IMPACT OF VILLAGE GROUP FINANCIAL SERVICES (VGFS) ON INCOME, EXPENDITURE, NET-WORTH AND WOMEN EMPOWERMENT IN DISTRICT GILGIT

(A CASE STUDY OF THE FIRST MICRO FINANCE BANK GILGIT)

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20-SE/MS (MRD)/F08

Submitted in partial fulfillment of the requirements for the Master of Philosophy degree in Rural Development at the faculty of International Institute of Islamic Economics International Islamic University Islamabad

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1. Rural finance - Bangladesh
2. Rural credit

Dedicated

to my loving parents

whose

constant love, encouragement and support

sustained me throughout my life.

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Contents

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All acclamations & appreciations are for Almighty Allah who created the universe and bestowed the mankind with knowledge & wisdom to search for its secrets. And His Holly Prophet Mohammed (PBUH) the most perfect on the earth who is forever a torch of guidance and knowledge for humanity as a whole.

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Figures and Tables

Acronyms and Abbreviations

AJ&K	Azad Jammu and Kashmir
AKAM	Aga Khan Agency for Microfinance
AKRSP	Aga Khan Rural Support Program
BLP	Better Life Program
BRAC	Bangaladesh Rural Advancement Committee
CEI	Cumulative Empowerment Index
CIDA	Canadian International Development Agency
COs	Community Organizations
EAs	Economic Activities
FMFB	First Microfinance Bank
GB	Gilgit-Baltistan
GDI	Gender Development Index
GEM	Gender Equality Measure
GI	Gini-Coefficent
GNH	Gross National Happiness
GNI	Gross National Income
Govt.	Government
HCR	Headcount Ratio
HDI	Human Development Index
HH	Household
ICTs	Information and Communications Technology
KB	Khushhali Bank
MDGs	Millennium Development Goals

MF	Microfinance
MFIs	Microfinance Institutions
MTDF	Medium Term Development Framework
NGO	Non-Governmental Organizations
NRSP	National Rural Support Program
OLS	Ordinary Least Squires
OPP	Orangi Pilot Project
PC	Per-capita Income
PCO	Population Census Organization
PKR	Pakistani Rupees
PPAF	Pakistan Poverty Alleviation Fund
PSLM	Pakistan Social and Living Standards Measurement
PSM	Propensity Score Matching
RSPN	Rural Support Program Network
SAARC	South Asian Association for Regional Co-Operation
SPSS	Statistical Package for Social Sciences
UNDP	United Nation Development Program
UPAP	Urban Poverty Alleviation Project
VGFS	Village Group Financial Services
VOs	Village Organizations
WB	World Bank
WOs	Women Organizations

ABSTRACT

Women constitute almost half of the total population in Pakistan and majority of them is living in the remote rural areas facing heavy burden of poverty. In rural areas women are the most vulnerable and deprived segment of the society. For meaningful and sustainable economic development women participation in economic actives is equally important as men. In rural areas the availability of economic opportunities for women and their participation in integrated economic development are limited. Therefore, proper initiatives are needed to make them active participants of development. In this regard the role of microfinance in economic development has been emphasized in the literature. Recently, a number of microfinance institutions have been established in Pakistan to improve the living standard and empowerment levels at grass route level. This study evaluates the impact of Village Group Financial Services (VGFS) on income, expenditure, net worth and women empowerment in five remote villages of district Gilgit. VGFS is a special scheme of the First Micro Finance Bank (FMFB) designed to assist the rural poor of Gilgit-Baltistan. The scheme has been initiated following the practical field experience of Aga Khan Rural Support Program (AKRSP) during the last decade. A field survey questionnaire is designed to assess the impact of VGFS on the living standard and women empowerment in Gilgit. A total of 200 female respondents are selected through multi-stage, disproportionate, stratified sampling technique, wherein 100 respondents of treatment group are selected on non-random basis and the rest 100 respondents of control group are selected on random basis. The targeted respondents from both groups are interviewed with well designed and pre-tested questionnaire. Finally, data is analyzed by using SPSS following Mean Difference Model of impact evaluation. The results of our estimation show significant improvement in income, expenditure and empowerment levels of the treatment group. However, no significant differences

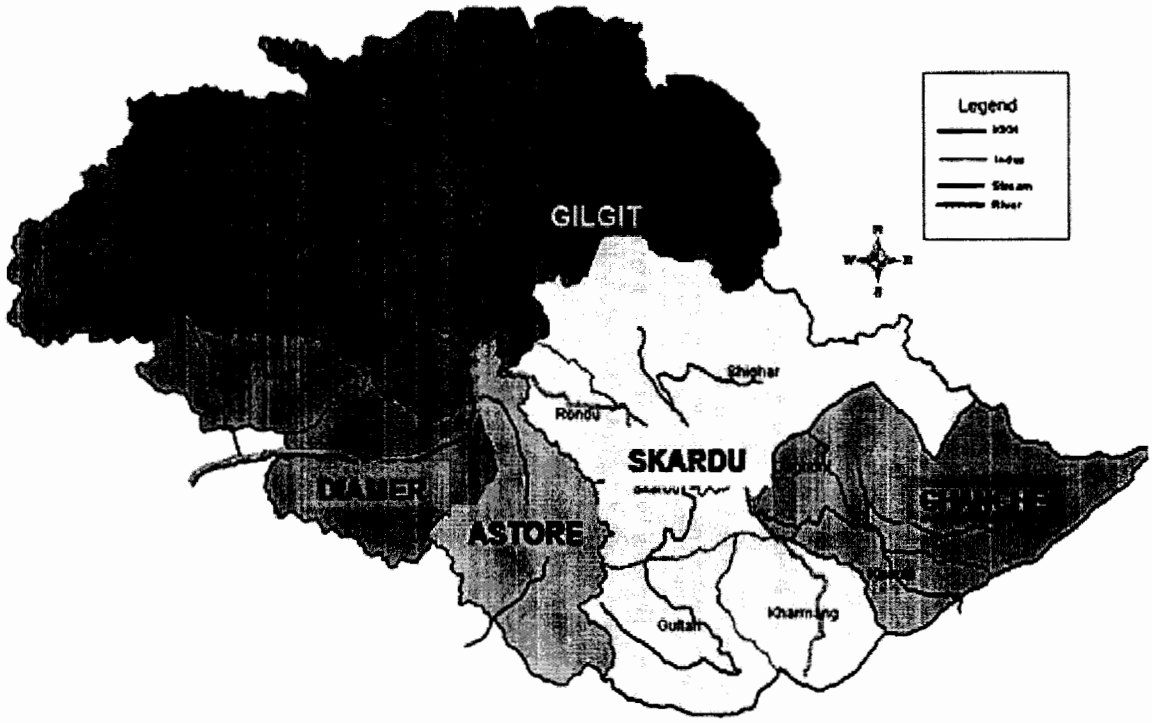
Chapter: 1

Introduction

1.1 Introduction of the area

The Northern Areas of Pakistan currently known as Gilgit- Baltistan approximately cover a region of 72,496 square kilometers bordering China, Afghanistan and India. The region has been divided in to seven districts, Gilgit, Ghizer, Diamer,Skardu, Ghanche, Astore and Hunza-Nagar which in turn have been further sub divided in to a total of thirteen sub divisions and nineteen tehsils:

Figure 1: Administrative Map of Gilgit-Baltistan



Source: http://geogilgit.org/ecotourism.php

According to 1998 census the population of Gilgit-Baltistan is approximately 8, 70,347 and growing at a rate of 2.47 per cent per annum. Average population density in 1998 was approximately 12 person/km while the average household size was 7.9 persons. (PCO, 1998). The distribution of population among different districts, subdivisions and tehsils of Gilgit-Baltistan are given as under:

Tab.1.1 Distribution of Population (Gilgit-Baltistan)

District	Population	Sub-Division	Population	Tehsil	Population
1-Gilgit	145272	Gilgit	145272	Gilgit	145272
2-Skardu	214848	1-Sikardu	127579	1-Skardu	81238
		2-Shigar	45322	2-Rondu	34375
		3-Kharmang	41947	3-Gultari	11966
				4-Shigar	45322
				5-Kharmang	41947
3-Diamer	131925	1-Chilas	72732	1-Chilas	72732
		2-D/Tangir	59193	2-D/Tangir	59193
4-Ghizer	120218	1-Punial/Ishkomen	56179	1-Punial	37773
		2-Gupis/Yasin	64039	2-Ishkomen	18406
				3-Gupis	29648
				4-Yasin	34391
5-Ghanche	88366	1-Khaplu	64347	1-Khaplu	64347
		2-Mashabrum	24019	2-Mashabarum	24019
6-Astore	71666	Astore	71666	Astore	71666
7-Hunza-Nagar	98052	1-Nagar	51387	1-Nagar-I	28825
		2-Hunza	46665	2-Nagar-II	22562
				3-Aliabad	32219
				4-Gojal	14446
G.Total	870347				

Source: Gilgit-Baltistan Election Commission, Gilgit.

Despite significant growth in the Gilgit-Baltistan urban areas, the population remains overwhelmingly rural. The major developmental concerns regarding this mountainous region

include declining food security, insufficient education and awareness, deforestation, poor governance, weak private sector, insufficient access to water, inadequate infrastructure, poverty, poor health facilities, insufficient investment and lack of financial institutions, etc.

1.2 Poverty Trends in Gilgit-Baltistan

The following table presents the percentage of the population that falls below the national poverty line in Gilgit-Baltistan.

Tab.1.2 Percentage of Population Living in Poverty by Region

Years	Baltistan	Gilgit
1991	76	62
1994	65	38
1997	43	35
2001	34	29
2005	29	21

Source: AKRSP Socio-Economic Survey in Northern Areas and Chitral (1991- 2005)

According to AKRSP socio-economic survey 2005 the percentage of population living below the poverty line[1] in 1991, was 76 % in Baltistan and 62% in Gilgit region. In 1994 this percentage was 65% and 38% in Baltistan and Gilgit region, respectively. Similarly in 2001 these ratios were 34% in Baltistan and 29% in Gilgit region. In 2005, the incidence of poverty has declined further and reached to 21% in Gilgit and 29% in Baltistan region. The percentage of poorest population[2] in the programme area of Gilgit-Baltistan also declined sharply during 1991-2005 (AKRSP 1991-2005: p 22).

[1] To define poor in the Socio-Economic Survey of Northern Areas and Chitral in 2005, the Govt. of Pakistan official poverty line of a maximum per-capita income of PKR 10,544 (person/year) was used.

[2] The poorest have been defined as the proportion of the population subsisting on less than half of the poverty line income, or approximately PKR 5,272.

Tab.1.3 Percentages of the Poorest by Region

Years	Baltistan	Gilgit
1991	44	30
1994	44	12
1997	14	9
2001	8	8
2005	6	3

Source: AKRSP Socio-Economic Survey in Northern Areas and Chitral (1991- 2005)

The percentage of poorest population in 1991 was 30% in Gilgit region while this percentage was 44% in Baltistan. In 1997 this percentage was declined to 09% in Gilgit and 14% in Baltistan region. The results of 2005 survey were more encouraging and showed that only 3% of the population in Gilit and 6% in Baltistan regions were poorest (AKRSP 1991-2005: p 22).

In addition to this, the survey also analyzed some charteristics of poverty among poor and non-poor housedholds of Gilgit-Baltistan. These characteristics include structure of household income and expenditure distribution, credit, saving and pattern of household consumption. The detail of household structure is given hereunder:

Tab.1.4 Household Characteristics (Gilgit-Baltistan)-2005

Particulars	Poor	Non-Poor
Household Size	10.7	9.4
Male to Female Ratio	97.7	109.5
Dependency Ratio	97.7	97.0
Adult Literacy Rate	49.3	62.1
Male Literacy Rate	63.3	65.4
Female Literacy Rate	35.8	45.0

Source: AKRSP Socio-Economic Survey in Northern Areas and Chitral (1991- 2005)

The poverty analysis of the survey showed that poor families tended to have relatively large household sizes, higher dependency ratios and lower literacy rates. High dependency ratio for poor families means that women will often be tasked with taking care of young and old dependents. In addition to bearing this burden, poor women also have extremely low literacy rates. The disparity in literacy between poor and non-poor men is very small while this disparity among poor and non-poor women is high. The table also shows that the literacy disparity between men and women in both poor and non poor is most evident which shows women vulnerability towards education in Gilgit-Baltistan (AKRSP 1991-2005: p 23). The economic characteristics of the households are given in the following table:

Tab.1.5 Income, Expenditure, Asset, and Savings Distribution-2005

Particulars	Poor	Non-Poor
Per-Capita Income (PKR)	7260	26158
Farm Income Share (%)	52	40
Off-Farm Income Share (%)	48	60
Average Income/HH (PKR)	68219	280,860
Average Expenditure/HH (PKR)	70736	117343
Average Assets/HH (PKR)	253,050	461982
Average Saving/HH (PKR)	16036	62054

Source: AKRSP Socio-Economic Survey in Northern Areas and Chitral (1991- 2005)

According to the AKRSP Socio-Economic Survey (1991-2005) in Northern Areas, currently known as Gilgit-Baltistan, the poor had low per capita incomes, low household expenditures and fewer household assets (AKRSP 1991-2005: pp 24-25).

The survey results also showed a declining trend in income inequalities (expressed in terms of Gini-Coefficent), depth, intensity and severity of poverty among different income groups in the program area of Gilgit-Baltistan;

Tab.1.6 Measures of Income Poverty and Inequality

Years	Gini-Coefficent	Depth of Poverty	Intensity of poverty	Severity of poverty
1991	0.39	0.53	0.36	0.75
1994	0.41	0.49	0.27	0.55
1997	0.36	0.42	0.19	0.41
2001	0.28	0.38	0.13	0.27
2005	0.24	0.32	0.12	0.16

Source: AKRSP Socio-Economic Survey in Northern Areas and Chitral (1991- 2005)

Average per-capita incomes of the poor have gradually come closer to the subsistence income levels required for survival. The equitable distribution of incomes among the poor themselves has also improved dramatically. Furthermore, reduction in inequalities between the poor and poorest have notably declined with the share of the poorest in over all incomes continuously improving over the period in the program area indicating that the poorest segments of the population are benefitting from development interventions (AKRSP 1991- 2005: p 26).

1.3 Background of the Study

In Gilgit-Baltistan the banking system has been limited to the services provided by some of the scheduled banks like National Bank of Pakistan, Habib Bank, Allied Bank, Soneri Bank and Cooperative Bank. The services of these banks were mainly provided for profit oriented purposes as a result they ignored small but productive sectors of Gilgit-Baltistan economy like handicrafts, bee keeping, fish farming and dry fruit industry, etc.

Aga Khan Rural Support Program (AKRSP) started to provide credit services to poor people of Gilgit-Baltistan in 1993. During the period from 1993 to 2001 it disbursed a total amount of loan PKR1568 million among the poor's. Those people who never had any interaction with the formal financial sector, started to join village and women organizations. They pooled

their individual savings and invested them in banks. Approximately one hundred thirty one thousands households from three thousands nine hundred village and women organizations in Gilgit-Baltistan had generated saving of PKR424 million up to 2001. (AKRSP Gilgit-Baltistan).

In 1994, Aga Khan Rural Support Program decided to set-up a microfinance bank in order to provide all types of microfinance services to the poor men and women in Gilgit-Baltistan. In 2002, The First Micro Finance Bank (FMFB) after receiving license from the State Bank of Pakistan started its functioning in Gilgit-Baltistan. Now, there are ten branches of FMFB working in six districts of Gilgit-Baltistan. For the effective capitalization of economic opportunities by the poor, the First Micro Finance Bank provides a range of financial services, i.e. Village Group Financial Services, Urban Group Financial Services, Micro Enterprise Finance, etc. In Pakistan majority of women are poor and they are living in rural areas, therefore First Micro Finance Bank has focused on providing financial services to women and as a result about 36% of First Micro Finance Bank borrowers are women (FMFB Annual Report 2008). With a vast majority of poor residing in the rural areas of Pakistan over 71% of the cumulative loan amount is disbursed by First Micro Finance Bank in rural areas (FMFB Annual Report 2008).

The Village Group Financial Services (VGFS) is a special scheme of the First Micro Finance Bank designed to assist the poor women of the rural areas. The scheme has been initiated following the practical field experience of Aga Khan Rural Support Program during the last decade. The main objectives of the Village Group Financial Services are given as under:

- Social mobilization of the community through guidance and identifying the opportunities available to them within the village and among the community.

- Empowerment of the community through need assessment and engaging them in developmental activities
- Provision of a range of financial services including credit and saving for the poor women of rural areas.
- Provision of loan facility to the poor rural women on their doors to reduce the accessibility gap and to avoid the transaction cost.
- Enhancement of financial management skills of the village organization office bearer.

1.4 Statement of Problem

The vast majority of the population in Gilgit is rural and depends on subsistence farming as a source of livelihood. A fundamental goal of rural development intervention is to reduce incidence of poverty in the communities through increasing per capita incomes. According to AKRSP socioeconomic survey the incidence of poverty in Gilgit in the year 2005 was 21% (AKRSP 2005). Since 2002 the FMFB is providing group based financial services to address the problem of poverty and to improve living standard in this region. In this regard FMFB Gilgit mobilized PKR 58 million from 7145 depositors in the first half of 2007 i.e. (January 1, 2007 to June 30, 2007). The total number of borrowers and the amount of loans disbursed in the first half of 2007 were 3365 and PKR 93 million, respectively, wherein 2411 male borrowed PKR 71 million and 954 female borrowed PKR 22 million[3]. How far the VGFS of FMFB has been reaching to the absolute poor and contributing towards improving living standard and women empowerment in Gilgit? There is some evidence that these activities and services have contributed towards poverty reduction and women empowerment by creating trust and

[3] Data has been collected from the FMFB Gilgit Branch.

confidence, through the growth and strength of the community organizations. However, there exists a need to investigate the exact nature of the role of VGFS of FMFB towards improving living standard[4] and women empowerment in district Gilgit.

1.5 - Objectives of the Study

The purpose of the study is to:

- Identify and evaluate the target group of Village Group Financial Services.
- Assess the impact of Village Group Financial Services (VGFS) on income, expenditure and net worth in district Gilgit.
- Examine the role played by the First Micro Finance Bank towards women empowerment.

1.6 Hypotheses

- A higher proportion of the beneficiaries of the Village Group Financial services (VGFS) provided by the FMFB are poor.
- The income, expenditure and net-worth levels of treatment group are higher than the control group.
- Treatment women are more empowered than control women in district Gilgit.

[4] Usually living standard indicators vary from study to study depending upon the nature and scope of the study. UNDP and PSLM identified a number of indicator including per capita income, education, health, personal freedom, housing, water supply and sanitation, etc. This study includes three core indicators of living standard i.e. income, expenditure and net-worth.

1.7 Scope and limitations of the Study

A number of studies have been conducted on the role of microfinance in poverty alleviation and women empowerment at global and national level. However, in this regard, no independent research has been done so for about the Northern Areas of Pakistan including Gilgit. The study on Gilgit is important due to its specific socioeconomic conditions. The study is designed to address the issues and limitations faced by microfinance sector in this region. The finding of this study may also help us to understand the role of microfinance institutions in other regions of Pakistan. However, there are certain limitations of this study. First, the study is restricted to district Gilgit only. Second, due to non-availability of base line data we use simple difference estimation technique instead of more reliable double difference technique for impact analysis. Third, the analysis is limited to three core variables of living standard, namely income, expenditure and net-worth.

1.8 Organization of the Study

For easy understanding and analytical purposes, this study has been divided into five chapters. Chapter one is an introductory part of the study. Chapter two consists of literature review. Chapter three discusses the theoretical framework and research methodology. Chapter four is about empirical results and data presentation. Chapter five concludes findings of the study and provides recommendations for policy makers.

Chapter: 2

Literature Review

The term "microfinance" is concerned with the provision of those financial services which are undertaken to target the low income groups. These financial services include credit, savings and insurance products. The Canadian International Development Agency (CIDA) defines microfinance as "the provision of a broad range of financial services to poor, low income households and micro-enterprises usually lacking access to formal financial institutions". (CIDA 2002)

The term "microfinance institution" refers to those organizations that are characterized by their commitment to assist poor families, micro entrepreneurs and impoverished women in gaining access to financial services (Hardy et al 2003). The basic difference between microfinance institution and formal financial institution is that the former develops such innovative techniques that minimize the possible obstacles facing low-income clients in the credit process such as lack of collateral and no credit history. Those techniques include group lending, small loans with progressive lending and frequent repayment installments (Torre 2007). Most of the microfinance/credit institutions provide credit services to their clients on group lending basis without any collateral.

The term "empowerment" is a complex and multidimensional concept and can be defined as the process of transferring decision-making power from influential sectors to poor communities and individuals who have traditionally been excluded from it. In other words the

term empowerment refers to increasing the economic, social, spiritual, and political strength of individuals and communities.

The Asian Development Bank (2007) conducted a "Special Evaluation Study" on the effect of microfinance operations on poor rural households and the status of women in Bangladesh and Philippine in 2007 to find out whether its projects had reduced rural poverty by improving the status of women. The study was based on the simple difference method of impact evaluation. The study concluded on the basis of a focus group discussion that the projects had positive and encouraging effects on the status of women at household level.

Rajasekhar (2002) wrote a paper on Microfinance Program and Poverty Reduction. The paper analyzed the impact of the microfinance program of SHARE on poverty reduction in Tamil Nadu. Data was collected from the eighty four households. One female respondent was selected from each household for interview. The study concluded that microfinance program contributed to increase the saving and income of the women. However, no significant differences were found between treatment and control groups in decision-making and control over income.

Chavan and Ramakumar (2002) reviewed empirical evidence on NGO-led micro-credit programmes in several developing countries and compared them with state-led poverty alleviation schemes in India. The study results indicated that microcredit programmes had slightly improved the income levels of their clients. Meanwhile the participants of the microcredit program had not gained much in the areas like skill enhancement and technological improvements.

Shahidur Rashid et al (2004) conducted a study on Micro-Lending for Small Farmers in Bangladesh. The study used survey method and data were collected from seven villages among five different geographic locations through multi-stage sampling method. The authors concluded that most of the small farm households still rely on the informal financial sector to fulfill their credit needs. They neither had access to the micro lending programs administered by the NGOs nor the formal financial sector. The study concluded that there is room to increase agriculture production by providing credit services to small farm households through microcredit institutions.

Setboonsarng and Parpiev (2008) conducted an impact evaluation study on Microfinance and Millennium Development Goals in Pakistan. The main objective of the study was to evaluate the role of Khushhali Bank,s microfinance program on the specific targets consistent with Millennium Development Goals. The study used mean difference method for estimation and to minimize selection bias it used propensity score matching (PSM) technique. The study confirmed that Khushhali Bank has been effective in reaching out to the poor in remote rural areas of Pakistan. The study also concluded that microfinance institutions have played an important role in the achievement of Millennium Development Goals in Pakistan.

Saugata Bandyopadhyay (2006) examined the role of microfinance in India, Bhutan, Bangladesh, Nepal and Pakistan in transforming the lives and social behavior of the poor people. In order to arrive at Gross National Happiness (GNH), the author tried to create a link among microfinance and capability building through the process of social transformation and by improving living standard. The study used descriptive method for estimation. The study concluded that microfinance played a vital role in SAARC countries in the development of

capability of treatment group through the formation of social capital at the lowest social network level.

Sofia Mumtaz (2000), in context of microfinance schemes, examined the role of National Rural Support Program (NRSP) in the alleviation of urban poverty through its Urban Poverty Alleviation Project (UAPP) in Rawalpindi and Islamabad. UPAP provides financial services to poor women on group basis which were neglected by traditional banking system. The study used descriptive statistics and the results were shown in the form of tables and graphs. The major finding of the study was that the project emphasis is on "boosting the household economy" rather than on the "empowerment of women".

Zaidi, Jamal and Javed (2007) conducted a study on Social Impact Assessment of Microfinance Programmes in Pakistan. The study examined six major microfinance institutions (Asasah, Orangi Charitable Trust, Akhuwat, Sindh Agricultural and Forestry Workers Coordinating Organization, National Rural Support Programme and Kashf) following simple difference and difference in difference method of impact evaluation. The study concluded that with regard to some microfinance institutions, one finds a sign of positive impact. The most important finding from the study was that the economic and social impact on the lives of microcredit participants for most of the institutions was limited. Although some differences in the socioeconomic aspects of the lives of treatment and control groups were observed, but these differences were statistically insignificant.

Seemi Waheed (2001) wrote a paper on Analysis of Issues on Micro Credit: The Case of Two Villages in Punjab. The central point of the study is that microcredit programmes remain a vital intervention in poverty alleviation policy. However, in 2001, 21% of the loan went to 'well-

to-do' and 'better-off' and the remaining to poor and very poor people. Therefore, in her opinion, refinement in the programmes needs to be introduced in targeting the poor only and as far as possible the loans should be avoided to 'well- to-do' and 'better-off' people.

Abdul Saboor et al (2009) analyzed the impact of micro-credit on the farm income and agricultural production. Simple random sampling technique was used and data were collected in Rawalpindi district from two different areas and two types of respondents, farmers with micro-credit and farmers without micro-credit. The respondents were interviewed personally at the farms. Proportionate Analysis and Multiple Regressions Analysis were used for estimation. The study concluded that the income of treatment group was higher than that of control group. Livestock was also important for higher farm income. Mechanization of agriculture, improvement of inputs used in agriculture production and availability of credit also has positive effects on farm income of treatment group.

Faisal Abbas et al (2005) analyzed the role of micro-credit in income generation and poverty in Faisalabad district. Data was collected from three branches of National Bank of Pakistan at different locations. The data was categorized broadly in two groups i.e., agricultural and non-agricultural. Difference of means test was applied to see the significant impact of credit on these groups. The study concluded positive correlation between micro-credit and income generation. Micro-credit helped to reduce poverty in this region.

Asif Javed et al (2006) wrote a paper on the impact of micro-credit scheme of NRSP on the socioeconomic conditions of female community in district Rawalakot, Azad Jammu and Kashmir, Pakistan. By applying simple random sample technique a sample size of 100 female borrowers was selected from all the communities' organizations (COs) working under the

supervision of NRSP. The data were analyzed by using SPSS to draw conclusions and interpret results. The study concluded that the income and expenditure of female increased to some extent as reported by majority of the respondents.

Dhavamani (2010) analyzed women's backwardness in study area. According to writer empowerment means power, but in developing countries women especially in rural areas are more deprived and socially excluded. In rural areas women dose not direct their life towards desired social, political and economic goals or status. Taking above mentioned issues in to account the writer in his study undertook to address the two objectives i.e. to enumerate the growth of self-help groups and to analyze the empowerment of the women through self-help groups in study area. In this investigation Dhavamani used both primary and secondary data and collected well-structured interview from books, journals, newspapers, published literatures and websites. He used proportionate random sampling techniques for collecting primary data. Out of total groups of 398 functioning in Sattur Talka under three NGOs, he selected10 percent of each group (40) form each NGO. For data analysis Dhavamani used statistical tools i.e. percentage means Z-test. Finally he concluded that women empowerment aims at enabling them to realize their identities, potentiality and power in all spheres of their lives. The real empowerment of women is possible if they easily access to the economic resources, more significant participation in the power structure of society and decision making process with family and in the society.

June Lennie (2002) analyzed what is disempowerment and how rural women will be empowered so that they participate in community development process. According to writer disempowerment mean powerlessness, marginalization and exclusion from various social, political, and economical activities. For the effective and quick empowerment of women in her study area "Queensland" the writer suggested interactive communication technology. In her

research June Lennie was more focused on need analysis and assessment. She used a model that identifies social, technological, political, psychological forms of empowerment to analyze the participant's experiences. For investigation the author constructed three broad objective questions. (a) What is the role of information and communication technologies (ICTs) such as emails and internet in economic development? (b) What are empowering effects of the use of ICTs for women and other community members? (c) What are the potentially disempowering or unintentionally negative effects of using ICTs in rural community development? For the collection of data the writer constructed semi-structure, in-depth, and individual interviews with twenty six participants and project stakeholders. She also conducted focused group interviews, audio-conferences with the participants of study area. Descriptive statistics techniques were used to analyze the data. The findings outlined in this paper suggested that ICTs play an important role in the fulfillment of rural women's diverse needs and community participation processes. ICTs can also play an important role in the facilitation of psychological, technological, political and social empowerment. It is observed that the project's online group weblink was quite effective in producing above mentioned effects. Meanwhile the evaluation also highlighted various disempowering effects of participating in the project and using ICTs. Majority of these effects were linked with various hurdles and barriers to participation like power relations among the participants and stakeholders and lack of effective access to ICTs.

Ugomma Ebirim (2000) focused on empowering the rural women through Adult Education for Development. The author had a critical look at the situation of the women in general and the rural women particularly in Nigeria as a reference position. He noted that Nigerian women, particularly rural women are wallowing in ignorance, hopeless poverty, total illiteracy, political bankruptcy and disempowerment. In this study the author used qualitative

method of investigation and data were collected through open ended questionnaire and focused group discussions in the selected area of study. Finally the author concluded that women in Nigeria are not allowed to participate in the political process. It showed disempowerment of women in Nigeria. The Better Life Program (BLP) was a good attempt to empower rural women through 'Non-Formal Education' programs, but it was discontinued by the government of Nigeria due to which the progress in women empowerment declined.

Ogbimi, Soyebo and Alabi (2006) investigated about Osun State, Nigeria where the percentage of women in total population was 49.6%, and majority of this population lived in the rural areas. The women were performing significant role in rural economic development, they were actively involved in agriculture sector. According to different surveys 74% of women worked are separate plots. Households headed by women required various sources to sustain their household livings. In most cases rural women's income was usually irregular, unpredictable and that they used it almost immediately to buy food or other needed items as a result they were not able to accurately determine or see themselves as income earners. Since the family existed in order to achieve its set objective, it had to plan, organize, coordinate and control all its resources towards achieving this mission. In this study the main objective was to minimize financial management problems encountered by rural women. Further specific objectives were to identify financial resources available to the respondents, determine the level of accessibility of the resources by the respondents and examine problems confronting the respondents on effective financial management. The study conducted in three agricultural zones of Osun state of Nigeria.Simple random sampling method was used for data collection. Total nine blocks were selected in each agricultural zone. Two cells were selected per block and two villages were selected per cell making a total of 36 villages. A total of 180 women were selected for the

interview. Simple descriptive statistical techniques such as frequency counts, percentages, means and standard deviation were used to analyze the data. The study concluded that lack of self-discipline in saving money and impulse buying as well as spending too much on ceremonies were the major problems of financial management of rural women. The problem of no savings will always lead households to financial embarrassment at the times of emergencies while impulse buying could result to non-purchase of priority needs. Excessive spending on ceremonies uncovers households to borrowing money from friends, relatives as well as cooperative societies and then affects the planned family goals.

Nilabja Ghosh (2010) investigated the external input based agrarian development in the developing world that has been critiqued for its shortcomings both in respect of sustainability and inclusiveness. Income potentials in the agriculture sector became gradually weighed down by the high costs, degradation and depletion of limited resources that needed to be accessed in competition with other fast moving sectors. Besides improving farm incomes and strengthening agriculture's linkage with the larger economy, the later, it was envisaged, would help to direct the generated incomes towards the women. In his paper the writer revisited the place of women as human resources in agricultural development planning in India and also made an assessment of entrepreneurship as an instrument towards income potential and empowerment of farm women. The queries considered in this evaluation were: (a) what are the economic advantages of agro-based enterprises practiced by the women and whether they are commercially gainful? (b) What have been the key factors for their economic performance and how important are training, market intermediation and organizational innovation? (c) What are the gender implications in terms of the roles, cooperation and conflicts between men and women and do the economic benefits signify empowerment effects? In the study the author conducted primary surveys for the

collection of related data, coordination with Ministry of Agriculture Govt. of India and the survey procedure allowed for sufficient flexibility to accommodate the cross-region diversities while being united by a common set of minimum guidelines. The author undertook sample size as trained women in agro-based enterprises treatment group and non-trained women as control group. The author used simple regression model for estimation. The author concluded that promoting enterprises among rural women is viewed as a promising route to increasing farm incomes along with gender empowerment. Agro-based enterprises offered significant potential to tie together the cost advantages of using resources available abundantly in the rural economy while relieving the women from the exploitations of participation, thus farm helped the women for developing more confident and informed attitudes in life. The study demonstrated how locally available resources and econ-friendly techniques along with indigenous knowledge reinforced with scientific research and training can form a valuable tool-kit for enhancing farm incomes and for improving the position of women.

Mahmuda Hoque and Yoshihito Itohara (2008) examined the status of rural women's participation in economic activities and their role in decision making in the study area. According to writers historically the work of women in Bangladesh was mostly confined to the homestead due to the culture, religious and social restrictions. Women related to agriculture activities were more deprived, socially excluded and had no role in decision making process. While addressing present status of women in Bangladesh the writers defined three objective questions, i.e. to determine present level of participation of rural women in different economic activities as well as explore the factors related to the extent of participation in economic activities, to access how the women's participation in economic activities were related to their household income and to verify the role of women in the decision making process regarding

various family affairs. For this purpose data were collected for the study from 92 farm women of Rampur village of Gaibandha district from May 10 to June 07 2006. Data were collected from all categories of farm families, like landless farmers, marginal farmers, small farmers, medium farmers and large farmers based on land holdings. Sample from each group were taken proportionally, 10 women taken from all farm families. Various descriptive statistical tools were used to analyze the data like mean, standard deviation, percentage, rank order, paired-t test, multiple regression analysis and chi-square tests. The study concluded that despite the poor socioeconomic status, the rural women of the study area actively participated in various economic activities especially in livestock and poultry management, various post-harvested operation and some non-agriculture activities. The study results showed that due to participation in economic activities the rural women in Bangladesh were earning some cash that contributed to their household income. Findings also showed that in most cases the rural women's participation in decision making process regarding different family affaires was lower than their male members. Due to NGOs the ratio of economic activities and participation in decision making process of women increased in study area.

Shahnaj Parveen and Ingrid-Ute Leonhäuser (2004) investigated the social status of Bangaladeshi women that comprised almost 50 % of total population. The social status of Bangaladeshi women, particularly those who were living in rural areas, remained very low. Rural women belonged to the most vulnerable segment of the society facing unfavorable conditions in terms of social domination and economic inequality. Keeping in view the above mentioned issues of Bangladeshi women, the author investigated the nature and extent of rural women's empowerment and factors affecting it. The study also identified a strategic framework for improving the existing empowerment levels of rural women. The study used both quantitative

and qualitative methods of investigation and data was collected from the three villages of Mymensingh district. Empowerment indicators like contribution to household income, access to resources, ownership of assets, participation in household decision making, perception on gender awareness and coping capacity to household shocks were chosen for analysis. Following stratified random sampling technique data were collected from one hundred and fifty six respondents during January-April 2003. For the purpose of estimation, a cumulative empowerment index (CEI) was developed by adding the obtained scores of above mentioned six empowerment indicators. The results of the study showed highly significant effects for sex of children, formal and non-formal education, exposure to media, spousal relationship, and free mobility on CEI. The findings of the study supported the proposition that empowerment of women increased by the above-mentioned six indicators. The study concluded that exposure to information media, education and training were the key variables to improve women empowerment in rural areas.

Syeda Qudsia Batool and M. A. Sajid (2007) conducted a study on the role of women in decision-making. In this study the authors investigated women's related issues in the society. Women at any stage, from girl to becoming adult, face lot of discrimination. Women need to be active in decision-making circle of the society, but our society is male dominated, and barriers rooted in quality between men and women by long-standing attitudes and traditions. The study highlighted issues of women particularly in Azad Jammu and Kashmir (AJ&K), women deprivation starts from birth because girl child is not particularly wanted child, her life starts with subordination. When she is young, her father decides for her matters like where she gets education and marriage. After marriage her husband and her in-laws get hold of all important matters. Women are mostly unpaid workers, they do lot of work in domestic poultry and

livestock but their work is not acknowledged. For the identification of women related issues and its solution the authors set some objectives. First, they investigated the nature and type of decisions made by women at domestic level both in urban as well as in rural areas of Azad Jammu and Kashmir. Second, they analyzed how married women's position within the household influence their power and autonomy. For this study data was collected from the four sample districts of AJ&K. One hundred and sixty four married women between age of eighteen and forty seven were randomly chosen from the four districts. From the total sample size, eighty eight women belonged to urban areas while seventy six belonged to rural area. The questionnaire comprised of household information and includes questions regarding to marriage duration, employment status, mobility etc. Age of eighteen and above was selected because in AJ&K most girls get married at the age of eighteen. The age of forty seven is selected to analyze the decision-making autonomy after forty. The study relied on primary sources of data, collected from direct interviews with the respondents. The unit of analysis for this study was the household. The study used mean difference model and over all significance of the model was tested through F-distribution. The study concluded that women's decision making power is related to their mobility. The result showed for both rural and urban women different levels of decision making at household level. The authors concluded that women participation in jobs can empower them. Through changing their attitude of conventional values and using less tradition which deprived the women, they can create balance between men and women in the society.

Imran Sharif Chaudhry and Farhana Nosheen (2009) conducted a study on the determinants of women empowerment in Southern Punjab (Pakistan). According to the authors Gender Equality Measure (GEM), developed by UNDP, showed the lowest value for South Asia. Pakistan was poorest among the South Asians countries. The average index score points for

South Asian countries were 0.226. The UNDP Report (2007-08) ranked Pakistan 136th from a total of 177 countries with a HDI score points of 0.551. Following the above mentioned issues the study investigated the major determinants of women empowerment in Pakistan. For this study two tehsils of district D-Ghazi Khan were randomly chosen, i.e. D. G. Khan Tehsil and the Tribal Area Tehsil. Total two hundred samples were chosen for survey using stratified random sampling technique. All the samples were female having age group of 14-65 years. The sample women included married, unmarried, working, non-working, educated and uneducated women. Since D.G.Khan Tehsil is comparatively more populated, one hundred and fifty samples were selected from D.G.Khan Tehsil, ninety from rural areas and sixty from urban areas. Remaining fifty was chosen from Tribal Area of D.G.Khan. For the estimation of data Ordinary Least Squares (OLS) method was used. The results of the study showed that women having bank account, women having access to media, women participation in excursion activities, age of women, married women and women having Islamic view point were statistically significant variables contributing positive impact towards women empowerment in the rural area as well as in urban area. Other variables including women doing paid work, age of the woman and participation rates had positive impact on women empowerment in rural areas. Similarly married women along with the women doing paid work were the significant variables affecting women empowerment in tribal areas. The study results also indicated better situation of women empowerment in urban areas as compared to rural and tribal areas because in urban areas women had easy access to job opportunities education, health and media, along with higher levels of education of household and the most important better knowledge of Islamic teachings and its practice, while this situation is deteriorated in tribal and rural areas because of lack of all these above mentioned facilities.

Imran Naz, Sami Ullah et al (2010) examined that women in Pakistan have limited participation in labor force. Majority of the women working in agricultural sector were unpaid. Meanwhile a few numbers of women were engaged in government jobs. The reserved quota for women employment in the country was negligible. Due to minimum participation of women in economic opportunities in Pakistan, their economic activity is not structured up to the mark. The major objective of the study was to investigate the male youth perception towards participation of female youth in economic development. For the attainment of the above mentioned objective the study used survey method. The study collected information regarding the attitude of male youth towards family practices and empowerment of women through closed and open-ended questionnaires. Specific questions regarding women ownership in property, women participation in democratic process like registration of vote and its casting were included in the questionnaires to check the male youth perceptions and attitudes towards women empowerment. The study concluded that due to better education and higher level of awareness regarding the issue of gender, the attitude of male youth has been changed. The male youth perception were positive in the area of women participation in democratic process i.e. vote registration and vote casting. The results of the study also indicated positive practice of giving ownership in property to their family women. This was because they respect Islamic law of inheritance.

AKRSP Socioeconomic Assessment Survey (2007) investigated the impact of micro-credit programme on women development in Gilgit-Baltistan. According to survey's result the women income has increased in the programme areas of Gilgit-Baltistan. They have easy access to savings and credit services. Moreover, women now enjoy increased mobility in the social sphere of life. Women's influence on household income and decision making has improved. However, the AKRSP survey based study is limited in scope. The study has been carried out by

the financial institution itself. The study also did not use any statistical or econometric model for the purpose of estimation. Thus, our study is broad in concept as it covers both qualitative and quantitative aspects of impact assessment by considering various socioeconomic indicators to measure the program impact on the household living standard. Our study also includes appropriate statistical or econometric model to make the results more reliable.

Chapter: 3

Theoretical Framework and Research Methodology

3.1 Theoretical Framework

Microfinance is an effective mean for empowering women. By putting financial resources in their hands, microfinance institutions help and promote gender equality. Women empowerment at individual level promotes the way for social change in the society. The empowerment of women at group level increases the availability of opportunities to individual and economic empowerment of women can improve the status of women in their respective families as well as in the society where they live. (Dheepa and Barani 2010)

Microcredit programs are effective in generating higher income and assets for borrowers through various channels. Firstly, age of the female as well as the male has a significant and positive impact on the income and assets. Secondly, individual's income increases as the person grows older, but income starts to decline after a certain level when he or she stops working. Thirdly, education of the female as well as the male is an important factor in affecting income and assets positively. Fourthly, as the number of earners increases in a household, the amount of borrowing also increases. Finally, micro-credit programs help better outcomes of yield for high income group borrowers compared to medium and low income group borrowers. (Sayama Rahman et al 2009)

Bangladesh Rural Advancement Committee (BRAC) is one of the largest private development organizations in Bangladesh working with the goals of alleviation of poverty, creating employment, increasing rural incomes and mobilizing the landless poor. Women

constitute 80% of the beneficiaries of BRAC and they have contributed 81% of total saving. BRAC has achieved impressive success in achieving its goal of improving socioeconomic status of its female borrowers. (MD Nurul Momen et al 2006)

Microcredit is considered as an effective tool to reduce poverty and women empowerment levels particularly in rural areas where majority of the world poor people are living. Availability of microcredit loans at lower interest rates provides opportunities to the poor rural men and women to initiate income generating activities at their doors (Sadegh Bakhtiari 2006)

Group based lending of microfinance in Orissa (India) had led to positive impact on the socioeconomic development of rural poor villagers. Comparing with control group, the lending increased average annual income of the treatment group by 11.41%, assets 9.75% and saving 42.53%. The expenditures for treatment group including expenditure on productive assets, household consumables, house construction & repair, were also higher than the control group (Debadutta Kumar Panda 2009)

Rajesh Kumar Shastri investigated about the incidence and alleviation of poverty in India. According to his estimates approximately 240 million people were living under the poverty line. He suggested to reduce the level of poverty by increasing self employment opportunities to the poor's. For this he considered microfinance as an effective tool to bring out the poor from absolute poverty by creating self employment opportunities through the provision of microcredit loans at reasonable interest rates. (Rajesh Kumar Shastri 2009)

Microfinance/credit programmes in Pakistan are empowering women in the area of household decisions making, i.e. decisions relating to purchase, repair and sale of house, purchase and sale of television, refrigerator etc. Usually these decisions fall in man's domain in

our society but microfinance has changed the paradigm of household decision making in favor of women. (Salman Asim 2008)

PPAF microcredit program has reduced the overall level of poverty in the program area by 3.07 percentage points i.e. from 6.61% to 3.54 %. The income levels of PPAF borrowers during the reported period was found higher and positive indicating a significant impact of the PPAF microcredit program on the income levels of their clients. So keeping in view this positive impact of PPAF microcredit program on income, it is suggested that PPAF may extend its credit services (outreach) by introducing community based organizations all over the country to tackle the problem of poverty. (Nasim Shah Shehrazi and Amanullah Khan 2009)

3.2 Research Methodology

Before going to discuss the impact evaluation methodologies, first we look at the definition of impact evaluation. Impact Evaluation measures the effects of a particular programme (positive or negative) on individuals, households and communities, and determines whether the programme causes these effects (Baker 2006; WB-OED 2004). An impact evaluation depends upon control and treatment groups along with a number of statistical and econometric techniques to investigate what would have happened in the absence of the programme – the counterfactual. (Khan 2004)

Having the practical limitations to implement the randomized design for all the community based projects in general and for this study in particular, the only rigorous impact evaluation method available is the quasi-experimental design. Subhrendu K. Pattanayak and others (2007) give the following three reasons to use quasi-experimental design while applying it for a water and sanitation project in India. These three reasons are also linked with our study. First, Quasi-experimental designs can be designed around multi-sectoral and multi-dimensional

programmes without constraining or influencing the implementation. Through careful sample design the quasi-experimental design is capable of measuring the relative contributions of Village Group Financial Services (VGFS) to multiple project effects including income, expenditure, net-worth and women empowerment. Second, quasi-experimental design addresses the selection bias arising from targeted or community based programmes by employing propensity score matching (PSM). Propensity score matching addresses selection bias due to observable characteristics by matching intervention communities to observationally similar non-intervention communities. Third, we can collect quantitative and qualitative data at multiple levels to measure programme impact. We can use quantitative structured surveys to collect community, household and institutional data. We can support the analysis using this data with qualitative insights from process evaluations, adequacy surveys and qualitative case studies.

3.2.1 Model Specification

For the quantitative impact evaluation of Village Group Financial Services, quasi-experimental design was used which relies on comparison of beneficiaries (treatment group) and non-beneficiaries (control group) of Village Group Financial Services. The control group was selected among the non-beneficiary households from the same village, because selection of control group from other villages may create serious selection biases. The study estimates impact identified in Martin Ravallion (2002) Simple Difference or Mean Difference Model[5]. The Simple Difference method computes the simple/mean difference in impacts between the treatment and control households and the relationship can be shown by using following equation:

[5] Since at present we do not have the baseline data therefore we cannot use the double difference method which is considered as more rigorous method in the impact evaluation literature (Baker 2006).

$$\Delta\overline{Y} = (\overline{Y_T} - \overline{Y_c})$$

Where:

$\Delta\overline{Y}$ = Change in the outcome variable of interest (income, expenditure, net-worth and women empowerment)

$\overline{Y_T}$ = Treatment outcome indicator (income, expenditure, net-worth and women empowerment)

$\overline{Y_c}$ = Control outcome indicator (income, expenditure, net-worth and women empowerment)

T = Total number of treatment households

C = Total number of untreated (control) households

Selection biases in such a design are inherent but these can be addressed using appropriate statistical and econometric techniques. The study employed poverty score card[6] as already tested by World Bank for identifying the match comparison of households in the control group to avoid selection biases. Poverty scorecard controls observable selection biases by ensuring that treatment and control groups are comparable in all aspects except that the control group has not received program intervention. The poverty scorecard is quicker and cheaper to implement than other methods.

[6] Poverty score card is a technique used in impact evaluation analysis to match the comparison groups in order to avoid selection biases. For this study we have used poverty score card for Pakistan identified by the World Bank to match the control and treatment groups. (Appendix-I).

3.2.2 Testing Difference between Two Means

To test whether the difference in means between treatment and control groups is statistically significant or not, we use t-test. As our samples are independent we use following formula to compute t-statistics:

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{\sigma_x^2}{n_x} + \frac{\sigma_y^2}{n_y}}} \qquad 3.1$$

Where:

$\bar{X}$ = Mean of Treatment Group

$\bar{Y}$ =Mean of Control Group

σ_x^2= Population Variance of Treatment Group

σ_y^2= Population Variance of Control Group

n_x =Sample Size of Treatment Group

n_y =Sample Size of Control Group

However population variances σ_x^2 and σ_y^2 are unknown they will be estimated by their sample variances S_x^2 and S_y^2 and compute t-statistics as given below under the assumption that $\sigma_x^2 = \sigma_y^2$

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{S_p^2}{n_x} + \frac{S_p^2}{n_y}}} \qquad 3.2$$

Where S_P^2 (pooled variance estimator) is calculated as:

$$S_p^2 = \frac{(n_x - 1)S_x^2 + (n_y - 1)S_y^2}{(n_x + n_y - 2)}$$

In both above cases degree of freedom (df) of t- statistics is equal to $n_x + n_y - 2$

In case population variances are unknown and not equal, then following modifications are required in commutating t-statistics, standard error of difference between two means and the degree of freedom as:

$$t = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{S_x^2}{n_x} + \frac{S_y^2}{n_y}}} \qquad 3.3$$

$$df = \frac{[\left(\frac{S_x^2}{n_x}\right) + (\frac{S_y^2}{n_y})]^2}{\frac{(\frac{S_x^2}{n_x})^2}{n_x - 1} + \frac{(\frac{S_y^2}{n_y})^2}{n_y - 1}}$$

To test whether population variances are equal or not we use F-test. In F test, we test the null of equal variances against the alternative that they are not equal and compute F statistic as:

$$F = \frac{S_x^2/df}{S_y^2/df} \qquad 3.4$$

If F computed is greater than F critical we reject the null of equal variances and use formula of t-statistics as given by equation 3.3. In case F computed is smaller than F critical we accept the null of equal variances and use formula of t-statistics given by equation 3.2.

3.2.3 Universe of the Study

The study relates to district Gilgit situated in Gilgit-Baltistan province (former Northern Areas) of Pakistan. According to 1998 census the population of district Gilgit is more than 145272. There are twelve major villages (locations) in district Gilgit, namely Karganala, Basin, Danyore, Nomal, Oshikhandas, Jaglute, Bagrote, Sharot, Shikute, Bargo, Jalalabad and Minawar. Out of the total 12 villages we have selected 5 villages, namely Karganala, Basin, Danyore, Nomal and Oshikhandas. The estimated population of these villages is about half of the total population of district Gilgit.

3.2.4 Dependent and Independent Variables

Dependent variables in this study are the income, expenditure, net-worth and women empowerment. Village Group Financial Services is the independent variable for this study.

3.2.5 Survey Design and Sampling Procedure

In order to minimize sampling variation, we used multi-stage disproportionate stratified random sampling technique for this study. Since district Gilgit is already stratified geographically in the form of well known villages (strata) and for each village (stratum) well defined boundaries are there, therefore, the study relied on existing stratification instead of making new stratification. In the first stage, sampling frame for the beneficiary households of Village Group Financial Services for the first half of the year 2007 (January 1, 2007 to June 30, 2007) in district Gilgit was collected from the First Micro Finance Bank Gilgit Branch. The sampling frame included a village-wise list of beneficiary households. At the second stage five villages, as mentioned above, were chosen on random basis out of total 12 villages. The sample

frame of these five villages consisted of 498 beneficiary households of VGFS (79 households from village Basin, 54 households from Karga, 123 households from Danyore, 134 households from Nomal and 108 households from Oshikhandas. At the third stage samples from each village (stratum) were selected through disproportionate stratified random sampling technique keeping in view that the selected samples from each stratum will represent the population. To make our samples more representative, we selected 20% of the total beneficiary population from each village as samples (16 from Basin, 11 from Karga, 24 from Danyore, 27 from Nomal and 22 from Oshikhandas). In this way a total of 100 samples of treatment group for the five villages were chosen. The respondent women included married, unmarried, divorced, widowed, educated and uneducated women whose ages were between 25 and 40 years. Similarly, equal numbers of samples from the same five villages were chosen for the control group following the poverty score card of treatment group. The study used per-capita as core unit for analysis. However, to support study results further we also made household level analysis where it became necessary.

3.2.6 Determination of Sample Size

To determine the sample size we have used the following sample size determination formula taken from Gilroy (2001):

$$n = (Z^2 * P * (100-P) / X^2$$

Where,

n = Sample size

Z = Value of the confidence level at (95%) i.e. 1.96

p = Coefficient of Variation in the variable of interests (50% assuming maximum variability -typically used in absence of data on coefficient of variation)

X = Precision level or the acceptable amount of error expressed in (10%) or the difference between the averages calculated from the sample data and the population data.

Using the above formula with 95% confidence level, 10% precision level and 100% coefficient of variation (assuming maximum variation in the variable of interest here say the income usually taken in the absence of data to calculate the coefficient of variation), we calculated a sample size of 96 households (approximately 1/5 of beneficiary population of 498 households). Thus, the household survey included 96 randomly selected household samples from the Village Group Financial Services beneficiaries and equal number of household samples from the control group i.e. non-beneficiary households of Village Group Financial Services. However, given the need of impact assessment methodology, the control household samples are selected in such a way that they are in close geographic proximity to the beneficiary household samples and have had similar socio-economic status before the VGFS introduction. For this purpose National Scorecard for Pakistan identified by Word Bank is used to identify the matched households (Appendix- I). In order to minimize the risk of non-sampling errors in the data collection, the sample size was further increased by 4% of total sample size. Hence, a total of 200 sample household were selected both from treatment and control groups.

3.2.7 Data Collection Tools

For the collection of data we constructed a structured questionnaire as well as in-dept interviews.

3.2.7.1 Structured Questionnaire

A structured household questionnaire also used by Fazal Ali Saadi et al (2009) in Socio-Economic Baseline Survey of Puran Shangala, North West Frontier Province, and Haroon Jamal (2008), Impact of Microfinance in Pakistan was refined and new variables were added following the socio-economic characteristics of the people of district Gilgit (Appendix-A, B, C, D, E, F). The questionnaire was designed around the outcome indicators (income, expenditure, net-worth and women empowerment), and was administered in July-August 2010 in both the treatment and control group households for the quantitative analysis. In this part of the evaluation, efforts were made to look at overall impact of Village Group Financial Services on income, expenditure, net-worth and women empowerment of the beneficiary households in district Gilgit in the mountainous region of Northern Pakistan. For easy understanding and analysis of women empowerment aspect, the study further divided women empowerment in to five broad empowerment indices. These five empowerment indices were economic empowerment, income empowerment, asset empowerment, education and health empowerment and social empowerment. Each empowerment index consisted its own indicators.

3.2.7.2 In-depth Interviews

In order to strengthen the impact analysis and to analyze why treatment total expenditure, saving, net worth and per capita net worth are insignificant at least 10% level of significance we further developed a structured individual questionnaire consisting 26 questions (Appendix-H) for interviews and the interviews were conducted from 10 respondents (two from each village) among the five villages of study area. We have selected those respondents who maintained a solid loan repayment record in the books of FMFB.

Chapter: 4

Empirical Analysis and Data Presentation

How far the funds of VGFS are reaching to the poor? In order to answer this question we first analyzed the poverty score card of treatment group. We ascertained that out of a total of 100 households of treatment group 54 household were living under absolute poverty line[7]. Thus, most of the beneficiaries were poor. However, 46 household of the beneficiaries were non-poor.

4.1 Distribution of VGFS Loans among Various Uses by Treatment Group

Following table shows the distribution of VGFS loans among the treatment group:

Table 4.1: Distribution of Loan among Various Uses by Treatment Group (PKR)

Treatment	Crops	Livestock	Business	Housing	Consumption	Others	Total
Group	451000	1115000	3499205	663000	492000	988000	7208205
	6.26%	15.47%	48.54%	9.20%	6.83%	14%	100%

The total amount of loan disbursed among treatment group was RKR 7208205. From the total amount of treatment loan 6.26% goes to crops sector, 15.15% to livestock, and 48.54% to business, 9.20% to housing, 6.83 to consumption and 14% to other uses[8]. It is evident that most of VGFS loans have been used for productive purposes and the share of loans used for consumption purposes is very small, i.e. 6.83%. Thus, we conclude that VGFS loans have been dominantly used for productive purposes rather than consumption purposes.

[7] Based on poverty scorecard, all households which scored less than 24 score points, are considered as poor.

[8] Other uses include machinery, social functions, health care, education, repayment of loans, etc.

4.2 Impact of VGFS on Income

Income is the base to check the success or failure of any program in a particular area. The following table shows the results of VGFS on income in the program area:

Tab. 4.2: Distribution of Income among Control and Treatment Groups (PKR)

	Income per Household	Income per Capita
Treatment Group (T)	186874	28186
Control Group (C)	166301	24277
All Households	176587	26200
Difference (T-C) PKR	20573	3909
Difference (T-C) %	12.37	16.10

The average household income per year for treatment and control groups is PKR 186874 and PKR 166301, respectively. The difference between treatment and control group's income in this case is 12.37%. The average per capita income per year for the sample households in treatment and control group is PKR 28186 and PKR 24277, respectively. The per-capita income of treatment households is higher than the control household's by 16.10%. The reason for higher difference between the absolute and per capita income of treatment and control group is that the household size of treatment group is smaller than the control group[9].

Households derive their income from multiple sources like crops, livestock, business, services, labor, pension, rental income, remittances, etc. About 88% of household's income comes from the four major sources i.e. crops, livestock, business and services.

[9] Total household size of treatment and control groups consist 663 and 685 members respectively.

Tab. 4.3: Share of Income among Control and Treatment Groups (%)

Households	Crops	Livestock	Business	Services	Labor	Others	%
Treatment	11.71	6.46	11.97	58.28	3.68	7.90	100
Control	12.46	4.18	5.83	33.43	24.45	19.65	100
All Households	12.06	5.39	9.08	46.58	13.46	13.43	100

12.06 % of the total household's income comes from crops and 5.39 % of the household's income is contributed by livestock. Services sector is the most important sector for the household income that contributes 46.58% of the total household income. Business sector's share in total income is 9.08 %, followed by labor (13.46 %) and others (13.43 %). One important finding of this investigation is that the share of business income in treatment group is more than the doubled as compare to control group. Similarly, the income of treatment group is higher than control group in livestock sector. It clearly indicates that village group financial services have some positive impact on the income of treatment group because 64% of VGFS loans are given to business and livestock sectors. The income of treatment group also significantly increased in service sector. Higher share of treatment group than control group in service sector may be attributed to relatively higher level of schooling of the former than the later. On the other side the major sectors that contribute to control household income include services sector (33.43%), followed by labor (24.45) and crops (12.46), respectively. The treatment household's income is greater than the control household's income in all sectors except crops and labor sectors where control group income exceeds than the treatment group income.

4.3 Impact of VGFS on Expenditure

Household expenditure is also a key determinant of economic wellbeing. Various studies in Pakistan have used expenditure to measure wellbeing. Our survey also includes the expenditure component to estimate the impact of VGFS on program area. Following table shows some expenditure results from the data that we have collected from the field survey:

Tab.4. 4: Distribution of Expenditures among Control and Treatment Groups (PKR)

	Expenditure per Household	Expenditure per Capita
Treatment Group (T)	107342	16190
Control Group (C)	99026	14456
All Households	103184	15309
Difference (T-C) PKR	8316	1734
Difference (T-C) %	8.40	12.00

The average household expenditure per year for treatment and control groups is RKR 107342 and PKR 99026, respectively. The difference between treatment and control group's expenditure in this case is 8.4%. The average per capita expenditure per year for the sample households in treatment and control group is PKR 16190 and PKR 14456, respectively. The per capita expenditure of treatment households is higher than the control household's by 12.0%. Thus, income and expenditure patterns of treatment group are higher than the control group reflecting high level of income and expenditure of treatment group and they can be attributed to the intervention of VGFS in the program area.

The distribution of household expenditure among treatment and control groups is given as under:

Tab.4. 5: Per Capita Yearly Expenditure among Treatment and Control Groups (%)

Households	Food	Clothing	Housing	Health	Education	Transport	Others	%
Treatment	39.79	7.97	10.21	6.84	15.92	4.19	15.07	100
Control	36.94	7.61	16.79	6.63	14.09	2.70	15.25	100
All HH	37.11	8.07	19.59	6.84	13.65	2.22	12.52	100

The average yearly per capita expenditure for food items in treatment group is 39.79 % of the total treatment expenditure followed by clothing 7.97 %, housing 10.21 %, health 6.84 %, education 15.92 %, transport 4.19 % and others 15.07 %[10]. Similarly, in control group this ratio of expenditure is 36.94 % for food items, 7.61% for clothing, 16.97 % for housing, 6.63 % for healthcare, 14.09 % for education, 2.70% for transport and 15.25 % for other needs. The inter-group analysis shows that almost in all categories except housing sector treatment group expenditures are higher than control group expenditures. Transport expenditure of treatment group is double than the control group because majority of treatment group households are engaged in business and services. Moreover, higher expenditures of control group for food, clothing, health and education indicate more improvement of human capital in this category.

4.4 Impact of VGFS on Net-Worth

Following table shows the asset and net-worth holdings of treatment and control group on household basis:

[10] Other expenditures include remittances, pension, fuel and firewood expenses, cash gifts expenditures on social functions, etc.

Tab.4. 6: Household Assets, Debt, Net-Worth in Treatment and Control Groups

	Asset	Debt	Net-Worth
Treatment Group (T)	1234777	11925	1222852
Control Group (C)	1229995	6615	1223380
All Households	1232386	9270	1223116
Difference (T-C) PKR	4783	5310	-527
Difference (T-C) %	0.39	80.27	-0.04

The mean value of asset holding for all households is PKR 1232386. The treatment group asset holding is PKR 1234777 while this value for control group is PKR 1229995. Average value of debt for all households is PKR 9270. The share of treatment group in total debt is PKR 11925 while control group share in total debt is PKR 6615. It implies that treatment group bears higher liability of debt and more than 70% of treatment outstanding debt is attributed to VGFS. The average value of net-worth for all households is PKR 1223116. Mean value of treatment group net worth is less than the control group value because treatment group bears higher amount of debt in the form of VGFS loans which they have to repay in near future. The deduction of debt value from the asset value makes the treatment group net-worth value negative indicating higher net-worth of control group as compared to treatment group.

The per capita distribution of assets, debt and net-worth among treatment and control groups are given as under:

Tab.4.7: Per Capita Assets, Debt and Net-Worth in Treatment and Control Groups

	Asset	Debt	Net-Worth
Treatment Group (T)	186241	1799	184442
Control Group (C)	179561	966	178596
All Households	182847	1375	181471
Difference (T-C) PKR	6680	833	5847
Difference (T-C) %	3.72	86.25	3.27

The above table shows the per capita distribution of assets, debt and net-worth among treatment and control groups. If we distribute assets and debt value on per capita basis among treatment and control groups then the difference in net-worth value (T-C) becomes positive indicating that net worth of treatment group is higher than the control group. The reason why the difference in net-worth value (T-C) becomes positive is that the treatment group household size is smaller than the size of control group.

4.5 Impact of VGFS on Saving

Following table shows the distribution of saving among control and treatment groups:

Tab. 4.8: Saving Trends in Control and Treatment Groups (PKR)

	Saving per Household	Saving per Capita
Treatment Group (T)	71238	10744
Control Group (C)	66465	9703
All Households	68852	10215
Difference (T-C) PKR	4772	1041
Difference (T-C) %	7.18	10.73

From the above table it is evident that saving (per capita and per household) of treatment group has increased more than the saving of control group in the study area. The per capita saving of treatment group is 10.73% higher than the control group, while at household level this difference in saving is 7.1%.

To test whether the mean differences in income, expenditure, net-worth and saving of control and treatment groups at per capita levels, are statistically significant or not, we use t-test. Results of both the F test and t test are summarized below in table 4.9:

Tab.4.9 Independent Sample Test Results (Living Standard)

	F-Test(P-Value)	**t-Test(P-Value)**
Per Capita Income	13.749 (0.000)*	2.702 (0.007)*
Per-Capita Expenditure	0.242 (0.623)	1.715 (0.088)***
Per-Capita Net-Worth	2.77 (0.097)***	1.064 (0.289)
Per-Capita Saving	(3.231) (0.074)***	(1.636) (0.10)***
*Significant at 1% **Significant at 5% ***Significant at 10%		

On the basis of F-test results we reject the null of equal variances in case of per-capita income, per capita net worth and per capita saving while in case of per capita expenditure we do not reject the null of equal variances. Therefore we use t-test given by equation 3.3 in chapter

three for testing the difference between two means for per capita income, per capita net worth and per capita saving, while in case of per capita expenditure we use t test given by equation 3.2. The results of t-test show that the difference between means of treatment and control group for per capita income, per capita expenditure and per capita saving is statistically significant[11] while that of per capita net-worth is statistically insignificant.

Following the above test results we conclude that VGFS has significantly contributed towards treatment income, expenditure and saving on per capita basis. Mean difference between Per capita net worth of treatment and control group is statistically insignificant. The reason for this insignificance is probably due to the loan repayment liability of treatment group to VGFS. Another reason may be that impacts on income may appear in shorter period of time while accumulation of household assets can take longer period of time, usually more than five years to show any significant impact after program intervention.

4.6 Impact of VGFS on Rural Poverty

We can also analyze the impact of VGFS on rural poverty following the income data collected from the survey. For this we can use the concept of poverty line income[12] and poverty headcount ratio (HCR) widely used in Pakistan in social impact assessment studies. The results of poverty headcount ratio in both control and treatment households from the survey are given in the following table:

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[11] Difference in the means of per capita income of treatment and control groups is highly significant, while that of per capita expenditure and per capita saving are significant at 10% only.

[12] Poverty line income is drawn at a level of per capita income considered necessary to provide a minimum standard of living. In Pakistan the poverty line income is PKR 1505 per capita per month for the year 2010 based on PSLM 2007. (Socio-Economic Baseline Survey of Kashmore district (2010): Rural Support Program Network (RSPN) Islamabad, Pakistan.

Tab. 4.10: Poverty Headcount Ratio for Treatment and Control Groups (%)

Group	Poverty Rate (HCR)
Treatment Group	24
Control Group	32
All Households (HH)	28

The Poverty Headcount Ratio indicates that out of total 100 household in treatment group only 24 household live below the poverty line income i.e. PKR 1505 per capita per month, while this rate is higher in controlled group i.e. 32 household. Here, we may assume that the lower level of absolute poverty in treatment group may probably be attributed to the VGFS intervention.

4.7 Women Empowerment

One of the major objectives of Government of Pakistan's microfinance and rural support programs is to promote the empowerment levels of poor rural women through encouraging them to initiate income generating projects so that they become self-sufficient and financially more independent. The Medium Term Development Framework (MTDF) 2005-10 prepared by government of Pakistan gives special attention to the problem of poverty and women empowerment in rural areas of Pakistan and considers microfinance as an effective tool to overcome these problems. In order to analyze the impact of village group financial services on economic decision-making, purchasing power, financial independence, control on income and savings and control on loan, women empowerment in this research has been divided in to five parts i.e. economic empowerment, income empowerment, asset empowerment, education and health empowerment and social empowerment.

4.7.1 Economic Empowerment

The economic empowerment index consists of fourteen broad indicators also used by S.A Zaidi (2007) and Haroon Jamal (2008) in their respective studies to analyze the impact of microfinance on women empowerment in Pakistan. These indicators are used as a proxy to check the empowerment levels of treatment women over control women. These indicators include questions regarding women power in decision making about purchase and sale of house, jewelry, livestock, household dresses, borrowing of money and repayment of debt (Appendix B). The following table shows total and average economic empowerment scores of control and treatment groups derived from the economic empowerment index.

Tab.4.11: Economic Empowerment (Score out of 14)

	Total Score	**Mean score**
Treatment Group (T)	1150	11.5
Control Group (C)	810	8.1
Difference	340	3.4

The economic empowerment index for treat and control group shows that out of a total score of 1400 for each group, treatment group women scored 1150 while control group scored 810. The difference between two sores is 340. Similarly, the mean score of treatment and control group is 11.5 and 8.1 respectively. The difference in mean scores for control and treatment group women is 3.4. It implies that in average treatment women are economically more empowered than control women by 3.4 points.

4.7.2 Income Empowerment

The income empowerment index includes five indicators of income relating decision making to check the women empowerment at household level of both treatment and control group women. These indicators consist of questions regarding the sources of income generation and use of income for different purposes at household level (Appendix C). The following table shows total and mean scores derived from the income empowerment index of treatment and control groups.

Tab.4.12: Income Empowerment (Score out of 5)

	Total Score	**Mean score**
Treatment Group (T)	382	3.82
Control Group (C)	314	3.14
Difference	68	0.68

The total empowerment scores obtained by treatment and control groups in the income empowerment index are 382 and 314 points and mean scores are 3.82 and 3.14 points, respectively. The difference in obtained scores is 68 points while the mean difference in scores is 0.68 points. On the basis of income empowerment index we conclude that treatment women are more empowered than control women as treatment women scored more points than control women in the income empowerment index.

4.7.3 Asset Empowerment

Asset empowerment index include eight important indicators of women decision making regarding household assets. The index include questions to check women decision making power relating to holding of land, cash, saving, operation and maintenance of bank accounts, sell, transfer and exchange of different household assets etc (Appendix D). Following table shows the asset empowerment sores for treatment and control groups:

Tab.4.13: Asset Empowerment (Score out of 8)

	Total Score	**Mean score**
Treatment Group (T)	397	3.97
Control Group (C)	298	2.98
Difference	99	.99

The asset empowerment index for treat and control group shows that out of a total score of 800 for each group, treatment group women scored 397 while control group scored 298. The difference between two sores is 99 score points. Similarly the mean scores of treatment and control group are 3.97 and 2.98 score points, respectively. The difference in mean scores for control and treatment group women is 0.99 score points. From the asset empowerment index it is evident that in average treatment women are economically more empowered than control women by 0.99 score points.

4.7.4 Education and Health Empowerment

The education and health empowerment index includes ten indicators regarding women decision making on education and health expenditures. Some of the major indicators include questions relating to the issues of children education and health, children spacing, nutritional requirements of the family etc (Appendix E). The education and health empowerment index score points for control and treatment groups are given as under:

Tab.4.14: Education and Health Empowerment (Score out of 10)

	Total Score	**Mean score**
Treatment Group (T)	661	6.61
Control Group (C)	560	5.60
Difference	101	1.01

The education and health empowerment index results show that treatment women are more empowered than control women because total and mean score points for treatment group in the education and health index are greater than control group. The total and mean scores differences among treatment and control groups are 101 score points and 1.01 score points, respectively.

4.7.5 Social Empowerment

Social empowerment index consists of ten indicators including questions relating to the social aspect of women empowerment i.e. questions relating to dresses, religious beliefs, women participation in social functions, NGOs programs, the extent of women association in political parties and their participation in democratic process etc (Appendix F). The social empowerment index results for treatment and control groups are given in the following table:

Tab.4.15: Social Empowerment (Score out of 10)

	Total Score	**Mean score**
Treatment Group (T)	554	5.54
Control Group (C)	483	4.83
Difference	71	.71

From table 4.15 it is quite evident that total and mean score points of treatment group are higher than control group indicating higher social empowerment of treatment group.

To test whether these mean differences in women empowerment scores of control and treatment groups in all the five categories of empowerment (economic, income, assets, education and health, and social) are statistically significant or not, we use t-test. Results of F and t-tests are summarized below in table 4.16:

Tab.4.16 Independent Sample Test Results (Empowerment)

Empowerment Indicators	F-Test(P-Value)	t-Test(P-Value)
Economic	35.689 (0.000)*	8.587 (0.000)*
Income	22.293 (0.000)*	4.222 (0.000*
Asset	3.474 (0.064)***	4.757 (0.000)*
Education and Health	38.599 (0.000)*	3.105 (0.002)*
Social	3.130 (0.078)***	3.771 (0.000)*
*Significant at 1% **Significant at 5% ***Significant at 10%		

In case of women empowerment, we reject the null of equal variances in all the five categories of empowerment (economic, income, asset, education and health, and social) as suggested by P-values of F-test. So we use t-test for testing the difference between two means by using the formula of t test given by equation 3.3 in chapter three. The reported values of t-test suggest that the difference between two means for all five categories are statistically significant. It means that treatment women are more empowered than control women in all the five empowerment categories.

According to the study results of women empowerment indices, the First Microfinance Bank's microfinance program, particularly it's Village Group Financial Services, have a significant positive impact on the empowerment levels of treatment women in district Gilgit. The study results show significant and positive differences between treatment and control women at the five categories of women empowerment (economic, income, asset, education and health and social empowerment). This indicates that when women participate in income generating activities, their power and worth in household decision making also improve along with the increase in household income, because they become an earning hand to their family.

Chapter: 5

Conclusion and Recommendations

FMFB is one of the leading microfinance bank in the country providing credit services to the poor's with the aim of reducing vicious circle of poverty and improving women empowerment levels, particularly in the rural areas of Pakistan. This study is an attempt to investigate the impact of Village Group Financial Services provided by FMFB on income, expenditure, net-worth and women empowerment in district Gilgit. For this purpose we collected primary data of 200 respondents from the five remote villages of district Gilgit using disproportionate stratified random sampling technique with well structured and pre-tested questionnaire. The data collected were analyzed through SPSS using mean difference model of impact evaluation.

Empirical results of this study suggest that microfinance, particularly the Village Group Financial Services, provided by the First Micro-Finance Bank, is an effective tool in improving income, expenditure, saving and empowerment levels of poor rural women in the study area. However, no significant mean difference was found between control and treatment households in the net-worth portion of impact evaluation. Net-worth may be insignificant because most of our respondents are in the process of repayment of loan. They have to pay the loan back taken from FMFB in the form of VGFS. The amount of debt reduces the value of net-worth because net-worth is the difference between assets and liabilities and the debt is a part of liability. In summary we conclude that FMFB is playing an important role in the improvement of rural livelihood and women empowerment in household decision making in the mountainous and rural region of Pakistan i.e. Gilgit-Baltistan. Keeping in view the positive impact of VGFS on per

capita income, expenditure, saving and women empowerment, it is suggested that FMFB should extend its credit services (outreach) to other remote areas of Gilgit-Baltistan through the formation of village and women organizations. On the basis of in-depth interviews it is also suggested that to extend its outreach, FMFB has to reduce the minimum limit to form a group from 15 members to five members or give individual loans so that maximum people in the society will be benefitted from its financial services. Most of the borrowers of FMFB claim that the amount of loan provided is not enough to meet their working capital requirements. Therefore, the FMFB, in the opinion of their clients, should double the maximum limit of loan i.e. 150000 to 300000 PKR. Although the vast majority of funds provided by FMFB are used for productive purposes, still there is a need of proper monitoring of funds in order to achieve more significant results. Most of our study respondents claimed that the interest rate charged by FMFB on borrowed funds in the case of VGFS is too high (i.e. 24%). Therefore, it is suggested that FMFB should cut down the rate of interest on borrowed funds in order to attain more significant results and higher market share in the form of outreach. Moreover, instead of using flat interest rate on borrowed funds, FMFB may consider to adopt diminishing method for charging interest rate on borrowed funds to reduce the burden of repayment on their clients.

The results of this study also indicate that the FMFB, along with the loan appraisal process, should make supplementary market research to bridge the information gap so that the borrowed funds can be used by the borrowers in the production and supply of most demanded products. Moreover, additional interventions (like creating awareness about the role of microfinance, increasing supply chain through other institutions of microfinance, improving infrastructure, etc.) are required to make significant impact on reducing poverty and improving living standard in Gilgit and other similar regions in Pakistan.

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APPENDIX-A (Survey Form)

Section A: For all Respondents

HH Number	

100 Identification of the Respondent

101. Name of respondent: _____102 Sex: M=1, F=2 _____ 103. Age of respondent (years): _____

104 Name of Village/Mohalla_____ 105 Name of District/Tehsil _____

106 Years of education completed: _____107Material Status (Write code no.) _____

Never Married=1, Married=2, Divorced/Separated=3, Widowed=4

108. Respondents code: VGFS borrower =1, Non-VGFS borrower =2; ☐

109. Relationship with household head (Write code no.) _____

Self=1, Wife=2, Mother=3, Sister=4, Mother-in-Law=5, Sister-in-Law=6, Son=7, Brother=8, Brother-in-Law=9, others=10

110. Occupation/activity: _____

Occupation/Activity Code: Own Farming = 1; Farm Labour =2; Off-farm skilled labour =3; Off-farm unskilled labour = 4
Govt. Job = 5; Private Job= 6; Business = 7; Student = 8; other work =9; Unemployed = 10 Old/disable =11

Characteristics of Household Head

110. Name of household head:	111. Age (years)	112. Years of education (completed	113. Occupation/activity

Occupation/Activity Code: Own Farming = 1; Farm Labour =2; Off-farm skilled labour =3; Off-farm unskilled labour = 4
Govt. Job = 5; Private Job= 6; Business = 7; Student = 8; other work =9; Unemployed = 10 Old/disable =11

200 Household Composition (Numbers)

Up to 1 year		Over 1 to 5 years		Over 5 to 10 years		Over 10 to 18 years	
201M	202F	203M	204F	205M	206F	207M	208F
Over 18 to 24 years		**Over 24 to 55 years**		**Over 55 to 65**		**Over 65**	
209M	210F	211M	212F	213M	214F	215M	216F

M=Male, F=Female

217. Total HH members (#) _____218 Male HH members (#)____ 219 Female HH members (#)_____

300 Work Status of HH Members in Different Age Groups > 10 Years (No.)

	10-18 years		18-55 years		Over 55 years	
	M	**F**	**M**	**F**	**M**	**F**
	301	302	303	304	305	306
HH work						
	307	308	309	310	311	312
Own farming						
	313	314	315	316	317	318
Farm labour						
	319	320	321	322	323	324
Off-farm skilled labour						
	325	326	327	328	329	330
Off-farm unskilled labour						
	331	332	333	334	335	336

Govt. Service						
	337	338	339	340	341	342
Private job						
	343	344	345	346	347	348
Business						
	349	350	351	352	353	354
Other work						
	355	356	357	358	359	360
Unemployed (not working)						
	361	362	363	364	365	366
Old/disable (not working)						
	367	368	369	370	371	372
Student (not working)						
	373	374	375	376	377	378
Others (not working)						
	379	380	381	382	383	384
Total of each age group						
				M=381+383	F=382+384	
Total >18 years						

400 (A) Annual HH Crops Production/Income (PKR in Last 12 Months)

400 A1. Total Farm Area (Kanal) _____
400 A2. Owned (Kanal) _____400A3 Share cropping (Kanal)_____400A4 Leased (Kanal)_____

	1	2	3	4	5	6	7
S. #	**Crops/Vegetables/**	**Land devoted (Kanal)**	**Production (Local unit)**	**Value (PKR)= (Col 3 x village price)**	**By-products**	**Value of by product (PKR)**	**Total Value (Col 4 + col 6)**
1	Wheat (40 kg)						
2	Maize (40 kg)						
3	Barley (40 kg)						
4	Potatoes (40 kg)						
5	Buckwheat (40 kg)						
6	Millet (40 kg)						
7	Pulses (40 kg)						
8	All Vegetables (kg)						
9	Fodder all types (40 kg)						
10	Others (specify)						
11 Value of crops production = Total of column # 4, # 6 and # 7							

1 Kanal = 506 m^2

400 (B) Annual Household Fruits/Forests Production/Income (PKR in Last 12 Months)

	1	2	3	4	5	6	7
S. #	**Fruits and forest trees and their production**	**Number of trees**	**Production (local unit)**	**Value (PKR)**	**By-products**	**Value of by product (PKR)**	**Total value in PKR (col 4 + col 6)**
1	Apricot						
2	Apple						
3	Mulberry						
4	Almond						
5	Walnut						
6	Pears						
7	Grapes						
8	Cherry						
9	Peach						
10	Pomegranate						
11	Plum						
12	Fig						
13	Any other (Specify)						
14	Trees for fire wood (40 kg)						
15. Value of trees production = Total of column # 4, 6 and 7							

400 (C) Annual Household Livestock/Poultry Production/Income (PKR in Last 12 Months)

	0	1	2	3	4	5	6	7	8
	Livestock	**Total number**	**Number of milking animal**	**Total milk/eggs per day (kg/#)**	**# of months animals/bird gave milk/eggs**	**Total value of milk / egg (PKR)**	**# of Animals & birds slaughtered / fish sold and consumed (kg)**	**Value of meat (in PKR)**	**Total value in PKR (col 5 + col 7)**
1	Cow								
2	Buffaloes								
3	Goats								
4	Sheep								
5	York								
6	Honey Bee								
7	Poultry birds								
8	Ducks								
9	Fish								
10	Ox								
11	Any other								
12	Value of livestock production = Total of column #5, 7 and 8 (PKR)								

400 (D) Annual HH Off-Farm Incomes (PKR in Last 12 Months)

	1	2	3	4	5
	M (#)	Annual income (PKR)	F (#)	Annual Income (PKR)	Total income (PKR) = (col. 2 + col.4)
Govt. service					
Private job					
404 Total income from services/jobs					
406 Pension					
Skilled labour					
Unskilled labour					
405 Total income from labor					
Petty enterprise					
Retail shop (in the local market)					
HH level enterprises (handicrafts/food processing etc)					
403 Total income from business					
Remittances from abroad					
Remittances from within the country					
408 Total remittances					
Shop/house rent (PKR)					
Land/livestock/machinery leased/rented out (PKR)					
407 Total rental incomes					
Govt. social protection					
Local philanthropy					
409 Total income received from social safety net					
410 Any other source					

400 (E) Total Annual Household Income (PKR in Last 12 Months)

Source	401 Crops*	402 Livestock*	403 Business	404 Service	405 Labour	401 to 405 Sub-total (a)
Income (PKR)						
Source	406 Pension	407 Rental Incomes	408 Remittances	409 Cash/Gifts	410 Other	406 to 410 Sub-total(b)
Income (PKR)						
Total income (PKR)= Sub-total (a) + Sub-total (b)						

***Reduce value of Q No 401 by 40%, 402 by 30% and 403 by 35% to exclude the expenses or costs (Based on the calculation of Mahmood Hassan Khan 2004)**

500 Household Food Consumption (In Kg Last Week)

A	1	2	3	4	B	1	2	3	4
Item		Quantity (Kg)	Rate per kg (PKR)	Total Amount (PKR) Col.2 x Col.3	Item		Quantity (Kg/#)	Rate/Kg (PKR)	Total Amount (PKR)= col.7 x col.8
Wheat Flour	**501**				Mutton	**509**			
Rice	**502**				Poultry	**510**			
Rice flour	**503**				Fish	**511**			
Tea	**504**				Eggs (#)	**512**			
Pulses	**505**				Milk/Yogurt	**513**			
Vegetables	**506**				Sugar	**514**			
Fruits	**507**				Fats/Cooking Oil	**515**			
Beef	**508**				Total (b): Total of column # 4				
Total (a): Total of column # 4					Grand Total: Total (a) + Total (b)				

600 Annual Household Expenditure (PKR in Last 12 Months)

601 Food*	602 Clothing	603 Housing	604 Healthcare	605 Education		601 to 605 Sub-total (a)
606 Social Functions	607 Transport	608 Remittances	609 Cash/Gifts	610 Fuel (Wood, Gas, Electricity, Kerosene oil)	611 Other	606 to 611 Sub-total(b)
Total expenditures (PKR)= Sub-total (a) + Sub-total (b)						

*Note: Take this value from Q. No. 500 by converting the total weekly expenses into annual expenses. (i.e 52 X grand total of Q 500)

7000 Household Assets Ownership (Number and Value)

701 Land (Kanal)	702 Total value (PKR)	703 Fruits trees (#)	704 Total value (PKR)	705 Forest trees (#)	706 Total value (PKR)	707 Large animals (#)	708 Total value (PKR)
709 Small animals (#)	710 Total value (PKR)	711 Poultry birds (#)	712 Total value(PKR)	713 Tractor (#)	714 Total value (PKR)	715 Thresher (#)	716 Total value (PKR)

717 Car/jeep	718 Total value (PKR)	719 Motorcycle	720 Total value (PKR)	721 Bicycle	722 Total value (PKR)	723 Cart/ Trolley	724 Total value (PKR)
725 Computer (#)	726 Total value (PKR)	727 Mobile phone (#)	728 Total value (PKR)	729 House	730 Total value (PKR)	731 Animal sheds (PKR)	732 Total value (PKR)
733 Other structure	734 Total value (PKR)	735 Sewing machine	736 Total value (PKR)	737 TV/Dish	738 Total value (PKR)	739 VCR/CD Player	740 Total Value (PKR)
741 Radio/ Tap Recorder etc.	742 Total value (PKR)	743 Tubewell/ Pump	744 Total value (PKR)	745 Shop/ business (PKR)	746 Jewellery (PKR)	747 Savings (PKR)	748 Loans given to others (PKR)
749 Total cash in hand (PKR)		750 Other assets (PKR)					

800 Loans Taken and Outstanding Debt (PKR)

Friends/Relatives(PKR)		Shopkeepers (PKR)		Banks (PKR)	
801Amount taken	802Amount owed	803Amount taken	804Amount owed	805Amount taken	806Amount owed
NGOs (PKR)		Community Org.(PKR)		Others (PKR)	
807Amount taken	808Amount owed	809Amount taken	810Amount owed	811Amount taken	812Amount owed
813Total Loan Taken		814Total Loan owed			

900 Use of Loans (PKR)

901Land	902Livestock	903Machinery	904Farm Inputs	905Business	906Housing
907Consumption	908Social Functions	909Health Care	910Education	911Repay Loans	912Other Uses
913 Cash available	914 Total loan used				

Source: Fazal Ali Saddi & Samad Khan (2008): Socio-Economic Baseline Survey of Puran Shangla, North West Frontier Province. Rural Support Program Net-Work (RSPN) Islamabad, Pakistan; Author's illustrations

APPENDIX-B (Economic Empowerment)

Section B: For all Respondents

1100 Women perceptions regarding household decision making

Economic Aspect

Score Yes=1, and No=2

Sr.No.	Indicators	Yes 1	No 2
1101	Do you take decisions on the aspects of purchase, construction, modification or repair of house?		
1102	Does your husband discuss with you when a decision on construction/modification/repair of house is made?		
1103	Do you take decisions on the purchase or sale of livestock?		
1104	Did your husband discuss with you before sale or purchase of livestock?		
1105	Do you purchase dresses for the family?		
1106	Do you purchase utensils for your family?		
1107	Do you purchase gold and jewellery for your family?		
1108	Do you take decisions on borrowing money?		
1109	Do your husband discuss with you issues of borrowing money?		
1110	Do you spend the money you have borrowed?		
1111	Do you repay the money you have borrowed?		
1112	Do you take decisions on transactions involving household equipment?		
1113	Do you have any debt in your name?		
1114	Does your husband discuss with you when he has incurred the debt?		
	Total score		

Source: Haroon Jamal (2008), Exploring the Impact of Microfinance in Pakistan; Author's illustrations

APPENDIX-C (Income Empowerment)

1200 Women perceptions regarding household decision making

Income and expenditures

Score Yes=1, and No=2

Sr.No	Indicators:	Yes 1	No 2
1201	Do you have your own income?		
1202	Do you spend it for the family yourself?		
1203	Do you need the permission of your husband to spend your income?		
1204	Do you get any part of your family income or husband's income in your hands regularly?		
1205	Do your husband discuss with you when he spends income for the family or his own requirements?		
	Total score		

Source: Haroon Jamal (2008), Exploring the Impact of Microfinance in Pakistan; Author's illustrations

APPENDIX-D (Asset Empowerment)

1300 Women perceptions regarding household decision making

Asset Transactions

Score Yes=1, and No=2

Sr.No	Indicators	Yes 1	No 2
1301	Do you possess any household asset?		
1302	Do you have cash savings in your own name?		
1303	Do you operate a bank account in your name?		
1304	Do you pledge, sell, or exchange any of the above said assets yourself?		
1305	Do you need permission from your husband to sell, pledge, exchange any of the assets?		
1306	Do you have or have you purchased land in your own name?		
1307	Is the house you stay in registered in your name?		
1308	Is the house you stay in registered in your and your husband's name?		
	Total score		

Source: Haroon Jamal (2008), Exploring the Impact of Microfinance in Pakistan; Author's illustrations

APPENDIX-E (Education and Health)

1400 Women perceptions regarding household decision making

Education and Health

Score Yes=1, and No=2

Sr.No	Indicators	Yes 1	No 2
1401	Do you take decisions on the issues of your children's education?		
1402	Does your husband consult you when he takes decisions on the education of your children?		
1403	Do you think you can decide on how many children you can have?		
1404	Do you think you can decide on the spacing between children?		
1405	Do you think you can decide on the treatment of your illness or illness of your family member?		
1406	Do you think you can decide on the method of treatment for your family members?		
1407	Do you think you can decide on the type of contraceptive to be used?		
1408	Does your husband discuss with you issues of health aspects of children?		
1409	Do you have any choice of food prepared and served in your home?		
1410	Are you able to take care of the nutritional requirements of yourself, family and children?		
	Total score		

Source: Haroon Jamal (2008), Exploring the Impact of Microfinance in Pakistan; Author's illustrations

APPENDIX-F (Social Empowerment)

1500 Women perceptions regarding household decision making

Social Aspects

Score Yes=1, and No=2

Sr.No	Indicators	Yes 1	No 2
1501	Are you free to go out and visit your friends and relatives without permission?		
1502	Do you have the choice of the dresses you wear?		
1503	Does your husband impose his religious beliefs on you and make you accept them?		
1504	Do you have any association with political parties?		
1505	Do you participate in voting and other democratic procedures?		
1506	Does your husband impose his political ideas on you and make you accept them?		
1507	Do you participate in the meetings of NGO's programs (other social events) in your locality?		
1508	Does your husband prevent you from participating in such programs?		
1509	Do you take decisions on the marriage of your son/daughter?		
1510	Does your husband discuss with you issues of the marriage of your son/daughter/close relative?		
	Total score		

Source: Haroon Jamal (2008), Impact of Microfinance in Pakistan; Author's illustrations

APPENDIX-G: Village Price Questionnaire

Name of District: _____ Name of Village: _____

Name of Respondent: _____ Date: _____

1800 VILLAGE PRICES (RATES)

Code	Item	a. Local unit of measurement (LUM)	b. Price (PKR/LUM unit)	c. KG equivalent	d. Price/kg
1801	Wheat grain				
1802	Wheat Flour				
1803	Potato				
1804	Maize				
1805	Maize Flour				
1806	Pulses				
1807	Buckwheat				
1808	Fats/Oil				
1809	Vegetables				
1810	Fodder				
1811	walnut				
1812	Apricot				
1813	Apple				
1814	Mulberry				
1815	Almond				
1816	Cherry				
1817	Pomegranate				
1818	Apricot				
1819	Grapes				
1820	Fire wood				
1821	Other fruits				
1822	Beef				
1823	Mutton				
1824	Poultry				
1825	Eggs				
1826	Fish				
1827	Milk				
1828	Honey				
1829	Sugar				

Code	Livestock	Unit	Price per Unit(PKR)	Code	Real Estate Value	Unit	Price per Unit(PKR)
1830	Cow	No.		1838	Farm land (cultivated)	Kanal	
1831	Ox	No.		1839	Barren land	Kanal	
1832	Buffalo	No.		1840	Commercial Land	Kanal	
1833	Sheep	No.		1841	Residential House	Kanal	
1834	Goat	No.		1842	Animal Shed	Kanal	
1835	York	No.		1843	Any Other (Specify)		
1836	Horse	No.					
1837	Donkey	No.					

Source: Fazal Ali Saddi & Samad Khan (2008): Socio-Economic Baseline Survey of Puran Shangla, North West Frontier Province. Rural Support Program Net-Work (RSPN) Islamabad, Pakistan; Author's illustrations

APPENDIX-H

In-depth Interviews Questionnaire

Name of District: _____ Name of Village: _____

Name of Respondent: _____ Date: _____

2001	Why did you take a loan from the FMFB instead of another source?	No collateral needed _____ 01 Simple procedure _____ 02 Home-based loaning _____ 03 Lower interest _____ 04 No alternative _____ 05 Any other (Specify) _____
2002	Have you used the loan entirely for the purpose for which it was given?	Yes _____ 01 No _____ 02
2003	If no, what were other uses?	Repayment of any other loan _____ 01 Household consumption _____ 02 Give it to husband or other relatives __ 03 Buy gold/ jewellery _____ 04 Used for any emergency _____ 05 Any other (specify) _____
2004	If yes, to what extent?	Greater than 80% _____ 01 50 to 80 % _____ 02 Greater than 50 % _____ 03
2005	Have you ever decided to stop taking loans?	Yes _____ 01 No _____ 02

2006	If yes what were the reasons? Please explain	
2007	Did you have the skill/experience for the purpose for which you took the loan?	Yes_____ 01 No_____ 02
2008	If no, do you wish to acquire skills?	Yes_____ 01 No_____02
2009	How can the FMFB help you to improve your skills?	Output marketing. _____01 Input supply. _____ 02 Business identification. _____ 03 Technical training. _____ 04 Other (specify) _____
2010	Does the FMFB provide any business support facilities?	Yes. _____ 01 No. _____ . _____ 02
2011	If yes, what kind?	Output marketing. _____ 01 Market/ price information. ____02 Technology/business practices__ 03 Any others (specify). _____
2012	Was the loan size adequate to meet required purpose?	Yes_____ 01 No_____ 02
2013	If not, how much more did you need? Specify amount	PKR_____
2014	Did you request for the additional funding?	Yes. _____ 01 No. _____ 02
2015	If yes, did they agree?	Yes. _____ 01 No. _____ _____02
2016	If no, why?	Policy issue _____ 01 Lack of funds. _____ 02 Any other(Specify) _____ 03

2017	Are the loans monitored?	Yes. _____ _____ 01 No. _____ _____02
2018	If yes, how?	Never. _____ _____ 01 Regular visits. _____ 02 Irregular. _____03
2019	If yes, (monitoring) By whom?	Loan officer _____ 01 CO office holder. _____ 02 Any other (Specify) _____
2020	Are the loan officers strict about recovery?	Yes _____01 No _____02
2021	What do they do to ensure timely repayment?	More visits. _____ 01 Threats. _____ 02 Use peer pressure of CO Members. _____ 03 Any other (Specify). _____
2022	In what way are they flexible?	Accept delayed payments. ___ 01 Write – off loans (Complete or part) _____ 02 Any other (Specify). _____
2023	Do you have a need for taking a loan in the future?	Yes. _____ 01 No. _____ _____ _____ 02
2024	If yes, please specify:	
2025	Do you think that FMFB, s financial system works well?	Yes. _____ 01 No. _____02
2026	Do you have suggestions to improve it?	

Source: Shaheen Rafi Khan et al (2008): Women, s Access To and Control over Microcredit in Rural Support Program (RSP) Area. Rural Support Program Net-Work (RSPN) Islamabad, Pakistan; Author's illustrations

Appendix-I Poverty Scorecard for Pakistan

1	How many people in the household are under the age of 18 or over the age of 65?	0-2 (15)	3-4 (10)	5-6 (5)	7 or more (0)
2	What is the highest educational level of the head of the household (completed)?	Never attended school. (0)	Less than class 1 to class 5 included. (1)	Class 6 to class 10 included. (3)	Class 11, college or beyond. (10)
3	How many children in the household between 5 and 16 years old are currently attending school?	There are no children between 5 and 16 years old in the household. (4)	All the children between 5 and 16 years old are attending school. (4)	Only some of the children between 5 and 16 years old are attending school (3)	None of the children between 5 and 16 years old are attending school. (0)
4	How many rooms per person does the household owns? (calculate the room per person ratio by dividing the number of rooms by the household members)	>=0 - <=0.2 (0)	> 0.2 - <=0.3 (2)	> 0.3 - <=0.4 (4)	> 0.4 (12)
5	What kind of toilet is used by the household?	Flush connected to a public sewerage, to a pit or to an open drain. (3)	Dry raised latrine or dry pit latrine. (2)	There is no toilet in the household. (0)	
6	Does the household own at least one refrigerator, freezer or washing machine?	Yes (3)	No (0)		
7	Does the household own at least one air conditioner, air cooler, geyser or heater?	Yes (9)	No (0)		
8	Does the household own at least one cooking stove, cooking range or microwave oven?	Yes (5)	No (0)		
9	Does the household own the following engine driven vehicles...?	At least one car / tractor and at least one motorcycle / scooter. (24)	At least one car / tractor but no motorcycle / scooter. (24)	No car / tractor but at least one motorcycle / scooter. (7)	Neither car / tractor NOR motorcycle / scooter. (0)
10	Does the household own at least one TV?	Yes (2)	No (0)		
11	Does the household own the following livestock...?	At least one buffalo / bullock AND at least one cow / goat / sheep. (6)	At least one buffalo / bullock BUT NO cow / goat / sheep. (6)	No buffalo / bullock BUT at least one cow / goat / sheep. (2)	Neither buffalo / bullock NOR cow / goat / sheep. (0)
12	How much agricultural land does the household own? (Converted into acres).	0 (0)	>0 - <= 12.5 (4)	> 12.5 (7)	

Source: Word Bank