Financing Non-Bankable Masses
A Comparative Analysis of
Conventional and Islamic Microfinance Programs
[A Case Study of Sungi Development Foundation & Islamic Relief (Pak)]

Dissertation Submitted in
Partial Fulfillment of the Requirements of

MS/M.Phil Degree (Economics)

by
ZAHOOR KHAN
Registration No. 153-SE/MS Eco-2/F08

Supervisor: Dr. Hafiz M. Yasin
Co-Supervisor: Muhammad Khaleequzzaman

School of Economics
International Institute of Islamic Economics
International Islamic University Islamabad.
December, 2010

CERTIFICATE

VIVA VOCE COMMITTEE

This is to certify that we have carefully read and evaluated the thesis submitted by Zahoor Khan. In our judgment the document bears sufficient substance that warrants its acceptance by the International Islamic University, Islamabad for the award of an MS degree in Economics.

EXTERNAL EXAMINER

Dr. Tariq Javed,
Associate Professor, Department of Economics,
Quaid-e-Azam University Islamabad

Signature.....

INTERNAL EXAMINER

Dr. Abdul Jabbar, Assistant Professor IIIE,
International Islamic University Islamabad

Signature.....

SUPERVISOR

Dr. Hafiz M. Yasin, Associate Professor IIIE,
International Islamic University Islamabad

Signature.....

CO-SUPERVISOR

Mr. Muhammad Khaliq-uz-Zaman,
Consultant/Associate Professor Islamic Banking & Finance IIIE,
International Islamic University Islamabad

Signature.....

COUNTERSIGNED

Dr. Asad Zaman,
Professor and Director General,
IIIE, International Islamic University Islamabad

Signature.....

Date of Viva Voce: 29th January, 2011

DEDICATION

THIS WORK IS DEDICATED TO MY BELOVED PARENTS AND TO MY ELDER BROTHER, NAWAS KHAN WHO'S KINDNESS, GUIDENCE AND SUPPORT HAS ALWAYS BEEN A SOURCE OF MOTIVATION FOR ME IN ALL WALKS OF LIFE.

ACKNOWLEGEMANTS

All praise to Almighty Allah (SWT) Who deserves all praises alone. It is His blessing, which enabled me to reach this level in my discipline.

I am grateful to most competent, knowledgeable and co-operative Supervisor Dr. Hafiz Muhammad Yasin for his willingness, considerable time, dedication and thorough supervision. I am also grateful to co- supervisor Mr. Khaleequzzaman for his suggestions and encouragement. This study would not have gone through without their motivation and support. Dr. Abdul Jabbar and other faculty members of IIIE deserve special gratitude who helped me throughout the development of this study. I am specifically obliged to Professor Dr. Asad Zaman, DG IIIE for his deep insights in analytical work and who's instructions forced me to investigate further and improve the presentation. I also offer special thanks to Prof. Dr. Naeem-ur-Rahman, Dean Social Sciences and Dr. Muhammad Naeem, Chairman Deptt. of Economics, University of Peshawar for their constant support.

I have no words to offer my gratitude and humble thanks to my loving parents who are the permanent source of inspiration and cooperation. In particular, I am indebted to my brother and sisters for their loving and helpful attitude.

My friends and colleagues have always extended a lot of cooperation and encouragement for which I am obliged. In particular, I solute to my friends Mr. Asmat Ullah Khattak, Mr. Shoaib Afridi, Mr. Salahuddin Afridi, Mr. Zamin Shah, Mr. Usman Khan, Mr. Zulfiqar Ali, Mr. Sanaullah and Mr. Naveed Afridi who have always supported me with their loving behavior.

Finally, I would like to thank all those who helped me in any way during my research and got involved in the process with their full support.

ZAHOOR KHAN
LECTURER
Department of Economics
University of Peshawar

ABSTRACT

Micro-financing is considered a "new paradigm" for promoting development and eradicating absolute poverty. Microfinance institutions have received growing attention at both national and international levels during the last decade, particularly after the award of noble prize to Dr. Younas (of Bangladesh). Their primary contribution is the provision of microfinance facility to non-bankable poor on terms and conditions different from formal banking practices.

With the gradual revival of the Islamic financial system and the advent of Islamic banking practice since the late 1970's, the microfinance institutions have also emerged overtime in the private sector. They provide credit to small scale enterprises on Islamic principles but also focus on the welfare programs in their areas of intervention. This aspect makes them more attractive to common masses in Muslim societies as compared to their conventional counterparts. The present study empirically investigates the performance of Islamic Relief (Pakistan) and Sungi Development Foundation in terms of efficiency, sustainability and socio-economic impacts on clients in selected areas of their intervention. Both primary and secondary data (over a time span of five years) have been used in the study and standard analytical/econometric techniques i-e ANCOVA, Mean difference and Binary Logistic models have been employed for the purpose. The results reveal that both microfinance programs are successful in achieving their targets in term of poverty alleviation and increasing social well being however, the performance of IR-Pakistan on comparative basis is better than Sungi Development Foundation. The empirical results of this study indicate that the performance of microfinance program founded on the Islamic principles of credit provision is better than the conventional program in a variety of ways. As such, the Islamic microfinance programs are better candidates to achieve the objective of poverty alleviation and reduction of income disparities as also for their compatibility with religious thinking of masses.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVATIONS USED

C&ED = Credit and Enterprises Development.

CMFI = Conventional Microfinance Institutions.

CMFP = Conventional Microfinance program.

HSBC = Hongkong and Shangai Banking Cooperation.

IMFP = Islamic Microfinance Program.

IRHQ = Islamic Relief Head Quarter.

IR-Pak = Islamic Relief (Pakistan).

MFI = Microfinance Institutions.

MFP = Microfinance Programs.

NGO = Non-Governmental Organization.

PIO = Public Interest Organization.

SDF = Sungi Development Foundation.

SSED = Small Scale Enterprises Development.

VC = Village community.

CHAPTER-1

INTRODUCTION

Micro-financing refers to provision of financial services to poor and low-income households having no access to formal financial institutions (Conroy, 2003). Microfinance is also described as banking for the poor. Microfinance programs include management of micro credit, savings, insurance and provision of other financial services as well as necessary trainings to group members, with the sole purpose to promote small scale and self-sustainable businesses. In most of developing countries, financing small and micro enterprise is considered a "new paradigm" for bringing about development and eradicating absolute level of poverty (Hulme and Mosley (1996a)). Small enterprises have received growing attention at both national and international levels during the last decade. A number of programs have been launched in different part of the world by national and multinational organizations to empower and protect the poor. The most important aspect of these programs is the provision of microfinance facility to non-bankable poor on terms and conditions different from formal banking practices.

1.1 THE ISLAMIC MICROFINANCE PROGRAMS

With the gradual revival of the Islamic financial system and the advent of Islamic banking practice since the late 1970's, the microfinance organizations, based on the Islamic principles of transactions, have also emerged overtime in the private sector. The objective of all microfinance programs, whether conventional or Islamic, is basically the same, i.e. to alleviate poverty and to help the marginalized groups of the society otherwise unable to produce physical collateral required by formal financial institutions (banks). The strategies followed by both micro-financing programs are apparently similar since they are essentially looking at a "double bottom line/

target"— social gains and commercial success. However, the philosophical approach to address these issues is different. The Islamic financial institutions naturally focus more on the welfare aspects. The welfare measures may assume different forms, for instance imposing no penalty in case of late payment for genuine reasons, risk sharing, profit and loss sharing according to ups and downs in the business, asset based/backed transactions to eliminate interest, settlement in the form of goods rather than paper transaction. The welfare aspects of Islamic microfinance programs, (facilitating the target groups through Qard-e-Hassan, Sadaqah, Zakat, Awqaf, the absence of Riba etc besides normal lending activities) make them superior to their conventional counterparts. The Islamic Microfinance Programs (IMFPs) are relatively new experiments in this field but expected to have far reaching and deeply rooted impacts on the life style of common masses. The growing magnitude of these programs has attracted the attention of researchers and policy makers in many countries of the world.

The Islamic microfinance programs have gained considerable acceptability in Muslim communities in particular and non-Muslim communities in general, since the principles of financing adopted by these organizations are neither contradictory to the values and traditions of the societies concerned nor inimical to smooth functioning of the economies. According to principles of Islamic Sharaih, the profit and loss of business is shared by financer and investor, which protects the rights of both parties. The Conventional Microfinance Programs (CMFPs) would like to avoid credit to extremely poor and marginalized groups of the society since they (debtors) are generally expected to default (Ditcher (1996). In contrast, the Islamic microfinance organizations facilitate such people by providing them with support from Zakat and Waqaf funds. As such these organizations can better serve the community and make sure the participation of all vulnerable groups in development and growth process of the economies concerned.

The Islamic Relief (Pak) and Sungi Development Foundation (SDF) are among the few popular NGOs based in Pakistan. They are involved in micro-financing activities for quite some time. The present study is devoted to a comparative analysis of their structure, methodology, performance and impact on the society within the selected areas of Pakistan.

1.2 RATIONALE OF THE STUDY

Considerable literature is available on the importance of microfinance programs, working successfully in different parts of the world with particular focus on alleviation of absolute poverty. The Nobel Prize awarded to Dr. Younas (of Bangladesh) has further strengthened the belief that nothing can better solve the issue of poverty than the effective implementation of microfinance programs. In this respect, the Islamic Microfinance Programs are lagging somewhat behind the Conventional Microfinance Programs. It is generally believed that IMFPs are comparatively more cooperative to the target groups by nature due to availability of short term interest free lending (Qard-e-Hassan) and long term profit-loss sharing (Musharakah) financing modes. The very concept of Islamic microfinance is superior to the conventional financing at least on theoretical grounds (Umer Chapra -2007). The CMFPs are usually considered as purely commercial in nature, which are bound to ignore the extremely poor and marginalized sections of the society for fear of default. These differences between CMFPs and IMFPs naturally give rise to some interesting questions that need thorough empirical investigation besides theoretical exploration. Some interesting queries may be as under.

- Is there any significant difference between CMFPs and IMFPs so far as their actual operations are concerned?
- Which program has comparatively greater social, psychological and economic impact on their clients?

- Do the claims found in the contemporary literature in favour of IMFPs really work?

The present study attempts, to investigate such important questions. An in-depth empirical investigation to explore the financial health, sustainability and performance of microfinance organizations on one hand and exploration of the impact of these programs on the socio-economic life of masses on the other hand will be a useful contribution in this area. For this end, we have selected two important NGOs namely, the Islamic Relief Pakistan (IR-Pak) and Sungi Development Foundation (SDF) both engaged in micro-financing practices with more or less similar address groups but with different operational instruments. A very brief introduction of these organizations is given below.

The Sungi Development Foundation (SDF) was established in 1989 and registered in Pakistan in May 1990 under the Societies Act, 1860 as a non-profit, non-government, public-interest organization (PIO). According to Sungi's mission statement, the objective is to bring about policy and institutional changes by mobilizing the deprived and marginalized communities to create an environment in which they [communities] can transform their lives through the equitable and sustainable use of resources.

The Islamic Relief (IR) is a UK-based international NGO, which commenced operations in Pakistan in 1992 and secured a registration with Security & Exchange Commission of Pakistan in 1994 as a company limited by guarantee (Local NGO). It is also registered with the Economic Affairs Division - Ministry of Finance, Government of Pakistan.

1.3 OBJECTIVES OF THE STUDY

1. To evaluate the financial health of Islamic and conventional microfinance programs with reference to Islamic Relief (Pak) and Sungi Development Foundation (SDF).

2. To compare the mode of operation and existing practices of both the organizations so as to bring forth the current scenario and understand their future course of action.

3. To evaluate the impact of both the programs on the socio– economic conditions of the poor marginalized groups in the areas under study.

1.4 ORGANIZATION OF THE STUDY

The study is organized into the following seven chapters.

Chapter- II that follows the present introductory part consists of a detailed literature review about Conventional and Islamic Microfinance programs and their performance. Chapter -III discuses the organizational profile of Islamic Relief-Pakistan and Sungi Development Foundation. Chapter-IV discuses the methodology and analytical framework developed to evaluate the financial health, sustainability and performance of these organizations and to study the impact of their intervention on the socio-economic life of their respective clients. Chapter -V provides details on nature of data and description of variables. The discussion and analysis of results is distributed in Chapter –VI and VII, both occupying the central position in this study. As usual, the final part; Chapter-VIII is devoted to conclusions and policy implications.

CHAPTER-2

REVIEW OF LITERATURE

Microfinance is relatively a newer concept and the literature on related topic is scarce. The literature on the performance of Microfinance programs (Conventional as well as Islamic) and their relevance to poverty alleviation can be divided into two sections

2.1 PERFORMANCE OF CONVENTIONAL MF PROGRAMS

Bolnick (1990) finds that participation of microfinance institutions had a positive impact on small enterprises, labor employment and growth; although the impact was noticed to be different across the sample. He conducted a survey in Bangladesh and interviewed more than 1500 respondents. By using various descriptive statistics techniques he came to the conclusion that implementation of effective microfinance programs has a significant impact on small enterprises.

McKernan (1996) investigates that participation of people in microfinance programs can produce positive impact on self-employment profits. By using cross country data of conventional Microfinance institutions, for five developing countries (namely, Bangladesh, Pakistan, Srilanka, Maldives and Nepal) he came to the conclusion that besides certain other positive impacts of Microfinance program, it significantly increases self employment and profit from self employment.

Hashemi (1998) investigates the question of female empowerment. He finds sufficient evidence that participation in microfinance program has statistically significant impact on women empowerment. He conducted a survey in Bangladesh and used different statistical techniques to asses the impact of these programs on women empowerment.

Khandker (1998) evaluates the impact of microfinance programs on the well being of poor marginalized groups. He conducted a survey in Indonesia with the help of a well established microfinance organization. He finds a positive impact of microfinance programs on poor and ignored segments of the society. He further concludes that the impact of microfinance programs can be enhanced if the facility is specially provided to women.

Wydick (1999a) finds that provision of microfinance facilities can significantly increase the income of beneficiaries of these programs and thus can change their status in the society. He took a sample of 900 clients of three different microfinance institutions and investigate the impact of these programs on clients' earnings. He used a multiple linear regression model to measure the influence of a set explanatory variables on dependent variable Y(income of client).

K.A.Ahmad (2008) evaluates self-sustainability of Microfinance programs by using a simple statistic i-e the income to cost ratio given by the formula: Percentage of total cost covered by income generated = Income earned during one year divided by total cost incurred during the period multiplied by100. He conducted a survey in three developing countries to asses the impact of Islamic microfinance program of Islamic Relief on poor and marginalized people in the areas under study.

Copestake et al. (2001) find that clients of microfinance institution (experimental group) who obtained two or more loans recorded high growth in terms of household income and profit as compared to a control sample. He conducted a survey in Srilanka and collected the responses of 850 respondents (600 clients and 250 non-clients) to investigate the impact of duration of membership of clients' earning. He came to the conclusion that duration of membership is positively related with clients' earning.

Dunn (2001) evaluates the impact of microfinance programs on controlled and experimental groups. He finds that the performance of experimental group is far better than controlled group in terms of earning, profit and assets. He took a sample of 1000 respondents (300 control and 700 experimental) in Nigeria and used regression techniques to asses the impact of Microfinance program on life style of clients. He concluded that microfinance programs significantly influenced income level of clients.

Buckley (1996) reports that a Malavi microfinance institution (Malawi Mudzi) experienced a huge default rate due to allocation of micro credit towards consumption purpose. He further elaborates that the defaulter rate was 33 %. He conducted a survey in Malaysia and found that micro credit can only be beneficial if properly utilized for productive purpose.

Hashemi (1997) reports that conventional microfinance institutions cannot survive without a subsidy. He argues that conventionally well known and well stabilized microfinance institution of Bangladesh namely Grameen Bank would operate at a loss without grants at 1996. He investigates the sustainability of conventionally largest Microfinance institution and concludes that at the earlier stages sustainability without grant seems a bit difficult.

Karnani (2007) argues that the focus on creating micro businesses is not as valuable as the proponents argue because many developing countries already have a sub optimally high level of small business that are not able to exploit economies of scale available to larger business. He argues that large businesses are able to create more employment than microfinance and this is more effective to reduce poverty.

Hulme (2000) suggests methodologies for impact assessment of microfinance programs. These are namely, controlled group survey, ethnography and participatory learning method. He

summarizes that for better and reliable results regarding the impact assessment of micro finance programs one should not rely on a single method but it should be a set of different methods.

Hyman (1998) investigates optimal impact assessment methods by comparing four evaluation systems for the microfinance institutions in Bangladesh. Finally he came to the conclusion that we need some advanced and more reliable methods of impact assessment of microfinance programs ought to be developed.

2.2 PERFORMANCE OF ISLAMIC MF PROGRAMS

Ahmed, Habib (2002) investigates financial health, efficiency and performance of Islamic microfinance programs by using various financial ratios i-e Return on assets (ROA), Net return Margin (NRM), Operating Costs as a Percentage of Loan Disbursed (OCL) and Beneficiaries to Employee Ratio (BER). He compares the performance of three (Al-Falah, Noble and Rescue) Islamic microfinance institutions working in Bangladesh. He concludes that the performance of Al-Falah is better than the rest of two institutions.

Ahmad. K (2002) believes that Islamic 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. He found that a loss in business, in case of conventional micro credit will cause double loss to creditor i-e he /she will loose his livelihood sources on one hand and will return the principal amount along with the rate of interest to conventional micro credit institute on other hand. He investigates theoretically the drawbacks of interest based loans and its negative impacts on society. He suggests that poor and marginalized segments of an Islamic society can be facilitated from Zakat and Awqaf institutions.

Sadeq (2004) while working on conventional as well Islamic microfinance organizations in Bangladesh found that negative socio-economic effects associated with conventional microfinance has led to the experiment of providing Islamic alternatives, which will be a substitute of conventional microfinance program. He further elaborates that Islamic Microfinance programs are free from the negative effects. While explaining his argument he emphasized that Islamic microfinance organizations facilitate the poor and marginalized groups by giving them support from Zakat and Waqaf funds. As such these organizations can better serve the community and make sure the participation of all vulnerable groups.

Mannan (2007) while working on microfinance programs with reference to Bangladesh finds that MFIs are based on the implicit assumption of social class conflict, so they tend to empower women, whereas IMFIs intend to empower family by ensuring joint liability of husband and wife in case of lending to family or groups of families. He comparatively studied the performance of Grameen Bank and Social investment bank limited. He concludes that Islamic microfinance is a good substitute of conventional microfinance to provide loan for productive purpose and to strengthen family integration.

M.M Rehman (2010) uses a binary logit models for impact assessment of clients well being. He used a set of dummy variables (dummy for mature clients, educational dummy, duration of membership etc) as explanatory variables to asses the impact of microfinace on the clients well being. He collected data from a sample of 1,020 respondents in a sample survey. Result shows that a significant number of clients have improved their religious observations such as prayers and fasting. Results of the econometric models shows that household income, productivity of crops and livestock, expenditure and employment increased significantly due to the influence of changed behavior and availability of Islamic micro-finance.

2.3 SUMMARY OF THE LITERATURE REVIEW

Microfinance is considered as a strong instrument to alleviate poverty and improve distribution pattern in an economy. The existing literature reveals that although there is need for effective microfinance programs on a wider scale to achieve the targets, (i-e to alleviate the absolute level of poverty and improve the distribution pattern) however the conventional microfinance practices involve some undesired elements i-e Social class conflicts, the element of Riba in transactions, high markup rates etc, which bring forth several hurdles in the effective implementation of these programs in Muslim societies. The Islamic microfinance programs, on the other hand, provide a better alternative. As already discussed, the objective of both the programs is essentially the same (poverty alleviation through focusing on the marginalized groups) and the strategies followed may be similar (focusing on social gains as well as financial sustainability), however the philosophical approaches to address these issues are different. The Islamic microfinance institutions enjoy an edge/ additional worth in that they can help the poor clients through other instruments like Qard-e-Hassan, Zakah etc. As such, they contribute forcefully to the cause poverty alleviation in favour of the marginalized groups, which makes them superior to conventional microfinance programs.

CHAPTER-3

ORGANIZATIONAL PROFILE

In this chapter we briefly discuss the organizational structure of micro finance organization under study, their modes of operation and the target groups which they address.

3.1 SUNGI DEVELOPMENT FOUNDATION (SDF)

The Sungi Development Foundation was established in 1989 and registered in 1990 under the Societies Act, 1860 as a non-government, public-interest organization (PIO) to work according to its vision and mission statement in different part of Pakistan.

3.1.1 The Microfinance Program

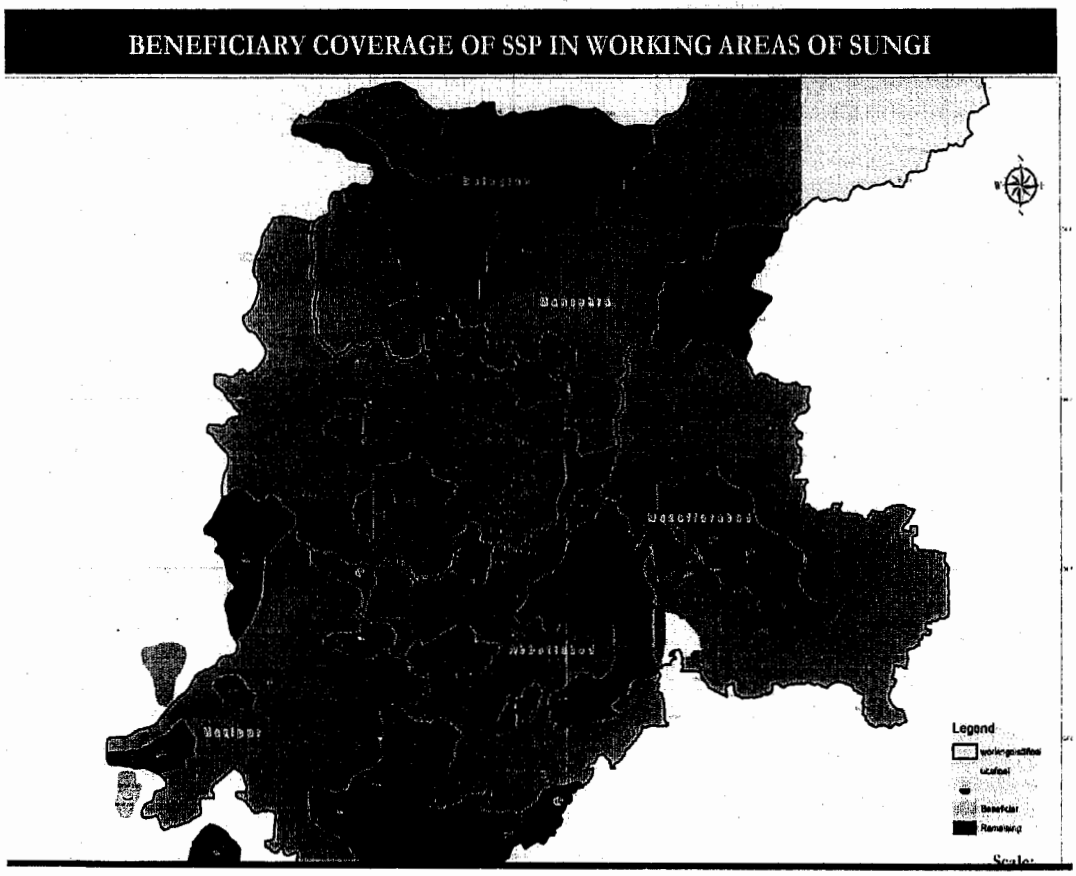
Microfinance facility is provided to poor and marginalized group in selected areas under Sungi's Credit and Enterprise Development (C&ED) section, which is part of the larger Sustainable Livelihood Program (SL). This is one of the three core programs, launched by SDF which include:

- Social mobilization and development (social mobilization, health and sanitation);
- Advocacy Support Program (Campaigns, collisions, communications and publication);
- Sustainable Livelihood (C&ED, natural resource management (NRM), and craft promotion).

The Sungi Microfinance Program started in late 1994 with an initial capital of PKR 80,000 provided by the United Nation Development Program. The major responsibilities of the program include:

- Mobilization of community savings;
- Disbursement of credit to members for productive activities i-e generating income and self-employment.
- Provision of necessary training for optimal utilization of micro credit.
- Development of market linkages.

The micro-credit policy is reviewed every year since 1994 by a committee including experts, staff members and community members. Credit applications are initially appraised by field coordinators and then forwarded to zonal coordinators for scrutiny. Finally, the applications are forwarded to the C&ED at the head office for final decision regarding provision of credit to members. **Map-I working area of Sungi Development Foundation**



3.1.2 Terms and Conditions of Credit

Micro credit limits	Rs. 10,000 to Rs. 100,000
Credit Period	12 to 36 months
Processing Fees	NIL
Repayment mode	Monthly Installments
Insurance and Services	Included in repayment

Running Business *or* two years experience of work

Annual income of the applicant is less than the minimum taxable limit.

- National Identity Card copy
- Application form, duly filled
- Undertaking for acceptance of the terms & conditions
- Two business guarantors from within the group
- Provision of electricity or gas bill (latest but not older than 6 months)
- Further documents may be necessary for specific products

3.1.3 District Batagram (The Intervention Area of SDF)

Sungi is working in different areas of Kashmir, Hazara Division and Punjab. We have selected District Battagram for evaluation in this study.

District Battagram is located in Hazara division of Khyber Pukhtoonkhwa (former NWFP). Alai and Battagram are two tehsils of the district, comprising 20 union councils and 400 villages. The literacy ratio in the district accounts to 18.3 percent (males 29.4 percent as against 6.5 percent for females). Unemployment rate in the district is 41 percent. More than 65 percent of the population lies below poverty line, where 27 percent of the population belongs to lower middle-income group that is living from hand to mouth (vulnerable). The working area of Sungi Development Foundation is approximately the whole district.

3.2 ISLAMIC RELIEF PAKISTAN (IR-PAK)

The Islamic Relief is an international, UK-based NGO, which started operations in Pakistan in 1992. It is registered with Security & Exchange Commission of Pakistan since 1994 as a company limited by guarantee (local NGO). Initially the organization started operation with the following interventions:

- One to One Orphans Sponsorship
- Emergency & Relief operations in earth-quake/flood affected areas.
- Seasonal Projects - free distribution of meat during Eid-ul-Adha and distribution of food packages among the during the Holy month of Ramadan.

Based on the successful experience of implementing Islamic Microfinance program since 2001, the Islamic Relief (Pak) entered into institutional partnership with Hong Kong and Shangai Banking Cooperation (HSBC) and Meezan Bank for small scale enterprise development. These initiatives strengthened the capability of Islamic Relief (Pak) to meet its objectives of creating employment opportunities and social uplifting by providing microfinance services according to Shariah principles.

3.2.1 Intervention Areas of the Islamic Relief (Pak)

The intervention areas of Islamic Relief for microfinance operations that we have selected for this study are the urban slums of Rawalpindi i-e Naseerabad, Qasimabad, Dhok-Mustaqeem, Dhokratha etc. Rawalpindi is an important city of Punjab province. It is the fourth largest city in Pakistan. The population of Rawalpindi is approximately 3,039,550 according to the 2006 census. The literacy rate is 70.5% (January 2006). There are more than 900 industrial units, which directly employ 1.6% of the total population.

Up to 2007, the objective of the Islamic Relief financing project was to provide interest free loans to the poor segments of the society so as to enable them to start and expand their micro business/enterprises. The Islamic Relief undertakes micro-financing activities through its section called: Small Scale Enterprises Development (SSED), which expanded its scope and included new categories of loans (other than income generation loans). These included loans for home improvement/reconstruction, education and female enterprises (particularly the widows). The methodology for disbursement of credit is based upon Islamic mode of financing: Murabaha – mark-up. From 2007 onwards Qard-e-Hassan is also used as vehicle for the delivery of construction and educational loans. The project is funded by Islamic Relief Head Quarter (IRHQ), UK.

3.2.2 Borrower's Selection Criteria (IR-PAK)

Limits of micro credit	Rs. 5000 to Rs. 100,000
Credit Period	6 to 24 months
Processing Fees	NIL
Repayment mode	Monthly installments
Services	Included in repayment

- Applicants should be mature i-e over 18 years of age.
- Annual income of the applicant should be less than the taxable limit.
- Applicants should belong to the intervention area of the organization.
- There should be no explicit criminal charges against the applicant.
- Applicants should be "relatively poor" and belong to vulnerable sections of the population (such as widows, registered disabled, etc).
- Applicants should agree with the terms and conditions of loan.
- There should not be more than one loan held by a household at one time.

- National Identity Card copy
- Filled application form for Murabahah transaction
- Under taking to abide by the terms and conditions.
- Two business guarantors from within the group
- Provision of electricity or gas bills (latest but not older than 6 months)
- Further documents may be necessary for specific products.
- Approval of the credit officer (of the area).

CHAPTER-4

METHODOLOGY AND ANALYTICAL FRAMEWORK

In this chapter, we discuss the model and methodology adopted to evaluate performance of the microfinance institutions under study and to see the impact of their intervention on the life style of the respective clients.

4.1 METHODOLOGY OF RESEARCH

The objective of this study is to compare the performance of conventional and Islamic microfinance programs in their efforts to support the poor and marginalized section of the society and to evaluate the impact on the life style of these people after intervention for many years. For this purpose we have selected two NGO's, namely the Islamic Relief Pakistan (IR-PAK) and Sungi Development Foundation (SDF). In order to focus on their intervention and to evaluate their performance; we have adopted a two-pronged strategy. First, we analyze the performance of these organizations via the published data on the financial health, sustainability, return on assets, operating cost, beneficiaries and clients, volume of credit etc. The requisite information has been drawn from the annual reports of the organization concerned over a span of six /seven years of their intervention. Second, the impact of intervention of these organizations on the life style of the clients is evaluated on the basis of primary data collected via filling of questionnaires from randomly selected respondents in the areas concerned. The respondents not only comprised the clients or beneficiaries of microfinance programs but also those household who had no such relationship with the organizations concerned. The inclusion of such households in the survey is to validate the impact assessment and to investigate whether a better socio-economic position of clients is exclusively due to the intervention of these programs or otherwise. These independent respondents comprised the control group of the study. The number of such respondents is twenty

five (25) for each organization, whereas the total number of respondents (including both control and experimental groups) from each organization is 125. Copy of the questionnaire is appended at the end. After this brief introduction, we discuss the analytical framework for performance evaluation of the contemporary microfinance programs under reference.

4.2 PERFORMANCE EVALUATION OF MF PROGRAMS

According to Chapra (2007), a financial system (irrespective of whether Islamic or conventional) is traditionally evaluated on the basis of efficiency and sustainability. Keeping this in mind we follow the methodologies adopted by researchers in similar studies in the area. For instance, Habib Ahmad (2002) investigates financial health, efficiency and performance of microfinance programs by using various financial ratios. These ratios are given as:

i. $\text{Return on Assets } (ROA) = \dfrac{Net\ Income}{Total\ Assets} * 100$

ii. $\text{Net Return margin } (NRM) = \dfrac{Total\ Income\ (from\ investment + interest) - Total\ Cost}{Total\ Operating\ Assets} * 100$

iii. $Cost - Disbursement\ \ Ratio\ (OCL) = \dfrac{Operating\ Costs}{Total\ Loan\ Disbursed} * 100$

iv. $Beneficiaries : Employees\ Ratio\ (BER) = \dfrac{Total\ Beneficiaries}{Full - time\ Employees} * 100$

In contrast K.A. Ahmad (2008) evaluates self-sustainability of microfinance programs by using a simple statistics: the income to cost ratio (ICR) given by the percentage of total cost covered by income generated (both estimated on annual basis):

v. $Income\ to\ Cost\ Ratio\ (ICR) = \dfrac{Income\ Earned}{Total\ Cost\ Incurred} * 100\ (during\ accounting\ period)$

As mentioned above, we draw the relevant data from the annual reports published by the organizations concerned. In addition to above indicators, we are also interested to evaluate and explore the available information regarding the number of clients (gender wise), credit disbursement, recovery rate, year of schooling of clients, family size, income and expenditure of the respondents etc, under the title of descriptive statistics. Information about these features will help us in analyzing the socio-economic impact of microfinance programs on their clients.

4.3 SOCIOECONOMIC IMPACT OF MICROFINANCE PROGRAMS

So for as the impact analysis is concerned, M.M Rehman (2010) uses binary logit model for assessment of clients' well being. He uses a set of dummy variables (for maturity of clients, education level, duration of membership etc) as explanatory variables. We intend to make use of these indicators for comparative analysis of the programs to evaluate the state of the art and to explore future trends of the organizations. However, we use a set of both binary and continuous explanatory variables in the regressions. Besides the usual econometric techniques, we employ the mean-difference approach in order to make the analyses more meaningful. The models are discussed below:

4.3.1 Simple/ Mean Difference Model

In order to investigate the impact of Microfinance programs in the areas under consideration, Quasi-experimental design has been used. We shall compare beneficiaries of microfinance (Experimental group) programs with those who are not receiving such benefits (control group) but having the similar socio-economic profile and cultural characteristics as those of the first group. The objective is to investigate if the microfinance programs under reference have any significant impact on the living standards of the beneficiaries or otherwise.

The simple Mean Difference Model employed for the purpose is explained below.

$$\Delta \overline{Y} = (\overline{Y}_T - \overline{Y}_C)$$

$\Delta \overline{Y}$ = Change in the outcome variable of interest (Income, Expenditure)

$\overline{Y}_C$ = control outcome indicator (Income, Expenditure)

T = Households in Treatment group.

C = Households in Control group (untreated).

In order to avoid selection bias, the control group has been selected from the same intervention area of microfinance organizations, who are approximately having the same socio-economic characteristics and sharing the same language and culture.

Although, the two samples (control and experimental groups) are drawn from their corresponding populations randomly, however we do not know about the form of population distribution and likewise the corresponding population parameters are also unknown. In order to investigate whether the difference between experimental and control group is statistically significant or otherwise, T-tests have been employed to the available data.

$$t = \overline{X}_T - \overline{Y}_C / \sqrt{S_T^2 / n_T + S_C^2 / n_C}$$

In case, the unknown population variances of control and experimental groups are the same, then the degree of freedom of t-statistic is equal to n_T+n_C-2. Conversely, if the unknown population variances of control and experimental groups are different, then degree of freedom of t-statistic is given by: $df = \left[\frac{[(S_T^2 / n_T)}{(S_T^2 / n_T)^2 / n_T} + \frac{(S_C^2 / n_C)]^2}{(S_C^2 / n_C)^2 / n_C} \right]$

F-statistic is used to show whether Population variances of both groups are mutually equal or otherwise. F-statistic is calculated as:

$$F = S_T^2 / df / S_C^2 / df$$

In order to rectify further the economic impact of the said microfinance programs on the life style of their respective clients, the incomes and expenditures of the clients can be cross checked for the periods before joining the said programs and afterwards. The test statistics used for the purpose is given as: $t = \frac{\bar{d}}{Sd/\sqrt{n}}$

4.3.2 The Impact on the Earnings of Clients

The indicators of socio-economic well being include the percent increase in income and total assets of the clients (or the growth rates), diversification into new products and services, increase in social interaction and market linkages, increase in the knowledge of Islam and understanding of the Islamic modes of financing etc. As discussed above, the information is derived through survey conducted in the selected areas of Battagram and Rawalpindi where the two NGO's are operating over the past several years.

ANCOVA and Maximum Likelihood Binary Logit models are employed for this purpose. These models help us in cross comparisons of socio-economic conditions of the people concerned (including both clients and non-clients).

$$Y_i = \beta_0 + \beta_1 D_c + \beta_2 D_s + \beta_3 X_a + \beta_4 X_m + \varepsilon_i \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where Y_i = is the earning of respondent per household.

$D_C = 1$ when individual selected is client and $D_C = 0$ if otherwise (non-client).

$D_s = 1$ if the respondent has other sources of earning $Ds = 0$ if otherwise.

X_a is an important determinant of income level. X_a shows education level of respondents.

X_m shows membership duration of respondents.

4.3.3 The Impact of Microfinance Programs on the level of Poverty

Here we use a Logistic model of the typical form. The dependent variable is constructed from the information collected through survey. In addition to the dummies used for assessment of income and explained above, we incorporate two additional binary variables in the model:

$$Z_i = \alpha_0 + \alpha_1 D_c + \alpha_2 D_s + \alpha_3 X_a + \alpha_4 X_m + \alpha_5 X_{fs} + \varepsilon_i \ldots\ldots\ldots(2)$$

Where $Z_i = \frac{\rho_i}{1-\rho_i}$ is the **odds ratio**, i-e the ratio of the probability that an individual's average monthly earning is above the poverty line to the probability that he falls below the line[1].

ρ_i = probability that a respondent is living above the poverty line.

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.

X_a is an important determinant of income level. X_a shows education level of respondents.

X_m shows membership duration of respondents.

Xfs represents respondents' family size.

4.3.4 The Impact of Microfinance Program on the Households 'Well Being'.

The notion of well being 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 'λ' shows the probability that well being of the respondent has increased overtime. In case an individual feels

---

5. For the purpose of this estimation, we assume Rs: 5100/- per month as the benchmark poverty line according to the World Bank definition of 2 dollars per day. Taking the exchange rate of Rs. 85/- per US dollar as on June 11th 2010 (when the survey was conducted), the monthly income for an individual to finance the minimum basic requirements turns out to be: 2*85x30 =Rs 5100/-

that his well being has improved after interaction with the program concerned, then the dependent variable will be coded '1' and otherwise '0' if he feels no difference.

Alternatively, this notion can be quantified and consumption expenditure may be considered as proxy for the level of well being. 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 well being of the clients. There is no change in the rest of the structure.

$$W_i = \delta_0 + \delta_1 D_c + \delta_2 D_s + \delta_3 X_a + \delta_4 X_m + \delta_5 X_{fs} + \varepsilon_i \quad \text{.....(4)}$$

$W_i = \frac{\lambda_i}{1-\lambda_i}$ is the **odds ratio**, i-e the ratio of the probability that wellbeing of the individual has increased to the probability that he does not feel so.

λi = 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.

X_a is an important determinant of income level. X_a shows education level of respondents.

X_m shows membership duration of respondents.

X_{fs} represents respondents' family size.

This MPC level is estimated by running a simple regression: $C_i=b_o+b_1Y_i+e_i$, where C_i is the consumption level and Y_i is income of ith respondent. The MPC estimated from the survey data for the Islamic Relief (district Rawalpindi) is 0. 816, and that for the SDF (district Batagram) turns out to be 0.768.

CHAPTER-5

DATA AND VARIABLES

In order to evaluate the impact of conventional and Islamic microfinance programs on the socio economic life of poor marginalized groups, and also to explore the financial health and sustainability of both the programs, a mixture of both primary and secondary data has been used. We discuss the sources of data and describe the variables used in the study.

5.1 SOURCES OF DATA

Basic information about the structure, working capital and assets of the organizations, number of clients, financing strategy etc. has been drawn from the annual reports of Islamic Relief Pakistan and Sungi Development Foundation. For the purpose of impact assessment, primary data over a cross section of randomly selected clients have been collected through questionnaires (copy enclosed as appendix) from the urban slums of district Rawalpindi, Naseerabad, Qasimabad and Dhok Mustaqeem etc (intervention area of Islamic Relief) and from union councils Ajmera, Batamori, Shumlai, Kuzabanda etc. of district Battagram, Hazara NWFP (working area of Sungi Development Foundation). To avoid bias and to isolate the impact of these programs on the life style of their respective clients, a control group of respondents from each sample area has been introduced. The following table shows the details.

Table 5.1 Detail of clients and non-clients selected from each organization.

Respondents	Islamic Relief (Pak)	Sungi Develop. Foundation
Clients	100	100
Non-clients	25	25
Total	125	125

In addition to different indicators related to dwellings, age, sex, level of education, social status, and financial asset of the respondents, we have developed certain other indicators to estimate the intensity of poverty and level of well being of the clients. As the intervention of Islamic Relief (Pak) is relatively newer, the time series data about the number of clients [gender wise], the volume of disbursement and repayment rates can be available only for six/seven performance years (2002-2008).

5.2 VARIABLES AND THEIR JUSTIFICATION

A number of variables and indicators have been used in estimation and analysis. These are briefly discussed as under:

5.2.1 Financial Indicators used to measure Efficiency of MFPs.

a. Return on Assets (ROA)

Return on Assets (ROA) is considered to be an appropriate measure of efficiency as it indicates how well the assets (resources) of a firm are used to generate income. As noted earlier it is given by: $ROA = \frac{Net\ Income}{Total\ Assets} * 100$

b. Net Return (Interest) Margin (NRM)

NRM indicates the efficiency of an organization via its role of intermediation. The microfinance organizations are intermediaries since they draw funds from different sources and pass on these funds to the final users. As already discussed, the net return margin is the income net of costs as percent of the operating asset: $NRM = (\Sigma Y_i - \Sigma C_i) / \Sigma A_i$

Yi = Income from Investment and interest receipts

Ci = Borrowing Cost (interest payments)

Ai = Operating Assets

c. Ratio of Costs to Loan Disbursed (OCL)

Another measure of operating efficiency is the OCL. If the field workers are efficient in covering a larger number of beneficiaries, this ratio may be lower. It is given by the operating costs as percentage of loans disbursed during the accounting period:

$$OCL = \frac{Operating\ Costs}{Total\ Loan\ Disbursed} * 100$$

d. Beneficiaries to Employee Ratio (BER)

Finally, BER may also be used to measure the operating efficiency of the microfinance organizations. It may be noted, however, that while a large number of beneficiaries may increase the income of the program per employee, it may also lead to problems in supervision and increase in the default rate, which will affect the income adversely. BER can be calculated as:

BER = Total Beneficiaries/Full-time Employees.

5.2.2 Variables used to Measure General Performance of MFPs.

a. Total disbursement (TD)

Total disbursement (TD) may be used as proxy of good performance of financial institutions in general and microfinance organizations in particular. Higher total disbursement during the accounting period, the more successful will be the organization concerned.

b. Recovery rate

This is the other side of the same coin. Disbursement and Recovery of loans go side by side. Therefore, a satisfactory recovery rate is also considered as proxy of good performance of the organizations concerned. The recovery rate (during a given period) is calculated as:

$$RR = \frac{Total\ Loans\ \text{Recovered}}{Total\ Loan\ Disbursed} * 100$$

c. **Total number of Clients**

Total number of clients (TNCs) is also used as an indicator for successful performance of microfinance organizations. If the number of clients increases with the passage of time, the said organization will be considered to be performing well and enjoying good reputation. Simple index number can be used for this purpose. $SIN = [\Sigma NC_i / \Sigma NC_o] * 100$

where NC_i = Number of clients in current time period and NC_o = Number of clients in base year.

5.3 VARIABLES USED IN THE IMPACT ASSESSMENT

The data on the following variables has been derived from field survey.

(a) Dependent Variables

As discussed in the previous chapter, we developed the impact assessment models for the microfinance institutions under reference. We used the following variables in the analyses.

(i) Income of Individuals/ Respondents (Y)

Income of individuals (Y) has been taken as dependent variable in the impact assessment models as shown in equations 1 to 3 of chapter 4. An increase in individual's income can be appropriately used as proxy of positive economic impact on the livelihood of individuals.

(ii) Indicator for Poverty Alleviation

The impact on alleviation of poverty is measured by the odd ratio $Z_i = \frac{\rho_i}{1-\rho_i}$. As discussed in chapter-4, the poverty line is considered to be Rs. 5100/- per month, which is equivalent to $2 per day as the minimum standard estimated by the World Bank. The parameter 'ρ' then denotes the probability that income of the respondent is equal to or greater than this benchmark.

(iii) Indicator of Well-being/Consumption level

In addition to income level and impact on poverty level, we have introduced another dependent variables for assessment of the intervention of microfinance programs, namely the well-being of the client, denoted by the odd-ratio $W_i = \frac{\lambda_i}{1-\lambda_i}$. Many studies on impact assessment of microfinance programs have used this qualitative index for well being. However, the well being (or welfare) reflects a state of mind and depends on the perception of the individual concerned. Therefore, we have tried to quantify this index and used the household consumption expenditure level as proxy for well-being. Assuming a simple Keynesian consumption function: C = f(Y), we have estimated the aggregate consumption function for the two data sets, each comprising 125 observations in the intervention areas of Islamic Relief and Sungi Development Foundation. Utilizing the simple linear regression: $C_i = b_0 + b_1 Y_i + u_i$, the estimates indicate MPC=0.816 (in case of Islamic Relief-Pak) and MPC =0.768 (in case of SDF intervention area). The average MPC turns out to be 0.792. 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 well being 'W' where the parameter 'λ' shows the probability that consumption of the individual respondent is at least equal to this benchmark. .

(b) Explanatory Variables

A set of dummy as well as continuous explanatory variables is used to evaluate the impact of microfinance programs on the life style of their respective clients. It may be recalled that we have employed three regression models; however the number of explanatory variables is not the same in all. The variables are discussed below.

a. Membership of the Individual (D_C)

The respondents in our survey were both client and non-clients. $D_C = 1$ when the individual selected (in survey) is a client and $D_C = 0$ if otherwise. The use of this dummy will help isolate the earning of clients and non-clients. If the average earning of clients is greater than that of non-clients belonging to the same socio-economic set up, then we may expect that microfinance programs can bring about some change in the living standards of clients.

b. Other Sources of Household Income (D_s)

Incomes of the individuals (respondents) may differ significantly due to existence of earning sources other than those developed on the basis of the financial support extended by MFIs. Agricultural (cultivable) land is particularly important in this case. In order to avoid this earning bias and refine the results, we introduce another dummy, such that $D_s = 1$ if the individual selected has other sources of income and $D_s = 0$ if it is otherwise.

In order to segregate and purify further the impact of microfinance program on the earning of their respective clients, we have introduced certain continuous variables in the assessment model as discussed below.

c. Duration of Membership (X_m)

The duration of membership or active association of an individual with the micro-finance organization may result into availability of more credit for investment and therefore higher earnings. We have introduced continuous variable (number of years) to capture this effect.

d. Education level of Client (X_e)

Education level of the client is a very important variable to influence investment and production decisions. A highly educated client is expected to possess better understanding,

knowledge and managerial skills and thus has the ability to invest the borrowed money in more efficient, secured and profitable businesses.

e. Age of the Client (X_a)

Age of the client is considered as an indicator of maturity and work experience and therefore an important variable in studies on impact assessment. Age of the family head (showing maturity) and family size (sharing burden/ helping hands) significantly affects saving decisions and planning for investment at household levels.

f. Family Size of Respondent (X_{fs})

Family size is an important variable that influences income and consumption level of households. Families with larger dependent members are generally expected to face higher level of consumption and thus less saving. However, this factor is also responsible for higher level of earnings, workforce and socio-economic strength, which is often ignored in the analyses. We have therefore included this variable as an important determinant of household income.

CHAPTER-6

RESULTS AND DISCUSSIONS-I

(Financial Ratios and Descriptive Statistics)

Analysis of data has been divided into two parts. This chapter is devoted to estimation of financial ratios and descriptive statistics so as to investigate the efficiency, performance and financial health of Islamic Relief (PAK) and Sungi Development Foundation (SDF). As discussed earlier, the data used in this part has been derived from the published annual reports of the MFPs' concerned. The next chapter comprises the impact assessment of the microfinance programs on the clients. Before proceeding further, it may be useful to give a brief introduction of the both microfinance organization.

6.1 BASIC INFORMATION

The basic information of the two comparable microfinance organizations is given in the following tables without comments. It may be noted that Islamic Relief and SDF were established and registered in 1992 and 1990 respectively

Table 6.1 Source of Income

SOURCES	ISLAMIC RELIEF -PAK	SDF
Donations	✓	✓
Organization own assets	✓	✓
Loans/Qard-e-hasana	✓	X
Others	✓	✓

Source: The data has been collected from the program coordinators through a specially designed questionnaire.

Table 6.2 Basic Information (2003-2008)

Information	Islamic Relief (Pakistan)	Sungi Development Foundation (SDF)
No. of Beneficiaries (clients)	2719	2885
Total Disbursement (Rs)	44 Million	28.85 Million
Average Disbursement	16000 Rs	10122 Rs
No. of Employees (June2010)	8	32
Female Beneficiaries	17%	> 93%
Dropout rate (% of total)	NA	20%
Savings/Deposits of Members	No provision	13000 Rs
Risk fund (Rs)	NA	900000
Saving Members/Beneficiary	NA	4.561

Source: The data has been collected from the program coordinators and annual reports.

6.2 PROFITABILITY AND EFFICIENCY

The profitability and efficiency of both the programs can be mutually compared on the basis of Return on Assets (ROA), Net Return Margin(NRM), Operating Cost as percentage of Loan disbursed (OCL). Table 6.3 gives the comparison of financial ratios.

Table 6.3 Profitability and Efficiency

Statistics	Islamic Relief (IR –PAK)	Sungi Dev Found (SDF)
Return on Assets (ROA)	3.42	2.15
Net Return Margin (NRM)	12.2	7.54
Operating Cost as % of Loan Disbursed (OCL)	7.5	11.45
Beneficiaries to Employees Ratio	339	90

Source: Financial ratios have been calculated on the basis of data set collected from Microfinance Coordinators and Annual Reports.

The financial performance of Islamic Relief Pakistan seems to be relatively better than the well-established conventional NGO namely, the Sungi Development Foundation (SDF). The ratio of Beneficiaries to Employees (BER) is used to measure the efficiency of the employees, and in this respect the performance of Islamic relief is much better than its counterpart.

6.3 SELF-SUSTAINABILITY OF THE PROGRAMS

The self-sustainability of Microfinance programs can be simply calculated by income to cost ratio (ICR) = (Income earned/ Cost incurred) during one year. The following table shows self- sustainability and recovery for rate for IR (Pak) and SDF.

Table 6.4 Self Sustainability- Comparative Position

	Islamic Relief (Pak)	SDF
Income to Cost Ratio (2009)	22.215	16.24
Recovery Rate (2009)	99%	99%

Source: The data regarding self-sustainability index and recovery rates have been taken from Annual Reports 2009 of Islamic Relief (Pakistan) and Sungi Development Foundation.

If we look at the sustainability index, the microfinance program of Islamic Relief (Pak) is more sustainable as compared to Sungi Development Foundation. They are however comparable so as for as the recovery rate from disbursement of loans is concerned.

6.4 BENEFICIARIES AND DISBURSEMENT

Here we discuss the basic information about the two programs in terms of beneficiaries and disbursement of loans retrieved from their annual reports. Table 6.5 and 6.6 show the descriptive statistics about the number of male and female clients and total disbursement per annum in case of the Islamic Relief and SDF respectively, derived from five years data (2003-2008). Taking this into consideration, we find that average number of clients per year is 340

(average male clients are 302 and average female clients are 38). Annual average disbursement (Murabah'ah Transactions) for Islamic Relief (Pak) is Rs. 5,367,913. Likewise, the average number of clients per year is 213 (average male clients are 61 and average female clients are 153). Annual average disbursement is Rs. 4, 74,132 for Sungi Development Foundation.

Table 6.5 Beneficiaries and Disbursement (IR-Pakistan) over 2003-2008

Statistics	Male Clients (per year)	Female Clients (per year)	Total number of Clients (per year)	Total Disbursement (per Year) Rs
Mean	301.8333333	37.5	339.3333333	5367913.333
Median	301	40	341	5762356.5
Sample Variance	11596.56667	160.3	14089.06667	1.54308E+13
Minimum	114	21	135	777640
Maximum	428	50	477	9912412
Count	6	6	6	6

* The monthly data has been converted into yearly data and descriptive statistics have been calculated on the basis of a data set 2003-2008, derived from annual reports.

Table 6.5 Beneficiaries and Disbursement (SDF) over 2003-2008

Statistics	Male clients (per year)	Female Clients (per year)	Total number of Clients (per year)	Total Disbursement (per year) Rs
Mean	60.5	153.25	213.75	3072500.167
Median	60.5	142	212.5	2828331
Standard Deviation	18.0237938	59.9422341	72.95742398	239868.1
Skewness	-0.047235518	0.39184695	0.494554958	0.210529
Minimum	32	76	119	798767
Maximum	89	254	343	6877790
Sum	484	1226	1710	3072500
Count	6	6	6	6

Descriptive statistics have been calculated on the basis of a data set 2003-2008, collected from the annual reports of Sungi Development Foundation (SDF)

Figures 6.1 and 6.2 show the annual increase in clients' (gender wise) and total disbursement respectively in case of Islamic Relief and Figure 6.3 and 6.4 depict the same information in case of Sungi Foundation. Simple trend lines are used to show the current position and future prospects of the selected organizations.

Figure 6.1 Annual increase in Clients (IR-Pakistan)

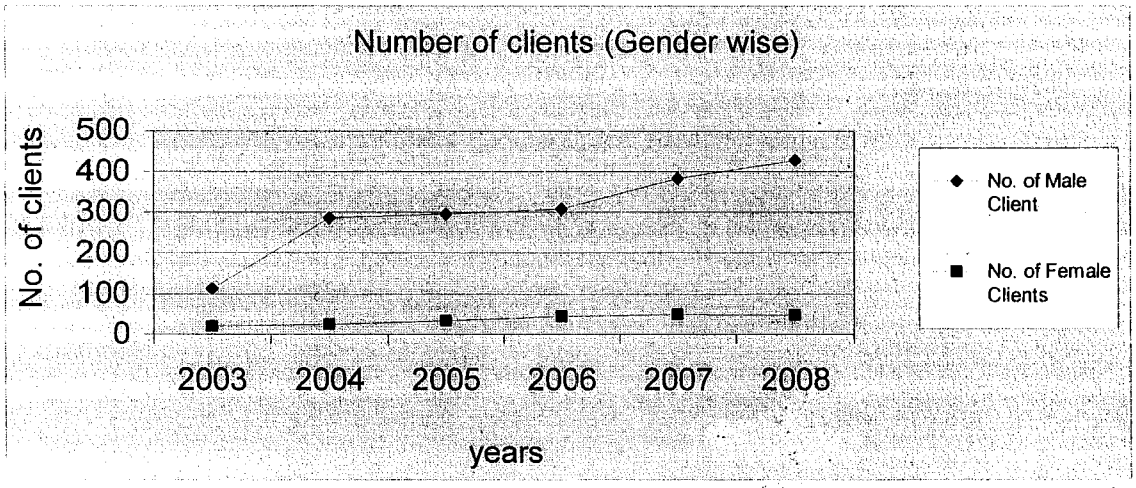


Figure 6.2 Annual growth in total Disbursement (IR)

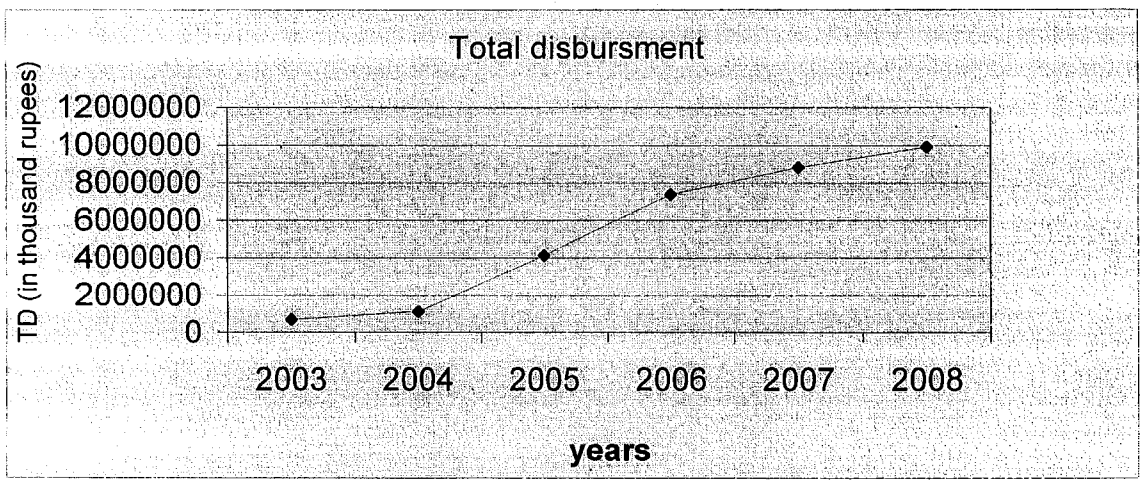


Figure 6.3 Annual increases in Clients (SDF)

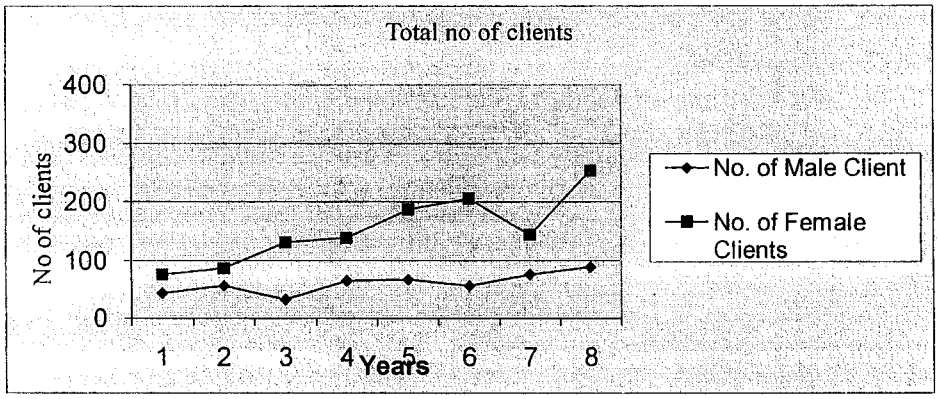
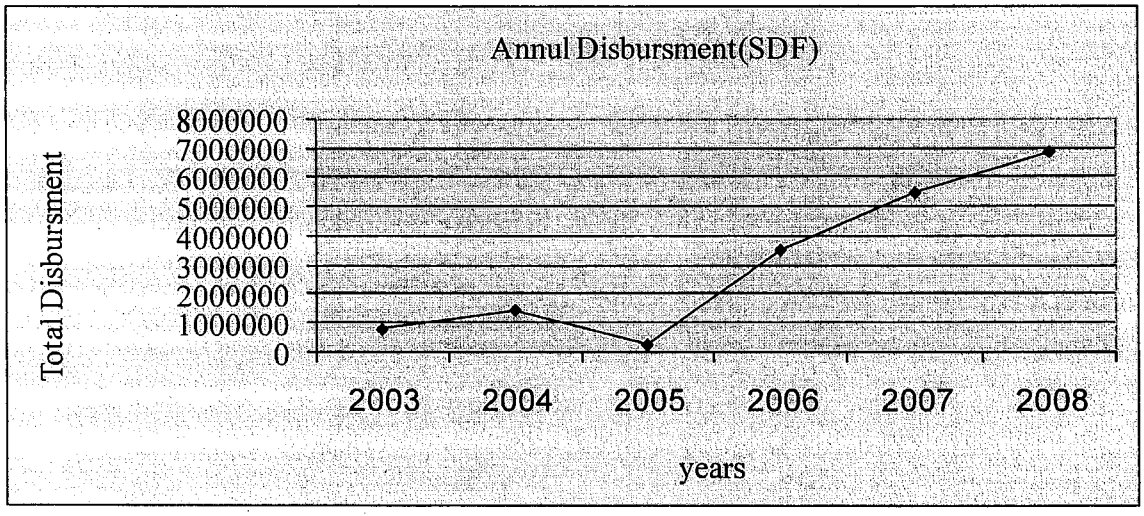


Figure 6.4 Annual growth in total Disbursement (SDF)



Finally we may compare the performance of the two MFOs under reference. Figure 6.5 shows the overall growth of clients (both male and female) and Figure 6.6 compares the total disbursement of both organizations. It is revealed that the position of Islamic Relief (Pak) is stronger than the well established conventional organization Sungi Development Foundation (SDF) in growth rates of both the number of clients and annual disbursements over the period of study.

Figure 6.5 Comparison of Clients gender wise.

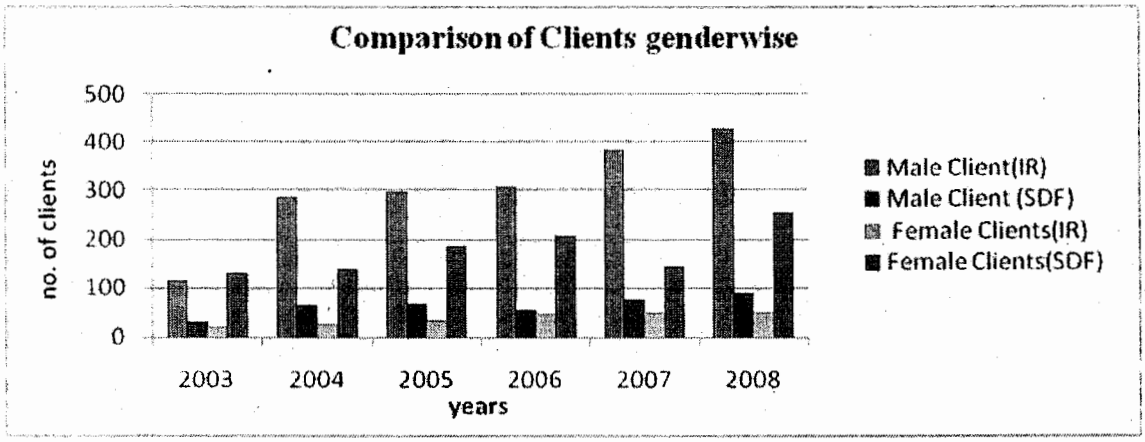
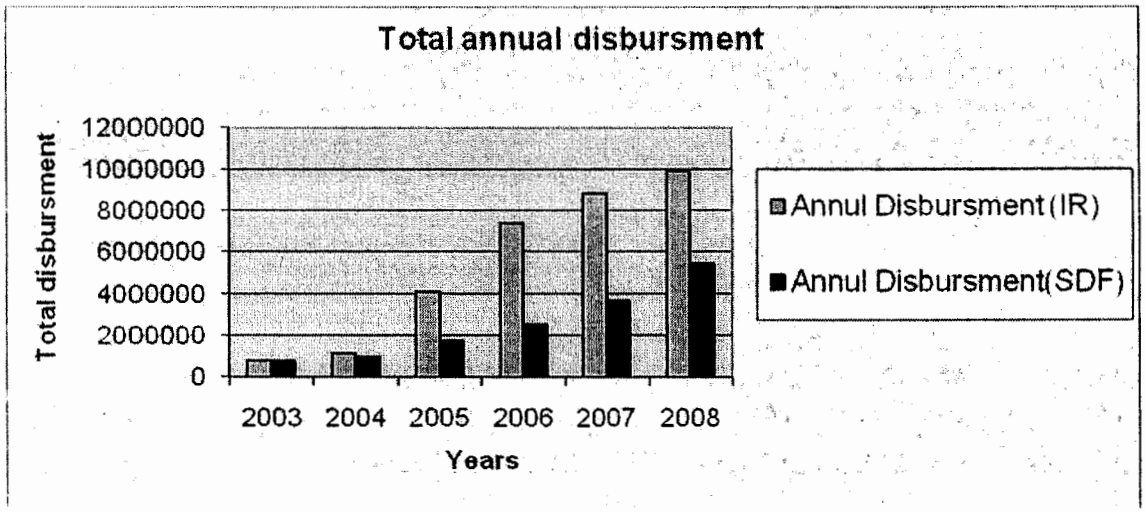


Figure 6.6 Comparison of total disbursement of IR and SDF



6.5 SUMMARY OF PERFORMANCE EVALUATION

The study reveals that average number of clients for IR-PAK over the data period (2003-2008) is 340 per year. The clients have considerably increased over time with annual growth of more than 250 %. The annual disbursement on the average (through Murabaha Transactions) is Rs. 5,367,913 with an annual growth of more than 490%. In contrast, the average number of clients for SDF is 214 over the same data period, which has increased overtime with annual growth of more than 176 %. The Annul disbursement is Rs: 474132 on the average.

Taking into consideration the specified financial ratios i-e Return on Assets (ROA), Net Return Margin (NRM), Operating Cost as percentage of Loan Dispersed (OCL) and Beneficiaries Employees ratio (BER) etc, the financial performance of Islamic Relief Pakistan is better than that of Sungi Development Foundation (SDF).

Looking at the indicators of self-sustainability given by the income to cost ratio and the recovery rate, the Islamic Relief program has performed better in terms of financial sustainability than the SDF over the data period whereas both the institutions are comparable so far as the recovery rates are concerned. For instance, the difference can be clearly seen in terms of income (earned) to cost ratio of both the institution for the same accounting period (year 2009): for Islamic Relief (Pak) it is given by: 985647/4437262 *100= 22.213% and for SDF the index turns out to be: 745670/4587965 *100 = 16.252%.

CHAPTER-7

RESULTS AND DISCUSSIONS-II

This chapter comprises the results of various models (ANCOVA, Simple difference and Binary Logit) used to investigate the impact of microfinance programs on the living standards of people. As already discussed, the information is obtained through a field survey conducted in the selected intervention areas of Islamic Relief-Pak and Sungi Development Foundation. Before we proceed towards the intended task, it seems appropriate to summarize the findings of survey.

7.1 SUMMARY STATISTICS OF RESPONDENTS

7.1.1 Information Obtained from Intervention Area of Islamic Relief (Pak)

The average age of the respondents in the area under study is 32.68 years and the average family size in the same area is 5.54 members (approximately 6 members). The average earning of respondents is Rs: 18159 per family and the average expenditure is Rs: 14812. About 87% of the respondents have their average monthly earning below the minimum required amount sufficient enough to be considered as non-poor. In other words, only 13% of the respondents have their average monthly income equal or above Rs:5100 (equivalent to $2 per day). It means that 87% of the respondents in the intervention area of Islamic Relief (Pak) are living below the poverty line. The data reveals that Islamic Relief (Pak) focuses comparatively more on male clients, since 80 % of the randomly selected clients are male while the remaining 20% are female. Unlike the traditional microfinance programs, the Islamic Relief (Pak) does not focus necessarily on female clients; since the objective is to help the poor (both men and women) rather than women empowerment (the slogan often used by such NGOs). The information regarding respondent regions, sources of income, extra benefits received by the clients and economic impact perceived by the respondents are shown in tables 7.1, 7.2, 7.3 and 7.4 below.

Table 7.1 Respondent Region (Islamic Relief-Pak)				
	Frequency	Percent	Valid Percent	Cumulative Percent
Naseerabad	48	34.8	38.4	38.4
Qasimabad	27	19.6	21.6	60.0
Dhokmustaqim	44	31.9	35.2	95.2
Rawalpindi	6	4.3	4.8	100.0
Total	125	90.6	100.0	

Field survey (2010)

Table 7.2 Sources of Income by Occupation (Islamic Relief-Pak)				
	Frequency	Percent	Valid Percent	Cumulative Percent
Salaried job	2	1.4	1.6	1.6
Small business	72	52.2	57.6	59.2
Mobile shop	21	15.2	16.8	76.0
Others	30	21.7	24.0	100.0
Total	125	90.6	100.0	

Field survey (2010)

The above table shows that majority of the respondents (57.6%) are running their own tiny businesses while the rest of the respondents earn from diverse occupations. Other important information derived from the survey (but not shown in the tabular form) reveal that 74% of the respondents have only one earning family member, 25.6% have two earning family members and 0.8% have three working members. Regarding the income–expenditure compatibility, 83.2% of the respondents consider their income sufficient enough to meet their expenditure level. However, in case of any discomfort, they either have access to the Islamic Relief for financial assistance or rely on informal loans. The respondents were asked if they have derived extra benefits other than financial support from the institution concerned during their association over the past 2/3 years. Following table shows details of benefits received by the respondents.

Table 7.3 Extra Benefits (Islamic Relief-Pak)				
	Frequency	Percent	Valid Percent	Cumulative Percent
No extra benefit	76	55.1	60.8	60.8
Training	29	21.0	23.2	84.0
Market linkages	16	11.6	12.8	96.8
Others	4	2.9	3.2	100.0

Field survey (2010)

About 60.8 % of the respondents did not receive any extra benefits except the micro credit. 23% of the respondents received extra benefits in the form of trainings, while 12.8% got improved their market linkages with the help of Islamic Relief (Pak). Regarding the economic impact noticed by the clients, the following table shows a detailed explanation:

Table 7.4 Economic Impact Noticed (Islamic Relief-Pak)				
	Frequency	Percent	Valid Percent	Cumulative Percent
No economic impact noticed	31	22.5	24.8	24.8
Increase in Income	92	66.7	73.6	98.4
Product diversification	1	.7	.8	99.2
Increase in physical assets	1	.7	.8	100.0
Total	125	90.6	100.0	

Field survey (2010)

Majority of the respondents (73.6%) noticed an increase in their earning level, while 24.8% of the respondents did not observe any extra benefit. It is obvious from the table that the respondents of Islamic Relief (Pak) did not see any significant impact on product diversification or an increase in their physical assets after their dealing with MFO. However, the time span of intervention is not long enough to notice changes in the physical assets of the people or to enable them expand their business and incorporate diversification of products. It is satisfactory that majority of respondents admit an increase in their income due to micro financing facility.

The clients seem satisfied with the process of disbursement of funds and the repayment process, developed by Islamic Relief (Pak). About 70% of the total clients did not feel any difficulty in the processing of credit as well as ability of repayment, which is satisfactory. Only 7% of the total clients felt difficulty in the repayment of credit either due to insufficient income level or large family expenditure or sickness or other mis-happening.

7.1.2 Information Obtained from Intervention Area of Sungi (SDF)

The average age of respondents in the area under study is 32.41 years, while average family size is 5.59 members (approximately 6 members). Likewise, the average earning of the sample is Rs: 19145 per family while the average expenditure is Rs: 15551. It is interesting to note that the average monthly income of all the respondents within the sample area of SDF intervention is below the minimum standards (Rs. 5100/-). In other words 100% of the respondents in the intervention area of SDF are living below the poverty line. Like other traditional microfinance organizations, the SDF particularly focuses on female clients as evident from the retrieved information in which 87.5 % of randomly selected respondents are female while the remaining 12.5% are male. The most relevant information regarding the respondents regions/ backgrounds, source of earnings, extra benefits and economic impact noticed in case of SDF are shown in tables 7.5, 7.6, 7.7 and 7.8 below.

Table 7.5 Respondent Regions (SDF)

	Frequency	Percent	Valid Percent	Cumulative Percent
Shumlai	20	13.8	16	16
Ajmera	25	16.6	20	36
Kozabanda	45	40.19	36	72
Batamori	35	25.3	28	100.0
Total	125	90.6	100.0	

Field survey (2010)

Table 7.6 Source of Income by Occupations (SDF)				
	Frequency	Percent	Valid Percent	Cumulative Percent
Salaried job	1	1.4	0.8	0.8
Small business	80	52.2	64	64.8
Mobile shop	10	15.2	08	72.8
Others	34	21.7	27.2	100.0
Total	125	90.6	100.0	

Field survey (2010)

It is revealed from the above that majority of the respondents (64%) are running their own small businesses while the rest of the respondents earn from diverse occupations. The data at hand also contains some important information about the family size, earning members, facilities in houses etc. For instance, 68% of the respondents have only one earning family member, 28% have two earning family members and 4% have three working members. Regarding the compatibility of household income and expenditure, 86.5% of the respondents considered their income sufficient enough to meet their normal expenditure. However, in certain situations of discomfort, they needed extra assistance, and for which purpose they either have to approach the SDF for microfinance or to seek informal (private) sources of loan. The respondents were also asked if they had received any extra benefits due to association with SDF. The response is shown in the following table.

Table 7.7 Extra Benefits (SDF)				
	Frequency	Percent	Valid Percent	Cumulative Percent
No Extra Benefits	25	19.1	20	20
Training	70	66.0	56	76
Market Linkages	25	19.1	20	96
Others	5	3.9	4	100.0

Field survey (2010)

It is evident from the above that 20% of the respondents did not receive any extra benefits except micro credit but 56% of them received some thing extra in the form of training, while 20% developed market linkages with the help of Sungi Development Foundation. It is worth mentioning that SDF encourages savings at the gross root level and every member is required to deposit a minimum amount with the organization. It also provides the facility of micro insurance. Regarding the economic impact noticed by the clients, the following table shows a detailed explanation:

Table 7.8 Economic Impact Noticed (SDF)

	Frequency	Percent	Valid Percent	Cumulative Percent
No Economic impact noticed	30	21.5	24	24
Increase in Income	80	56.2	64	88
Diversification of Products	10	8	8	96
Increase in physical assets	5	4.1	4	100.0
Total	125	90.6	100.0	

Field survey (2010)

Majority of the respondents (64%) noticed an increase in their earning level whereas 24% didn't observe any extra economic benefit. It is obvious from the table that microfinance program of SDF does not have significant impact on product diversification or increase in physical assets of the respondents. Majority of the clients seem satisfied from the process of disbursement of funds and the repayment process. On such a query, 65% of the clients revealed that they did not feel any difficulty in the repayment of credit and only 11% of them felt hardship either due to insufficient income or large family size expenditure or other accidental events beyond their control.

7.2 STATISTICAL INFERENCE

On the basis of data obtained from the intervention areas of the Islamic Relief (Pak) and SUNGI Development Foundation, we carry out the statistical analysis as under:

7.2.1 ISLAMIC RELIEF (PAK)

(a) Testing difference between Earnings (mean difference)

The two samples (control and experimental groups) are drawn from the same population in the respective region randomly. However, we do not know about the shape of population distribution or the values of population parameters. T-test has been employed to investigate whether the difference between the earnings of experimental and control group is statistically significant or otherwise. As discussed earlier, if the unknown population variances of control and experimental groups are the same, then the degree of freedom of t-statistic is equal to n_T+n_C-2. Thus the df = (100+25) -2 =123. The test is summarized as under (the symbol 'T' stands for treatment group and 'C' for control group).

i. $H_0 : \mu_{inc\,(T)} = \mu_{inc\,(C)}$
$H_1 : \mu_{inc\,(T)} \neq \mu_{inc\,(C)}$

ii. Significance level: $\alpha = 0.01$

iii. Test statistic under H_0 is given by: $t = \overline{X_T} - \overline{Y_C} / \sqrt{S_T^2 / n_T + S_C^2 / n_C}$

iv. Critical region is $|t| \geq t\ 0.005\ (123) = 2.617$ v. Computation: Estimated t-value: 4.417

As the t-estimated value is greater than the corresponding tabulated t-value, therefore we reject Ho and conclude that mean income of the experimental group is statistically different from that of the control group.

We may conduct another test to verify if the unknown population variances of control and experimental groups are equal or otherwise. In this case, the degree of freedom and the corresponding F-statistics are estimated as under:

$$df = \left[\frac{[(S_T^2 / n_T)}{(S_T^2 / n_T)^2 / n_{T-1}} + \frac{(S_c^2 / n_c)]^2}{(S_c^2 / n_c)^2 / n_{c-1}} \right] = 46.46 \qquad F = S_T^2 / df / S_c^2 / df = 0.000469$$

As the estimated F-value is very small and does not exceed the F-tabulated (2.25 at 1% confidence level) value, therefore we have sufficient evidence to accept our null hypothesis and conclude that there is no difference between the variances, i.e. $\sigma_t^2 = \sigma_c^2$.

(b) Testing difference between Expenditure (mean difference)

The mean difference test may be applied to the expenditure levels of the treatment and control groups and statistical inference derived. A significant difference between the consumption levels of the two groups will be indicative of the success of microfinance program in economic uplift of the people in the intervention area. The results are as under:

i. $H_0 : \mu_{\exp(T)} = \mu_{\exp(C)}$
$H_1 : \mu_{\exp(T)} \neq \mu_{\exp(C)}$

ii. Significance level: $\alpha = 0.01$

iii. Test statistic under Ho: $t = \overline{X_T} - \overline{Y_C} / \sqrt{S_T^2 / n_T + S_C^2 / n_C}$

iv. Critical region is $|t| \geq t\ 0.005, (123) = 2.617$ v. Computation: Estimated t-value: 3.512

As the estimated t-value is greater than tabulated value, we reject Ho and conclude that mean expenditures of experimental group is significantly different from that of control group.

(c) Testing difference between Incomes before and after association

In order to rectify further the economic impact of the concerned microfinance program on the poor and marginalized segments, we have cross checked the income and expenditures of the clients before and after joining the said programs. The difference is thus checked for statistical significance. We state our null and alternative Hypothesis for IR-Pak clients' as:

i.
$$H_0 : \mu_{inc\ (T)\ before} = \mu_{inc\ (T)\ after} \Rightarrow Difference = 0$$
$$H_1 : \mu_{inc\ (T)\ before} \neq \mu_{inc\ (T)\ after} \Rightarrow Difference \neq 0$$

ii. Level of Significance: $\alpha = 0.01$

iii. Test statistic under Ho is given by: $t = \dfrac{\bar{d}}{Sd/\sqrt{n}}$

iv. Critical region is $|t| \geq t\ 0.005, (99) = 2.617$ v. Computation: Estimated t-value: 13.24

Since the t-estimated value is greater than t-tabulated value, therefore we reject Ho and infer that the difference between the incomes of clients before and after joining the microfinance program is significant. This empirical result provides sufficient evidence in favour of the Islamic Relief microfinance program (IR-Pak) in uplifting the standard of living of the clients.

7.2.2 SUNGI DEVELOPMENT FOUNDATION (SDF)

We have followed the same procedure of testing the mean difference of income and expenditure of the experimental and control groups in the intervention area of the Sungi as discussed above. Following are the results of tests.

(a) Testing difference between Earnings (mean difference)

i.
$$H_0 : \mu_{inc\ (T)} = \mu_{inc\ (C)}$$
$$H_1 : \mu_{inc\ (T)} \neq \mu_{inc\ (C)}$$

ii. Level of Significance: $\alpha = 0.05$

iii. Test statistic under Ho is given by: $t = \overline{X_T} - \overline{Y_C} / \sqrt{S_T^2 / n_T + S_C^2 / n_C}$

iv. Critical region is $|t| \geq$ t 0.025 (123) = 1.98 v. Computation: Estimated t-value: 2.164

As the t-estimated value is greater than the corresponding t-tabulated value, therefore we reject Ho and conclude that mean incomes of the experimental group is statistically different from that of the control group.

(b) Testing difference between Expenditure (mean difference)

i. $H_0 : \mu_{\exp(T)} = \mu_{\exp(C)}$
$H_1 : \mu_{\exp(T)} \neq \mu_{\exp(C)}$

ii. Level of Significance: $\alpha = 0.05$

iii. Test statistic under Ho is: $t = \overline{X_T} - \overline{Y_C} / \sqrt{S_T^2 / n_T + S_C^2 / n_C}$

iv. Critical region is $|t| \geq$ t 0.025 (123) =1.98 v. Computation: Estimated t-value = 2.185

Since the estimated t-value is greater than the corresponding tabulated t-value, therefore we reject Ho and conclude that mean expenditures of experimental group at 5% significance level is statistically different from control group's mean expenditure.

(c) Testing difference between Incomes before and after association

In order to rectify further the economic impact of the Sungi microfinance program on the life style of the people, we have cross checked the incomes of clients before and after their joining of the said program. The results are stated below:

i. $H_0 : \mu_{inc(T)before} = \mu_{inc(T)after} \Rightarrow Difference = 0$
$H_1 : \mu_{inc(T)before} \neq \mu_{inc(T)after} \Rightarrow Difference \neq 0$

ii. Level of Significance: $\alpha = 0.01$

iii. Test statistic under Ho is: $t = \dfrac{\overline{d}}{Sd / \sqrt{n}}$

iv. Critical region is $|t| \geq t\ 0.005\ (99) = 2.617$ v. Computation: Estimated t-value is 141.89

As estimated t-value is greater than the tabulated value, we reject Ho and conclude that the difference between the clients' current income and that before joining microfinance program is significantly different from each other. This empirical investigation further provides sufficient evidence in favor of economic uplift of SDF clients.

Table 7.9 Summary of Statistical Inference: Economic Impacts (IR-Pak versus SDF)

	IR-Pak	T-value	SDF	T-value
Mean difference in incomes (Experimental vs Control group)	7891	4.417*	4302	2.164**
Mean difference in expenditure (Experimental vs Control group)	6435	3.512*	3560	2.185**
Mean difference in incomes Before and After intervention (Experimental group)	6160	13.64*	3870	141.89*

* Significant at 1%. ** Significant at 5%.

It is worth mentioning to note that both microfinance programs have a positive impact in terms of increasing income and expenditures of their respective clients. The above table also depicts that IR-Pak has relatively stronger positive impact in terms of Economic and social uplifts of their corresponding clients[2]. For Islamic Relief Pakistan, all variables are statistically significant at 1% while the same variables for SDF are statistically significant at 5 % except the last variable.

[2] This difference may be all because of financing non- bankable clients in urban areas.

7.3 REGRESSION ANALYSIS

This section discusses the results of different models (ANCOVA and Binary Logit) used to investigate the impact of microfinance programs on the living standards of people. As already discussed, the information is obtained through a field survey conducted in the selected areas of intervention of the microfinance organizations, IR-Pak and SDF.

7.3.1 The Impact of Microfinance Activities on the Earnings of Clients

As explained in the analytical framework (chapter-4), we have resorted to successive models with binary and continuous explanatory variables in order to evaluate the impact of intervention of the micro-finance programs (the Islamic Relief- Pak and SDF) on the earnings of the clients. The data was collected through structured survey and the following model was proposed with binary as well as selected continuous explanatory variables on the right hand side:

$$Y_i = \beta_0 + \beta_1 D_c + \beta_2 D_s + \beta_3 X_a + \beta_4 X_m + \varepsilon_i$$

a) The Impact on the Earning of Clients (Islamic Relief-Pak)

Table 710 (a) shows the regression estimates for equation number 1.

So far as the first model is concerned, the regression reveals that average income of the people (non-clients) is Rs: 12108 per household in the area under study. The impact of IR (Pak) microfinance program on the earning of clients is depicted by the coefficient of D_c. If an individual becomes member of IR-Pak, his/her earnings on the average will increase by Rs 8501. Similarly if respondents have other sources of earnings, then the difference between average earnings of respondents' having other sources of earning and Non-clients is Rs: 7295. Age of the respondents (as proxy for maturity and experience) also plays a very important role in determination of household earnings. If age of respondents' increases by one unit (one year),

then on the respondent's income per household on the average increases by Rs: 211.5. The duration of membership with the MFI positively influences income of the clients. If Xm (membership duration) prolongs by one month, then the household earning increases by Rs: 67.7 on the average. The education level could also be a good determinant of the income level of respondents. However, this variable turned out to be insignificant and therefore excluded from the analysis.

Table 7.10 (a) Regression Results from Equation-1 (IR-Pak)
Dependent Variable: Level of Income (Y)

Variable	Estimates	Std. Error	t-value	P>t	95% Confidence Interval	
Dc	8501.424	1590.862	5.34	0.000	5351.628	11651.22
Ds	7295.074	1380.575	5.28	0.000	4561.632	10028.52
Xa	211.5608	83.90131	2.52	0.013	45.44201	377.6795
Xm	67.68585	30.76488	2.20	0.030	6.773533	128.5982
Constant	12108	2924.406	0.45	0.655	-4479.41	7100.759

(b) The Impact on the Earning of Clients (Sungi Development Foundation)

The results of the regression (equation-1) are produced below in Table 7.10 (b).

It is evident from the table that average monthly income of the respondents (non-clients) is Rs: 6219. The impact of SDF microfinance program on the earning of their clients is implied by the coefficient of D_c, which means that if an individual becomes a member of the MFI concerned, his earning on the average will increase by Rs 3918 and his total monthly income will rise to Rs. 10137 (6219+ 3918). By taking into consideration the probability value of the slope estimate, we may conclude that there is significant relationship between D_c and the dependent variable Y. Similarly if a respondent has other sources of earnings besides the support from MFI, then the difference between earnings of respondent concerned and the non-clients is Rs: 4018.

As stated above, age / experience of the individual also plays a vital role in determining the earning level. The results show that if age of the respondent increases by one unit (by one year), then his income increases by Rs: 129.5 on the average. Likewise the duration of membership, denoted by Xm (length of association with MFI) positively influences income of clients. If this duration increases by one month, then on the average, the household earning increases by Rs: 32 approx. Although, this variable is statistically insignificant but carries the correct sign. As in the case of IR-Pak, the level of education as determinant of income was considered for the respondent s of SDF but later on dropped from analysis due to unsatisfactory results.

Table 7.10 (b) Regression Results from Equation-1 (SDF)
Dependent Variable: Level of Income (Y)

Variable	Estimates	Std. Err.	t-value	P>t	95% Confidence Interval	
Dc	3918.837	1136.828	3.45	0.001	1667.997	6169.677
Ds	4018.278	1041.935	3.86	0.000	1955.32	6081.236
Xa	129.5364	56.24278	2.30	0.023	18.17958	240.8932
Xm	31.95443	27.61473	1.16	0.250	-22.72081	86.62968
Constant	6219.615	1924.831	3.23	0.002	2408.585	10030.65

7.3.2 The Impact of Microfinance Activities on Poverty Reduction

As explained in chapter-4 on the analytical framework, the impact of intervention of the microfinance programs on the absolute level of poverty may be evaluated through a Binary Logit model via equation 2, reproduced below:

$$Z_i = \alpha_0 + \alpha_1 D_c + \alpha_2 D_s + \alpha_3 X_a + \alpha_4 X_m + \alpha_5 X_{fs} + \varepsilon_i$$

In the above relation, $Z_i = \frac{\rho_i}{1-\rho_i}$ is the odds ratio and ρ_i is the probability that a respondent is living above the poverty line (Rs. 5100/- per month). Thus the value of the dependent variable is derived from the available data set on the income and expenditure levels of the respondents. In addition to the dummies for client/non client (membership: Dc) and existence of other sources of income or otherwise(Ds), certain continuous variables have been included to exhibit important characteristics like age of the respondent (Xa), the duration of membership/ association with the MFI concerned(Xm) and family size (Xfs). Next we turn to the results from regression with reference to the data collected through structured surveys in the respective intervention areas of Islamic Relief (Pak) and Sungi Development Foundation.

(a) The Impact on the Absolute level of Poverty (IR-Pak)

The results obtained by computing equation (2) from the data collected from the intervention area of Islamic Relief (Pak) are depicted in Table-7.11 (a) below.

Table 7.11 (a) Marginal effects of Logistic Regression: Equation-2 (IR-Pak)

Variables	dy/dx (ME)	Odd Ratio	Std. Err.	Z	P>Z	95% Confidence Interval	
Dc	0.1237	0.0177	0.71893	2.36	0.026	0.36211	3.6558
Ds	0.1965	3.5650	0.43953	3.96	0.002	0. 81322	2.5698
$\mathbf{X_m}$	-0.161	4.0156	0.65129	-2.11	0.024	-2.98910	-0.23655
$\mathbf{X_a}$	0.1222	3.3232	0.61240	2.52	0.039	0.16465	2.2155
X_{fs}	-0.053	1.0681	1.15320	-0.389	0.039	0.065931	0.1454
Cons			0.75641	-4.65	0.001	-5.55558	-2.3255

Logistic regression	**Number of obs**	**125**
	LR $chi^2(4)$	36.39
	Prob > chi^2	0.0000
Log likelihood = -51.83	Pseudo R^2	0.2738

The dependent variable Zi has been assigned two categories, zero and unity. The results reveal that if D_c increases by one unit (if an individual avails the facility provided by the MFI),

then the probability in favour of having monthly earning of at least Rs. 5100 (above poverty line), increases by 12%. Likewise the results reveal that if D_s =1 (if the individual concerned has other sources of earning besides the micro-credit facility), then the probability in favour of having average earning of Rs. 5100 minimum per month, increases by 19%.

The duration of membership is supposed to be an important variable, so far as reduction in poverty is concerned and the variable (X_m) has to capture these effects. However it has turned out to be insignificant and does not carry the correct sign. Another variable under the title of age (X_a) has been used to indicate maturity of the clients. Mature and experienced clients are expected to use the funds properly for productive ends. This variable carries the correct sign, however insignificant at 1% level. Family size (number of dependent members) is an important variable. The empirical results reveal that if family size increases by one member, then the probability in favor of average earning of Rs: 5100 decreases by 5%. The Pseudo R^2 value is 0.2738, which is an equivalent of R-square in ordinary regressions. The LR-statistic value is 51.83 with very small probability and implies the overall significance of the model.

(b) The Impact on the Absolute level of Poverty (SDF)

The regression results with respect to the data derived from the intervention area of Sungi Development Foundation are presented in the following table: 7.11(b).

The dummy variable (D_c) is used to show the status of the respondent, whether client of the MFI concerned or non-client. The results reveal that if an additional individual avails the credit facility of SDF, then the probability in favour of an average income of Rs. 5100 per month increase by 21% . The dummy variable (Ds) shows sources of earnings of the respondent other than the business supported by microfinance from SDF or otherwise. The results reveal that

if Ds=1 (the individual concerned has other sources of earnings), the probability in favour of having an average income of Rs. 5100 per month increase by 8%.

Table 7.11 (b) Marginal effects of Logistic Regression: Equation-2 (SDF)

Variables	dy/dx (ME)	Odd Ratio	Std. Err.	Z	P>Z	95% Confidence Interval	
Dc	0.2132	1.8745	0.45875	2.57	0.016	0.2565	2.6156
Ds	0.0825	5.6552	0.25654	0.92	0.023	-1.5570	-0.7026
X_m	0.1754	2.6358	0.65234	4.05	0.000	0.7377	2.8561
X_a	0.1829	2.6548	0.65856	2.65	0.015	0.2887	3.5260
X_{fs}	-0.1127	0.3156	-0.21560	-5.56	0.054	0.4654	3.9824
Cons			0.43575	-2.661	0.028	-1.4465	-0.2412
Logistic regression			**Number of obs**			**125**	
			LR $chi^2(4)$			45.57	
			Prob > chi^2			0.0000	
Log likelihood = -48.356			Pseudo R^2			0.3250	

The duration of membership is considered as an important variable. Older clients are expected to better utilize the credit and hence generate higher profits. This variable (Xm) is significant and carries the expected positive sign. Another variable under the title of age (Xa) is used to show the impact of maturity of clients so far as the utilization of micro-credit is concerned. This variable is statistically significant. Likewise, family size (number of dependents in the household) is an important variable in poverty analysis. The results reveal that if family size increases by one member, then the probability of having an average income of Rs: 5100 (poverty line) decreases by 11%. The **Pseudo R^2** is 0.3250 which is an equivalent of R-square in OLS models. Similarly, LR-statistic value (-48.356) having very small probability shows that the model is overall significant.

7.3.3 The Impact of Microfinance Programs on Well-Being of the Clients

Microfinance programs are expected to promote well-being of the clients or to improve their standard of living. As explained under the analytical framework, evaluation of the impact on well being of the clients is not so easy and straight forward. The notion of welfare or well

being is its self very dubious and involves personal judgment. Although, the level of income may be considered an index of well being 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 reinforce the results obtained under section 7.3.2 above by resorting again to the Binary Logit model via equation 3, reproduced below:

$$W_i = \delta_0 + \delta_1 D_c + \delta_2 D_s + \delta_3 X_a + \delta_4 X_m + \delta_5 X_{fs} + \varepsilon_i$$

$W_i = \frac{\lambda_i}{1-\lambda_i}$ is the **odds ratio**, showing ratio of the probability that well-being has increased (denoted by λi) to the probability that the respondent does not feel so,

Qualitatively, well-being 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 that his/her life style has been improved in general after getting support from the microfinance program. The parameter 'λ' shows the probability that well being of the respondent has increased overtime. We have asked a question on this aspect and the responses recorded in the survey.

Alternatively, the notion of well-being may be quantified and consumption expenditure may be considered as proxy for the purpose. As discussed in chapters-4 and 5, we have computed the benchmark level of consumption expenditure just sufficient to satisfy the minimum basic needs and this amounted to Rs. 4039/- or Rs. 4040/- approx. per month per household. The parameter 'λ' then shows the probability that consumption of the individual respondent is at least equal to this benchmark and it is straight forward to compute the indicator 'W'. For the sake of comparison, we follow both qualitative and quantitative approaches for the two comparative microfinance programs under study.

(a) The Impact on the Well-Being of Clients (Islamic Relief-Pakistan)

(i) Qualitative approach: Based on the perceptions of the respondents, the dependent variable 'W_i' is distributed in two categories based on the values of the parameter 'λ'. The results are depicted in Table- 7.12 (I). The results show that if the dummy variable (D_c) increases by one unit (if an additional individual avails the facility of microfinance), the probability in favour of an increase in well- being will increase by 19%. Similar interpretation can be given for other dummy variable (Ds) measuring presence of other sources of income or otherwise. The continuous variables used for age/maturity/experience (Xa), duration of membership (Xm) and family size (Xfs) can be interpreted as usual. It can be noted from the table that all the coefficients carry the expected signs. The information regarding McFadden R-square and LR-Statistic depict the overall significance of the model.

(ii) Quantitative approach: As stated above, the dependent variable is based on the level of consumption expenditure and thereby quantified. The parameter 'λ' shows the probability that consumption of the respondent is above the benchmark level (Rs. 4040/- per month). If the consumption of an individual is above this level, it may be presumed that his/her well being has increased. The empirical position is shown in Table- 7.12 (II) above.

The results indicate that if D_c increases by one unit (if an individual avails the facility of microfinance), then probability in favor of an increase in well being will increase by 15%. Likewise the variable D_s 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 well being will increase by 25%. The variable used to capture the effects of age or maturity is significant and carries the expected sign. Same is the case with the variable used family size and that used for the duration of membership

with the program concerned. LR-statistic (41.3228) with very small probability shows that the model is overall significant.

Table 7.12 (I). Impact on Well-Being of Clients: Equation-3 (IR-Pak) (Qualitative)

Variable	dy/dx	Std. Error	z-Statistics	Odd ratio	Probability
C		0.556692	-2.608960	0.234011	0.00091
D_c	0.1582	0.682225	3.645851	12.02865	0.0003*
D_s	0.0425	1.156895	2.698198	22.68110	0.0070*
X_a	0.2451	0.506604	1.432023	2.065698	0.15210
X_m	0.12358	0.505309	1.813825	2.500628	0.0597**
X_{fs}	-0.0526	0.4036	-1.4333	2.152	0.05638*
LR statistics (4 df)	40.38523	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%

Table 7.12 (II) Impact on Well-Being of Clients: Equation-3 (IR-Pak) (Quantitative)

Variable	Dy/dx	Std. Error	z-Statistics	Odd ratio	Probability
C		0.556692	4.225810	10.23401	0.00910
Dc	0.14710	0.682225	3.974451	15.06370	0.0003*
Ds	0.21256	0.528200	4.083333	8.63698	0.0002*
Xa	0.14550	1.156895	1.828798	10.97171	0.0002*
Xm	-0.0672	0.505309	1.288320	3.17815	0.0538**
Xfs	0.0958	0.542500	1.037123	1.69124	0.0513**
LR statistics (4 df)	41.32285	McFadden R-squared			0.438154
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%

A comparison of the two tables [7.12 (I) and (II)] indicates that the quantitative approach followed in the analysis of well being is more reliable. The results have significantly improved in the second case [Table 7.12 (II)], since all the variables are significant and carry the correct signs. Next we repeat the same experiments with clients of the SDF.

(b) The Impact on the Well Being of Clients (SDF)

Next we turn to analyze the data obtained from the intervention area of Sungi Development Foundation. We follow both qualitative and quantitative approaches.

(i) Qualitative approach: The construction of the dependent variable 'W_i' is based on the perceptions of the respondents about their well being. It is distributed in two categories (1,0) depending on the values of the parameter 'λ'. The results are depicted in Tables- 7.13 (I)

The results show that if D_c increases by one unit (if an individual avails the facility of microfinance), then the probability of improvement in well-being increases by 8 %. The age of the client as well as his association with the microfinance program for a longer duration are significant factors in improving the well-being. The family size, although carrying a negative relationship with the dependent variable, is however not significant at 5%.

(ii) Quantitative approach: As discussed in the beginning, the construction of dependent variable is based on the level of consumption expenditure and therefore quantified. The parameter 'λ' shows the probability that consumption expenditure of the respondent is above the benchmark level. The results are depicted in Table- 7.13 (II)

The dummy variable used to denote membership of the respondent is denoted as 'D_c'. The results indicate that in case D_c increases by one unit, the probability in favour of well-being of the client will increase by 17%. This variable is significant and carries the expected sign. Likewise, the impact of other sources of income (besides the financing received for investment

and business from the organization concerned) is reflected by the coefficient of the dummy variable Ds. This suggests that the probability of well being will increase by 16% if the respondent has some other sources of income besides finance facility. This variable is significantly related with the well being of clients. Likewise, the variables for age (to proxy for maturity), the duration of membership are also significant and positively related with well being of the individual concerned. The family size carries the expected negative sign and significantly related to well-being of the clients.

Table 7.13 (I) Impact on Well-Being of Clients: Equation-3 (SDF) (Qualitative)

Variable	Dy/dx	Std. Error	Odd-Ratio	z-Statistic	Prob.
C		0.567692	0.0860	- 3.4522	0.00010*
D_c	0.0865	0.542225	1.5659	1.5241	0.0124*
D_s	0.0945	0.57340	2.683954	1.820814	0.0124*
X_m	0.1562	1.876895	3.4110	0.8521	0.0870**
X_a	0.0625	0.634875	1.2520	0.2365	0.18541
X_{fs}	-0.0523	0.487509	1.0125	1.0235	0.0676**
LR statistic (4 df)	38.85		McFadden R-squared		0.4604
Probability (LR Sta)	1.0E-05		Total Observations		
Obs with Dep=0			Obs with Dep=1		

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

Table 7.13 (II) Impact on Well-Being of Clients: Equation-3 (SDF) (Quantitative)

Variable	Dy/dx	Std. Error	Odd-Ratio	z-Statistic	Prob.
C		0.5069	9.45520	5.52240	0.0000
D_c	0.1628	0.5113	3.41113	2.52220	0.0141*
D_s	0.1321	0.5236	3.25412	1.54125	0.0064*
X_m	0.1507	0.3562	2.02560	1.53625	0.0570**
X_a	0.1153	1.5265	3.23500	0.85465	0.0230*
X_{fs}	-0.0452	0.5242	1.12450	-0.45591	0.0560**
LR statistics (4 df)	55.45		McFadden R-squared		0.4874
Probability (LR Sta)	1.235-05		Total Observations		125
Obs with Dep=0	55		Obs with Dep=1		70

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

A comparison of the two tables [7.13 (I) and (II)] indicates that the quantitative approach is more reliable and the results have significantly improved.

7.3.4 The Economic Impact of MFI's: Comparative Position (IR-Pak vs SDF)

We are now in a position to evaluate and mutually compare the impact of microfinance programs under reference on the life style of their respective clients. Although the areas of intervention of the two MFI'S are geographically different, however the socio-economic characteristics are more or less similar. Here we concentrate on two indicators, namely the income level and state of poverty.

So far as the impact of microfinance programs on the earnings of their clients is concerned, we base the comparison on the results presented in Tables 7.10 (a & b). Table 7.14 depicts the comparative position of clients of both the organizations.

Table 7.14 Comparative Position: Impact on Earnings (IR-Pak versus SDF)

	IR-Pak-(Rs)	SDF-(Rs)
Non-clients' average income	12108	6219
Clients (AE) average income	20609	10137
Difference	**+8501**	**+3918**
No other source of earning	12108	6219
Respondents having other sources of earnings	19403	10237
Difference	**+7295**	**+4018**

The average monthly income of non-clients for Islamic Relief Pak is Rs. 12108 while that for SDF is Rs. 6219. The difference in earnings of clients and non-clients for both organizations is positive, which shows a positive impact of microfinance programs on the earnings of corresponding clients. However, the contribution of IR-Pak in terms of increasing the earning of their clients seems to be stronger than its counter part (SDF) despite the fact that the latter is well established NGO supported by the government and has vast financial resources. Of course, the SDF seems to be focusing on the extremely poor as compared to the IR-Pak, which is indicated

by the value of constant in the two regressions intimating the average incomes of controlled groups in the two territories.

Next we turn to the comparative position of the two organizations in terms of poverty alleviation. This time, the comparison is based on the results shown in Tables 7.11 (a) & (b). The following Table 7.15 provides the summary conclusions.

Table 7.15 Comparative Position: Impact on Poverty Reduction (IR-Pak versus SDF)

	Islamic Relief (Pak)		**Sungi Development Foundation**	
Variable	Odd Ratio	Marginal Effects	Odd Ratio	Marginal Effects
Association with MFI	3.5650	0.1237	1.8745	0.2132
Other Sources	0.0177	0.1965	5.6552	0.0825
Age/Experience	3.3232	0.1222	2.6548	0.1829
Family size	1.0681	-0.0530	0.3156	-0.1127

As explained above under section 7.3.2, the dummy variable (D_c) is used to show the status of the respondent (client/ non-client). This association with MFI is likely to increase the probability of having an average income sufficient enough to cross the poverty by 12% in case of IR-(Pak) and by 21% in case of SDF. The impact of SDF seems to relatively stronger in this case. The dummy variable (Ds) shows sources of earnings of the respondent i.e. in addition to the small business supported by MFI, like cultivable land, part-time service etc. The results reveal that the probability of poverty reduction in favour of such individuals increases by 19.6% in case of IR-Pak clients and by 8.2% in case of SDF clients. It means that the clients of SDF intervention area are relatively poorer and depend heavily on microfinance credit facility for their livelihood since they have rarely other sources of income. The age/maturity factor in poverty elimination is also stronger in case of SDF clients than those of IR-Pak. Same is the case of family size (dependent members per household).

CHAPTER-8

CONCLUSION AND POLICY IMPLICATIONS

The present study is conducted with the objective to evaluate the financial health, efficiency, sustainability of contemporary microfinance programs operated by the Islamic Relief (Pakistan) and Sungi Development Foundation (SDF) and also to assess the impacts of these programs on the socio economic conditions of masses in the respective areas of their intervention. A set of primary and secondary data has been used for the purpose. The primary- cross sectional data about the income, family size, expenditure, education level and other attributes have been collected from the clients and non-clients, through a well structured questionnaire. The secondary- time series data about the sources and disbursement of funds, number of beneficiaries [gender wise], financing methodologies etc have been taken from the annual reports of the microfinance organizations concerned over the period from 2002-2008. Various indicators, like return on assets (ROA), net return margin (NRM) and beneficiaries to employee ratio (BER), have been used to evaluate efficiency, profitability and viability of the programs concerned. The impact of micro financing activities on the lifestyle of masses in the intervention areas of the organizations has been estimated using ANOVA and Binary Logit models. The performance of the programs concerned is mutually compared and some conclusions derived.

8.1 MAIN FINDINGS OF THE STUDY

- The study reveals that average total number of clients for IR-Pak is 340 per year, which has increased over time (2003-2008) with annual growth rate of more than 250 %. The annual average disbursement (through Murabaha transactions) is Rs. 5,367,913 with an

annual growth of more than 690%. In contrast, the average number of clients for SDF is 214 per year, which has grown over time (during the same period) with annual growth rate of more than 176 %. Likewise, the annul average disbursement is Rs: 474132, which has grown overtime with an annual rate of 205%.

- Self-Sustainability of Islamic Relief (Pak), given by income to cost ratio for the year 2009 is 22.215. In contrast, the same indicator for SDF (2009) is 16.25. The recovery rate for the same year for both IR-Pak and SDF is 99%.
- The average earning of non-clients is Rs. 12108 per month in the intervention area of the Islamic Relief (Pak). The impact of its micro financing activities on the earning of clients has been projected to be Rs. 20,000 (an average increase of Rs. 8501 per month or 46%) as indicated by the coefficient of binary variable D_C. Similarly the average earning of non- clients in the intervention area of SDF is Rs. 6219 per month. If an individual becomes member of the organization and avails the micro credit facility, his/her monthly earning is projected to increase by Rs3918 (26.5%) and the total earning will rise to Rs: 10173per month.
- The impact of microfinance facilities on the level of poverty has been estimated by using the binary logit model. The results indicate that people who become members of IR-Pak and avail the credit facilities for investment will be better off and the probability that their monthly earning will be at least Rs: 5100 per household (or the probability that they will cross the poverty line) will increase by 14% viz-a-viz the people who don't avail such facilities. Similar projection is made for the clients of SDF. The probability that the clients of SDF will cross the poverty line (have average monthly income of at least Rs. 5100 per month) is more than 28% as compared to the non-clients.

- The empirical analysis indicates that total dependence on the facilities provided by the 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 micro credit facility, the probability of his/her crossing the poverty line will be 24 % higher than those who possess nothing else and depend only on the facilities provided by the MFO concerned. Likewise, if the client of SDF possesses some other assets (for income generation), then the probability of his/her crossing the poverty line will be 9% higher than another client depending totally on the availability of credit facility from the SDF. This result is clearly meaningful.
- From empirical investigation we may conclude that both organizations (IR-Pak and SDF) contribute positively in term of poverty reduction and enhancing the well being of their respective clients. However it is worth mentioning that the performance and socio-economic impact of Islamic Relief (Pak) is relatively stronger than its counterpart, the Sungi Development Foundation.
- Empirical investigations of mean difference model reveal that economic impact noticed in terms of earning and expenditures resulting from Microfinance programs is statistically different for clients and non-clients.

8.2 POLICY RECOMMENDATIONS

On the basis of the findings of the study conducted to evaluate the performance of two microfinance organizations, the following implications may be relevant for designing appropriate policies for the welfare of poor and non-bankable masses.

- Both the microfinance programs are performing well in their areas of intervention and 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.

- Islamic Microfinance program contributes positively in term socio- economic uplift of clients. Respondents who avail the facility of Islamic microfinance are approximately 9% 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 well being of these people.
- The empirical analysis indicates that total dependence on the facilities provided by the 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 microfinance program owns some other assets (sources of earnings) besides the microcredit facility, the probability of his/her crossing the poverty line become higher than those who possess nothing else and depend only on the facilities provided by the MFO concerned.
- The empirical investigation reveals that if credit is provided to mature clients this will increase the chance in favor of social well being as compare to immature clients. Based on this result IR-Pak and SDF Should concentrate to provide the facility of microfinance to mature clients so as to effectively contribute in socio- Economic uplift of clients.
- The poor masses depend, by and large, on traditional technology of production especially in the rural agrarian areas. They are in dire need of effective training on different aspects of on-farm and off-farm activities, credit management, environmental protection, health

care and ethical development. Such trainings can be better arranged by the microfinance institutions, in addition to their normal financing activities. However, some support from the government will be definitely required.

- As per general observation 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 microfinance institutions.
- 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 is necessary.
- The empirical results of this study indicate that the performance of microfinance program founded on the Islamic principles of credit provision is better than the conventional program in a variety of ways. As such, the Islamic microfinance programs are better candidates to achieve the objective of poverty alleviation and reduction of income disparities as also for their compatibility with religious thinking of masses.
- The Islamic microfinance programs must not restrict their transactions to Murabaha mode of financing. In other words, they ought to transform gradually to other desired modes of Islamic finance like Musharaka, Mudariba and Ijara etc.

REFERENCES

A. Habib (2002a), "Contemporary Practice of Islamic Financing Techniques": Jeddah: Islamic Research and Training Institute/ Islamic Development Bank, Research Paper No. 20.

A. Habib (2002b), "Financing micro enterprises: An analytical study of Islamic microfinance institutions" Islamic economic studies Vol: 9 No: 2, March 2002.

Bennett, Lynn (1998), "Combining Social and Financial Intermediation to Reach the Poor: The Necessity and the Dangers" in Kimenyi, Mwangi S., Robert C. Wieland, and .D.V. Pischke (eds), *Strategic Issues in Microfinance*, Hants, England: Ahsgate Publishing Ltd., pp.99-117.

Buckley, Graeme (1996), "Rural and Agricultural Credit in Malawi, A Study of the alawi Muzdi Fund and the Smallholder Agricultural Credit Administration", in Hulme, David and Paul Mosley, *Finance against Poverty*, London: Routledge, Volume 2, pp. 333-07.

Chapra,Umar (2007) "The case against interest. Is it compelling?" Thunderbird International Business Review Vol. 49 (2), March April 2007, pp.161-186.

Copestake et al (2001). "Impact Assessment of Microfinance: Towards a New Protocol for Collection and Analysis of Qualitative Data," Working Papers 23746, University of Sussex, Imp-Act: Improving the Impact of Microfinance on Poverty: Action Research Program.

Dichter, Thomas W. (1996), "Questioning the Future of NGOs in Microfinance", *Journal of International Development*, No. 8, pp. 256-69.

Dunn, et al (2001). "The Impacts of Microcredit: A Case Study from Peru." AIMS Research and Publications: Core Impact Assessments.

Hashemi, Syed M. (1997), "Building up Capacity for Banking with the Poor: The Grameen Bank in Bangladesh," in Schneider, Hartmut (ed.), *Microfinance for the Poor*, Paris: Development Centre of the Organization for Economic Cooperation and Development, OECD, pp.109-128.

Hulme, David and Paul Mosley (1996a), "Finance against Poverty," Volume 1, London: Routhledge.

Hyman, et al (1998) 'Comprehensive Impact Assessment Systems for NGO Micro-Enterprise Development Programmes.' *World Development*, 26(2):261-76

Karnani (2007). "Microfinance misses its Mark" Stanford Social Innovation Review: Summer 2007

Khan, Ajaz Ahmad (2008). "Islamic microfinance: Theory, Policy and Practice"- Islamic Relief Worldwide: 19 Rea Street South Birmingham B5-6LB United Kingdom.

Khandker (1995). Microfinance and Poverty: Evidence using Panel Data from Bangladesh- *World Bank Econ Review (2005) 19(2): 263-286 first published online September 8, 2005*

Latif, M.A. (2002). Income, consumption and poverty impact of infrastructure development. *The Quarterly Journal of the Bangladesh Institute of Development Studies, 28* (3), 1-36.

Manan (2007), "A Comparative Analysis between Grameen Bank and Social Investment Bank Ltd: Myths and Realities" paper presented at first International Conference on Inclusive Islamic Finance, Brunai Darussalam (2007).

M. Mukhtar. (2009) "Islamic Microfinance Welfare in the name of Business" M.Sc (Economics and Finance) thesis, International Institute of Islamic Economics, International Islamic University Islamabad (IIUI).

McKernan, S. (1996). Essays on micro-credit programs in Bangladesh. Ph.D. dissertation, Department of Economics, Brown University.

Montgomery, Richard (1996), "Disciplining or Protecting the Poor? Avoiding the Social Costs of Peer Pressure in Micro-credit Schemes", *Journal of International Development* No.8, pp. 289-305.

Schneider, Hartmut (1997), *Microfinance for the Poor*, Paris: Development Centre of the Organization for Economic Cooperation and Development, OECD.

Wydick (1999a) *"Group lending: the Significance of Micro Credit as a tool of Third World Development"* the Economic Journal 1999: Volume I No 1, PP.52-65.

Zaman, H. (2001)- *Assessing the Poverty and Vulnerability Impact of Micro-Credit in Bangladesh: A case study of BRAC*- (Policy Research Working Paper No-2445). World Bank Washington DC

Appendix - 1
QUESTIONNAIRE USED IN SURVEY

1. BASIC INFORMATION OF RESPONDENT:

i. Name of respondent: ii. Age iii. Gender M/F

iv. Family size v. Years of schooling vi. Place to which belongs

vii. No of family members working/employed

II. FINANCIAL INFORMATION OF THE RESPONDENT

1. What is your income level per month?

2. What is your main source of earning?
   i. Livestock
   ii. Salaried Job
   iii. Small business
   iv. Other (please specify)
3. What is the total value of your assets (in term of rupees)?

4. What is your total expenditure per month?

5. Please give details of your expenditures.
   i. Food expenditures
   ii. Rental expenses
   iii. Educational expenses
   iv. Others

6. Is your income level enough to meet your expenses?
   i. Yes
   ii. No

7. If no, how do you adjust your expenses?
   i. Taking formal loans
   ii. Taking informal loans (from relatives etc)
   iii. Adjust from your previous savings.
   iv. Other (please specify)

III. ORGANIZATIONS AND BENEFICIARIES RELATIONSHIP

8. For how many months you are attached with this organization?

9. Have your income level increased after the attachment with this organization?

10. If yes, how much? (in term of percentage)

11. Are you getting some extra benefits from this organization?

    If yes, please specify
    i. Training
    ii. Market linkages for selling your products.
    iii. Others (please specify)

12. Does the organization help you in case of any emergency situation?

13. What economic impact of micro credit facility you have noticed on

    i. Your assets

    ii. Income

    iii. Housing

    iv. Diversification into new goods/services

14. Are you satisfied from the process and amount of payment? Yes/No

    If no, please specify the reason/reasons

15. Do you feel any difficulty in the repayment of loan? Yes/No

    If yes, please specify the reasons

    i. Insufficient income

    ii. Large family size iii others

16. How do you mange if you fail to repay?
    i. Using past saving/selling assets
    ii. Support from spouse/in-laws
    iii. Support from other relatives and friends
    iv. Do nothing

17. Who decides about the usage of funds/loans?
    i. Self
    ii. Spouse
    iii. Other members of family

IV. DWELLING-RELATED INDICATORS

(Information collected about the dwelling in which the family currently resides.)

18. How many rooms are there in your house? .....

(Include detached rooms in the same compound of the house)

19. What type of roofing material is used in the house?

    i. Tarpaulin (tent type), plastic sheet, grass and twigs

    ii Wooden planks , stones with mud plaster

    iii. Iron sheet or bricks/ tiles

    iv. Concrete.

20. What type of exterior walls does the dwelling have?

    i.. Tarpaulin, plastic sheet, branches and twigs

    ii. Mud walls iii. Bricks/ stone with mud plaster

    iv. Bricks/ stone with cement plaster.

21. What type of flooring is there in the rooms?

    i. Simple mud plaster ii. Wood lining

    ii. Bricks/Tiles iv. Concrete with additional covering.

22. Note the condition of the main dwelling as observed (For the surveyor)

    i. Seriously dilapidated ii. Needs major repairs iii. Sound structure.

23. Is the electricity supply to your dwelling?

    i. No connection ii. Shared connection iii. Own connection.

24. What type of cooking-fuel is primarily used in your house?

i. Animal dung ii. Twigs collected from forest iii. Wood by purchase

iii. Charcoal iv. Kerosene oil v. Gas/ LPG and Electricity

25. What is the source of drinking water?

i. Rainwater, springs, ponds/ lake, river ii. Public wells for common use,

iii. Private well/hand pump iv. Piped supply from municipality

26. What type of toilet facility is available in the house?

i. No facility within the house, use open air ii. Pit toilets (own)

iii. Shared ventilated latrine iv. Toilet with flush system (own)

V. OTHER ASSET-BASED INDICATORS

27. Area of land owned (kanal): Cultivable….. Non-cultivable …….

28. Value of land owned: (Rs) Agricultural …… Commercial …….

29. Nature and value of selected assets owned by household. (Ask the household to identify any assets purchased with micro credit / loan and eliminate these from the table below.)

Asset type and code	Number owned	Resale value at current market price
Livestock		
Cattle and buffalo		
Adult sheep, goat		
Horses and donkeys		
Poultry/rabbits/fish		
Transportation-related assets		
Cars		

Motorcycle		
Bicycle		
Oxen/Donkey Carts		
Other vehicles (Bus, Truck, Tractor)		
Home appliance and electronics		
Televisions		
Cassette recorders/Radios		
Refrigerators		
Electric or Gas cookers		
Washing machines		
Electric/Gas Iron		
Fans/Pedestals		

30. What is your overall assessment of Economic/ Financial position of clients of MFO's?

i. Poor mainly ii. Average/lower middle group iii. Rich/well-to-do iv. Don't know

V. SOCIAL IMPACTS OF MFOS ON CLIENTS

(Please ask and record the following information if the respondent is a client)

Information	**ISLAMIC RELIEF**		**SDF**	
Knowledge of Islam increased	Yes	No	Yes	No
Better relationship with group members	Yes	No	Yes	No
Better relationship with spouse and relatives	Yes	No	Yes.	No
Have benefited (other than financial benefits)	Yes	No	Yes	No

Appendix - 2

BASIC INFORMATION ABOUT MFOs

	ISLAMIC RELIEF	SDP
Location of operation		
Year of establishment		
No. of beneficiaries		
Total disbursement(Rs)		
Disbursement/Beneficiary		
No. of employees		
Female beneficiaries(% of total)		
Dropout rate(% of total)		
Members saving(R.s)		
Risk fund(R.s)		
Member savings/beneficiary(R.s)		

ASSEST STRUCTURE OF MFOs

	ISLAMIC RELIEF	SDF
Total (Rs)		
Deposit with organization (% of total assets)		
Earning assets (% of total)		
Fixed assets (% of total)		
Cash (% of total)		

CAPITAL AND LIABILITY STRUCTURE OF MFOs

Capital	ISLAMIC RELIEF	SDF
Total (Rs)		
Capital fund (Rs) (% of total assets)		
Beneficiaries account (Rs) (% of total credit)		
Net borrowing (Rs) (% of total liabilities)		
Other liability (Rs) (% of total liabilities)		

SOURCES OF INCOME OF MFOs

SOURCES	ISLAMIC RELIEF	SDF
Donations (Rs)		
Organization own assets		
Loans/Qard-e-Hasana		
Others		