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## Is Cooperative Microfinance<sup>1</sup> a Myth or Reality? An Economic Analysis of the Welfare of Marginalized Segments

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### Abstract

The present study was conducted to investigate the impact of the Islamic Cooperative Microfinance program (*Murabah'ah*<sup>2</sup>) on the standard of life of the poor and the marginalized segments of the society. The Islamic microfinance program of the Islamic Relief-Pakistan was taken as a model of cooperative microfinance. A sample of 100 clients along with a control group of 25 respondents was selected randomly so as to avoid selection bias. The socio-economic impact of the said programs on the poor marginalized groups was evaluated by two Binary logistic models. The first model is based on respondents' perception regarding the overall welfare, while the second model is based on standardized consumption expenditure, used as a proxy for welfare in quantitative term. Findings of the study suggest that the Cooperative microfinance program has a positive impact on the overall welfare of the clients. This is also reflected in the empirical investigation which reveals that standardized consumption expenditure as a proxy for well-being (welfare) of the clients represents a more appropriate picture as compared to the welfare model based on respondent perceptions only. The results suggest that the respondents who avail the facility of the cooperative microfinance are approximately 10 times more likely to increase their welfare as compared to non-clients. We propose that by expanding the facility of the cooperative microfinance by sensitizing the poor and the marginalized segments regarding this facility can effectively alleviate the absolute level of poverty, and also has the required potential to increase the social wellbeing of these people.

*Keywords:* Cooperative microfinance; Islamic microfinance; marginalized segments;

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## Introduction

To alleviate poverty in most developing countries, financing small and micro enterprises is considered a “new paradigm” for bringing about Development and eradicating absolute poverty. Small enterprises have received growing attention at both national and international levels during the last decade.

In Cooperative Micro Financing, we are essentially looking at a “double bottom line”— social gains and commercial success. Conventional Micro financing setup is somewhat also lying on the same concept however Cooperative financial system naturally focus on welfare aspect. The welfare may be in the form of no penalty in case of genuine late payment reason, risk sharing, profit sharing according to the percentage to support the ups and downs of business, asset based/backed transactions to overcome interest or *riba*, settlement in the form of goods; whether it be hardcore welfare aspects of *qard-e-Hassan* (interest free loan), *sadaqah*, *zakah*, Charity – have far more reaching and implicitly impacting positive role in each and every regard of life. Cooperative Microfinance Programs (CMFPs) are the new experiments in this field. The growing magnitude of these programs has attracted many countries of the world. CMFPs have a general acceptability in Muslims communities in particular, and non-Muslim communities in general since the principles of financing of these organizations are neither contradictory to the Islamic Shariah nor to any divine religion’s principles or norms, values and traditions of any society.

Furthermore, the profit and loss of business are shared by the financier and the investor, which protects the debtor and makes him confident to invest freely in Shariah-based activities. Conventional microfinance Organizations (CMFOs) do not provide credit to extremely poor and actual marginalized groups of the society because they are generally considered defaulter. While CMFOs facilitate such groups from *Zakat* and *Waqf* (Charity) funds. CMFPs can better serve the community and make sure the participation of all vulnerable groups. Islamic relief the popular NGO involved in Cooperative Micro financing programs over in Pakistan uses group lending methodology, where no physical collateral is required. Social pressure is used as an alternative to physical collateral.

Different studies have been conducted against CMFPs and in favor of CMFPs. Due to lack of fund mobilization and high administrative cost, most CMFOs are not economically viable. Bennett (1998, p. 116) reports that administrative cost

of five CMFOs in South Asia is in the range of 24 percent to more than 400 percent of per dollar lent. Reed and Befus (1994, p. 190) study five CnMFOs and find average return on assets for three of these to be below 2 percent, one at 3.5 percent and the other at 14.6 percent. The type of activity for which the funds are used may also be low productivity activities. Furthermore, CMFOs target women and some studies find that rate of return on credit given to women is low as they engage in relatively low productivity activities (Hossain 1987, Rahman and Khandker 1994). Osmani (1989) points out that one factor that forces some households out of microcredit schemes is that the resulting increase in the supply of output causes the rate of return on loans to be lower than its cost of borrowing.

Ditcher (1996), Hulme and Mosley (1996a), and Montgomery (1996) report that microfinance institutions do not serve the poorest who are either not given loans or drop out of the credit schemes. The declared objective of targeting women as recipients of funds is to empower them (Khandker 1998 and Rahman 1999). Khandker (1998), however, finds that financing women rarely empowers women. Rahman (1999) further reports that targeting the women as beneficiaries of credit by CMFOs creates tensions within the household and increases frustration and violence in the family. Rahman (1996 a, b, 1999) discovers that the Grameen Bank borrowers often take loans from other sources to pay installments and are trapped in a spiraling debt cycle. Sadeq (2004) in Bangladesh on conventional CMFOs and Cooperative Micro finance he found that it was due to negative effects of social as well as economic nature of microfinance that attracted the critics to provide alternatives, which will be free from the negative effects. Some of them have come up with faith based micro financial services, and are categorized as Cooperative Microfinance Programs (CMFPs). They and their services are different from their counterparts in number of ways. First, the CMFOs provide micro financial products, which are free from interest. Their products are based on mark-up pricing, profit sharing and so on. Second, the IMFOs provide micro financial services to both men and women, without any differential treatment. Mannan (2007) in Bangladesh he found that CnMFPs are based on the implicit assumptions of social class conflict, so they tend to empower women, whereas CMFPs intends to empower family by ensuring joint liability of husband and wife in case of lending to family or groups of families. Ahmad (2002) believes that Cooperative microfinance can provide greater benefit to clients through non-interest based financing and reliance on funds from awqaf as a substitute to expensive external fund.

A majority of the authors have supported the idea of Cooperative microfinance on theoretical grounds. This paper attempts to use quantitative data, obtained from the respondents, in the intervention area (clients and non-client) of Islamic Relief Pakistan.

### **Method and Material**

The notion of wellbeing is something parallel and opposite to poverty. Qualitatively, it may be reflected by the perception (or feeling) of the respondent that his life style has been improved in general after getting support from the microfinance program. It is denoted by the odd ratio 'W', which may assume the form of a binary variable. The parameter ' $\lambda$ ' shows the probability that wellbeing of the respondent has increased overtime. In case an individual feels that his wellbeing has improved after interaction with the program concerned, then the dependent variable will be coded '1' and otherwise '0' if he feels no change otherwise.

Alternatively, this notion can be quantified and consumption expenditure may be considered as proxy for the level of wellbeing. We may assume an average MPC for the population of respondents and compute a benchmark level of consumption expenditure sufficient enough to fulfill the basic needs. The variable 'W' then denotes the odd ratio of the probability that monthly consumption of an individual is equal to or greater than the benchmark level to the probability that his earning is less than the said level. This ratio will help us in evaluating the impact of intervention of the microfinance programs on wellbeing of the clients. There is no change in the rest of the structure.

Microfinance programs are expected to promote well-being of the clients or improvement in the standard of their life. Evaluation of the impact of microfinance programs on the welfare or wellbeing of the clients is not so easy and straight forward. The notion of welfare or wellbeing is itself very dubious, and involves personal judgment. Although, the level of income may be considered as an index of wellbeing and if the position of an individual shifts above the poverty line as a result of support from microfinance programs, his welfare is supposed to be enhanced. However, we have tried to confirm the results by introducing a binary logistic model.

$$W_i = \delta_0 + \delta_1 D_c + \delta_2 D_s + \delta_3 D_m + \delta_4 D_e + \delta_5 D_a + u_i$$

$W_i = \frac{\lambda_i}{1 - \lambda_i}$  is the **odds ratio**, i-e the ratio of the probability that the wellbeing

of the individual has increased to the probability that he does not feel so.

$\lambda_i$  = probability that wellbeing of the individual (respondent) has increased.

$D_c$  is the dummy variable used to show clients and non-clients; assuming values of 1 or 0.

$D_s$  is the dummy used for individuals having other sources of income, assuming values of 1 or 0.

$D_m$  is the dummy used to show duration of membership of clients, assuming values of 1 or 0.

$D_e$  is the dummy used for educational level of respondents, such that:  $D_e = 1$  if the respondent has at least 10 years of schooling (SSC) and  $D_e = 0$  if otherwise.

$D_a$  is the dummy used for the age or maturity of respondents, such that:  $D_a = 1$  if an individual is aged 40 years or more and  $D_a = 0$  if otherwise.

Qualitatively, wellbeing may be reflected by the perception (or feeling) of the individual. Thus, the binary variable  $W_i$  may be assigned some value if the respondent reveals the feelings that his/her life style has been improved in general after getting support from the microfinance program. The parameter ' $\lambda$ ' shows the probability that wellbeing of the respondent has increased overtime. We asked a question on this aspect and the responses recorded in the survey.

Many studies on impact assessment of microfinance programs have used this qualitative index for wellbeing. However, we have quantified this index and used household consumption expenditure as proxy for welfare. Assuming a simple Keynesian consumption function:  $C = f(Y)$ , we have estimated the aggregate consumption function for the data set, comprising 125 observations in the intervention area of Islamic Relief :  $C_i = b_0 + b_1 Y_i + u_i$ .

Using the poverty line of Rs. 5100/-, the benchmark level of consumption expenditure just sufficient to satisfy the minimum basic needs will be Rs. 4039/- or Rs. 4040/- approx. per month. It is now straight forward to compute the indicator of wellbeing 'W' where the parameter ' $\lambda$ ' shows the probability that consumption of the individual respondent is at least equal to this benchmark. For the sake of comparison, we follow both qualitative and quantitative approaches.

## Results and Discussion

Under this section we have estimated the logistic model qualitatively and quantitatively.

### Impact on the Wellbeing of Clients (IR-Pak)

- i. Qualitative approach: Based on the perceptions of the respondents, the dependent variable 'W<sub>i</sub>' is distributed in two categories based on the values of the parameter ' $\lambda$ '. The results are depicted in Table- 1

**Table 1:**

Logistic Regression (IR-Pak)-Qualitative

Variable	Coefficient	Std. Error	z-Statistics	Odd ratio	Prob.
C	-1.452387	0.556692	-2.608960	0.234011	0.00091
D <sub>c</sub>	2.487291	0.682225	3.645851	12.02865	0.0003*
D <sub>a</sub>	3.121532	1.156895	2.698198	22.68110	0.0070*
D <sub>e</sub>	0.725468	0.506604	1.432023	2.065698	0.15210
D <sub>m</sub>	0.916542	0.505309	1.813825	2.500628	0.0597**
LR statistic (4 df)	37.32285	McFadden R-squared			0.438154
Probability(LR stat)	1.55E-07				
Obs with Dep=0	40	Total observations			125
Obs with Dep=1	85				

\*Significant at 1%, \*\*Significant at 5%

The above table shows that if the dummy variable (D<sub>c</sub>) increases by one unit (if an individual avails the facility of microfinance), then the estimated logit will increase by 2.4873 units. This suggests that the probability in favor of an increase in wellbeing will increase by  $e^{2.4872} \approx 12.0275$  times. Similar interpretation can be given for other dummy variables used for age, education level and duration of membership. All the coefficients carry the expected positive signs. However, the impact of education on the level of welfare has turned insignificant.

- ii. Quantitative approach: As stated above, the dependent variable is based on the level of consumption expenditure and thereby quantified. The parameter

' $\lambda$ ' shows the probability that consumption expenditure of the respondent is above the benchmark level. The results are depicted in Table- 2

**Table 2:**

Logistic Regression (IR-PAK)- Quantitative

Variable	Coefficient	Std. Error	z-Statistics	Odd Ratio	Probability
C	2.352477	0.556692	4.225810	10.23401	0.00910
D <sub>c</sub>	2.712291	0.682225	3.974451	15.06370	0.0003*
D <sub>s</sub>	2.156050	0.528200	4.083333	8.63698	0.0002*
D <sub>m</sub>	1.156352	0.505309	1.288320	3.17815	0.0538**
D <sub>a</sub>	2.39532	1.156895	1.828798	10.97171	0.0002*
D <sub>e</sub>	0.525468	0.506604	1.037123	1.69124	0.0513**
LR statistic (4 df)	41.32285		McFadden R-squared	0.4154	
Probability(LR stat)	1.67E-07				
Obs with Dep=0	40		Total Observations	125	
Obs with Dep=1	85				

\*Significant at 1%, \*\*Significant at 5%

In the above model, the dependent variable  $W_i = \lambda_i / 1 - \lambda_i$  is odd ratio showing the probability in favour of average consumption of Rs: 4036 per month or above. If the consumption of an individual is above this level, it may be presumed that his/her wellbeing has increased. D<sub>c</sub> is dummy variable used to show that the respondent concerned is clients of the microfinance organization. The results indicate that if D<sub>c</sub> increases by one unit (if an individual avails the facility of microfinance), then estimated logit will increase by 2.7123 units. In other words, the probability in favor of an increase in wellbeing will increase by  $e^{2.7123} \approx 15.06388$  times. Likewise the variable D<sub>s</sub> has been used as dummy for other sources of income. This suggests that if an individual avails the facility of microfinance and he/she also enjoys some other sources of income, then the probability in favour of an increase in wellbeing will increase by  $e^{2.1560} \approx 8.6365$  times. The dummy variable used to capture the effects of age or maturity (40 years or above) is significant and carries the expected sign. Same is the case with the dummy variable used for the level of education and that used for the duration of membership with the program concerned. The McFadden R-squared (0.4381) and LR-statistic (41.32) with very small probability show that the model is overall significant.

## Conclusion

The present study has been conducted to investigate the impact of Cooperative (Islamic) Microfinance program on the standard of life of poor and marginalized segments of the society. For this end Islamic microfinance program of Islamic Relief-Pakistan has been taken as a model of cooperative microfinance. A sample of 100 clients along with a control group of 25 respondents has been selected randomly so as to avoid selection bias. The socio-economic impacts of the said programs on the poor marginalized groups have been evaluated by Binary logistic models. Two logistic models have been estimated to investigate the welfare of the respondents. The first model is based on respondents perception regarding overall welfare, while the second model is based on standardized consumption expenditure, has been used as a proxy of welfare in quantitative term. Findings of the study suggest that Cooperative microfinance program has a positive impact on the overall welfare of the clients. This is also reflected from the empirical investigation that standardized consumption expenditures as a proxy of wellbeing (welfare) of the clients represent a more appropriate picture as compare to welfare model based on respondent perceptions only.

## Main Findings and Recommendation

1. Cooperative Microfinance program contributes positively in term of the socio- economic uplift of clients. Respondents who avail the facility of cooperative microfinance are approximately 10 times more likely to increase his/her welfare as compare to non-clients. We can figure out that by expanding the facility of cooperative microfinance by sensitizing the poor and marginalized segments regarding this facility can effectively alleviate the absolute level of poverty and also has the required potential to increase the social wellbeing of these people.
2. The empirical analysis indicates that total dependence on the facilities provided by the cooperative microfinance institutions might not be sufficient for a significant uplift in the life style of poor people. The projections of this study intimate that if a client of the IR-Pak owns some other assets (sources of earnings) besides the microcredit facility, the probability of his/her crossing the poverty line will be 9 times higher than those who possess nothing else and depend only on the facilities provided by the MFO concerned.



3. The empirical investigation reveals that if credit is provided to mature clients (of age 40 or more) this will increase the chance in favor of social wellbeing by more than 10 times as compare to immature clients. Based on this result IR-Pak Should concentrate to provide the facility of Islamic microfinance to mature clients so as to effectively contribute in socio- Economic uplift of clients.
4. As per general observations the intensity of poverty is much higher in rural areas as compared to urban areas. The majority of poor inhibited in rural areas of Pakistan are generally illiterate, technically backward and politically depressed. As such, the rural areas deserve special attention of the cooperative Microfinance institutions.
5. Although majority of clients do utilize the micro credit efficiently for self-employment and income generating activities, however there are fair chances of wrong or inappropriate use of credit. Therefore proper inducement, effective training, monitoring and supervision of the clients are necessary.
6. Last but not least cooperative microfinance program is performing well in intervention area (The urban slums of Rawalpindi) all such programs need to be promoted and encouraged, both by the government as well as the well to do citizen of Pakistan. Such programs, working in different areas like health, education, housing, training and skills as well as micro credit extension are the candles of hope and aspiration for the poor and deprived segments of the society.

## Notes

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- <sup>1</sup> The Cooperative/Welfare microfinance program is a program where the poor and marginalized group of the society will be facilitated through free-interest loans, partnership and trade based financing.
- <sup>2</sup> *Murabah'ah* is an Islamic mode of finance. It is also called cost plus selling contract. According to the rules of this contract a commodity is purchased by the financing organization on behalf of the client and it is then sold to the client by adding profit margin.

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