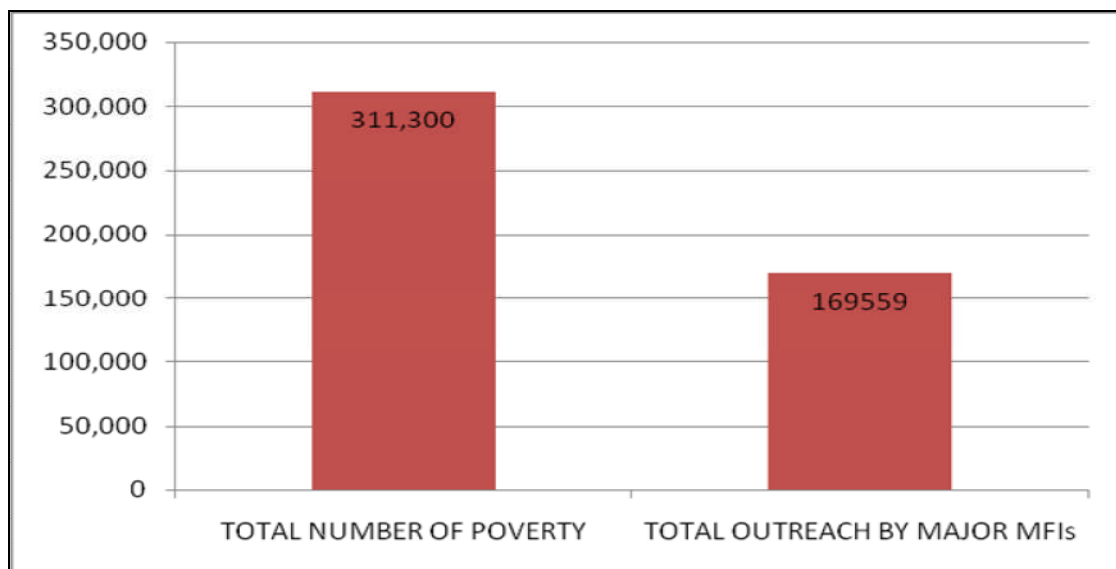


Figure 3 Total number of Poverty versus Total number of Outreach by Major MFIs as at 2004

Meanwhile, the outreach of the major MFIs in Malaysia is 169,559 borrowers; 77.2% of the people reached by Malaysia MFI's are AIM's clients, hence, it has the largest number of borrowers while the remaining 22.8% were shared by the other three as shown in the pie below as at 2004.

More so, as at the same year, total number of incidence of poverty in Malaysia was 311,300 out of which the number of people that fall under the

hardcore –poor households was 67,300 (refer to figure 3). It indicates that 55.5% of the estimated poor in the economy were having access to sources of finance while 45% of them are not reached. Meaning that Malaysian government, NGOs and wealthy Philanthropy within the financial system can do more to reach out to these sets of people who need opportunities that usually come in the form of capital. In doing so, more efforts should be concerted on funding methods of these Malaysian MFIs.

Several researches on MFIs had shown that micro-credit can assist in reducing poverty level because small and medium scale businesses which serves as engine of growth in an economy when adequately financed have the ability of generating investment opportunity to make them self-reliance, and hence have a positive effect on the real Gross Domestic Products (GDP). Dunford [10] raises a fundamental question on how to identify the core poor especially in allocation of the scarce resources by MFIs. This is a challenge to some MFIs especially those serving high-income groups in the economy. In essence, is the hardcore-poor benefiting from MFIs activities or the higher income clients that are in the majority of MFIs clientele in the Asian region? Some researchers had concluded from their studies that the hardcore poor are benefiting while a recent research [11] in Peru indicated that the “better-off” poor benefited more than the hardcore-poor. This will be the case especially where MFIs are serving the higher-income group and will reduce transaction cost to the MFIs as well as adverse selection problem. It could be based on the premises that they are better informed; and can analyze cost-benefits as well as risk associated with a business than the poor people with low level of financial literacy. Another challenge to MFIs is the competition created by entrance of big international investment banks and commercial banks as would be discussed in the next section. Human capital is been

identified as an obstacle to MFIs operations, the case of KKR in Malaysia is a typical example with the diminishing number of volunteers that usually assist in the clerical work of the association. However, the main obstacle in MFIs way in Malaysia and elsewhere has been identified to be a sustainable financing.

Capital Market Integration of MFIs for Sustainable Financing- The BOLD Transaction

It has been observed that most MFIs are not self sufficient, cost of running MFIs are more compared to commercial banks. Hence, the ongoing attempt to tap the local creditors and investors through integration of commercial banks into the activities of those MFIs that are yet to transform to commercial bank. This is to take advantage of domestic financing and the commercial banks will also provide protection for them against foreign exchange risk. According to a study by Elisabeth and Brian [12], the number of commercial MFIs continue to be on the increase due to conversion of NGOs’ MFIs into commercial ones and government-owned ones into private shareholding ones. The study further provides the total number of commercial MFIs equity and borrowers worldwide Shared between Asia, Latin America, Africa and Europe. These figures are presented diagrammatically below. (Refer to figure 4and 5).

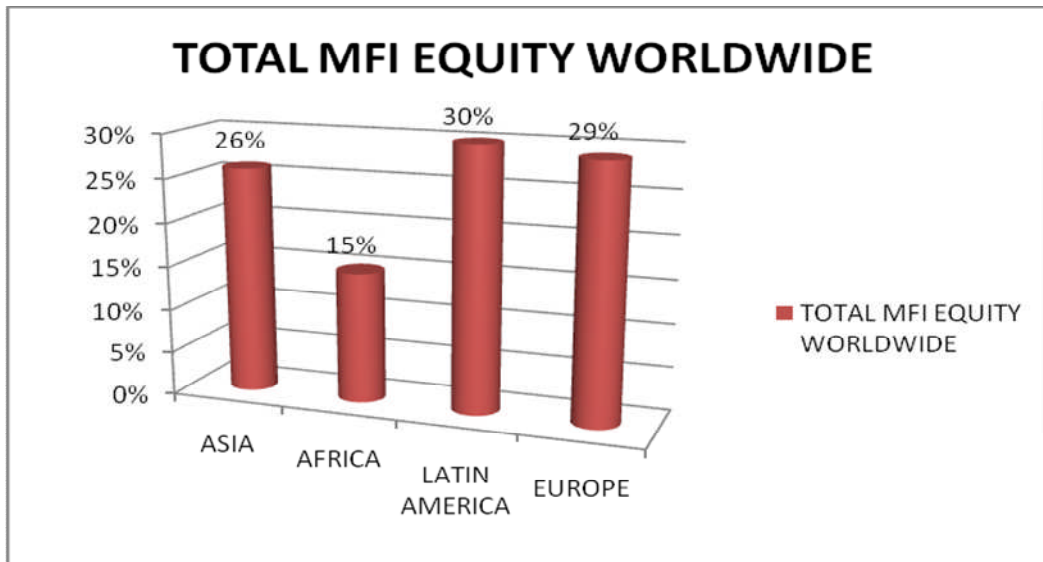


Figure 4: Distribution of Total MFIs Equity Worldwide (Data 2006)

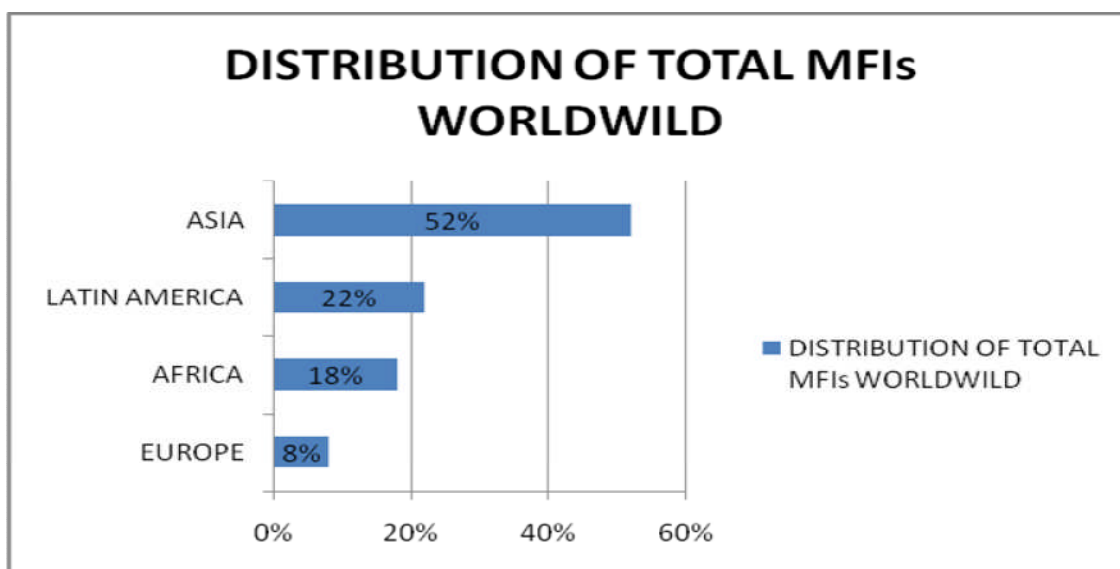


Figure 5. Distribution of Total MFIs Worldwide (Data 2006)

Furthermore, sourcing for outside financing for sustainability of MFIs through the capital market has been suggested as another alternative for MFIs funding. BlueOchard Loan for Development 2006 tagged “BOLD 2006”, a Morgan Stanley arranged transactions was able to raise \$100 million Collateralized Loan Obligation (CLO) backed by unsecured senior loan to 21 MFIs in 13 developing countries spread within Latin American, Eastern Europe and Asia. The countries are Albania, Azerbaijan, Bolivia, Cambodia, Colombia, Ecuador, Georgia, Mexico, Mongolia, Peru and Russia.[1]. In collaboration with Morgan Stanley in this transaction are the Dutch Development Bank FMO, half-owned by Netherlands government and Blue Orchard Finance SA, a Geneva based asset manager that specializes in microfinance by promoting private investments in microfinance through identification and analysis of MFIs and investment monitoring and reporting of its funds. Other several attempts at integrating MFIs into the mainstream capital market are the ACCION Gateway Fund that makes equity, quasi-equity, and debt investments in MFIs with a proven track record of financial sustainability. The AfriCap Microfinance Fund makes equity investments in African-based MFIs, as well as financing technical assistance for said MFIs. Using a venture capital approach, ProFund International is an investment fund that attempts to earn a competitive return for its shareholders while facilitating MFI growth. With the classification of microfinance institutions (MFIs) into top-tier that is those at the top of Microfinance industry pyramid and others- those

at the bottom of the pyramid- a wide gap may be created between the top-tier and less mature MFIs. Due to the infant stage of MFIs in Malaysia, they are still below the pyramid of MFIs, not yet converting and not among the top tiers. Before they can take advantage of the capital market for sustainable financing, some of them have to give up the social objective for commercial purpose by commercializing their activities.

Finally, the Community Reinvestment Fund provides a secondary market for microfinance loans by securitizing the micro loans and collateralizing bonds that are sold to private investors [13]. It should be noted that MFIs in these transactions are “top-tier” and not the less matured ones. They are ones with a proven good track records and self-sufficient to an extent. There is however the need for these MFIs to have good rating in the market. The rating Fund was established by Inter-American Development Fund and Consultative Group to Assist the Poor (CGAP) with the objective of Market-building for MFI rating, assessment services by encouraging greater demand from MFIs for professional external evaluations, as well as strengthening the quality of supply and the improved transparency of MFI financial performance, as a basis for improved performance and increased flow of commercial funding to MFIs. The European Union (EU) joined the Rating Fund in 2005 [14]. As at 2007, November, the Fund had rated over 425 MFIs from almost 63 countries but none of them were from Malaysia. This further confirms that Malaysia MFIs are relatively an infant in the industry.

III. DISCUSSION AND ANALYSIS

Malaysia Microfinance Institutions and Poverty Reduction

A research conducted by Microfinance Information Exchange [9] shows that South East Asian is the birthplace of modern microfinance and houses the largest MFIs in the world in terms of outreach. Despite this record, Malaysia has not mentioned to be in the fore front in the Microfinance Industry in Asia. This could be partly due to the fact that MFIs in Malaysia are less developed and depends on Government grants and NGO, with little participation of commercial banks in Malaysia in this industry.

Though, studying the poverty rate in Malaysia according to the Malaysia Five years Plan, it could be observed that the government has stood up to poverty reduction in rural areas and most especially in the urban cities. Such that in 2004, the incident of poverty in the rural areas by percentage was 11.9 in 219,700 poor households compared to what it was three decades ago. For instance in 1976, it was 50.9% in 864,100 poor households but with no incident of hardcore poverty compared to 2004 which recorded 2.9% hardcore poverty in 53,200 household as could be seen in Figure 6 and 7 below. Hardcore poverty problem started in 1984 with an alarming figure of 121, 600 hardcore-poor households.

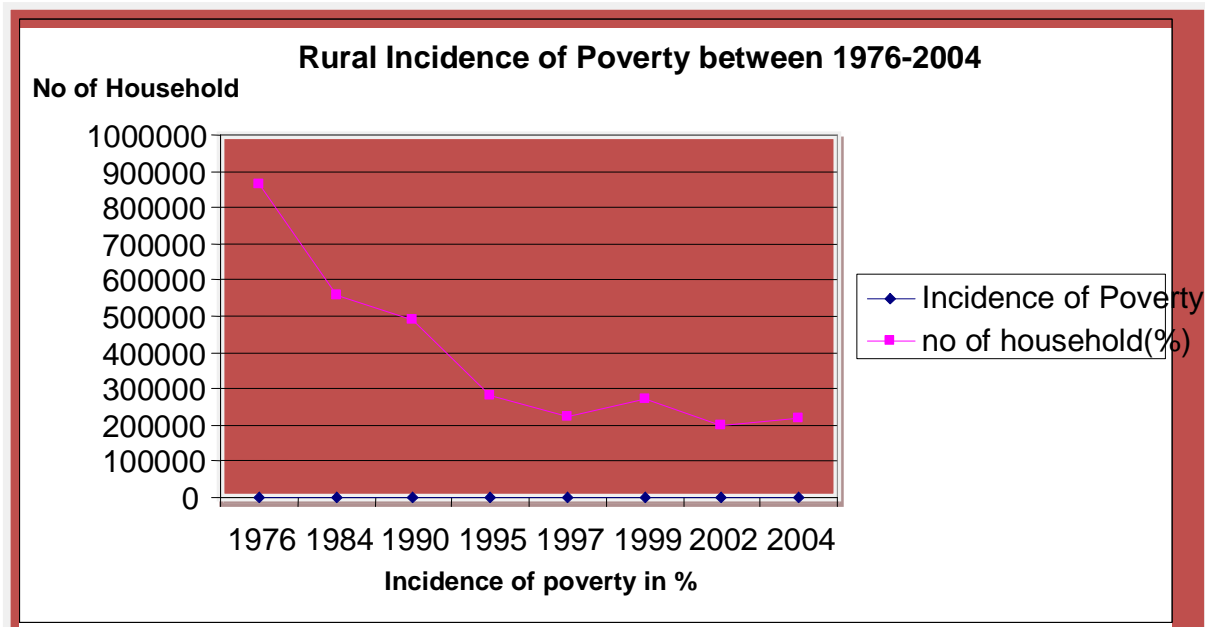


Figure 6. Rural Incidence of Poverty in Malaysia 1976-2004

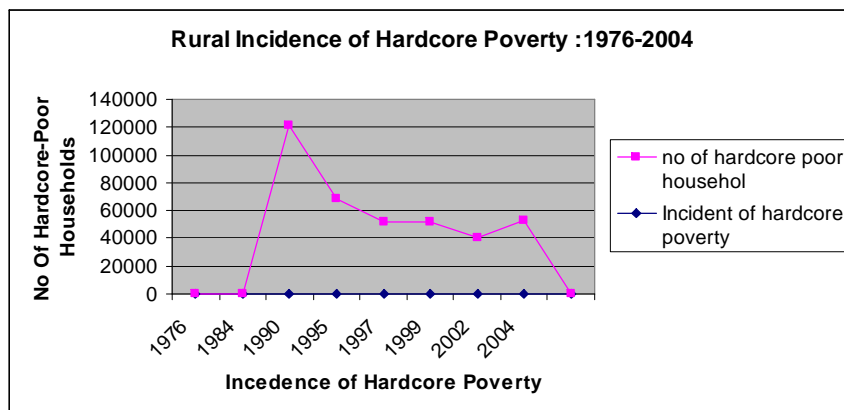


Figure 7. Rural Incidence of hardcore Poverty: 1976-2004

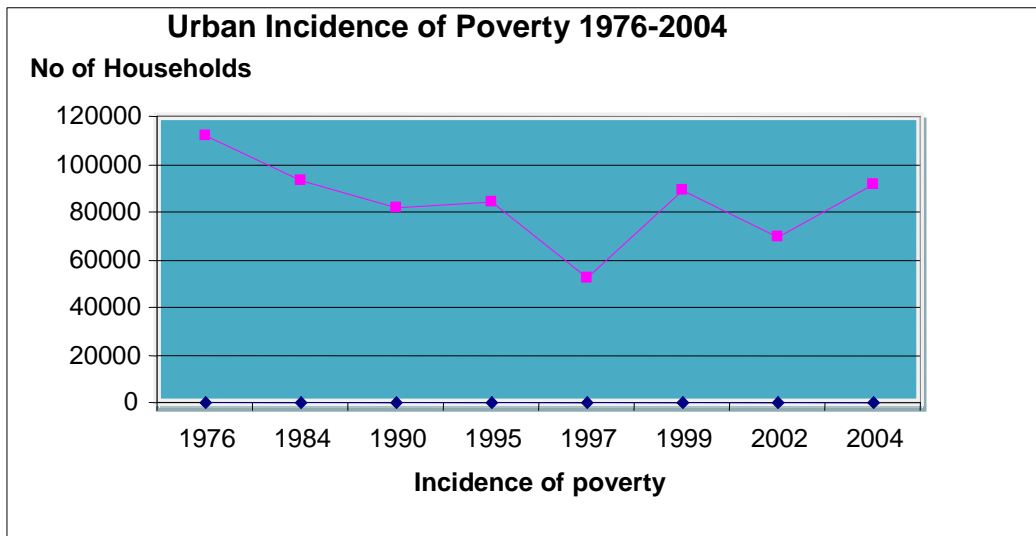


Figure 8 Urban Incidence of Poverty: 1976-2004

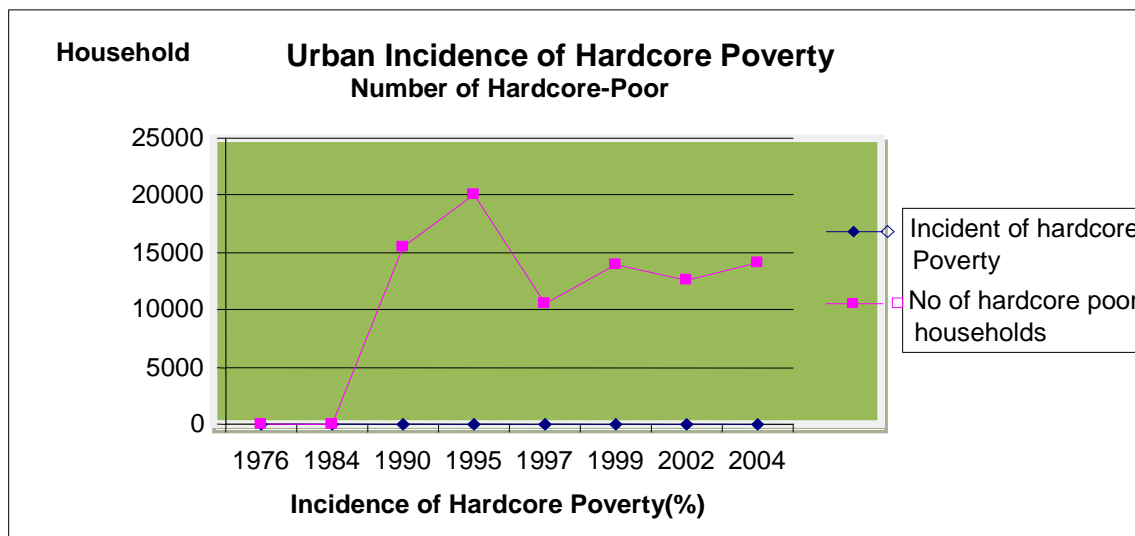


Figure 9. Urban Incidence of Hardcore Poverty: 1976-2004

Meanwhile, incidence of poverty in the urban areas of Malaysia was low compared to what is obtainable in the rural areas. As at 2004, incidence of poverty in the rural areas was 11.9% while it was 2.5% in the urban setting. In addition, the cases of hardcore poor were 2.9% in the rural areas and 0.4% in the urban areas. Moreover, incidence of poverty was 18.7% in 1976 in the urban areas with 111,800 numbers of households while that of 2004 was 2.5% with 91,600 numbers of households. The hardcore-poor however, was 0% with no household to be classified as hardcore poor as at 1976, but by 2004, with 0.4%

cases of hardcore poverty, 14,100 households are in abject poverty. Refer to figure 8 and 9.

Conclusion and Policy Implementations

This paper examined the sustainable financing to Malaysian MFIs. It was discovered that a government-aided microfinance operation existed and this may lead to overdependence on government loan funds, grants; donors and subsidies. This may not be conducive for the Malaysian MFIs to generate sufficient profit margin to sustain their activities. Conversion of Self-sufficient MFIs into commercial

institutions as could be seen around the world may eventually lead to convergence between commercial banks and the MFIs. It will not only affect the less matured MFIs in term of their share of the market (market niche) but may further worsen the inaccessibility problem of the poor in the grassroots thereby, defeating the social objective for which these institutions were established. And their ability to reduce poverty will be curtailed. Having MFIs that have financial sustainability as much as possible in Malaysia and different regions will assist in combating the menace of poverty that has become a threat to regional and global peace, thus enhancing economic stability. The entrance of more top-tier MFIs into the Malaysian industry may assist in this direction but may bring about financial incumbency problem and competition for micro-credit which the less mature microfinance institutions might not be able to withstand and which may likely drive them out of the market. The good objective of poverty reduction through access to capital by the poor will be jeopardized.

Furthermore, achieving financial self-sufficiency is quite difficult. Making the transition to sustainability requires real technical expertise as well as a radical shift in organizational culture, as programs that once spent their time chasing donations learn to focus on efficiency, cost cutting and the bottom line [5]. Therefore, heterogeneous nature of MFIs should be considered in sourcing for external financing. Due to sustainability saga, financial sustainability of MFIs is becoming more and more important than using credit to overcome poverty [15]. Hence, Malaysia government should lay more emphasis on providing micro-credit to the poor through better funding of the MFIs because they have not outgrown obtaining grants from donors, government as well as local funding and savings. More so, since Malaysia MFIs does not fall under the Top-tier MFIs in the industry, exploring the capital market for sustainable financing may not be applicable at this stage of their maturity. More NGOs, specialized cooperatives and institutions should be encouraged to float MFIs in their localities. Malaysia is known for solving her problems in her own ways, which had aided her development especially with her refusal to take IMF loan during the 1997 financial crisis. Hence, this line of action should be toll in solving Malaysian MFIs problem considering its maturity. The use of corporate *Sukuk* e.g *Musharakah Sukuk*, *Ijara Sukuk* etc can be employed to mobilize more local funding to the Malaysian MFIs. Islamic Microfinance; a new paradigm; is an alternative the Asian Pacific Economic Corporation (APEC) is considering under a Public-Private sector initiative to achieve the objective of outreach to the poor in the Asian region. This is a welcome ideal and a step in the right direction. Conclusively, sustainability problem and capital market integration for MFIs should be

considered in retrospect to the objectives, social-economic and political environment of these MFIs for Malaysia to utilize this developmental tool in strengthening herself as International hub for Microfinance Industry.

REFERENCE

- [1] C. Ian, H Gonzalez, D. Maurice, and C. Novak (2007). Microfinance-On the Road to Capital Market, *Journal of Applied Corporate Finance*, 19: 01 .(Morgan Stanley).
- [2] ABAS Malaysia, Islamic Microfinance: A New Approach to help Small Enterprises, *Meeting paper 6-C of The Advisory Group on APEC Financial System Capacity Building*, 5 August 2008, Hangzhou, People Republic of China.
- [3] "Rethinking Poverty: Which Way out?", available at www.un.org/esa/socdev/rwss/docs/2010
- [4] D.Tulchin, Positional Microfinance Institutions for the Capital Market", *Social Enterprise Association Working Paper*, 2004 accessed from www.microcapital.org/downloads/.../SEA_PositionMFICapMkts.pdf
- [5] M. Smith, What's so important About Sustainability?, *Accion International's newsletter*, *Venture Winter*, 1998 from www.accion.org/NETCOMMUNITY/page accessed March 21st, 2008.
- [6] M. Hamps, "Pleading for Sustainable Microfinance in Both Sides of the Globe-National Strategies of Microfinance Development: Good Practices in Germany, Indian, Malaysian and Philiphine", 2005, accessed from www.microfinancegateway.org on April 25, 2008.
- [7] A.H. Roslan, M. S. Z. Noor, R. Majid, and F Zainal Abidin, , *Microfinance and Poverty: The Malaysian Experience*", a paper presented at the 2nd International Conference of the GRES- Which Financing for Which Development, Bordeaux, France, 23-26 November,2006.
- [8] I.Ahmad, "Current Situation of Microfinance in Malaysia and Its Issues", *Paper for International Circulation*, 2004. From <http://banktani.tripod.com/microfinance.htm> accessed on the 15th May, 2008.
- [9] <http://www.themix.org/asia.html>
- [10] C.Dunford, Evidence of Microfinance's Contribution to Achieving the Millennium Development Goal: Freedom from Hunger, accessed on 9th September, 2009 from www.microfinancegateway.org.
- [11] www.microfinancegateway.org.
- [12] J.,D., P. Copestake, J.P. Fanning, A. McKay, and K.W Revollo, Monitoring the Diveristy of Poverty Outreach and Impact on Microfinance: A Comparism of Methods Using Data from Peru, *Development Policy Review*, Vol 23, Number 6, 2005, pp 703-23.

- [13] R. Elisabeth and B. Brain., “*The Growth of Commercial Microfinance: 2004-2006*”, 2006 from www.cmef.com.pg accessed May 10, 2008, pp.1-26.
- [14] http://www.accion.org/technical_assistance/micro_links2.asp_Q_K_E_2.
- [15] <http://www.ratingfund.org/content.aspx?cID=3>
- [16] H .Neils and L .Robert, Impact of Microfinance: A Critical Survey, *Economic and Political Weekly*, February 10, 2007, pg1-4.

ABOUT THE AUTHOR:

Adesina-Uthman Ganiyah A. is a Fellow at the Department of Economics and Actuarial Science and currently a PhD student at the University Putra, Malaysia. .Mailing address: 37A-1, JLN, 18/34, Taman Sri Serdang, 43300, Sri Kembangan, Selangor, Malaysia.