Efficiency Analysis of Micro-finance Institutions in Pakistan

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EFFICIENCY ANALYSIS OF MICROFINANCE INSTITUTIONS IN PAKISTAN

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ABSTRACT

Microfinance collectively refers to the supply of loans, savings accounts, and other basic financial services like insurance, to the poor. About one billion people globally live in households with per capita incomes of one dollar per day (Morduch J. 1999). Microfinance Institutions (MFIs) are special financial institutions. They have both a social nature and a for-profit nature. Their performance has been traditionally measured by means of financial ratios. The objective of the study has been to estimate the efficiency of microfinance institutions in Pakistan. Non parametric Data Envelopment analysis has been used to analyze the efficiency of these institutions by using data for the year 2003 and 2007 respectively. Both input oriented and output oriented methods have been considered under the assumption of constant return to scale technologies and microfinance should provide services on sustainable basis. A microfinance institution is said to be financially sustainable if it without the use of subsidies, grants, or other concessional resources, it can profitably provide finance to micro enterprises on an acceptable scale.

Key Words: DEA, Efficiency, Microfinance, Pakistan
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1.1 INTRODUCTION

Microfinance collectively refers to the supply of loans, savings, and other basic financial services like insurance, to the poor. As the poor people cannot avail these financial services from the formal commercial banks (because of the collateral requirements), microfinance tends to provide to them exclusive of these conditions. For these financial services, the poor people are willing to pay for because of the added advantage they receive for not collateralizing anything. The term also refers to the practice of sustainably delivering such services. More broadly, it is a movement that envisions a world in which as many poor and near poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance, and fund transfers (Christen, R. P., Rosenberg, R., and Jayadeva, V., 2004).

The beginnings of the Microfinance sector in Pakistan have its roots in the rural development projects that were funded by donors. Microfinance was started in Pakistan in the early 1980s when the Aga Khan Rural Support Programme (AKRSP) launched its credit operations in the North in 1982 and with the establishment of the Orangi Pilot Project (OPP) in the same year. The model of AKRSP was implemented in the whole country in 1990s with the establishment of National Rural Support Programme (NRSP) and the Sarhad Rural Support Programme (SRSP). These institutions were general support institutions that provided a wide range of social services, including financial services. Financial services that were provided to the poor were often socially driven and

were highly subsidized and little efforts were made to recover delinquent loans. To address these shortcomings in 1996 the RSPs established specialized microfinance NGO called as Kashf Foundation. In 1998, this precursor of the Pakistan Microfinance Network (PMN) began to play a role in representing emerging Micro Finance Providers (MFPs). Further developments followed in 2000, when the Pakistan Poverty Alleviation Fund (PPAF) made its first loan to MFPs, and SBP opened a microfinance unit. In 2001, the GoP helped to create a major retail institution, the Khushhali Bank, dedicated to serve the poor.

The Aga Khan Rural Support Program's development model has been replicated all across Pakistan, and since microcredit became a major instrument in dealing with the problems of the rural poor, it is assumed by all the actors in this sector that principally microcredit should be used to reduce the near 33 percent poverty much of it rural in the country (Hussein & Hussain 2003).

The microfinance sector in Pakistan consists of regulated and self regulated organizations, depending on the type of organization they are (e.g. MFI, NGO or a Bank). According to the World Bank's Consultative Group to Assist the Poor (CGAP), Pakistan is a late starter but less far behind the sector in other countries in South and South-East Asia. It has made considerable gains after the inception of the MF Ordinance in 2001. The target set out by the Government of Pakistan for MF sector for 2010 is three million borrowers. The sector is building up itself strongly yet there are a few problems that might be a threat to the sustainability of the sector

Microfinance is about providing broad range of financial services to the poor income people who has no access to the financial services. The services include the broad

range including the savings, loans, insurance, leasing, money transfers etc. It is well recognized fact that microfinance is the most suitable way to empower the poor and to increase their income generating capacity (PIPRP 2001). In Pakistan as well as at international level, the importance of microfinance as a tool to eliminate poverty is well accepted. But with this extra ordinary scope this sector is facing some serious challenges as well. The basic idea of micro-finance services is to provide the financial assistance to the poor at the time he or she needs it at the doorstep and at a very convenient condition (Waheedur Rehman 2007). Recently microfinance has got special attention not only in the academic debates but also in the area of policy making (Smailbone and Wyer 2000).

The core objective of microfinance industry is to improve access of the poor to the financial services. Poverty is persistent in the Pakistan. Majority of its population is living below the poverty line. Credit is the mainstay of microfinance industry. The rural support program accounts for approximately 44% of the total micro credit extended by the sector. The microfinance banks and institutions account for 31% and 22% respectively. The number of active borrowers for microfinance in Pakistan crossed the 1.9 million mark first time ever, in the beginning 2010. This was preceded by a gradual recovery of the sector 2009 from downturn witnessed at the end of 2008.

The need for Micro financing arises because the poor section has been ignored by the commercial banking sector that is economically active but financially vulnerable and constrained. As a result the poor are dependent on the relative suppliers or money lenders who are charging extremely high interest rate. Access to informal loans is relatively easy as compared to the formal sector due to convenience and lack of lengthy procedures. Therefore poor usually prefer to take loan from the informal sector. The history of

emergence of microfinance institutions usually started with the establishment of Grameen Bank in Bangladesh in 1970's. The methodology of group lending is the basis of Grameen bank. The key players in Microfinancing in Bangladesh are NGOs and cooperatives; Grameen and private sector, government commercial banks and international NGOs.

Microfinance is an important market-oriented strategy of the financial sector to broaden the financial access and support the objective of economic and social development. Pakistan is amongst the few countries globally that have national strategy which identifies drivers and challenges to achieve both targets along with an implementation plan drawn along side with industry stakeholders to monitor progress against the national strategy.

Microfinance was started in Pakistan in the early 1980s when the Aga Khan Rural Support Program (AKRSP) launched its credit operations in the North in 1982 and with the establishment of the Orangi Pilot Project (OPP) in the same year. The model of AKRSP was implemented in the whole country in 1990s with the establishment of National Rural Support Program (NRSP) and the Sarhad Rural Support Program (SRSP). These institutions were general support institutions that provided a wide range of social services, including financial services. Financial services that were provided to the poor were often socially driven and were highly subsidized and little efforts were made to recover delinquent loans. To address these shortcomings in 1996 the RSPs established specialized microfinance NGO called as Kashf Foundation. In 1998, this precursor of the Pakistan Microfinance Network (PMN) began to play a role in representing emerging Micro Finance Providers (MFPs).

As a result of endeavors of the past few years, microfinance in Pakistan has come a long way from a nascent stage to an industry, which is now well-poised to grow. With current outreach of 1.82 million borrowers, the sector saw phenomenal growth of almost 43% in years 2007 and 2008. Similarly, in the year 2009 the industry witnessed an overall positive trend, albeit mild, in respect of growth in all of its major indicators, with a healthy growth in the deposits indicator that grew by 72%. It is encouraging that the MFBs have made progress on a number of fronts during the year. A mix of vibrant and mature MFBs primarily contributed to the overall deposit growth of the sector. Gross Loan Portfolio (GLP) recorded a significant a 15% growth during the year of 2009. Given the tight liquidity situation in the market, it is now imperative for MFBs to develop their internal deposit base. The borrowings by MFBs have declined to Rs. 4.76 billion from Rs. 5.069 billion during the year 2009.

The target market of microfinance sector is estimated to be 25 to 30 million borrowers and government has set the outreach goal posts to at least 3 million by 2010 and moved it further to 10 million by 2015. To increase outreach the sector adopted extensive growth strategy and the overall growth rate of outreach varied from 100 percent in 2004 to a low level of 36 percent during 2005-06 and later to 52 percent in 2007. Outreach in terms of number of active borrowers increased from a low base of 240000 in 2003 to 1.27 million in 2007. Gross loan portfolio increased from Rs. 2.3 billion in 2004 to 12.7 billion in 2007, loan size also increased from Rs. 6,629 in 2004 to Rs. 10,000 in 2006 and 2007. The number of savers increased from 888000 to 1.14 million in 2007 and investment in the sector is as high as $ 400 million between 1999-2005 (PMN 2007).

Besides the main groups of microfinance other institutions that also provide microfinance services include, commercial banks and government owned institutions etc. Although the main product of these institutions is not microfinance, the government-owned institutions that provide microfinance services to the poor include: micro credit and saving services and subsidized credit for government's Rozgar Scheme by National Bank of Pakistan (NBP); credit and saving services by ZTBL; special microfinance services by government owned First Women's Bank Limited (FWBL), Bank of Khyber (BOK), SME Bank, financial savings and money transfer services provided through countrywide network of 7,500 branches of Pak Post Saving Banks, the seven National Saving Schemes (NSS) of Central Directorate of National Savings (CDNS) which accept deposits of about 4 million account holders and the Zakat office that provide charity funds as a social objective. Some commercial financial institutions including ORIX leasing also extend microfinance services to their poor customers (CLEAR, 2007).

In Pakistan microfinance providers include six microfinance banks, 14 microfinance institutions, including rural support programs, non government organizations, and commercial financial institution. (SBP 2006) Microfinance banks are khushhali bank (KB), Tamer Microfinance Bank Limited (TMFBL), Pak Oman microfinance bank limited (POMFL), First Microfinance Bank Limited (FMFBL), Network Microfinance Bank (NMFB), and Rozgar Micro Finance Bank (RMFB). Non government organizations include kashaf, Sind Agricultural and Forestry Workers Coordination (SAFWCO), Akhuwat, Orangi Pilot Project (OPP), and Asasah are operating as MFIs. Development Action for Mobilization and Emancipation (DAMEN), Taraqee Foundation and Sungi are providing microfinance services as part of their overall

program. Rural Support program include national rural support program (NRSP), Punjab rural support Program (PRSP), Sarhad rural Support Program (SRSP) and Thardeep Rural Support Program (TRDP). They consider microfinance as part of their multidimensional rural development program. Commercial microfinance institutions provide microfinance services as a separate function with in the broader organizational context. These include Orix Leasing and The Sungi foundation.

Majority of the microfinance institution operating in Pakistan, particularly RSPs, use the community based approach as a tool for the delivery of the services. Community based approach produces the highest outreach. The largest microfinance provider with national coverage of about 407641 active borrowers in 2007 is NRSP (SBP 2006). It also needs to be transformed into formal MFBs to enable it to better manage its financial, managerial and technical capital to increase the outreach of microfinance services in the country. Some organization use the solidarity group model, adapted from the Grameen bank. KASHF is the best example in the Pakistan context and give the best portfolio quality ratio. Finally some organizations use the mix of individual lending and partnership with community based organizations. It seems that organizations based o this methodology are the most viable programs.

The main objective of this study is to analyze the efficiency of microfinance institutions in Pakistan. There is much literature regarding the role of microfinance institutions in poverty alleviation but component of efficiency analysis is lacking. So analysis of this component is of much worth which is the objective of this report.

1.2 REVIEW OF LITERATURE

Different studies have been conducted on different aspects of microfinance such as barriers to microfinance outreach, emergence of microfinance, indicators showing

microfinance performance, effectiveness of microfinance and regulatory framework for microfinance. However this study is concerned with the analysis of efficiency of microfinance in Pakistan. The review of different studies is presented below to explore the work done on the field of microfinance.

Zaman, Hassan (2000) studied the relationship between micro credit and the reduction of poverty and vulnerability by focusing on Bangladesh rural advancement committee (BRAC). The research findings show that micro credit mitigates a number of factor contributing to vulnerability. The argument is explained by complementing the existing literature with empirical analysis of household survey data collected in one region of Bangladesh in 1995. Potential reduction in vulnerability due to micro credit can be achieved through a number of pathways. Meyer (2002) has reported the flexibility of microfinance products by analyzing the case study of Bangladesh. The study points to the role that product and institutional design play in explaining in MFIs dropouts, delinquencies, overlap and use of informal finance. The policy should be changed and Adjusting Repayment Schedules, Loan sizes, differential loan pricing and expanding the product line. Several impediments retard the development of more flexible products as commitments to the status quo, cost and complexity of change and innovation, and competition and the financial system. Jansson, Torr *et al* (2003) pointed the indicators showing microfinance performance. These indicators fall into four major categories namely portfolio quality, efficiency and productivity, financial management and profitability. The study particularly depicts that the management and governance area lack the performance indicators. There is obvious problem with this approach since vast differences in accounting practices make comparison difficult. Portfolio quality is crucial area of analysis, since the largest source of risk for any financial institution resides in its

loan portfolio. Productivity and efficiency measures are less comprehensive indicators of performance than those of profitability. Decision in financial management area can directly affect the bottom line of the institution. Profitability reflects in the portfolio quality. Conroy (2003) studied the challenges of micro financing in South East Asia by using the data of year 2002. The objective of the study are to examine the circumstances of seven ASEAN countries in which institutional micro finance has developed to some significant degree and the outreach of the south Asian countries. A number of models have emerged, as the Grameen bank model, Village Bank Model, Credit Union Model, Self Help Groups model, and Rural Financial System Approach.. The challenges confronting microfinance in Southeast Asia include the need to achieve operational and financial sustainability for MFIs. The policy implication is that there is the need of intervention at the system level, to assure an appropriate policy and regulatory environment for sustainable microfinance to flourish.

Nghiem, H.S and J. Laurenuson (2004) analyzed the efficiency and effectiveness of the microfinance institutions in Vietnam by looking at the evidences from NGOs schemes. The study hypothesizes that tradeoff relationship exists between financial stability and social development during the initial stage of microfinance and synergy exists at the maturity stage. The research is conducted using the combination of both qualitative and quantitative approaches particularly DEA analysis. From financial perspective the average technical efficiency score is 80 percent and from social aspect the score is 81 percent. The results show that most microfinance schemes are fairly efficient when social and financial aspects are considered separately.

Qayyum.A and M.Ahmad (2004) estimated the efficiency of microfinance institution using the one year (2004) data. MFI are playing an important role in poverty alleviation. The study identified the most efficient/best practice MFI(s) that would in turn help to improve functioning of the MFIs in the South Asian region and analyzing the efficiency and its determinants in commercial banking sectors of various countries. The researcher used the DEA technique. Out of these three—Annesa, BARC, and Grameen bank belong to Bangladesh, and two MFIs—Bodhana and Pushtikar are from India. No MFI from Pakistan was found operating on the efficient frontier. There is need to enhance the managerial skills and improve technology. Stephens *et al* (Dec 2005) worked to analyze the performance and transparency of microfinance institution in south Asia. The study draws on the experiences of local and global transparency initiatives to draw a picture of the state of transparency in South Asia, the challenges that it faces, and the initiatives underway to overcome these obstacles. The analysis used industry reporting standards, to survey institutional performance in South Asia and to highlight drivers of that performance.

Rehman W (2007) described the barriers to microfinance outreach of women in Pakistan by using the data of year 2006 by using deductive research method. The blending of rural and urban areas of Pakistan is used to collect the data for the purpose of reflecting the real picture. The study is identified the outreach of the credit to the vulnerable section *i.e.* the women. Reasons that restrict the outreach of microfinance in Pakistan are social constraints and financial constraints. There are about 150 millions people living in Pakistan. The women are 48% of the total population. There are 10

million people in Pakistan including women who need micro finance services but the out reach is only 10% of the total market (Pakistan microfinance network).

Haq *et al* (2008) compares the regulatory framework of the microfinance institutions (MFIs) in Asia. The study examined the regulatory policy and supervision of the MFIs in Asia. The cross comparison has helped identify those features that appear most effective. The approaches are classified as: self regulation (through governance/non prudential regulation), banking law regulation and special law regulation. Selecting the correct approach is important as over regulation will then hamper MFI services and so hurt the poor. Mava, B (2008) explores the linkage between poverty alleviation and microfinance and also the impact of microfinance on poverty alleviation. Hossain (2002) defines microfinance as offering of small, collateral free loans to members of cooperatives who otherwise have no access to the capital which is necessary to begin small businesses.

1.3 METHODS AND DATA SOURCE

The study has made an attempt to analyze the efficiency of microfinance institution in Pakistan using the data for the year 2003 and 2007. The data used has been taken from Pakistan Microfinance Network for the year 2003 and 2007. The objective of the study is to analyze that how many institutions are efficient in delivering credit to the poor section. The methodology used to analyze the efficiency the data envelopment analysis (DEA). This methodology has been used by the previous studies as Charnes, Cooper, and Rhodes (1978), Fare, Grosskopf and Lovel (1983) and Banker, Charnes and Cooper (1984). Data envelopment analysis (DEA) is the non-parametric mathematical programming approach for frontier estimation. The discussion of DEA models presented here is brief, with relatively little technical detail. More detail reviews of the

methodology are presented by Seiford and Thrall (1990), Lovell (1993), Ali and Seiford (1993), Lovell (1994), Charnes *et al* (1995) and Seiford (1996). The piecewise-linear convex hull approach to frontier estimation, proposed by Farrell (1957), was considered by only a few authors in the two decades following Farrell's paper. Charnes, Cooper and Rhodes (1978) proposed a model, which had an input orientation and assumed constant returns to scale (CRS) while Banker, Charnes and Cooper (1984) proposed a variable returns to scale (VRS) model.

Data envelopment analysis (DEA) has been used in study to analyze the efficiency of the microfinance institutions of Pakistan. An output-oriented model implies that the efficiency is estimated by the output of the MFI relative to the best practice level of practice for a given level of inputs. In order to specify the mathematical formulation of the output oriented, let us assume that we have K decision-making units (DMU)[2] using N inputs to produce M outputs. Inputs are denoted by x_{jk} (j = 1,……..,n) and the outputs are represented by y_{ik} (i=1,…….,m) for each MFI k (k=1,…….,K). The efficiency of DMU can be measured as (Coelli, 1998; Worthington, 1999; Shiu, 2002).

$$TE_K = \sum_{i=1}^{m} u_i y_{is} \Big/ \sum_{j=1}^{n} v_j x_{jk}$$

Where y_{ik} is the quantity of the ith output (**i.e: Gross Loan Portfolio and Number of Active Borrowers**)) produced by the kth DMU MFI, x_{js} is the quantity of jth input **(i.e: Total Assets and Number of Personal)** used by the nth MFI, and u_i and v_j are the output and input weights respectively. The DMU maximizes the efficiency ratio, TE_k, subject to

[2] Hereafter MFI will be represented by DMU.

$$\sum_{i=1}^{m} u_i y_{is} \Big/ \sum_{j=1}^{n} v_j x_{jk} \leq 1 \qquad \text{Where } v_j \geq 1$$

The above equation indicates that efficiency measures of a MFI cannot exceed one and the input and output weights are positive. The weights are selected in such a way that the MFI maximizes its own efficiency. To select optimal weights the following mathematical programming (output-oriented) is specified (Coelli, 1998; Wrothington, 1999; Shiu, 2002)

Max $T.E_k$

Sub to

$$\sum_{i=1}^{m} u_i y_{ir} - x_{jr} + w \leq 0 \qquad r=1,\ldots\ldots,K$$

$$v_j x_{jr} - \sum_{j=1}^{n} u_j x_{jk} \qquad \text{ui and } v_j \geq 0$$

Input oriented linear programming methods is used in order to obtain the minimize inputs. Therefore the following mathematical programming model is specified (Banker and Thrall, 1992; Coelli, 1998; Worthington, 1999; Shiu, 2002; Topuz et al, 2005).

Min $T.E_k$

Subject to $$\sum_{i=1}^{m} u_i y_{ir} - y_{iF} + w \geq 0 \qquad r=1\ldots K$$

$$x_{jr} - \sum_{j=1}^{n} u_j x_{jk} \geq 0 \qquad \text{ui and } v_j \geq 0$$

The above model shows CRS if w=0 and it changed into variable return to scale (VRS) if w is used unconstrained. In the first case it leads to technical efficiency (TE)

and in the second case we estimate pure technical efficiency (PTE). The TE scores obtained from a CRS DEA into two components, one due to scale inefficiency and one due to pure technical inefficiency. This may be done by conducting both a CRS and a VRS DEA upon the same data. If there is a difference in the two TE scores for a particular DMU, then this indicates that the DMU has scale inefficiency, and that the scale inefficiency can be calculated from the difference between the VRS TE scores and the CRS TE score. The CRS assumption is only appropriate when all DMU's are operating at on operating at an optimal scale. Banker, Chaarens and Cooper (1984) suggested an extension of the CRS DEA model to account for VRS situations. The use of the CRS specification when not all DMU's are operating at the optimal scale will result in measure of TE which is confounded by scale efficiency (SE).

The data used has been taken from Pakistan Microfinance Network for the year 2003 and 2009. The variables used to analyze the efficiency of these institutions are total assets, number of personnel, gross loan portfolio, and number of active borrowers. Total assets and no of personnel are considered as inputs and gross loan portfolio and number of active borrowers has been considered as output. Total assets and gross loan portfolio are taken in PKR (000).

1.4 EFFICIENCY ANALYSIS

The DEA approach refers to the ability of microfinance institutions to control costs and generate revenues and was developed by Charnes, Cooper and Rhoades (1978). The DEA model allows for the treatment of constant as well as variable return to scale. The efficiency of MFIs can be measured by selecting appropriate inputs and outputs in DEA based estimations is important to avoid biasing the frontier due to the inclusion of incorrect inputs and outputs and/or the omission of correct ones.

For the year 2003, there are 12 microfinance institutions providing microfinance services. Under constant return to scale assumption, three microfinance institutions on the efficiency frontier and four are on efficiency frontier under variable return to scale technology. Microfinance institutions that remain efficient under both assumptions are FMFBL, SUNGI, and TARAQEE. The first one is formal financial institution while the later two are NGO type institution providing microfinance services.

Average input oriented technical efficiency (TE), pure technical efficiency (PTE) and sale efficiency (SE) is 54.8%, 71.6% and 77.3% respectively. Average output oriented TE, PTE, and SE are 54.8%, 71.7%, and 78.4% respectively. In the first case input can be reduced by 28.4% without affecting the level of output and in the latter case output can be increased by 28.3% with the existing level of inputs. The pure scale inefficiency is greater than technical inefficiency in both the cases. It implies that most of the technical inefficiency of the firms is due to the scale inefficiency rather than pure technical inefficiency.

The results also shows that most of the microfinance institutions in Pakistan experienced economies of scale that is 42% MFIs under input oriented measures and 67% under output oriented measures are at the stage of decreasing return to scale. Under input oriented measures 33% MFIs are at the stage of increasing return to scale. However under OOM, only one MFI shows increasing return to scale.

Table 1

For the year 2009, out of 19 there are four micro finance institutions efficient under constant returns to scale and nine are efficient variable returns to scale. Micro finance institutions that are efficient under both constant return to scale and variable

return to scale are POMFB, RMFB, NMFB, and TF. The average mean value Of TE, PTE, and SE are 57.1%, 70.9%, and 84.3% respectively under IOM. This implies that input can be decreased by 29.1% without decreasing in output. The average TE, PTE, and SE scores under OOM are 57.1%, 73.4% and 78.8% respectively. In this case output can be increased by 26.6% with the existing level of inputs.

Further the results also show that there are 58% MFIs showing DRS and 15.7% microfinance institutions showing IRS under IOM. While under OOM there are 78% MFIs showing decreasing return to scale. However there is no microfinance institution that shows increasing return to scale under OOM. The results are given in the table below: **Table 2**

1.5 CONCLUSION

Microfinance is not widespread in Pakistan. The aggregate outreach from banks and other institutional sources is less than 5 percent of the potential market of nearly 6.3 million households. The microfinance sector in Pakistan is characterized by a narrow institutional base, limited retail capacity and little, if any, financial integration (CGAP). Commercial banks, in general, are neither structured nor geared to extend their microfinance exposure beyond experimental forays and development finance institutions (DFIs) do not target asset less poor. Non-government organizations (NGOs) have shown appreciation of the nature of microfinance demand emanating from the poor through effective targeting, participatory approaches, capacity building and general sensitivity

Microfinance Institutions (MFIs) are special financial institutions. They have both a social nature and a for-profit nature. Their performance has been traditionally measured by means of financial ratios. The objective of the study has been to estimate the efficiency of microfinance institutions in Pakistan.

The major contribution that the State Bank of Pakistan made was to provide a legal framework for the microfinance sector in 2001. The Finance Bill, 2006 by the Government of Pakistan added to the regulatory framework

While conducting DEA analysis for each year, it has been found that out of 12 there are three microfinance institutions that are on efficiency frontier in the year 2003 under both constant return to scale assumption and variable return to scale assumption. The Institutions are FMFBL, SUNGI, and TARAQEE. Three microfinance institutions are efficient under constant return to scale assumption and four are efficient under variable return to scale assumption. For the year 2009, out of 19 four microfinance institutions are efficient under constant return to scale and nine are efficient under variable return to scale assumption. Micro finance institutions that are efficient under both constant return to scale and variable return to scale are POMFB, RMFB, NMFB, and TF.

The data set shows that the SUNGI and TARAQEE foundation which was on efficient frontier in 2003 does not exist anymore in 2009. FMBL, TRDP, DAMEEN, SAFWCO, KASHF and OPP shows there is a decline in efficiency as compare to 2003. In case of scale efficiency the OPP is near to efficient frontier in 2007 as compare to 2003 only PRSP shows improvement in their efficiency scale as compare to 2003.

This will lead to conclude that microfinance should provide services on sustainable basis. A microfinance institution is said to be financially sustainable if it without the use of subsidies, grants, or other concessional resources, it can profitably provide finance to micro enterprises on an acceptable scale.

However, many gaps remain in Pakistan's microfinance sector. Competition in the market is somewhat limited: there are very few microfinance players in Pakistan that have achieved a size sufficient to benefit from economies of scale. The regulatory constraints of the State Bank of Pakistan, which prohibit microfinance banks from pledging security or sourcing foreign currency loans, are the biggest obstacle to the supply of microfinance funding. Efforts are underway to close the funding gap. The results have an important policy implication that inefficiencies in Pakistan are mainly of technical nature. There is need to enhance the managerial skills and improve technology. This could be done by imparting training. Lagging countries like Pakistan require special training initiatives in the field of microfinance management for efficient operation on sustainable basis.

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Table 1: Efficiency Analysis of MFIs for the Year 2003

MFI	INPUT ORIENTED				OUTPUT ORIENTED			
	TE	**PTE**	**S.E**		**TE**	**PTE**	**S.E**	
BOK	0.137	0.200	0.687	IRS	0.137	0.270	0.507	DRS
FMFBL	1.000	1.000	1.000	-	1.000	1.000	1.000	-
KASHF	0.326	0.768	0.425	DRS	0.326	0.852	0.383	DRS
NRSP	0.356	1.000	0.356	DRS	0.356	1.000	0.356	DRS
PRSP	0.343	0.889	0.386	DRS	0.343	0.926	0.371	DRS
SRSP	0.588	0.591	0.994	IRS	0.588	0.590	0.996	DRS
TRDP	0.232	0.239	0.969	IRS	0.232	0.237	0.980	DRS
DAMEEN	0.658	0.733	0.898	DRS	0.658	0.737	0.893	DRS
SUNGI	1.000	1.000	1.000	-	1.000	1.000	1.000	-
SAFWCO	0.613	0.646	0.949	DRS	0.613	0.662	0.926	DRS
TARAQEE	1.000	1.000	1.000	-	1.000	1.000	1.000	-
OPP	0.323	0.524	0.615	IRS	0.323	0.326	0.991	IRS
MEAN	**0.548**	**0.716**	**0.773**		**0.548**	**0.717**	**0.784**	

Table 2: Efficiency analysis for the year 2009

MFI	INPUT ORIENTED				OUTPUT ORIENTED			
	TE	**PTE**	**S.E**		**TE**	**PTE**	**S.E**	
BOK	0.489	1.000	0.489	DRS	0.489	1.000	0.489	DRS
FMFBL	0.518	1.000	0.518	DRS	0.518	1.000	0.518	DRS
KASHAF	0.283	0.648	0.436	DRS	0.283	0.743	0.381	DRS
NRSP	0.338	1.000	0.338	DRS	0.338	1.000	0.338	DRS
PRSP	0.759	1.000	0.759	DRS	0.759	1.000	0.759	DRS
SRSP	0.650	0.662	0.981	IRS	0.650	0.660	0.984	DRS
TRDP	0.197	0.203	0.974	DRS	0.197	0.256	0.772	DRS
DAMEEN	0.356	0.388	0.917	DRS	0.356	0.462	0.770	DRS
SAFWCO	0.453	0.466	0.973	DRS	0.453	0.504	0.900	DRS
OPP	0.239	0.240	0.997	DRS	0.239	0.275	0.870	DRS
TMFB	0.814	1.000	0.814	DRS	0.814	1.000	0.814	DRS
POMFB	1.000	1.000	1.000	-	1.000	1.000	1.000	-
RMFB	1.000	1.000	1.000	-	1.000	1.000	1.000	-
NMFB	1.000	1.000	1.000	-	1.000	1.000	1.000	-
CSC	0.366	0.366	1.000	-	0.366	0.414	0.883	DRS
AKHUWAT	0.608	0.613	0.992	IRS	0.608	0.624	0.974	DRS
ASASAH	0.557	0.665	0.837	DRS	0.557	0.722	0.772	DRS
TF	1.000	1.000	1.000	-	1.000	1.000	1.000	-
ORIX	0.217	0.217	0.997	IRS	0.217	0.287	0.754	DRS
MEAN	**0.571**	**0.709**	**0.843**		**0.517**	**0.734**	**0.788**	