

# Assessment of Operational Efficiency of MFBs in Pakistan

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## Abstract

In this study, I assessed the operational performance of nine microfinance banks operating in Pakistan. The period of study was from 2019 to 2023. Data was taken from published financial statements of these banks. I took Number of Employees and Total Assets as inputs and Financial Revenue and Gross Loan Portfolio as outputs. For the purpose of measurement of operational efficiency, Data Envelopment Analysis (DEA) Technique is used. As per results, on average of three years, Khushhali Bank is considered as the better performing bank than other banks. Apna, Finca, First Microfinance, NRSP Bank, and Tameer Bank have also better performance scores. Waseela, Pak Oman and New Micro did not perform well operationally. For the purpose to achieve better operational efficiency, these banks need to make their decision-making process better and use their inputs efficiently.

**Keywords:** MFI, MFB, DEA, inputs, outputs, and poverty.

Poverty is one of the most crucial and top most problem in developing countries (Durrani et al., 2011). Micro financing is considered a tool through which access to finance is provided to poor people to make them able to start a small size economic activity which ultimately help them to get out from vicious circle of poverty ((Haq et al., 2010). This concept was introduced at institutional level in Grameen bank of Bangladesh (Khan, 2010). Microfinance includes range of services like micro credit, insurance, money transfer and deposits which are provided to poor people (Robinson, 2003). These services are being provided by Microfinance Banks, Microfinance Institutions and NGOs (Louis & Baesens, 2013). Pakistan is also facing this evil of poverty (Shirazi & Khan, 2009). Almost 40% of the population live below poverty line which is very alarming and requiring an extensive and aggressive measures for poverty alleviation. For the purpose of providing financing to poor people in 1980s two programs, Orangi Pilot Project and Agha Khan rural Support Program were established (Mustafa, Gill, et al., 2000). In 1990s a country wide program called National Rural Support Programs (NRSPs) was also established (Ayub, 2013).

During 90s many NGOs were established to provide microfinance facilities to poor people (Mustafa, Gill, et al., 2000). Kashf Foundation was established in 1996 which started the provision of micro credit facility all over Pakistan (Muhammad, 2010). Pakistan Poverty Alleviation Fund was established in 2000 by Government of Pakistan (Shirazi & Khan, 2009). Further realizing the practical advantage of microfinance, in the year 2000 Government of Pakistan launched microfinance sector development program (MSDP). Khushhali Bank is the first microfinance bank established in Pakistan in 2000 (Rauf & Mahmood, 2009). Currently almost 45 formal microfinance banks/institutions are operating in Pakistan, out of which 36 are Microfinance Institutions, 10 are Microfinance banks and 6 are Rural Support Programs (Pakistan Microfinance Review, 2015). These include many institutions and NGOs which give loan to the

poor people on zero interest basis and on personal guarantee. These institutions are registered under Microfinance Institutions Ordinance 2001, Non-Banking Finance Companies and Notified Entities Regulations 2008 and Societies Registration Act 1860. These are regulated by State Bank of Pakistan, Securities and Exchange Commission of Pakistan and other Government Departments. In addition to these formal institutions there are also many informal traders and lenders which give consumer and commercial loans to poor people on interest and non-interest basis (Pakistan Microfinance Review, 2015). Some of the data is reproduced here from which we can understand the financial performance and outreach of Microfinance Institutions.

**Table 1:** Data related to Microfinance in Pakistan

| Year                                          | 2019   | 2020   | 2021   | 2022   | 2023   |
|-----------------------------------------------|--------|--------|--------|--------|--------|
| <b>Active Borrowers</b><br>(in millions)      | 1.7    | 2      | 2.4    | 2.8    | 3.6    |
| <b>Gross Loan Portfolio</b><br>(PKR billions) | 24.8   | 33.1   | 46.6   | 61.1   | 90.2   |
| <b>Active Women Borrowers</b> (in millions)   | 0.9    | 1.3    | 1.4    | 1.6    | 2      |
| <b>Branches</b>                               | 1,550  | 1,460  | 1,606  | 1,747  | 2,754  |
| <b>Total Staff</b>                            | 14,202 | 14,648 | 17,456 | 19,881 | 25,560 |
| <b>Total Assets</b><br>(PKR billions)         | 48.6   | 61.9   | 81.5   | 100.7  | 145.1  |
| <b>Deposits</b><br>(PKR billions)             | 13.9   | 20.8   | 32.9   | 42.7   | 60     |
| <b>Total Revenue</b><br>(PKR billions)        | 10.1   | 12.5   | 17.3   | 24.3   | 32.8   |

Source: Pakistan Microfinance Review, 2023

A microfinance institution, whether it is profit oriented or its basic purpose is poverty alleviation, its main operation and target is to provide micro credits to poor people (Ajmal & Qureshi, 2011). Its performance depends upon how much it is efficient to attain this objective.

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In an ideal way all these microfinance institutions should work efficiently. If they would work in this way, then they would be more able to actively contribute for the cause of poverty alleviation. But in reality, they are not equally competent to achieve a high efficiency scale. A better assessment of their efficiency can help them to enhance their performance and overcome inefficiencies. In this study I focused on the assessment of operational efficiency of microfinance banks in Pakistan. I also compared efficiency of these microfinance banks with each other. Many researchers tried to investigate the efficiency of MFIs all over the world to assess the performance of these MFIs. Some of these researches are discussed in the below section.

### **Literature Review**

Pal (2010) studied the efficiency of MFIs in India by using Data Envelopment Analysis (DEA) technique for the period of 2007-2009. He selected 39 microfinance institutions for this purpose and their results identified efficiencies and inefficiencies of these MFIs. Zerai and Rani (2012) examined the technical efficiency of microfinance institutions in Ethiopia for the period 2004-09 and they used Stochastic Frontier Analysis (SFA) technique for this purpose. Results showed the overall average technical efficiency of these institutions 71.72% and they recommended to device strategies and adopt better practices to make efficiency better.

Kipsha and Zhang (2013) also studied the efficiency of MFIs in East African Countries. For this purpose, they selected 47 MFIs from these countries and data from 2008 to 2011 was used in this study. They used unbalanced panel regression analysis technique and on the basis of results they recommended that these institutions should focus on financial viability and reduce their dependence on subsidies. Tahir and Tahrim (2013) studied the efficiency of five ASEAN countries for the period of 2008 to 2010. They used Data Envelopment Analysis Technique and different results were shown by the researchers regarding efficiency. They recommended to control the inefficient usage of inputs and to make decision making better to improve technical efficiency. There is another study by Tahir and Tahrim (2013) on efficiency analysis of Cambodian microfinance institutions during the period 2008-2011.

In addition to DEA, they also used Malmquist Productivity Index (MPI) and found 92% overall efficiency of these institutions which was very good, but it should be improved. Girabi and Mwakaje (2013) investigated the impact of microfinance on the productivity of farmers in Tanzania. Results are based on 98 respondents which includes beneficiaries and non-beneficiaries. Multiple Regression Analysis technique was used in this study and as per results beneficiaries of micro credits were found to be more productive than non-beneficiaries. Reasons of these results were the use of advanced technology and input and better access to the market. Ferdousi (2013) did a comparative study of MFIs operating in India, Bangladesh and China by using DEA technique and for this purpose he selected 42 MFIs from China, 34 from Bangladesh and 89 from India. Their results showed that under constant return to technology, MFIs of India and China are better than MFIs of Bangladesh and under variable return to scale technology, MFIs of Bangladesh are performing better.

Singh, Goyal and Sharma, (2013) studied the efficiency of MFIs in India using DEA technique and data from 2005-2009 of 41 MFIs from India was used in this study. Researchers used both input and output oriented approaches in their study and out of total 41, only two MFIs are considered as efficient under CRS model but under VRS model only three MFIs are considered as efficient. Ashraf, Hassan and Hippler (2014) analyzed the performance microfinance sector of 33-member countries of OIC and 50 nonmember countries of OIC. Performance was measured in terms of outreach, profitability and loan recovery and data of 754 MFIs from 2003 to 2009 was used in study. DEA and SFA techniques were used for efficiency analysis. Results showed the positive impact of country's GDP on outreach but age of a country has no significant impact on outreach.

Shirazi and Khan (2009) studied the impact microfinance provided by Pakistan Poverty Alleviation Fund on poverty alleviation and they compared poverty level of 2003 with poverty level of 2004. As per results of this study, poverty was reduced by 3.05% due to micro credit facility during the period under observation. Rauf and Mahmood (2009) studied the outreach of microfinance in Pakistan and for this purpose they developed six dimensions of outreach. Period of study was from 2004 to 2007 and results of this research showed that the share of MFIs was becoming more in figure than share of MFBs.

Durrani et al (2011) investigated the impact of microfinance on a district Dera Ismail Khan in Pakistan and they received filled questionnaire from 68 borrowers for this purpose. According to results of this study 80% of the respondents gave response that microfinance was very helpful in poverty alleviation. Noreen, Imran, Zaheer and Saif (2011) studied the impact of microfinance on poverty alleviation by taking the 384 samples out of total beneficiaries of four microfinance institutions of Pakistan and they found that microfinance helped these people to make their living better. Latif et al (2011) assessed the impact of microfinance on poverty alleviation in Pakistan and for this purpose researchers collected data from 400 borrowers of microcredit and results showed that 40% of these respondents established their own small-scale businesses.

Shirazi (2012) studied the economic impact of Pakistan Poverty Alleviation Fund and he found marginal positive impact on the economic condition of the borrowers. Ayub (2013) studied the impact of microfinance in Bahawalpur district where major microcredit provider was NRSP. This study was based on questionnaire and interviews and as per results microfinance facility helped people to make standard of living better. Farooq and Khan (2014) compared the efficiency of Pakistani Islamic and conventional microfinance institutions and two Islamic and two conventional MFIs were selected for study in this research. In this study they used different financial and other ratios for the purpose of this comparison for the period of 2005 to 2012. They concluded the Islamic microfinance institutions as financially sound and effective in achieving their goals.

Another study on this subject by Mahmood, Mahmood and Khan (2014) in which they compared efficiency of nine conventional and three Islamic microfinance institutions for the period 2008-11 and they found Islamic microfinance institutions more efficient

than conventional institutions. Ghalib, Malki and Imai (2015) studied the impact of microfinance by interviewing borrower and non-borrower households of rural parts of Punjab, Pakistan. Period of study was 2008-2009 and researchers found a positive impact of microfinance on poverty reduction.

### Data and Methodology

In this study, Data Envelopment Analysis (DEA) technique which is a non-parametric technique and widely used to measure the efficiency of the organizations (Tahir & Tahrir, 2013; Ferdousi, 2013). In DEA we can do analysis of efficiency by using multiple variables of input and output (Haq et al., 2010). This technique was firstly introduced by Charnes, Cooper and Rhodes (1978) and first time applied in banking sector by Sherman and Gold (1985). In this technique, organizations are considered as DMUs (Decision Making Units) and relative efficiency scores of these DMUs are measured while converting inputs into outputs (Pal, 2010). On the basis of orientation, DEA models are divided into two categories. First category is input oriented in which we have the objective to maintain same level of output after minimizing the input (Ahmed & Ahmad, 2008). In the second category, which is output oriented category we try to increase our output by maintaining the same level of inputs. In this study I used input orientation and tried to measure the efficiency of inputs in these MFBs while assuming the same level of output.

**Table 2:** Categories of variables used in study.

| Category  | Social and Financial Indicators used                 |
|-----------|------------------------------------------------------|
| 1-Inputs  | 1- Number of Employees<br>2- Total assets            |
| 2-Outputs | 1- Gross Portfolio Balance<br>2- Number of borrowers |

### Results

In the below table we measured the efficiency of all nine Microfinance Banks of Pakistan. In the first column, overall technical efficiency calculated. Second Colum represents pure technical efficiency and in third colum, scale efficiency is presented. We can compare the efficiency scores of all these banks by using the data.

**Table 3:** Average results of input-oriented DEA model

| MBFs        | TE Score | PTE Score | SE Score |
|-------------|----------|-----------|----------|
| Apna        | 0.6550   | 0.9200    | 0.7287   |
| Finca       | 0.9413   | 0.9670    | 0.9717   |
| First Micro | 0.8620   | 0.9023    | 0.9540   |
| Khushali    | 1.0000   | 1.0000    | 1.0000   |
| Waeela      | 0.4253   | 0.7053    | 0.6203   |
| NRSP        | 0.9417   | 0.9570    | 0.9827   |
| PakOman     | 0.5850   | 1.0000    | 0.5850   |
| Tameer      | 0.9893   | 0.9893    | 0.9790   |
| New Micro   | 0.4587   | 0.8453    | 0.5573   |

### Discussion on Results

Technical Efficiency (TE) represents the scores we can understand that how efficiently a DMU is using its inputs to create output. Pure Technical Efficiency (PTE) shows the efficient usage of resources by the managers of DMUs. It is an index through which inefficiencies of management can be captured the without involving the scale efficiencies (Kumar, S., & Gulati, R., 2008).

Scale Efficiency (SE) is related to the use and exploitation of the economies of scale by managers of DMUs.

**Table 4:** Overall technical efficiency is  $TE = PTE \times SE$ .

| Years       | 2021 |      |      | 2022 |      |      | 2023 |      |      |
|-------------|------|------|------|------|------|------|------|------|------|
| MFBs        | TE   | PTE  | SE   | TE   | PTE  | SE   | TE   | PTE  | SE   |
| Apna        | 0.55 | 1    | 0.55 | 0.7  | 1    | 0.7  | 0.7  | 0.76 | 0.92 |
| Finca       | 0.82 | 0.9  | 0.91 | 1    | 1    | 1    | 1    | 1    | 1    |
| First Micro | 0.88 | 0.91 | 0.97 | 0.96 | 1    | 0.96 | 0.73 | 0.79 | 0.92 |
| Khushali    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |
| Waeela      | 0.39 | 0.86 | 0.46 | 0.45 | 0.63 | 0.71 | 0.42 | 0.62 | 0.68 |
| NRSP        | 0.99 | 1    | 0.99 | 0.82 | 0.87 | 0.95 | 1    | 1    | 1    |
| PakOman     | 0.53 | 1    | 0.53 | 0.55 | 1    | 0.55 | 0.66 | 1    | 0.66 |
| Tameer      | 1    | 1    | 1    | 1    | 1    | 1    | 0.96 | 0.96 | 0.93 |
| New Micro   | 0.34 | 1    | 0.34 | 0.4  | 0.68 | 0.59 | 0.62 | 0.85 | 0.73 |

Scores of all above efficiency measures are between one and zero. Score one is considered as best and this score is considered as relatively inefficient as it is below one. By using DEA technique, we can set target values of input or output for poor performing units. In terms of all three efficiencies we can see the highest average score of Khushal Bank. It means relatively it is operating with best management decisions and using economies of scale for this better performance.

In case of Technical Efficiency, after Khushhali Bank, Tameer Microfinance is considered as second better and NRSP is considered as third better bank. The worst score is of Waeela Microfinance, its score is 0.4253, means that Waseela can produce same level of output by decreasing 57.47% of input. In terms of Pure Technical Efficiency, Tameer is also considered as second better Finca got third better score. Waseela Microfinance again got worst score of pure technical efficiency. Waseela,s management can get same output by using 29.47% less inputs it shows the inefficiencies of management. If we see scale efficiency NRSP is considered as second better and Tameer is considered as third better bank. The worst score is of Pak Oman. It means Pak Oman is almost 41.5% (1-0.5850) percent inefficient to use scale efficiencies. If we would look into the change of the scores from 2021 to 2022 and from 2022 to 2023 overall these MBFs improved their efficiencies in both pure technical efficiency and scale efficiency. SE score of New Microfinance was 0.347 in 2021 which was worst among all MFBs, and it was improved in 2022 to 0.686 and further improved in 2023 to 0.732. Same was in the case of Apna Bank, its score also increased from 0.555 in 2013 to 0.709 in 2022 and 0.922 in 2023. Finca and Khushhali Bank maintained their better efficiency scores over the years. There was a slight decrease in efficiency scores of First microfinance and Tameer Bank during the period. First microfinance and Pak Oman also made their scores better over the years. There may be many reasons for inefficiencies like poor human resources, poor decision making, inappropriate product mix or terms and conditions attached thereto. Inefficient marketing strategies are also reasons for poor performance. Strategies for making organization more efficient can lead to a better competition which ultimately help in the cause of poverty reduction in the country.

### Conclusion

In this study researcher analyzed the efficiency of Microfinance banks and through above results it is evident that many of them are not working at their best efficiency level. Difference in efficiency scores of these banks can also be analyzed. It shows that there is so much potential still exists to improve the efficiency of these

MFBs. There is need of detailed analysis of reasons in these MFBs for this poor level of efficiencies. If they would overcome their inefficiencies, they would be more able to provide financing services to the poor people and ultimately can contribute to the cause of poverty alleviation our country. They can learn from the experiences of each other for better performance.

For further contribution to research in this area, we can do other studies by putting different inputs or outputs to see the efficiency related to those inputs/outputs. Same studies can also be performed on NGOs and other microfinance institutions.

## References

- Khan, A. A. (2010). Analysis of critical factors of microfinance institutions of Pakistan. *Paradigms: A Research Journal of Commerce, Economics and Social Sciences*, 4(1), 24-47.
- Ahmed, T., & Ahmad, W. (2008). Analysis of technical efficiency in banking sector with respect to its inputs and outputs. *International Review of Business Research Papers*, 4(1), 11-22.
- Aajmal, H., & Qureshi, T. (2011). Micro-Finance and Sustainable Development: Evidence from Pakistan. *Paradigms*, 5, 88-113.
- Ashraf, A., Kabir Hassan, M., & J. Hippler III, W. (2014). Performance of microfinance institutions in Muslim countries. *Humanomics*, 30(2), 162-182.
- Durrani, M. K. K., Usman, A., Malik, M. I., & Shafiq, A. (2011). Role of micro finance in reducing poverty. A look at social and economic factors. *International Journal of Business and Social Science*, 2(21).
- Ferdousi, F. (2013, December). Performance of Microfinance Institutions in Asia: DEA based efficiency analysis. In *2013 International Conference on the Modern Development of Humanities and Social Science* (pp. 91-94). Atlantis Press.
- Ghalib, A. K., Malki, I., & Imai, K. S. (2015). Microfinance and household poverty reduction: Empirical evidence from rural Pakistan. *Oxford Development Studies*, 43(1), 84-104.
- Haq, M., Skully, M., & Pathan, S. (2010). Efficiency of microfinance institutions: A data envelopment analysis. *Asia-Pacific Financial Markets*, 17, 63-97.
- Kumar, S., & Gulati, R. (2008). An examination of technical, pure technical, and scale efficiencies in Indian public sector banks using data envelopment analysis. *Eurasian Journal of business and Economics*, 1(2), 33-69.
- Kipsha, E. F., & Zhang, X. (2013). Sustainability, profitability and outreach tradeoffs: evidences from microfinance institutions in East Africa. *European Journal of Business and Management*, 5(8).
- Latif, A., Nazar, M. S., Mehmood, T., Shaikh, F. M., & Shah, A. A. (2011). Sustainability of micro credit system in Pakistan and its impact on poverty alleviation. *Journal of Sustainable Development*, 4(4), 160.
- Muhammad, S. D. (2010). Microfinance challenges and opportunities in Pakistan. *European Journal of Social Sciences*, 14(1), 88.
- Mahmood, H. Z., Khan, R., Mehmood, B., & Khan, K. (2014). Efficiency analysis of conventional vs. Islamic microfinance: An appraisal for sustainability in Pakistan. *International Journal of Empirical Finance*, 3(4), 192-201.
- Noreen, U., Imran, R., Zaheer, A., & Saif, M. I. (2011). Impact of microfinance on poverty: A case of Pakistan. *World Applied Sciences Journal*, 12(6), 877-883.
- Pal, D. (2010). Measuring technical efficiency of microfinance institutions in India. *Indian Journal of Agricultural Economics*, 65(4).
- Shirazi, N. S. (2012). Targeting and socio-economic impact of microfinance: A case study of Pakistan. *Islamic Economic Studies*, 20(2), 1-28.
- Shirazi, N. S., & Khan, A. U. (2009). Role of Pakistan poverty alleviation fund's micro credit in poverty alleviation: A case of Pakistan. *Pakistan Economic and Social Review*, 215-228.
- Tahir, I. M., & Che Tahrim, S. N. (2013). Efficiency Analysis of Microfinance Institutions in ASEAN: A DEA Approach. *Business Management Dynamics*, 3(4).
- Zerai, B., & Rani, L. (2012). Technical efficiency and its determinants of micro finance institutions in Ethiopia: A stochastic frontier approach. *African Journal of Accounting, Economics, Finance and Banking Research*, 8(8),