HOW EFFECTIVE ARE MICROFINANCE PROGRAMMES IN SERVING THE POOREST? 
EMPIRICAL PERSPECTIVES ON OUTREACH AND IMPACT FROM SURVEY-BASED RESEARCH

A thesis submitted to the University of Manchester for the degree of PhD in the Faculty of Humanities

2010

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NOTES

Currency Equivalents (As of 1 September 2010)

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<td>US $1.00</td>
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<td>PKRS/Rs. 85.846</td>
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The fiscal year (FY) of the Government of Pakistan ends on 30 June. The abbreviation ‘FY’ before a calendar year denotes the year in which the fiscal year ends. FY2010 for instance begins on 1 July 2009 and ends on 30 June 2010. All year figures without the prefix FY refer to calendar years, unless otherwise stated. In this study, the currency symbol "$" refers to US Dollars, unless otherwise expressly stated.
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>ACCION</td>
<td>Americans for Community Co-operation in Other Nations</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>ADBP</td>
<td>Agricultural Development Bank of Pakistan</td>
</tr>
<tr>
<td>AERC</td>
<td>Applied Economic Research Centre</td>
</tr>
<tr>
<td>AKRSP</td>
<td>Agha Khan Rural Support Programme</td>
</tr>
<tr>
<td>ARCM</td>
<td>Asia Resource Centre for Microfinance</td>
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<tr>
<td>ASA</td>
<td>Association for Social Advancement</td>
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<tr>
<td>ASCA</td>
<td>Accumulating Saving and Credit Association</td>
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<tr>
<td>ATT</td>
<td>Average Treatment-on-Treated Effect</td>
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<tr>
<td>BIDS</td>
<td>Bangladesh Institute of Development Studies</td>
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<td>BRAC</td>
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<td>Catholic Relief Services</td>
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<tr>
<td>CFI</td>
<td>Commercial Financial Institutions</td>
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<td>CFPR</td>
<td>Challenging the Frontiers of Poverty Reduction</td>
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<td>CGAP</td>
<td>Consultative Group to Assist the Poor</td>
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<td>CIA</td>
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<td>Community Organization</td>
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<td>Department for International Development</td>
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<td>Difference-in-difference</td>
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<td>FINRURAL</td>
<td>La Asociación de Instituciones Financieras para el Desarrollo Rural</td>
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<td>FY</td>
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<td>GDI</td>
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<td>Kashf Foundation</td>
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<td>LDC</td>
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<td>MHHDC</td>
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<td>MIX</td>
<td>Microfinance Information Exchange</td>
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<td>Micro and Small Enterprises</td>
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<td>MTDF</td>
<td>Mid-Term Development Framework</td>
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<td>NGO</td>
<td>Non-Government Organisation</td>
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<td>NLC</td>
<td>The Network Leasing Corporation of Pakistan</td>
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<td>PRHS</td>
<td>Pakistan Rural Household Survey</td>
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<tr>
<td>PRODEM</td>
<td>Fundacion papa la Promocion y Desarrollo de la Micro Empresa</td>
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<tr>
<td>PRSP</td>
<td>Poverty Reduction Strategy Paper</td>
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<tr>
<td>PSES</td>
<td>Pakistan Socio-Economic Survey</td>
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<td>PSLM</td>
<td>Pakistan Social and Living Standards Measurement Survey</td>
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<td>PTCC</td>
<td>Primary Thrift and Credit Co-operative Society (Sri Lanka)</td>
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<td>RD-12</td>
<td>Rural Development 12</td>
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<td>RISP</td>
<td>Rural Industrialization Survey Project</td>
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<td>ROSCA</td>
<td>Rotating Savings and Credit Association</td>
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<td>RSP</td>
<td>Rural Support Programme</td>
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<td>SAFWCO</td>
<td>Sindh Agricultural and Forestry Coordination Organization</td>
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<td>SBE</td>
<td>Social Business Enterprise</td>
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<td>SBP</td>
<td>State Bank of Pakistan</td>
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<td>SEWA</td>
<td>Self-Employed Women’s Association</td>
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<td>SHARE</td>
<td>Society for Helping Awakening Rural Poor Through Education</td>
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<td>SHG</td>
<td>Self Help Group</td>
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<td>SME</td>
<td>Small and Medium Enterprise</td>
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<td>SPIU</td>
<td>Scottish Poverty Information Unit</td>
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<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<td>SRSP</td>
<td>Sarhad Rural Support Programme</td>
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<td>TUP</td>
<td>Targeting the Ultra Poor</td>
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<td>UN</td>
<td>United Nations</td>
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<td>UNCDF</td>
<td>United Nations Capital Development Fund</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
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<td>UPAP</td>
<td>Urban Poverty Alleviation Project</td>
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<tr>
<td>USAID</td>
<td>United States Aid For International Development</td>
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<td>WB</td>
<td>World Bank</td>
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ABSTRACT

The *Microfinance Model* has been applied extensively on a global scale as a strategy for reducing poverty and promoting development. The ensuing results have transformed both the social and economic lives of countless households worldwide. While some practitioners and academics consider the results to be indisputably affirmative, others have questioned the legitimacy and sanctity of the findings, and have even argued that in certain cases (gender empowerment, for instance) the impact has not been as promising as portrayed.

This research centres on two questions: first, it measures the depth (as opposed to breadth) of programme outreach, i.e. how ‘deep down’ microfinance has been able to reach by gauging what category of the poor it currently serves; and second, it assesses the nature and extent of impact that programme participation has had on borrowers’ livelihoods.

The study draws on first-hand observations and empirical data gathered from 1,132 households across eleven districts in the rural areas of the province of Punjab in Pakistan. In order to accurately portray the multi-dimensional nature of poverty, the survey captures household characteristics over four dimensions divided into a multitude of variables.

The study employs quasi-experimental research design and hence makes use of data collected by interviewing both borrower (treatment) and non-borrower (control) households. By applying the Principal Component Analysis (PCA) model, each household is allocated a specific poverty score in relation to all other households in the sample, to generate a poverty index which enables ranking and further analysis. In order to account for the problem of selection bias in the sample, the study uses propensity scores and assesses programme impact by applying both kernel and stratification methods, across the four dimensions on which poverty levels are captured.

Study findings reveal that depth of programme outreach is poor, as there is a proportionately higher distribution of borrowers in the ‘less poor’ category (41 percent); the ‘middle poor’ are 35 percent, and the smallest proportion of borrowers served (22 percent) belongs to the ‘very poor’ category. Regarding programme impact, there are mixed results; although borrowers seem to fare better across around 70 percent of the indicators, a majority of these are not statistically significant. This suggests that despite producing some degree of positive impact, microfinance institutions still have to do a lot more if they are to make a real difference to the poors’ livelihoods.

Finally, policy implications that can assist towards both deepening outreach and enhancing programme impact are discussed.
DECLARATION

I, Asad Kamran Ghalib hereby declare that no portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or other university or other institution of learning.

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Chapter 1 : Introduction and Research Description

1.1 Introduction

The World Development Indicators report by the World Bank (2007a) shows that despite all the measures to reduce world poverty, there are still over one billion people who live below the ‘$1-a-day’ poverty line; and the number of people living below the ‘$2-line’ actually rose during most of the period 1990-2004. According to UNDP (2008), during 2007 over a billion people had almost no income (the equivalent of a dollar-a-day or less) and these people typically spent more than half of what they earned on food for their families, leaving them with even less for shelter, water, sanitation, education and healthcare. Moreover, a majority of these people pooled their incomes through work that was insecure, underpaid and, at times, unsafe.

Despite massive global efforts, the fight against poverty has not yet even turned the corner. According to the World Bank (2005a), the past decade saw some progress on poverty eradication – but at a pace ‘too slow to make a significant dent in global poverty’. South Asia’s share of the world population is 22 percent, but it contains more than 40 percent of the world’s poor (Haq 2008). Significant increases in poverty in other parts of the world, especially sub-Saharan Africa, are a further cause for concern. In another report, the World Bank (2008) estimated the global poor now exceed an estimated 1.4 billion, up from around 1 billion in estimates (Faiola 2008). This amounts to over a fifth of the total world population. According to the World Bank (2005a) there has not been a measurable acceleration in the eradication of poverty in the developing world in the past decade, as almost one-third of the countries have shown no increase in GDP per capita since 1980 and, overall, some 50 percent of developing countries showed an increase in the number of people below the poverty line of US$1 per day during the 1990s.

Out of the eight Millennium Development Goals (MDGs) aimed for achievement by 2015, the first one: ‘Eradicate extreme poverty and hunger’, comprises two targets:
**Target 1:** Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.

**Target 2:** Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

With just five years remaining to achieve the targets set forth for the MDGs, UN’s (2010) report on the progress towards the goals states that robust growth in the first half of the decade reduced the number of people in developing regions living on less than $1.25 a day from 1.8 billion in 1990 to 1.4 billion in 2005, while the poverty rate dropped from 46 percent to 27 percent. The global economic and financial crisis which began in 2008, however, slowed growth in developing countries. The global crisis will have far-reaching effects on the fight against poverty in the developing world, as the report states that ‘newly updated estimates from the World Bank suggest that the crisis will leave an additional 50 million people in extreme poverty in 2009 and some 64 million by the end of 2010 relative to a no-crisis scenario, principally in sub-Saharan Africa and Eastern and South-Eastern Asia. Moreover, the effects of the crisis are likely to persist: poverty rates will be slightly higher in 2015 and even beyond, to 2020, than they would have been had the world economy grown steadily at its pre-crisis pace’ (UN 2010:7).

1.2 The Role of Non-Governmental Organisations in Poverty Alleviation

The previous section opened up the context of world poverty and explored the population and distribution of the world’s poor. It also referred to the MDGs that focus on poverty reduction and cutting by at least half the number of people who live below the poverty line. This section looks into how such poverty can be reduced, especially through the intervention and efforts of various forms of third-sector organisations such as Microfinance Institutions (MFIs) and Non-Governmental Organisations (NGOs).

Various kinds of organisations have played a significant role in combating poverty and assisting human development, the most common being civil society organisations, usually operating in the form of NGOs. The sudden increase in specialised NGOs such as MFIs, particularly over the last two decades, has made it possible for many
impoverished people to have easier access to finance and other services to improve their lives. Fowler (2000) suggests that NGOs have such an influential role in the society that they should actually ‘pursue roles of social entrepreneurs and civic innovators, rather than mere users and distributors of subsidy’.

Increased awareness has led a number of organisations, institutions and countries to assist in poverty reduction programmes all around the world. This has taken many forms: assistance in terms of financial aid, providing support for governance-related issues, helping in building infrastructure, assisting capacity building, engaging in participatory development, providing support for employment and income generation, etc. Most of these activities are facilitated by the third-sector organisations that include NGOs, MFIs and Social Business Enterprises (SBEs). International organisations and government institutions with a worldwide presence provide aid, resources, human capital and specialist support to these organisations as this makes it more convenient and practical to reach the masses at the grassroots level.

The concept of such institutions has matured over the years, which have witnessed a surge in their formation, formalisation and recognition on a global scale. ‘Over the past two decades’, states Nelson (2007), ‘the processes of democratisation, economic liberalization and technological transformation have led to a dramatic growth in the number, diversity, reach and influence of civil society organizations and networks. These range from trans-national coalitions, international non-governmental organizations and global trade unions, to millions of community-based initiatives, supported by unprecedented communications capacity via the internet and global media. They include social and political movements, indigenous people’s groups, youth organizations, women’s groups, environmental, human rights and development organizations, consumer groups, faith-based initiatives, professional associations, trade and industry organizations, chambers of commerce, philanthropic foundations, universities, policy think-tanks, and scientific and research institutes. They operate individually and collectively at all levels of society and have an impact on many aspects of peoples’ lives, ranging from their political and civil rights and obligations, to economic, social and cultural rights and opportunities’. 
Third sector organisations encompass civil society groups such as NGOs, and a substantial portion of microcredit activity is facilitated by them. Owing to the operational infrastructure being firmly in place already, service delivery becomes significantly practicable. As a result, microfinance today is delivered to consumers through a variety of institutions, NGOs and MFIs being the most common ones, while recently a number of commercial banks have also started lending on the same terms and principles as MFIs and have been contributing significantly towards poverty alleviation.

Chege (1999) states that despite some shortcomings, NGOs have a comparative advantage over governments in a number of areas of activity. Some of their greatest strengths lie in advocacy and participatory models of development that focus on human development. They are very effective in demonstrating that poverty, no matter how endemic, can be tackled by involving project beneficiaries in planning, implementation and sustainability of projects. The United Nations Industrial Development Organization (UNIDO 1997) attributed NGOs’ comparative advantage to local accountability, independent assessment of issues and problems, expertise and advice, reaching important constituencies, provision and dissemination of information and awareness-raising. According to UNIDO, the strength of NGOs lies in their ‘proximity to their members or clients, their flexibility and the high degree of people’s involvement and participation in their activities, which leads to strong commitments, appropriateness of solutions and high acceptance of decisions implemented.’ NGOs often tackle issues that governments are unable or unwilling to take up. They provide efficient, innovative and cost-effective approaches to difficult social and economic problems. In some cases, they provide leadership in producing and advocating public policy, and operate in spheres where government officials are constrained by bureaucratic or political considerations (Chege 1999). Dhakal (2002) attributes several reasons to the emergence and proliferation of non-governmental organisations since the 1970s and considers ‘market failure and government failure’ as leading reasons in European, Asian, African, and Latin American countries. Researchers and policy-makers have started to examine the role of NGOs as a possible remedy for the ‘crisis of the welfare state’.
The growth of NGOs, at least in part, is a reflection of dissatisfaction with both the state and the market (Hulme 1994; Hossain 2001; Dhakal 2002). More positively, aid policies have been implemented effectively through NGOs and have thus endorsed their value for such measures. The success of NGOs can be judged by the amount of aid which flows through them each year. Rogerson (2004) estimates the total amount of bilateral aid channelled through NGOs to be about US$4 billion annually, while the total flow for development and relief handled by NGOs is about US$12-14 billion annually, serving over 20% of the world’s poor (Fowler 2000).

This section discussed how NGOs are contributing towards aid mobilisation and working towards the overarching objective of poverty reduction and human development. The section that follows explores how such organisations assist towards providing greater access to financial services to achieve this aim.

1.3 Access to Financial Services and Poverty Reduction

Improving access to financial services in developing countries has become a major policy objective, as it is widely believed that economic growth can be accelerated substantially by both deepening and widening outreach of financial services (Rao 1980; Chowdhury 2008). Financial services outreach is associated with giving access to capital and providing job opportunities for the poor. Despite efforts to provide access to financial services, it has often been argued that both formal and informal sectors in the developing world have failed the people in rural communities (Beck, Demirguc-Kunt et al. 2005; Ghalib and Hailu 2008), primarily because this limited access is one of the main obstacles to income generation and social protection (Gupta and Chaudhuri 1997).

The last fifteen years have witnessed significant advances not only in understanding the needs of the poor regarding financial products but also in means and methods of making such services available to them (Bebbington 1999; Matin, Hulme and Rutherford 1999; Hulme 2000; Simanowitz 2001). Such improved understanding has led to a shift in how the poor are perceived, from ‘small or marginal (male) farmers needing subsidised agricultural credit to (largely female) microentrepreneurs with no collateral to pledge but with a business world to conquer with the help of microcredit’
(Matin, Hulme and Rutherford 1999). Alex Counts (2005) of the Grameen Foundation attributes the current global poverty crisis and resulting human suffering, environmental degradation, civil unrest and many other societal ills to the quest for scaleable anti-poverty approaches. ‘Such deplorable conditions’, according to Counts (2005), are ‘the source of the growing interest in microcredit and, more broadly, microfinance’.

There are two sources of credit available to the rural poor in a less developed economy: institutional and non-institutional (Armendariz and Morduch 2005). Non-institutional or informal sources include moneylenders, landlords, traders, friends and relatives; institutional or formal sources consist of cooperatives, commercial banks, regional rural banks, etc. (ibid.). Conventional banks face a series of problems in extending services to the rural poor. Coming from outside the communities which they seek to serve, such institutions lack adequate and efficient systems to disburse and collect funds profitably in poor areas (Rao 1980; Sundrum 1992; Gupta and Chaudhuri 1997). Since the typical borrower in the unorganised credit market has no, or very limited, access to the organised market (Bhaduri 1977; Rao 1980), he resorts to private moneylenders in order to finance his immediate needs. Consequently, such lenders have traditionally been amongst the primary source of finance at rural levels (Rao 1980; Sundrum 1992; Gupta and Chaudhuri 1997).

Credit market isolation, coupled with an inelastic demand for credit, allows the private moneylender to decide freely what interest rate to charge (Germidis, Kessler et al. 1991). Moreover, due to multiple types of credit arrangements, there is a wide range in interest rates (Robinson 2001). Since informal moneylenders tend to operate under monopolistic conditions, their low-income borrowers generally pay much higher interest for credit than would be necessary if commercial microfinance were widely available through financial institutions with a broad outreach (1998). Dowla (cited in Robinson 2001) makes extensive use of data from a variety of sources, which reveal that interest rates being charged by the informal sector are simply exorbitant. Depending on the source, the cost of capital to the borrowers may vary anywhere from 10 to 120 percent per annum for initial investment, and up to 240 percent for working capital. The studies further show that even friends and relatives may charge interest on informal loans (from 30 to 96 percent per annum). Apart from the usurious
rates charged, the highly personalised relations between lender and borrower, through a system that is usually deeply embedded in the social structures (Bhaduri 1977; Rao 1980), ‘permit the lender to secure from the borrower the collateral which the latter cannot employ in the organised market’ (Rao 1980:159). Short-term financing (such as on a daily basis) proves most expensive for the cash-strapped borrowers. Germidis, Kessler et al. (2001) cite a common short-term financing mechanism common in Asia and Latin America, where street vendors obtain fresh produce each morning for 50 pesos and repay 60 pesos the same afternoon, thus paying an effective monthly interest rate of 23.638 percent. Robinson (cited in Sundrum 1992) argues that given the large share of the credit market which moneylenders hold in many developing countries, the high interest that borrowers pay can have a substantial negative effect on development efforts, as it tends to impede the growth and progress of borrowers’ microenterprises. Unfortunately, private lenders tend not to lower their exorbitant interest rates as they know that the borrowers linked to them cannot easily find another lender, do not have bargaining power and are poor and desperate (ibid.).

To make matters worse, despite exorbitant rates and even after collateralising whatever few assets they possess, borrowers are still ill-treated and suffer at the hands of the lenders and sometimes even political support is needed to negotiate a deal (Robinson 2001), while incidences of bonded labour have been reported (Chowdhury 2008; 2009). In rural India, locally powerful lenders may even forcibly take possession of the borrowers’ land and hold it, as collateral, until the poor peasants return both the principal and accrued interest (Chowdhury 2008). Traditional banks, on the contrary, are less extreme in terms of interest rates, but require collateral as part of the key lending requirement.

1.4 Microfinance as a Viable Alternative for Financial Inclusion

Arguments in the previous section raised concerns about the restraints and inadequacies in the formal as well as informal financial sectors in providing better and cheaper alternatives of accessing financial services to the rural and urban poor. The demands have led not only to the evolution of microfinance (Chowdhury 2008; 2009), but also towards its immense popularity all over the developing world as a key tool in development-related programmes (Germidis, Kessler et al. 1991; De Aghion and
Morduch 2000; Cheston and Kuhn 2002; Gallardo 2003; Brau and Woller 2004; Dunford 2006; Chowdhury 2009). Sharma (2001) argues that among financial institutions serving poor households around the world, microfinance programmes have emerged as one of the most important players. Such immense success can be attributed to two major characteristics that moneylenders and commercial banks lack, as shown in the discussions above: **collateral-free lending** and **low interest rates**.

The underlying premise of the model is to provide credit without the borrower having to surrender his assets as security in case of non-payment (see Asian Development Bank’s definition of microfinance in Box 1-1). How can money be advanced without any security and collateral? Chowdhury (1997) attributes it to ‘the harmony among group members, the strict discipline in providing credit and collecting repayments, and supervision of borrower’s activities in the microcredit system’. Armendariz and Morduch (2005), on the other hand, argue that banks require collateral because clients have no inherent loyalty to such ‘outsiders’ while the banks themselves have little or no knowledge about potential clients. According to RangDe (cited in Cull, Demirguc-Kunt et al. 2009), since microfinance originated in the developing world where people have strong social structures and interdependencies, such social cohesion tends to create a peer pressure that encourages individuals to repay loans and support each other. Yunus (2007) refers to this process of collateral substitution as ‘freeing credit from the bondage of collateral’, and refers to the system as ‘a wrong which has caused so much avoidable human misery’. Yunus (2009) further criticises collateral provisions for depriving poor people of credit facilities within the formal financial sector institutions, stating that it constitutes a form of ‘financial apartheid’.
Despite the absence of collateral, repayment rates are even higher than collateralised lending by the traditional banking sector, and ‘microfinance institutions now reach well over 100 million clients and achieve impressive repayment rates on loans’ (Robinson 2001). Most MFIs have reported over 99 percent on-time repayments, while Grameen Bank (2009) claims a 98 percent recovery rate. Such high recovery rates can be attributed to the closely-knit rural communities, strong social networks, peer pressure and effective monitoring by MFIs (for a detailed account, see Conning 1999; Wydick 1999; De Aghion and Gollier 2000; Hermes, Lensink, et al. 2003; Setboonsarng and Parpiev 2008).

The microfinance model has revolutionised many aspects of life for the poor. Improvement in their livelihoods, empowerment, changes in literacy levels, improved access to healthcare, changed consumption patterns, enhanced awareness, social uplift and employment opportunities are some of the most obvious ones. Balkenhol (2006) attributes the superiority of microfinance over alternative anti-poverty strategies to several circumstances: it has rapid, massive and verifiable effects; it can be measured and evaluated; it can be scaled up quickly; it can be targeted with precision at the poor and sometimes even the very poor; unlike grant or transfer-based programmes for

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**Definition of Microfinance**

Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households and their microenterprises. Microfinance services are provided by three types of sources:

- formal institutions, such as rural banks and cooperatives;
- semi-formal institutions, such as nongovernment organisations; and
- informal sources such as money lenders and shopkeepers.

Institutional microfinance is defined to include microfinance services provided by both formal and semi-formal institutions. Microfinance institutions are defined as institutions whose major business is the provision of microfinance services.

Source: Asian Development Bank (ADB 2000)
poverty reduction, microfinance recycles financial resources, which do not get lost but stay in the local economy. Above all, microfinance treats the poor as autonomous individuals who are expected and want to take charge of their lives. However, despite all the accolades that have been given to microfinance, Matin et al. (1999:3) caution that ‘it’s not a magic sky-hook that reaches down to pluck the poor out of poverty. It can, however, be a strategically vital platform that the poor can use to raise their own prospects for an escape from poverty’.

The most prominent feature of advancing loans through this model is that it helps in creating a more self-reliant population, rather than distributing charity and aid which are consumed without creating sustainable businesses. This process helps in capacity building and creating sustainable livelihoods. Microfinance provides a solution to gradually shift people out of poverty and make them increasingly self-reliant. As self-dependency grows amongst individuals and households, so do output, employment, per capita income, production, and growth: all factors that compose a positive combination for the overall progress of a nation towards development, independence and prosperity.

Microfinance is not simply about lending and borrowing small amounts for a profit; the practice entails a whole process that impacts not only individual lives but entire households and communities. It brings prosperity, empowerment, independence and awareness. Although the economic advantages may be the foremost and primary intention, the consequent social benefits, though intangible, may prove even more long-lasting and far-reaching; their effect on those concerned even surpassing the tangible financial gains. Gender empowerment, social cohesion, community building, liveability and security are some of the indirect benefits of microfinance.

The United Nations recognised the enormous potential that microfinance possessed in combating poverty in the developing world, and 2005 was declared the International Year of Microcredit. In a landmark step to enhance its profile, the Microcredit Resolution was passed on 18 December 2007 at the United Nations General Assembly. The draft resolution states that ‘by terms of its resolution, on the role of microcredit and microfinance, the Assembly underscores the need for greater access to those tools in developing countries, particularly so small farmers could increase agricultural
productivity and rural development. It emphasizes the need to prevent credit deficiencies caused by the financial crisis in microcredit and microfinance institutions and their services to the poor, as well as encourages Member States to adopt coherent financial regulatory frameworks’ (UN 2008).

The preceding sections have examined world poverty and the role of third sector organisations towards its reduction. Inadequate access to financial services and the resulting contribution to poverty were also explored, and microfinance as a workable alternative was discussed. The sections that follow lay out the research context of this study by formulating the problem statements and setting out the research questions.

1.5 Research Background

Currently in Pakistan, a variety of institutions ranging from NGOs to private and state-sponsored rural support programmes are delivering microfinance services to the poor; some of them have been working since independence in 1947. According to the Pakistan Microfinance Network (Khalid 2010), the microfinance service market in Pakistan remains underdeveloped and serves less than seven percent of potential clients. If microfinance is to serve a large share of the market, practitioners must improve their programmes by enhancing both outreach and access.

Poverty in Pakistan is still widespread, and despite several efforts by local and international agencies, the problem seems to have exacerbated over the years. The European Commission’s (2002) country strategy paper for 2002-2006 attributes political instability, regional conflicts and lack of sound economic management during the last decade, to the slow growth, worsening fiscal deficit and precarious balance of payments situation. The report further states that poverty in Pakistan is generally believed to be on the rise. Available data implies that over one third of the population is affected, with an over-proportional increase of poverty in urban areas. Poor access to social services, inappropriate economic policies and lack of good governance are underlying reasons for this development. Estimates show that the population now exceeds 170 million (GoP 2010), and with a GDP per capita of only US$ 2,600 (CIA 2010), it is easy to understand why an estimated 25 percent, nearly 40 million, still live below the poverty line. Microfinance has played a positive role in
combating poverty in the country, but reaching only 6-7 percent of poor households (in contrast to almost over 10 percent in Bangladesh), it does not look very promising. Increasing both the depth and breadth of outreach is imperative in ensuring effective policy implementation for poverty eradication.

1.6 Problem Statement

Ever since microcredit was introduced formally in the late 1970s, it has been hailed as a major poverty reduction tool across the developing world. Where its positive impact has been lauded for lifting millions out of poverty, it has, on the other hand, been a major theme for criticism amongst academics and practitioners alike (see for instance: Dignard and Havet 1995; Mallick 2002; Brau and Woller 2004; Khuwaja 2009). Hermes and Lensink (2007) conclude after reviewing the debate on microfinance and poverty that it is still unclear whether microfinance contributes substantially to a reduction in world poverty and whether microfinance is the most efficient way to reduce poverty. Lucarelli (2005), however, takes a more cautious approach and warns that although microcredit does have an important role to play in the development process and in overcoming poverty traps, it should not be relied upon too much as a panacea for complex development problems. Even Yunus, recognised as a pioneer of the model, reiterates that microfinance ‘is not a miracle cure that can eliminate poverty in one swoop, but it can end poverty for many and reduce its severity for others. Combined with other innovative programmes that unleash people’s potential, microcredit is an essential tool in our search for a poverty-free world’ (Yunus and Jolis 1999). In order to be truly effective, however, services offered by MFIs have to be made available to those segments of society that lie at the bottom of the pyramid. Despite universal acceptance and recognition that the poorest need greater flexibility in financial services provision, there has been no such innovation that can successfully and comprehensively address their needs on a large scale (Barua and Sulaiman 2006).

Following from works such as those cited above, this research aims at assessing how, and to what extent, borrowers’ livelihoods are impacted by the intervention of microfinance programmes. It also endeavours to measure the depth of programme
outreach across the surveyed region to gauge how successful various programmes are in reaching the bottom poor within programme areas.

1.7 Setting the Research Context: Objectives and Need for Assessing Impact

Any impact assessment study entails a substantial amount of time, effort and resources. It has to be justifiable to stakeholders and produce results that are not only factual but accurately reflect the prevailing circumstances; only then can an assessment exercise be considered worthwhile. The principal objective of this research will be an assessment of the impact that microcredit has on borrowers. Impact assessment, as described by Mosedale (2000), is ‘the process of identifying either the anticipated or the actual impacts of a development intervention, on those social, economic and environmental factors which the intervention is designed to affect or may inadvertently affect’. Out of the three types of impact identified by Mosedale, this study will target economic and, to a certain extent, social impact as major areas of concern. Mosedale (2003) also identifies three different, but interrelated, objectives of any impact assessment study:

a) Accountability and transparency: to provide evidence about the achievements of interventions and their costs.

b) Improving programme/project effectiveness: to produce recommendations about how present and future performance could be improved

c) Policy development: to generate guidance about how government and donor policies could be reformed so as to facilitate more successful interventions.

Though the research design will endeavour to consider all three objectives, it will lay greater emphasis on accountability and intervention achievements, as the primary focus of the study lies in the impact of programme intervention on borrowers’ lives. Programme development, policy reforms, recommendations and performance evaluation will occupy a secondary place in the overall research design. Given that nearly a quarter of Pakistan’s population is living below the poverty line, it seems pertinent to have a clear understanding of the different measures being employed by various institutions in combating poverty. The microfinance model, being perhaps one
of the most popular means of financing microenterprises, has been applied extensively by NGOs, MFIs and even commercial banks. In Pakistan, according to Kamal (2007), the Prime Minister unveiled plans in August 2007 to increase microcredit borrowers from a current estimated 1 million to 3 million by 2010, while the National Rural Support Programme (NRSP) recorded an increase of 105 percent for the year 2006-07 over 2005-06. This study will look at how borrowers’ lives have been transformed by measures such as these and also if, how and to what extent the microcredit model has been successful in fighting poverty.

Donor money is limited, and so are the internal resources of any developing country. National governments, donors, local and international partners are keen to know how donated funds are being organised, disbursed, spent and managed. A key element of any form of donor intervention is to witness observable outcomes of injected resources, both human and capital. Studies to assess impact have been carried out to meet these objectives (Simanowitz, 2001; Copestake, 2002). Microfinance has been used in Pakistan as a major social and economic development tool (see for example: Mustafa, Gill et al. 2000; Hind Tazi 2006; Zaidi et al. 2007, Haq 2008; IFC and KfW Bankengruppe 2008). Both external and internal donors, as well as successive national governments, have been investing substantially in this sector. Quite naturally, all stakeholders would desire to see how the human, physical and capital inputs are performing and how far their efforts have gone in attaining the desired objectives.

This study investigates if, how, and to what extent microfinance initiatives in Pakistan, particularly across rural Punjab, have succeeded in reducing poverty. The study considers two major issues: how far the rural poor have benefited by participating in microfinance programmes; and how successful various programmes have been in reaching the bottom poor. The results of such an exercise are significant in the sense that they will enable decision makers to make more-informed decisions about how to design and implement a broad-based and inclusive poverty reduction strategy in future.

Assessment, monitoring and evaluation of microfinance institutions and their performance are vital for a wide array of stakeholders: national governments, practitioners, donors and various partners in international development. For inherent
motives, governments want to know and ‘prove’ the intended positive outcomes of any programmes that they are involved with, while in the case of practitioners, it is in their best interests to learn the ultimate outcome of the various programmes. From programme design and implementation to impact assessment, it is important for them to find out what segments of society they have been able to reach, and how programme intervention has transformed borrower livelihoods. Were the products and services suitable for the target population? Were such products designed with localised needs and specifications in mind? What further improvements must be made in forthcoming projects? Donors are interested in finding out if their donated funds have been utilised in the best possible manner and whether the original objectives for which the funds were made available have been achieved.

Finally, this study contributes to the existing literature on the economic impact of programme intervention on borrowers’ livelihoods as well as on the depth of outreach of such programmes across rural Punjab. Despite numerous studies worldwide of a similar nature, impact assessments, especially those determining depth of outreach in rural Pakistan, have been very few (OPM 2006; Zaidi et al. 2007; Haq 2008; Jamal 2008). The few studies that have been undertaken seem to highlight scale or breadth of outreach, i.e. the geographical area covered by MFI programmes, as opposed to the depth of outreach which signifies the type of poor who are being served. This study aims to fill this vital knowledge gap, while making a valuable contribution to existing literature on associated topics.

1.8 Research Questions

In order to meet the objectives of the study as discussed in the section above, the research answers the following two main research questions:

a) How effective are microfinance programmes in reaching the ‘poorest of the poor’ across rural Punjab in Pakistan?

b) How effective is microfinance programme intervention in improving the well-being of borrowers?
The first research objective is geared primarily towards assessing how effective various MFIs are in targeting the ‘very poor’ as opposed to the moderately and less poor people across various areas of rural Punjab. This question aims to assess how deeply MFIs penetrate in terms of lending in these rural areas.

- How successful have they been in targeting the very poor people of rural areas so as to address their needs?
- Which category of the poor have the various MFIs been able to reach? Are the very poor being given access to microfinance or are the middle or upper levels being targeted due to their relatively low risk?

The second research question examines how various MFIs operating across the rural parts of the province of Punjab assist in improving the socio-economic well-being of their clients. Following the microfinance model, small amounts of collateral-free loans are extended to borrowers in order to either establish or expand existing micro-enterprises. Since the interest rates are relatively low compared to the informal credit sector and the loans have been extended on a collateral-free basis, it is expected that borrowers will either employ this capital to expand existing enterprises, or invest it to establish small businesses, earn a profit, repay instalments, save a certain amount, and thus improve their livelihoods over a period of time.

The fieldwork captures a picture of rural poverty across four dimensions: human resources, dwelling-related indicators, food security and vulnerability, and ownership of household assets. Each of these is further divided into various indicators that form part of a questionnaire and are recorded by coding figures obtained during field interviews with respondents. The methodological aspects of the survey are discussed in chapter three while the dimensions and associated indicators are explained in greater detail in chapter five.

1.9 Structure and Layout of the Study

This study examines the depth of microfinance programme outreach across rural Punjab in Pakistan, by investigating the types of poor people being served. It also investigates how and to what extent borrowers’ lives are impacted by borrowing from
various MFIs operating in the surveyed region. This introductory chapter looked briefly at the evolution of microfinance, its fundamental principles and how the microfinance model endeavours to challenge and defy the age-old, established practice of private, collateralised money-lending to the rural poor. Chapter two explores current literature on poverty targeting and outreach. It examines how, why and to what extent microfinance providers extend services to the ‘poorest of the poor’ and how such depth (as opposed to breadth) of programme outreach impacts both service providers and consumers.

Chapter three describes the research design and methodology adopted for this study. It discusses the theoretical underpinnings and underlying knowledge claims which set out the elements of the philosophical ideas, strategies and methods that form the core of the research approach. A detailed discourse on three major strategies of inquiry (quantitative, qualitative and mixed-methods) follows, arguing why mixed methods and triangulation would be most suitable for a study of this nature. It also discusses the use of treatment and control groups and the quasi-experimental design of the research. The chapter also has an in-depth discussion on the selection and choice of indicators and variables used for designing the questionnaire for data collection in the field.

Chapter four examines the geographical and economic context within which this study takes place. It presents background information on Pakistan, the current state of poverty and well-being of its people, the political context and the overall economic standing of the country. It also explores various initiatives at the state-level to combat poverty and discusses the access and outreach of financial services in the country. A detailed section examines the microfinance sector in the country, how it evolved and developed over the years, how it is regulated by the state, its level and extent of outreach and, finally, the challenges that it faces today.

Chapter five is dedicated exclusively to answering the first research question: depth of programme outreach. After discussing the selection and choice of indicators that were used to develop the field instrument employed for conducting interviews, it presents descriptive statistics of the surveyed households’ socio-economic characteristics. The poverty index is subsequently developed by applying the Principal Component
Analysis (PCA) model, which ranks all households in order of their relative wealth. This ranking is eventually used to create terciles to determine depth of outreach.

Chapter six answers the second research question, concerning the impact of microfinance programme intervention on borrowers’ livelihoods. It explores the type, level, direction and extent of impact that microfinance has on borrower households. Finally, the study is summed up in Chapter seven that discusses the findings from the study, policy implications and directions for further research.
Chapter 2: Microfinance, Poverty Reduction and Depth of Outreach: A Theoretical Overview

2.1 Introduction

This chapter provides a theoretical overview of the study and discusses poverty, international development and the role of microfinance in reducing rural poverty. This portion of the study has been divided into three main areas.

Keeping in line with the first research question that deals with the depth of programme outreach, the section that follows this brief introduction sets out the context by exploring literature that is relevant to concepts behind financial services outreach and poverty targeting. It also identifies and discusses major definitions of poverty-targeted projects, which leads to a discourse on the theoretical underpinnings of financial sustainability, outreach and impact. Out of related ongoing debates, the institutionists and welfarists are identified as two major classes of theorists who hold contradicting paradigms on whether institutions should be more focused on achieving profits and sustainability or should have a greater bias towards human welfare. Finally, Schreiner’s six aspects of outreach are examined along with the effectiveness of targeting and outreach in poverty-reduction programmes. This is followed by a detailed discussion of major empirical studies that have dealt with poverty targeting and outreach.

The subsequent area of this chapter concentrates on the second research question: the impact of microfinance. First, the need and justification for an impact assessment is discussed, followed by an overview of microfinance and poverty reduction and how borrowing assists clients in various ways such as asset building, improvement in dwelling conditions, food security, etc. Two key associated products of microfinance are also discussed at length in this section: microsavings and microinsurance. Finally, empirical work carried out relating to the impact that microfinance has on borrower livelihoods across the developing world is examined in detail and analysed critically across different areas, such as the positive ways in which it has impacted beneficiaries,
criticism levelled against microfinance, how it has affected women and how it has contributed towards asset building.

The third and final section of the review of literature looks at microfinance primarily from Pakistan’s perspective as it is the country where the fieldwork has been carried out. The section opens with a detailed discourse on major impact assessment studies carried out in Pakistan, and goes on to discuss the shortage of reliable empirical work in the microfinance sector conducted in the country. This leads to identifying and assessing the gaps in literature relevant to this topic in respect of both depth of programme outreach and the impact that microfinance has on borrower households, with specific focus on household income and expenditure, assets, adult literacy, children’s school attendance, etc., hence justifying the need for this study to fill the knowledge gap in this area of research. The section pays particular attention to the impact on women and also explores various efforts of MFIs towards effective poverty targeting and outreach.

2.2 Financial Services Outreach and Poverty Targeting

Development policies are either targeted at certain specific individuals or segments of the society (targeting), or are designed to influence the entire population (universalism). Mkandawire (2005) argues that there is hardly ever pure universalism or targeting; policy regimes are often hybrid and tend to lie between the two extremes. Since the 1980s, however, the balance has tilted from universalistic policies towards targeting (ibid.). The principles, cost-related potential benefits, as well as ethical and political problems of targeting versus broad or universal services have been extensively discussed in the literature (see Besley and Kanbur 1993; Sen 1995; Johannsen 2006).

Historically, during the late seventies and early eighties, economists devoted considerable attention to the distributional effects of projects. This attention reflected long-standing concerns of applied welfare economists about the distributive implications of prescriptive judgements (Little 1950; Londero 2001). The outcome, according to Johannsen (2006) is that ‘both our understanding of poverty and the measurement approaches have considerably improved the targeting efforts of diverse
types during the last decades’. Londero (2001) asserts that concerns about the ability of reaching the poor have led to promoting the design of poverty-targeted interventions, in some cases leading to the dichotomous classification of projects into poverty targeted and the rest. To that effect, two definitions of poverty-targeted projects seem to be in use: the first common definition describes a project as poverty targeted ‘whose design includes specific instruments to channel to the poor more benefits than would otherwise have been the case’. An important characteristic of this definition is that it is not concerned with the amount of benefits channelled to the poor, but only with the existence of the targeting instruments. The second definition pertains to headcount impact: ‘for a project to be poverty targeted, it is normally asked that the percentage of poor beneficiaries exceeds a certain pre-established threshold, for example, the headcount poverty incidence in the country or region’ (ibid.:5). Weiss (2005) classifies measures to reach the poor in four different ways: targeting by activity such as primary healthcare and education; targeting by indicators such as lack, or size of, ownership of land, form of dwelling, and sex of family head; targeting by location or geographical targeting; and targeting by self-selection such as employment creation where payment is either in cash or kind, such as subsidisation of low quality foodstuffs.

2.3 Financial Sustainability, Outreach and Impact: The Triangle of Microfinance

The foregoing section discussed debates on targeting and universalism, the definitions and interpretations of poverty targeting and how economists argue about welfare and the distributional effects in development-related projects. From the microfinance perspective, what distinguishes it from other ‘grassroots’ development strategies is the promise it holds out that development can be made to pay for itself, and perhaps even generate enough surplus to fund an ever-expanding number of beneficiaries on a continued basis (Woller 2004). This promise has captured the imagination and mobilised the resources of policymakers, donors, development practitioners and, increasingly, even formal sector financial services institutions (ibid.). The microfinance industry promotes the dual objectives of sustainability of services and outreach to the very poor. While formulating policies to fund development-related projects and MFIs, donors consider both objectives. Moreover, many practitioners,
donors and other principal stakeholders perceive a trade-off between financial sustainability and depth of programme outreach (Henry, Lapenu et al. 2003). Cohen (2003) suggests that donors should invest in a range of promising financial institutions to ensure that diverse clients at many income levels are reached, extending outreach both outwards and downwards as far as possible. In practice, however, this might be arduous to achieve for a number of reasons. Martin (2001), for instance, identifies one major concern in efforts to combat poverty as identifying the poor since ‘it is difficult, time consuming and costly to measure poverty on a nationwide scale’. The success of poverty alleviation efforts typically depends on their ability to properly identify and target the objective population, i.e. the very poor (ibid.).

For any lending programme to ‘pay for itself’, it is generally accepted that financial self-sufficiency of the service providers is necessary for programme sustainability. ‘Financial self-sufficiency can be described as the non-profit equivalent of profitability. In microfinance, it is defined as when a microfinance institution’s (MFI’s) inflation-adjusted operating revenues, less monetary and in-kind subsidies, exceed its inflation-adjusted operating costs plus its actual and imputed (the rate the MFI would have paid in the market) funding costs. Arguably, financial self-sufficiency is the principal focus of the microfinance industry today’ (Woller 2004:2).

Summing up, microfinance institutions can be considered to be financially self-sustainable if they have the financial capability and self-sufficiency that enables them to keep on operating independently and sustaining their operations without any continued external assistance. Such assistance may include gifts, aid, donations and subsidies which flow in from various external donors and government agencies.

While pursuing such self-sufficiency, however, a potential danger according to Woller (2004) is that this might divert MFIs’ attention and resources away from their core objective of poverty alleviation and away from their core poor market. ‘This fear’, states Woller, ‘is based on several factors: the poor tend to be concentrated in harderto-reach rural areas characterized by weak and fragmented markets for goods and services, dispersed populations, limited non-farm activities, and underdeveloped infrastructures. These factors imply both relatively high costs per dollar lent and relatively greater risk’ (ibid.:2). Other factors implying relatively high administrative costs are the difficulties inherent in identifying and reaching poor persons and the
heavy delegation and monitoring costs resulting from the lack of physical collateral. The lack of physical collateral in turn implies higher credit risk (Conning 1999). According to Churchill, Hirschland et al. (2002), serving the extreme poor or those in remote areas is costly because ‘reaching the poor implies delivering services near their homes, which requires more staff time and greater internal controls. Furthermore, the extremely poor may need to be actively recruited, exclusively targeted, or offered different or more flexible products. These strategies increase operating costs. The extremely poor or persons in remote areas may not be able to afford products priced to cover the associated risks and transaction costs. Managing a range of customized services can also drive up costs, making it difficult to viably serve the very poor. In particular, customized services will require field staff with a higher level of skills’. In short, delivering financial services to the poor is comparatively costly and difficult, and is fraught with risk, none of which bodes well for long-term financial self-sufficiency (Woller and Schreiner 2003).

Woller (2004) argues that financial self-sufficiency and depth of outreach are not inherently dichotomous; instead they have a complex, multi-dimensional relationship that depends on several factors, both direct and indirect. In a study by Woller (2004) that performed an empirical analysis of the determinants of financial self-sufficiency among thirteen village banking institutions and over three years, using data provided by the MicroBanking Bulletin, ‘perhaps the most notable finding was that depth of outreach, as proxied by the average loan to GNP per capita, is inversely associated with financial self-sufficiency’. This finding, according to Woller, demonstrates that among poverty lenders, deep outreach and financial self-sufficiency can be complementary, assuming the adoption of appropriate policies.

As higher operating costs imperil sustainability of service providers, the debate over institutional sustainability and depth of programme outreach amongst academics and practitioners continues, as some argue that institutions have to be – first and foremost – financially stable, that is, they are able to cover their operating costs. Some analysts have maintained that increasing the depth of outreach and financial sustainability are compatible objectives in the sense that increasing the scale of operations will also increase the absolute number of poor people amongst clients: ‘It is scale, not exclusive focus, that determines whether significant outreach to the poor will occur’
(Zeller and Johannsen 2006). Several other authors presented analyses (see Hulme and Mosley 1996; Conning 1999; Lapenu and Zeller 2002; Paxton and Cuevas 2002; cited in Zeller and Johannsen 2006) that support the notion of a trade-off between improving depth of outreach, i.e. reaching relatively poorer people, and achieving financial sustainability.

Out of this debate have arisen the institutionists and welfarists as two major classes of theorists who support contradicting paradigms, as elaborated below:

2.3.1 The poverty approach

As maintained by the welfarists the proponents of the poverty approach argue that the very poor clients should be targeted, despite the high costs involved in serving them. Like relief efforts, success is measured by how well support fulfils the needs of the poorest in the short term. In such an approach, donations cover the shortfall between revenue from clients and the cost of supply. Advocates of the poverty or welfarist approach argue that donations serve as a form of equity, and as such, the donors can be viewed as social investors. Unlike private investors who purchase equity in a publicly traded firm, social investors do not expect to earn monetary returns. Instead, these donor-investors realise a social or intrinsic return. Welfarists therefore tend to place greater emphasis on poverty alleviation, alongside the depth and breadth of programme outreach (Woller et al. 1999; Murdoch 2000; Brau and Woller 2004). In terms of programme outreach, they argue for a focus on targeted outreach rather than scale or sustainability and contend that a narrow insistence on cost recovery and the elimination of subsidies would only force MFIs to systematically exclude the poorest from borrowing since they are more difficult as well as costly to serve (Hulme and Mosley 1996; Conning 1999).

2.3.2 The self-sustainability approach

Also referred to as the ‘financial systems’ approach in the literature, this line of thinking is advocated by the institutionists. It targets less-poor clients on the fringes of the formal financial system. Like development efforts, it measures success by how well it expands the frontier of the mainstream economy in the long term (Von Pischke
In the self-sustainability approach, donations cover start-up costs and fund experiments meant to find innovations that reduce the cost of supply so much that revenue from clients can cover costs in the long term’ (Schreiner 2002:591). The institutionist or financial systems approach has become increasingly dominant across much of the donor community and exhorts microfinance providers to aggressively pursue sustainability through raising interest rates and lowering costs (Conning 1999). In this view, as MFIs begin to lessen their reliance on donor funds and subsidies and adopt good banking practices, they are expected to further innovate and lower costs. Profits are viewed as being not only acceptable, but also essential because profits are expected to attract private investment to the sector (ibid.).

Critics argue that MFIs should be subsidised since microfinance is one of the most effective known means of reaching the poorest and positively affecting livelihoods of the poor (Morduch 1998), whereas some NGOs hold the opinion that adoption of a financial systems approach would gradually divert energy and attention away from other important social and political objectives such as empowering the poorest and most vulnerable (Dichter 1997). A small but growing dissent movement has also argued that microfinance in general, and sustainable microfinance in particular, may be doing more harm than good by increasing the indebtedness and vulnerability of the poor (Dichter 1997; Johnson and Rogaly 1997, cited in Conning 1999). According to Woller et al. (1999), institutionists use microeconomic theory to prove that achieving financial self-sufficiency is the actual ‘end’ of microfinance as shown below:

If

\[
\begin{align*}
    a &= \text{financial self-sufficiency} \\
    b &= \text{improved social welfare} \\
    c &= \text{the end of microfinance}
\end{align*}
\]

Then using common logic,

1. Financial self-sufficiency equals improved social welfare \((a = b)\);
2. Improved social welfare is the end of microfinance \((b = c)\); therefore
3. Financial self-sufficiency is the end of microfinance \((a = c)\).
Navajas et al. (2002) argue that if microfinance institutions are not sustainable, they tend to inflict costs on the poor in the future that are far greater than the actual gains enjoyed by them in the present. Von Pischke (1996) investigates the trade-off between outreach and sustainability of MFIs and argues that while attempts to increase the outreach of microcredit programmes enable more poor to borrow; this practice undermines and endangers the existence of MFIs themselves. This may be due to two major issues. First, it may attract the wrong type of borrowers: those who are dishonest and are attracted to the promise of ‘easy money’ or are borrowers with poor employment prospects and with very few assets. The second concern relates to the rise in operating costs for making the loans available to the borrowers. This increase, Von Pischke explains, will be consequential to the rise in the number of clients, and the loans disbursed. Paying greater attention to financial management can be a viable solution because, by doing so, MFIs will be better able to balance the demands placed on them by increasing outreach, thus eventually enabling them to attain financial sustainability.

The inclusion of the aspect of impact into the policy objectives of microlending is rationalised and justified on the grounds that any further institutional innovation and programme expansion will be dependent on public intervention and financial support. This subsequently requires public investments, which in turn raises the issue of pay-off, in other words, impact in terms of economic growth, poverty relief and food insecurity (Zeller and Meyer 2002).

From the discussion above, it becomes apparent how mutually dependent and interconnected the three elements of outreach, sustainability and impact are. These three form a critical triangle, proposed by Zeller and Meyer (2002), and illustrated in Figure 2-1. The triangle contains a small circle that characterises all infrastructure innovations that can be implemented to improve financial sustainability (examples include improved financial management systems and policies, the introduction of ICT and management information systems for accurate reporting to aid in decision making, etc.), the impact (such as designing and implementing cost-effective complimentary services for the borrowers), and outreach (such as designing and implementing such strategies and policies that attract and target the right type of clients, carrying out a
detailed needs analysis based on empirical research to identify deserving individuals and households).

As shown in Figure 2-1 above, such institutional innovations have a direct bearing on all three elements. This entire scenario is, in turn, part of a bigger picture, which includes the national, macroeconomic and sectoral policy framework as well as the socio-economic environment. This ‘bigger picture’ is represented by the outer circle, which encompasses the institutional innovations alongside the three sides of the triangle.

According to Zeller and Meyer (2002), regardless of their concurrence with any one of the two schools of thought (welfarists vs. institutionists), MFIs generally place emphasis on any one of the dimensions as explained above, though ideally all of them aim to contribute to all three. To achieve this, there may be trade-offs between one or more aspects, e.g. between impact and sustainability, or between outreach and sustainability.
2.4 The Six Aspects of Outreach

While outreach is traditionally conceived as consisting of two dimensions – breadth and depth – as explained above, Schreiner (2002) identifies six aspects of outreach, each of which is also arguably a component of social value: worth to clients, cost to clients, depth, breadth, length, and scope. The poverty approach assumes that great depth can compensate for narrow breadth, short length, and limited scope. The self-sustainability approach assumes that wide breadth, long length, and ample scope can compensate for shallow depth (ibid.). Sections 2.4.1 to 2.4.6 below present, in summarised format, Schreiner’s six aspects of outreach:

2.4.1 Worth of outreach

The worth of outreach to clients can be described as their willingness to pay as well as to continue with the programme. ‘Worth’ hinges on the terms of the financial contract and on the tastes, constraints, and opportunities of clients. It becomes difficult to measure worth to clients, in part because it depends on the subjective gain that a client derives from a financial contract and in part because it is difficult to know what would have happened in the absence of microfinance (Schreiner 2002). According to Woller (2004), determining the drop-out rate and repeat purchases are the simplest and most straightforward measures of worth. Several relatively simple measures of drop-out have already been proposed (Rosenberg 2001). Another useful measure can be the indices of customer satisfaction. Schreiner (2002b) proposes desertion scoring, a method which aims to predict the probability that a borrower will apply for another loan once the current one is paid off; micro-lenders seek to prevent desertion because profitability usually increases with each repeat loan (Churchill and Halpern, 2001; Rosenberg 2001; Schreiner 2002b). ‘If the lender knew which clients were at-risk to drop out, then it could encourage them to repeat, perhaps offering them a reduced interest rate or forgiveness of the disbursement fee, contingent, of course, on satisfactory repayment of the current loan. These incentives, however, are costly to the lender; desertion scoring controls costs by targeting the incentives to likely drop-outs’ (Schreiner 2002b:48).
2.4.2 Cost of outreach

This can be described as the sum of price costs and transaction costs or the interest rate charged on loans and client transaction costs (Woller 2004). Price costs are direct cash payments for interest and fees and are revenue for the microfinance organisation. Transaction costs are non-price costs for both non-cash opportunity costs – such as the time spent in applying for a loan – and indirect cash expenses for such things as transport, documents, food and taxes needed to use a financial contract. Transaction costs borne by clients are not revenue for the microfinance organisation.

2.4.3 Depth of outreach

Depth of outreach is, according to Schreiner (2002:594), ‘the value that society attaches to the net gain of a given client. In welfare theory, depth is the weight of a client in the social-welfare function. If society has a preference for the poor, then poverty is a good proxy for depth. For example, society likely prefers that a street child or a widow get a given net gain than that a richer person get the same net gain. Direct measurement of depth through income or wealth is difficult. Simple, indirect proxies for depth are sex (women are preferred), location (rural is preferred), education (less is preferred), ethnicity (minorities are preferred), housing (small, flimsy houses are preferred), and access to public services (lack of access is preferred)’.

2.4.4 Breadth of outreach

This is basically the number of clients that the MFI serves. The breadth of programme outreach matters due to budget constraints; the wants and needs of the poor exceed the resources earmarked and available for them. All else being constant, the breadth of the poverty approach depends on the level of donations that it can attract. Breadth of outreach can be measured by the number and percentage change of clients served over a period of time. For a more comprehensive understanding of breadth, the number and percentage change of clients served should be broken down by major product lines or product types offered, such as enterprise loans, consumption loans, savings, and insurance (Schreiner 2002; Woller 2004).
2.4.5 Length of outreach

The timeframe of the supply of microfinance is referred to as the length of outreach. If society cares about the welfare of the poor both now and in the future, then length matters. Length is difficult to measure because it occurs in the future. Profits are one proxy because, in the absence of guaranteed donations, profits signal some ability to buy resources on the market and thus offer some hope to survive if donors leave.

2.4.6 Scope of outreach

Scope of programme outreach represents the number of different types of loan, savings, insurance and other products offered, broken down by product lines or product types (Woller 2004). Scope of outreach may encompass loans, savings and insurance services, or loans to both groups and individuals or even contracts with different terms.

2.5 Empirical Studies on Poverty Targeting and Outreach

The foregoing discussions have covered theoretical underpinnings and debates amongst academics and practitioners regarding sustainability, outreach, profitability and targeting. This section is devoted primarily to empirical studies by various researchers who have explored outreach and targeting in the microfinance perspective.

Outreach is one of three operational policy objectives for building inclusive financial systems. The other objectives, as noted by Zeller and Johannsen (2006), are financial sustainability of the microfinance institution and impact on poverty reduction. According to Daley-Harris (2006), microcredit outreach is still small despite the enormous increase in services to poor borrowers. In 2004, only 6 percent of borrowers with an income below $365 per annum were able to borrow from microfinance institutions. Matin (2005), however, asserts that despite the general consensus that microfinance does not reach the poorest, recent evidence suggests that nearly 15 percent of microfinance clients in Bangladesh are among the poorest, while Gonzalez and Rosenberg (2006) state that, measured by number of borrowers, microfinance is dominated by Asia, which accounts for seven out of every eight MFI borrowers and twice as much microcredit as any other region. Despite such claims, there are still
hundreds of millions of potential clients not being served. Effective programme targeting leads to directed outreach, which is vital since financial institutions, through such design, endeavour to reach the real, intended beneficiaries: the very poor, in order to achieve poverty reduction. This is especially important as most microfinance clients today fall into a band around the poverty line, the extremely poor, which is rarely reached by microfinance.

Experiential work dedicated exclusively to poverty targeting and depth of outreach of microcredit programmes is relatively rare. This is mostly because a majority of the work on programme outreach is merely a part of larger and more comprehensive impact assessment studies that investigate economic poverty, household assets, household income and expenditure, community and social capital formation and gender empowerment, etc. While such studies highlight issues concerned with outreach, they often tend to overlook in-depth analysis and are generally more inclined towards discourses on economic and social impact on borrower livelihoods at a larger scale.

Despite the dearth of dedicated research, there are instances of empirical work that focused exclusively on poverty targeting and outreach. In an extensive study carried out in Western Cape Province in South Africa, for example, Adato and Haddad (2001) examine the targeting performance of seven programmes and analyse the role of government, community-based organisations, trade unions, and the private sector in explaining targeting outcomes. The findings concluded that the programmes were not well-targeted geographically in terms of poverty, unemployment, or infrastructure or within localities; jobs went to the poor and unemployed, though not always the poorest. Srivastava (2004) addresses two broad questions related to poverty-targeting programmes with particular reference to India: how much in aggregate does the government spend on poverty-targeted programmes and how effective have these programmes been in targeting the poor and in alleviating poverty. Martin (2001), in a study based in Mozambique, suggests that the most efficient method to identify and target the poor would be ‘geographic targeting’, which can be achieved by first generating a disaggregated map of poverty and living conditions by combining data from both a nationwide standards of living survey and a national population and housing census. Zeller and Johannsen (2006) use data from nationally representative
household expenditure surveys undertaken in 2004 in Bangladesh and Peru and examine the poverty status of clients of different types of microfinance institutions in both countries. The analyses show that microfinance institutions are able to reach the poor, but also that a large share of their clients belongs to the non-poor population.

2.6 The Effectiveness of Poverty Targeting and Programme Outreach in Poverty Reduction

Since microfinance programmes by nature and design rely on targeting mechanisms at the individual or household levels, they are often preceded by some categorical targeting towards geographic or demographic sub-groups (Johannsen 2006). Such inherent targeting design of microfinance makes it more convenient to formulate policies towards effective and efficient programme outreach. The success of poverty alleviation efforts typically depends on their ability to properly identify and to target the objective population, i.e. the very poor. Sen and Hulme (2006:191) argue that ‘the poorest are not like the poor but “a little bit poorer”, hence they may benefit from policies to help the poor, but need other policies as well’. Ideally, one would like to identify such populations at the individual level, and to design targeting programmes that reach them adequately (Martin 2001). This level of accuracy and efficiency obviously requires large amounts of resources for gathering information and administering the targeting programmes. With scarce resources and under time pressures for finding solutions for the large proportion of the population living in poverty, most countries have put aside the ‘ideal’ scheme and instead try to find alternative, but more practical approaches (ibid.). One of these approaches, geographic targeting, is recognised as a possible solution to the dilemma of identifying the poor. Instead of aiming to identify and target the poor individuals and the households where they belong, it is administratively easier and cheaper to orient poverty alleviation efforts to the geographic areas where the poor actually live (Martin 2001).

How effective is targeting towards poverty alleviation? Goldberg (2005) cites two major studies pertaining to ASA and Grameen Bank that strongly suggest that microfinance works better for the poorest than the less-poor. Both organisations established their own programmes to reach the hardcore poor. Neither involves grain
handouts, but they offer very small loans with flexible repayment schedules (Goldberg 2005; Hulme 2008). Grameen’s ‘Struggling Members’ or ‘Beggars Program’ constitutes a typical loan to a beggar member amounting to Tk.500 (US$ 9.00). It is both collateral - and interest-free. The repayment schedule is flexible and decided by the struggling members themselves. The instalments are to be paid according to their convenience and earning capability. As of July 2009, about 111,645 beggars have already joined the programme. The total amount disbursed stands at Tk.136.56 million (approx. US$2 million), out of which Tk.102.26 million (US$ 1.48) has already been paid off (Grameen Bank 2009). The Bangladesh Rural Advancement Committee (BRAC)’s own assessment of its impact found that while landless clients benefited least from the programme, those with 1-50 decimals of land (‘the poor’) benefited most (Goldberg 2005). In a study that looked into inequality and the polarising impact of microcredit in Zambia, Copestake (2002) found that clients below the poverty line benefited significantly more from access to credit. A study by Hossain and Diaz (1997) that evaluated a Grameen Bank replication in the Philippines found that income from older borrowers’ microenterprises was 3.5 times higher than that from newer borrowers’ enterprises, and older borrowers also increased income from other sources.

However, a study of community-driven rural development projects carried out by the Inter-American Development Bank concurred that the poorest and the most vulnerable are not necessarily reached by targeting (Dahl-Ostergaard, Moore et al. 2003). Certain projects of the World Bank have tried to reach the poor through targeting, but there is limited evidence to show that they have done this more successfully than any other Bank investment. It is not surprising, therefore, that a recent literature review (Mansuri and Rao 2004; cited in The World Bank 2005) found that projects that rely on community participation have not been particularly effective at targeting the poor.

Despite the results of studies noted above, the question of which group benefits most from microfinance is probably misguided. Evidence shows that the very poor do benefit from microfinance, and this justifies the decision of many programmes to recruit them (the ultra poor) and to develop products and services that suit their needs (Goldberg 2005). Some microcredit advocates argue that microfinance services
should reach the ‘poorest of the poor’ as access to credit is a human right in the fight against economic exclusion and therefore narrow targeting of the poorest is necessary (in-depth targeting) (Aguilar 2006). Some studies have also shown that most poor people have benefited from microfinance programmes but that narrow targeting is not necessarily a condition for reaching the poorest, while some large-scale non-targeted schemes have been shown to reach the poorest (ibid.).

The significance of client targeting cannot be underestimated and certain donors have even started making this aspect an inherent policy for identifying potential borrowers. According to Woller, Simanowitz et al. (2004), for instance, MFIs applying for US Agency for International Development (USAID) funding have to demonstrate that they target the very poor. Such a demonstration requires them to perform poverty assessments, classifying the poverty level of their clients and monitoring changes in their poverty status. The Microenterprise for Self-Reliance Act, as amended in 2003, mandates that at least 50 percent of all resources granted by USAID for microenterprise and microfinance be targeted at the very poor. The Act defines the very poor as either (1) those living in the bottom 50 percent of those below the national poverty line established by the national government of the country in which those individuals live, or (2) those living on the equivalent of less than $1 per day.


Figure 2-2: The wealth pyramid
The wealth pyramid as put forth by Prahalad (2006) is presented graphically in Figure 2-2 above. The solid horizontal line depicts the international poverty line, whereas the two dashed lines below it represent the two dollars-a-day and one dollar-a-day expenditure per capita. Commercial banks have traditionally reached only the top of the pyramid; credit unions have done better in reaching further down the pyramid through their cooperative principles and lower cost structures, but still do not generally reach below the international poverty line (Dunford 2006). This is where microfinance steps in and provides a viable and workable solution by reaching the poorest people who are ignored and sidelined by mainstream financial institutions.

2.7 Microfinance and its Impact on Borrowers

The previous sections discussed literature that was relevant to the first research question: depth of programme outreach. Poverty targeting was also discussed alongside this, as it is an important instrument to reach the intended beneficiaries. Moving on, this and subsequent sections explore the second research question which is about if, how and to what extent microfinance impacts borrowers’ livelihoods.

In the first section that follows, the need for and rationale behind carrying out and measuring programme impact is examined at length. The usefulness to various stakeholders at different levels is discussed. Answers are sought to questions such as why should impact assessment be done at all, can impact really be attributed to the work of the MFI, and whose needs are met by impact assessment? Literature regarding the debates surrounding whether impact assessment is necessary or not, or if it is a waste of resources, is explored. This part sets the stage for the next section which discusses how microfinance assists in poverty reduction by means of financial intermediation through small loans. It also explores the various avenues it offers borrowers for building both tangible and intangible assets such as labour, human capital, household and productive assets, gender empowerment, household relations and social capital.

2.8 The Need for Impact Assessment

According to Matin, Hulme et al. (1999), historically the poor have been seen as marginal farmers needing subsidised agricultural credit, but now the poor have
become a diverse group of vulnerable households with complex livelihoods and varied needs. From such a perspective, microfinance is seen as a mechanism that can reduce vulnerability (i.e. a sudden drop in income, consumption or assets) and eventually reduce income poverty. We are now entering the microfinancial services era. Such financial services help the poor maintain and improve their livelihoods, not merely by giving them access to credit to start or run a business, but also by offering them savings and insurance services that help them maintain and improve their human and social capital throughout their lives (ibid.).

As microfinance programmes are one of the most important interventions in developing a country’s efforts to reduce poverty, recent years have seen a huge growth of the sector in terms of numbers and size of organisations, numbers of clients and provision of subsidised donor funding (Simanowitz 2001). Although the model is not new, it did not attract the attention of the professionals, international agencies and policymakers until microfinance was globally perceived as a concept for poverty alleviation through institutional mechanisms (Khalily 2004).

Since poverty alleviation is the fundamental defining stimulus of this model and ‘a large proportion of MFIs include poverty reduction in their mission, and donor funding is allocated to microfinance on this basis’ (Simanowitz 2001:4), it becomes necessary to assess the nature and extent of the ensuing impact on borrowers’ livelihoods. Cohen (1999; 2001) argues that historically, assessing the impact of microfinance programmes was seen by donors as something they should undertake in order to document that their resources were having positive results; whereas project managers merely saw high levels of loan repayment and repeat customers as the proxy measures of impact and evidence that the services provided were highly valued by the clients and were therefore having a positive impact. Over the years, however, the growing appreciation of the value of the client information generated by impact assessments for project management, coupled with the emergence of lower cost and credible approaches to assessing impact on clients and their households, mean that it is no longer a peripheral topic. It has gradually been emerging from its status as marginal to becoming part of the mainstream microfinance agenda (Cohen 1999).
Due to the popularity of the model, there have been substantial recent developments in the rationale and conceptualisation of impact assessment. According to Simanowitz (2001) there are three key questions that have concerned much of the recent research on microfinance impact assessment:

c) Why should impact assessment be done at all? Is this not an inefficient use of resources where market proxies can be used to determine whether clients are benefiting from the services provided by the MFI?

d) Can impact really be attributed to the work of the MFI? With the complexity of clients’ livelihoods and the external environment, it is very difficult to prove impact, and the methods that can be used to this end are time consuming, costly and complex. These factors, combined with the perception that adequate market proxies exist, have led to a strong lobby against the need to perform impact assessment.

e) Whose needs are met by impact assessment? In the past impact assessment has primarily met donor needs for proving impact and effective use of resources. Is it possible to design impact assessment that better meets practitioner needs for improved understanding of their clients and how can MFIs’ services be extended so as to improve the impact that they are having? What are the needs of other stakeholders such as clients?

Simanowitz (2001) argues that assessing impact is necessary for two reasons: the first is to allow MFIs to stand back, contemplate their performance, and assess whether the process has had any impact on the lives of the borrowers. This helps create learning within MFIs that can be instrumental for future planning and decision making. The second benefit is that such studies will eventually be used by donors to judge whether the amounts that they have pledged ‘for the uplift of the masses’ are actually producing a visible influence on them. Cohen (1999:3) argues that impact assessment studies are necessary because ‘both donors and policy makers want proof of the effectiveness of financial services in relation to their developmental objectives. In addition to measures of programme sustainability, outreach, and deepening financial markets, they want to know whether these services are reaching the poor, helping to
alleviate poverty and putting the clients and their households on the road to self-sufficiency. Positive results are indicative of the value of investment in microfinance services and indicate that they are helping the poor get out of poverty. Failure to demonstrate impact raises the prospect that funds for microfinance will be reprogrammed for other uses’.

The debate about whether impact assessment is necessary or not centres on the conviction that the market can provide adequate proxies for impact and that impact assessment is therefore an inefficient use of resources. Based on the economic theory of utility, it is argued that if clients are willing to pay for a service, i.e. client retention and repayment rates are good, only then can it be assumed that they are happy to pay for this service because it is doing them good. If this measure is combined with organisational financial performance it is argued that these two indicators are effective in telling us that we have a strong, efficient organisation that is providing a service that is needed and has a positive impact (Simanowitz 2001). According to Rosenberg (in Morduch and Haley 2002:9) ‘if your investee institutions (the MFIs) are pricing their services in a way which covers all of the costs of providing them ... and if their clients continue to use these services, then you have strong evidence from the persons most likely to know that the clients are deriving benefits whose value exceeds the cost of providing them ... do you really need to know a lot more than that?’ Adams (2001, cited in Simanowitz 2001:6) argues that ‘impact assessment studies are fraught with insurmountable methodological problems and the costs of doing them usually exceed any benefits they might provide’, while according to Dunford (2006), the talk about ‘impact’ is too often vague about what kind of impact, for whom, and from whose perspective. Discussing the intricacies of measuring impact, Weiss et al. (2005) state that assessing the true relationship that exists between microfinance services and poverty reduction is not straightforward, since accurate assessment requires a control group identical in characteristics to the recipients of credit and engaged in the same productive activities, who have not received credit, and whose income (or other measures) can be traced through time to compare with that of the credit recipients.
2.8.1 Usefulness of an impact assessment to stakeholders

As the microfinance industry becomes increasingly specialised to cater for a diverse range of clients, Simanowitz (2001:9) states that ‘the impact agenda has opened up to incorporating the needs of a greater range of stakeholders and it has become clear that impact research can be used for a wide range of purposes (as shown in Table 2-1). The processes of understanding clients’ livelihoods and their relationship to the MFI, the needs of clients in terms of their businesses and in reducing vulnerability and poverty, and the organisational services and structures needed to deliver them, have a large number of potential benefits. Impact assessment that is more focused on the needs of practitioners has moved towards looking at how impact information can feed into management and product design processes, and provide frequent and timely information. Impact assessment thus provides information that allows MFIs to improve their services, and thus improve the impact on their clients.’
<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Usefulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donors</td>
<td>Allow funders to validate their investments</td>
</tr>
<tr>
<td></td>
<td>• Quantitative information about the size of the changes taking place</td>
</tr>
<tr>
<td>Donor/MFI staff &amp; board</td>
<td>Demonstrate meeting Mission and Objectives</td>
</tr>
<tr>
<td></td>
<td>• Improve understanding of the causes of changes and the relation between changes and the work of the MFI</td>
</tr>
<tr>
<td>MFI staff and board</td>
<td>Monitor meeting of Mission and Objectives</td>
</tr>
<tr>
<td></td>
<td>• Provide managers with information about performance in terms of organisational mission and impact</td>
</tr>
<tr>
<td></td>
<td>• What are the general directions of changes taking place?</td>
</tr>
<tr>
<td></td>
<td>• Are changes different amongst MFI clients compared to the wider community?</td>
</tr>
<tr>
<td></td>
<td>• What impacts or changes are taking place in relationships between clients and other household members, other MFI clients, or other community members?</td>
</tr>
<tr>
<td>MFI staff and board; clients</td>
<td>Organisational learning &amp; improving practice</td>
</tr>
<tr>
<td></td>
<td>• Improve understanding of individual clients, households, businesses, and their communities and the inter-relationships between the different levels</td>
</tr>
<tr>
<td></td>
<td>• Improve MFI’s understanding of differing needs of different sections of the community e.g., the very poor.</td>
</tr>
<tr>
<td>MFI management – product development &amp; methodology</td>
<td>Provide market research information to improve products and services</td>
</tr>
<tr>
<td></td>
<td>• Improve MFI’s responsiveness to clients’ expressed and underlying needs</td>
</tr>
<tr>
<td></td>
<td>• Provide information which helps managers understand what services their target clients need</td>
</tr>
<tr>
<td>MFI management – staff and product delivery management</td>
<td>Management tool to manage &amp; improve impact</td>
</tr>
<tr>
<td></td>
<td>• Provide managers with information about staff performance</td>
</tr>
<tr>
<td></td>
<td>• Improve understanding of client livelihoods and processes of change which are taking place</td>
</tr>
<tr>
<td>Clients</td>
<td>Provide accountability to clients</td>
</tr>
<tr>
<td></td>
<td>• Clients’ input into improving MFI services so as to better meet their needs.</td>
</tr>
<tr>
<td></td>
<td>• Self-analysis, learning and improved practice</td>
</tr>
<tr>
<td></td>
<td>• Increase ability to understand and analyse their own situation</td>
</tr>
</tbody>
</table>

Source: Simanowitz 2001

**Table 2-1: Usefulness of impact assessment to different stakeholders**
As shown in Table 2-1 above, it becomes evident that there are multiple stakeholders at various levels in an impact assessment exercise. All of these will have different needs and interests according to their specific requirements and roles within the system. It becomes necessary to design an assessment in such a manner that it caters for the needs of the maximum number of stakeholders.

2.9 Microfinance and Poverty Reduction: An Overview

The preceding sections explored literature on debates relating to the need and justification of an impact assessment. The utility of conducting such an exercise across various stakeholders was also put forward by Simanowitz (2001). This section explores how financial intermediation leads towards poverty reduction, asset building and gender empowerment.

The underlying motive of providing microfinance services to the poor is to provide them with allied low-cost and collateral-free credit services that are both simple and hassle-free to obtain. There is an increasingly large body of evidence that demonstrates that microfinance aids poverty alleviation and reduces vulnerability to poverty. In addition, there is an emerging body of literature supporting the belief that microfinance can have a positive impact on health, nutritional status and primary school attendance (Morduch 2002; Armendariz 2005; Goldberg 2005; Dunford 2006). Researchers have collected and analysed data employing a multitude of methods, tools and techniques to assess how far microfinance goes in reducing poverty.

The microfinance development strategy proposed by the Asian Development Bank (ADB 2000) argues that the model can be effectively used to fight poverty, which makes development practitioners, policy makers, multilateral and bilateral lenders recognise that providing efficient microfinance services for the poor is important for a variety of reasons, as stated below:

(i) Microfinance can be a critical element of an effective poverty-reduction strategy. Improved access to and efficient provision of savings, credit, and insurance facilities in particular can enable the poor to smooth their consumption, manage their risks better, build their assets gradually, develop their microenterprises, enhance their
income earning capacity, and enjoy an improved quality of life (see Table 2-2 below). Microfinance services can also contribute to the improvement of resource allocation, promotion of markets, and adoption of better technology; thus, microfinance helps to promote economic growth and development.

(ii) Without permanent access to institutional microfinance, most poor households continue to rely on meagre self-finance or informal sources of microfinance, which limit their ability to actively participate in and benefit from development opportunities.

(iii) Microfinance can provide an effective way to assist and empower poor women, who make up a significant proportion of the poor and suffer disproportionately from poverty.

(iv) Microfinance can contribute to the development of the overall financial system through integration of financial markets.
<table>
<thead>
<tr>
<th>Financial service</th>
<th>Results</th>
<th>Impact on poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Savings Facilities of microfinance institutions (MFIs)</strong></td>
<td>– More financial savings &lt;br&gt;– Income from savings &lt;br&gt;– Greater capacity for self-investments &lt;br&gt;– Capacity to invest in better technology &lt;br&gt;– Enable consumption smoothening &lt;br&gt;– Enhance ability to face external shocks &lt;br&gt;– Reduce need to borrow from money lenders at high interest rates &lt;br&gt;– Enable purchase of productive assets &lt;br&gt;– Reduce distress selling of assets &lt;br&gt;– Improve allocation of resources &lt;br&gt;– Increase economic growth</td>
<td>– Reduce household vulnerability to risks/external shocks &lt;br&gt;– Less volatility in household consumption &lt;br&gt;– Greater income &lt;br&gt;– Severity of poverty is reduced &lt;br&gt;– Empowerment &lt;br&gt;– Reduce social exclusion</td>
</tr>
<tr>
<td><strong>Credit Facilities</strong></td>
<td>– Enable taking advantage of profitable investment opportunities &lt;br&gt;– Lead to adoption of better technology &lt;br&gt;– Enable expansion of microenterprises &lt;br&gt;– Diversification of economic activities &lt;br&gt;– Enable consumption smoothening &lt;br&gt;– Promote risk-taking &lt;br&gt;– Reduce reliance on expensive informal sources &lt;br&gt;– Enhance ability to face external shocks &lt;br&gt;– Improve profitability of investments &lt;br&gt;– Reduce distress selling of assets &lt;br&gt;– Increase economic growth</td>
<td>– Higher income &lt;br&gt;– More diversified income sources &lt;br&gt;– Less volatile income &lt;br&gt;– Less volatility in household consumption &lt;br&gt;– Increase household consumption &lt;br&gt;– Better education for children &lt;br&gt;– Severity of poverty is reduced &lt;br&gt;– Empowerment &lt;br&gt;– Reduce social exclusion</td>
</tr>
<tr>
<td><strong>Insurance Services</strong></td>
<td>– More savings in financial assets &lt;br&gt;– Reduce risks and potential losses &lt;br&gt;– Reduce distress selling of assets &lt;br&gt;– Reduce impact of external shocks &lt;br&gt;– Increase investments</td>
<td>– Greater income &lt;br&gt;– Less volatility in consumption &lt;br&gt;– Greater security</td>
</tr>
<tr>
<td><strong>Payments/Money Transfer Services</strong></td>
<td>– Facilitate trade and investments</td>
<td>– Greater income &lt;br&gt;– Higher consumption</td>
</tr>
</tbody>
</table>

Source: Asian Development Bank (ADB 2000)

**Table 2-2: Microfinance poverty reduction nexus**
Apart from the benefits cited above, there is a multitude of factors by which microfinance impacts not only borrowers’ livelihoods but also the entire community, as according to Khandker (2005) the programmes have spillover effects on the local economy. Basher (2007:182) considers social empowerment through such effects on individuals by examining the social hostility faced by the participants and finds that ‘the spillover effects of the individual empowerment are evident from society’s acceptance of the attitudinal changes accomplished by the participants of the Grameen Bank’. Zohir and Matin (2004) argue that although many studies have researched and identified the impact of microfinance programmes, a majority of these do not include in their analysis the possible spillover effects of MFIs from the participants to non-participants, whereas they could be helping the very poor in this way.

2.9.1 Financial intermediation through small loans

One of the major objectives of all MFIs is combating poverty through financial assistance in the form of small, low cost, collateral-free loans to the poor in order to help them start businesses of their own that will ultimately enable them to become self reliant. According to Otero (1999), ‘conceptually, microfinance addresses one constraint faced by the poor: their shortage of material capital, the input necessary to generate income. Capital investment, from savings or borrowed money, takes a critical place in the economy of all human actors, regardless of their level of income. Microfinance creates access to productive capital’. Littlefield, Morduch, and Hashemi (2003:2) reiterate the benefits that such small amounts of loans bring to the poor: ‘it helps safeguard poor households against the extreme vulnerability that characterizes their everyday existence. Loans, savings, and insurance help smooth out income fluctuations and maintain consumption levels even during the lean periods. The availability of financial services acts as a buffer for sudden emergencies, business risks, seasonal slumps, or events such as a flood or a death in the family that can push a poor family into destitution.’

Hulme and Mosley’s (1996) empirical work makes use of data from a range of sources to highlight the ‘financial’ aspect of MFI activities. The research refers to efforts by organisations such as Grameen and BRAC in Bangladesh to illustrate that very poor households were able to raise their incomes and increase their assets when
they were advanced credit. A vital characteristic that the study reports is the direct relationship that exists between the impact of a loan and the existing income of the clients, since, according to them, those with existing higher levels of income have a greater range of investment opportunities (as compared to those with lesser incomes). The authors argue that credit schemes are more likely to benefit the ‘middle and upper poor’. This point actually reinforces the authors’ previous observation that microcredit helps elevate people out of poverty, because if they ‘graduate’ from being extremely poor or destitute to ‘middle poor’, they will benefit even more due to the wider range of investment and asset-building opportunities available. This cycle continues and feeds on itself to help the poor move farther and farther away from poverty.

This model is explained diagrammatically in Figure 2-3 by PlaNet Finance (2010), which shows how the poor, suffering from a vicious cycle of poverty, break free from the cycle by microcredit intervention. They are able to fend for themselves by means of self-employment, and over a period of time become increasingly self-sufficient, start getting access to better education and health and protection against illnesses and crises – all of which contribute towards their route to escape from poverty.
This unique cyclical function has been referred to as the virtuous cycle by Mohammed Yunus (Hulme and Moore 2006), which runs as follows: ‘low-income → credit → investment → more income → more credit → more investment → more income’. In stark contrast to the age-old vicious cycle of poverty (as seen in the top portion of Figure 2-3 above), this proposition enables people to move out of poverty, rather than going round and round in the poverty cycle for the rest of their lives.

2.9.2 Asset building and poverty reduction

The assets of a household are broadly defined to include the productive, social and locational assets that determine the opportunity set of options for livelihood strategies (the household’s revealed behaviour). These actions, in turn, determine outcomes in terms of household well-being (Siegel 2005). Assets are important for the well-being...
of any household. For the poor, assets provide security and safeguard against sudden shocks and in coping during times of crisis. According to the World Development Report 2000/01 of the World Bank (2000), understanding the determinants of poverty in all its dimensions helps to think in terms of people’s assets, the returns to (or productivity of) these assets and the volatility of returns. The poor in the developing world have very few assets, primarily due to an inequality in the distribution of wealth. Poor health, deficient skills, scant access to basic services and the humiliations of social exclusion reflect deprivations in people, public, and social assets. Lack of assets is thus both cause and outcome of poverty.

Households manage their stock of assets as a critical part of their coping strategies. The quantity and kind of assets that a household possesses will play a critical role in determining its current and future income (Corbett 1988). Assets may be held for a variety of reasons. They may be stores of value, an input to household production, a significant source of income, more or less liquid, and more or less risky in terms of their future value. Any asset may be acquired because it has a given combination of these characteristics (ibid.).

Otero, Rhyne et al. (1994) argue that ‘the families that operate micro-enterprises typically lack assets, especially marketable assets’. Assets play a vital role in terms of coping strategies as those assets acquired during non-crisis years act as a part of saving and self-insurance which can then be drawn upon and liquidated at times of household economic crisis. These include well-known tangible assets such as labour and human capital, less familiar productive assets such as housing, and largely invisible intangible assets such as household relations and social capital (Moser 1998). Other assets, such as land or cattle, play a key role in generating income, but may be more risky and less liquid as stores of value. Rather than being held as a form of saving which can readily be drawn upon, these assets may be acquired because they are key productive assets in generating streams of income for the household (Corbett 1988).

The 2003 World Development Report states that greater productivity and prosperity depend on improvement of many dimensions of well-being – both material wealth and the non-material aspects of personal and social welfare. Improving well-being, so
defined, requires management of a diverse portfolio of assets – physical, human, financial, social, natural, and intellectual (The World Bank 2002c). Writing about such a diverse portfolio of assets, Moser (1998) identifies an asset vulnerability framework. Although this framework includes well-known tangible assets such as labour and human capital, prioritised in the 1990 Poverty WDR (The World Bank 1990), it is a more ‘inclusive’ framework that comprises less familiar productive assets such as housing and, as explained above, largely invisible intangible assets such as household relations and social capital. These can be summarised as follows:

- **Labour** – commonly identified as the most important asset of poor people.
- **Human capital** – health status, which determines people’s capacity to work; and skills and education, which determine the return for their labour.
- **Productive assets** – for poor urban households the most important is often housing.
- **Household relations** – a mechanism for pooling income and sharing consumption.
- **Social capital** – reciprocity within communities and between households based on trust deriving from social ties.

According to Moser (1998), the ability to avoid or reduce vulnerability depends not only on initial assets, but also on the capacity to manage them – to transform them into income, food or other basic necessities. Moser further argues that a strong relationship exists between vulnerability and asset ownership which is of operational significance, and that analysing vulnerability involves identifying not only the threat but also the resilience or responsiveness in exploiting opportunities, and in resisting or recovering from the negative effects of a changing environment. The means of resistance are the assets and entitlements that individuals, households, or communities can mobilise and manage in the face of hardship. ‘Vulnerability is, therefore, closely linked to asset ownership. The more assets people have, the less vulnerable they are, and the greater the erosion of people’s assets, the greater the insecurity’ (ibid.:3). Swift (1989) analyses vulnerability and security as a function of assets, which he classifies as investments (human investments in education and health, and physical investments in housing, equipment and land); stores (food, money and valuables such as jewellery) and claims on others for assistance (including friendship, kinship,
networks and patrons in the community, government and the international community). Swift argues further that assets create a ‘buffer’ between production, exchange and consumption. Production and exchange activities create assets and in case of need, assets can be transformed into production inputs or directly into consumption. Reducing assets, however, increases vulnerability although this may not be visible.

2.10 Associated Products

The discussions above explored how microfinance contributes towards poverty reduction. As opposed to microcredit, which involves just the borrowing and lending of money, the term microfinance includes ‘the provision of a wide range of financial services to the poor: savings, insurance, money transfers, and credit’ (Qureshi and Roodman 2006:ii). Out of the various financial and non-financial products that most MFIs provide these days, the most popular amongst borrowers are discussed below: savings and insurance schemes at the micro level.

2.10.1 Microsavings

Apart from the credit facilities that microfinance has been traditionally associated with, many MFIs have started to experiment with a host of associated financial as well as non-financial services. Microsavings are one such service. It has become increasingly clear that the most important element of microfinance is not lending but savings, as only some poor people will benefit from the chance to borrow, but almost all will benefit from the chance to save (Collins, Morduch et al. 2009; Kristof and WuDunn 2009). Otero, Rhyne et al. (1994) argue that savings are important for the long-term financial health of households and as a protection against illness, periods of unemployment, etc., and according to Liedholm and Mead (1987), savings are equally important for enterprise growth, for it is from savings that most investment in enterprises comes.

The poor in the developing world have traditional savings schemes as the only options available, such as Rotating Savings and Credit Associations (ROSCAs), Accumulating Savings and Credit Associations (ASCAs) and deposit collectors.
Moreover, they face a number of barriers to access saving facilities: conventional banks will not accept their small deposits; they cannot prove their identity; and most often banks are located far from where they live and work. Microsaving schemes consist of small deposit accounts offered to lower income families or individuals as an incentive to save small amounts of money to meet emergency needs. Depending on the MFI, there are either no or very few minimum balance requirements.

Empirical work has shown that borrowers participating in saving schemes seem to be better off than non-savers. A study by Aportela (1999), for instance, based upon the expansion of a Mexican savings institute, found that the expansion of a savings programme increased the average savings rate of households by nearly five percentage points, while for the poorest households, this effect was more than seven percentage points. Another study was carried out by Ashraf, Karlan et al. (2005) based on a randomised control experiment aimed at determining the difference in savings levels for those who are offered a commitment savings product (the treatment group) and those who are not (the control group). Findings showed that the commitment savings product generates a strong positive impact on savings levels. Those who were offered the savings product increased their average savings balances by 81 percentage points after 12 months (relative to those who were not offered the product). A study by Chen and Snodgrass (2001) to measure the impact of credit and savings services on poor, urban Indian women found that savings may be more beneficial to poor households than credit, although credit is often necessary to overcome financial shocks; borrowers were the most well-off group, followed by savers, with non-clients having the lowest incomes.

2.10.2 Microinsurance

Churchill (2006) defines microinsurance as ‘such an insurance which (i) operates by risk-pooling, (ii) is financed through regular premiums and is (iii) tailored to the poor who would otherwise not be able to take out insurance’. Insurance can offer a means of coping with the consequences of shocks, allowing smoothing of nutrition or avoiding costly asset depletion. It also allows the poor to take advantage of opportunities that would help them to escape poverty but that are too risky without additional protection (Dercon and Kirchberger 2008). According to Churchill (2006),
viewed from a client perspective, microinsurance as a product to assist in
development-related efforts seems to be helpful as it is valuable, simple and
affordable. The main suppliers of microinsurance are commercial insurers. Most
international insurers and reinsurers are involved in microinsurance initiatives or offer
products directly. At the same time, international organisations, donors, NGOs and
governments are important facilitators. The success of microcredit worldwide has
shown that people with low incomes are a proven market for financial services and
are effective consumers if given appropriate products, processes and knowledge.
Within this financial frontier, microinsurance has also emerged as a major opportunity
for influencing, in particular, the death risk/health risk confronted by households
(Zafar 2002). According to Lloyd’s (2009), in the insurance field, microinsurance can
provide the specialised insurance products demanded by under-served low-income
markets.

If risk is uninsured, it leaves poor households vulnerable and exposed to serious or
even catastrophic losses from sudden negative shocks. Moreover, it forces them to
undertake costly strategies to manage their incomes and assets in the face of risk,
lowering mean incomes earned. Welfare costs due to shocks, and foregoing profitable
opportunities, have been found to be substantial, contributing to persistent poverty
(see Morduch 1990; Rosenzweig andBinswanger 1993; Dercon 1996; Dercon and
Kirchberger 2008). Microinsurance has the potential to reduce these welfare costs. By
offering a payout when an insured loss occurs, it avoids other costly ways of coping
with the shock, leaving future income earning opportunities intact. Furthermore, the
security linked to being insured can be expected to allow the avoidance of costly risk-
management strategies with positive impacts on poverty reduction (Dercon and
Kirchberger 2008). The impact that microinsurance products generate can be
measured across two fundamental dimensions: first, the level of protection the
insurance provides when a shock occurs (ex-post); and second, how microinsurance
can impact on households’ behaviour before shocks actually occur (ex-ante) (ibid.).

Dercon and Krishnan (2003) present evidence that suggests a crowding-out effect of
informal risk-sharing arrangements by food aid. While the evidence base is limited,
 microinsurance can also have important externalities at the community level. For
example, health insurance can produce positive information externalities through
improved preventive behaviour so that individuals who are not insured also benefit from it (Dercon and Kirchberger 2008). On the other hand, Morduch (2006) indicates a possible negative price effect of insurance during times of shock when insured individuals drive up the price of goods, for example food.

The potential market for insurance in developing economies is estimated to be between 1.5 and 3 billion policies. There is significant demand for a range of insurance products from health and life, agricultural and property insurance, to catastrophe cover. Besides profits, there are several other benefits for commercial insurers providing microinsurance: a larger and diversified risk pool, benefits to reputation, and market intelligence and innovation that can be applied to other business activities. In the longer term, the combination of first-mover advantages and sustained growth in developing markets can lead to strong future business prospects (Lloyd’s 2009).

2.11 Measuring the Impact of Microfinance on Borrowers

Preceding sections have explored the literature and discussed debates regarding the need for impact assessment. It was also observed how microfinance aids poverty-reduction programmes and how financial intermediation assists in asset-building and empowering women. Finally, apart from ‘credit’ alone, microfinance entails certain associated products. Two of the most prominent ones, microsavings and microinsurance, were discussed at length.

In order to deal with the second research question of this study, the above discussions have set the stage for the core theme: empirical research into impact assessments in an international context. The literature on impact assessments can be broadly classified into three major themes: economic benefits, welfare and well-being at the household level, and wider aspects of social and political influence.

Findings from a broad range of studies are discussed under various headings, such as the positive impacts that microfinance has had on borrowers’ lives in terms of household income and expenditure, assets, savings, health, literacy, etc.; and since the model has never been without critics, a section is devoted to exploring what critics
have expressed and what counter-arguments are available. Similarly, there is
discussion about those researchers who have maintained a ‘neutral’ stance on the
impact of microfinance. Since a majority of borrowers are female, studies carried out
to explore the impact on women and their empowerment through microfinance are
also discussed.

Microfinance institutions have expanded rapidly in recent years: according to the
Microcredit Summit Campaign, microfinance institutions had 154,825,825 clients,
more than 100 million (two-thirds) of them women, as of December 2007 (Banerjee,
Duflo et al. 2009). Microcredit seeks to promote business growth and improve well-
being by expanding access to credit (Karlan and Zinman 2009), and intends to support
mainly informal activities that often have a low return and low market demand.
According to Snodgrass and Sebstad (2002), microfinance is an attractive
development strategy for a wide spectrum of actors, combining values of market-
driven service provision, entrepreneurship, self-help, and aid to the poor. The
potential for reaching and assisting large numbers of households on a sustainable
basis made microfinance a popular development investment in the 1990s. Today,
thousands of microfinance programmes have been established with the benefit of
development funding.

Given the extensive popularity and application of microfinance as a key poverty-
reduction mechanism, as discussed above, it becomes necessary to gauge its impact
on borrowers. According to Mayoux (2001), impact assessment in microfinance has
received more attention than in any other area of enterprise development. It is now
generally accepted that impact assessment is a critical element in further improving
microfinance services and promoting innovation. Dunford (2006), however, argues
that the talk about impact is too often vague, ignoring ‘what kind of impact?’, ‘for
whom?’, and ‘from whose perspective?’ Given the diversity of people represented in
Figure 2-2, we must also be clear which category we are talking about and how they
can be classified into the various levels of poverty.

There is a substantial amount of diversity of methods, tools and techniques in the type,
level, target, range, scale and scope of the impact of microfinance. According to
Cohen (1999), impact assessment in the area of microfinance is a ‘work in progress’
and anyone wishing to undertake an impact assessment is presented with a range of options – the *purpose* and *resources* guide the choice.

Literature on the impact of microfinance identifies its three major contributions:

*(a) Economic benefits* – The first contribution that microfinance makes to borrowers’ livelihoods relates to aspects such as the increase in income of the participants, accumulation of assets, increase in savings and microinsurance, etc. (Khandker and Chowdhury 1995; Alamgir 1998; Khandker 1998).

*(b) Welfare and well-being at the household level* – The second contribution includes aspects such as empowerment, adult and children’s literacy, health and access to housing facilities, water and sanitation (see Baden and Milward 1995; Hashemi, Schuler et al. 1996; Norman 1997; Kabeer 1998; Dyar, Harduar et al. 2006; Hashemi and Rosenberg 2006; Chowdhury 2009).

*(c) Wider aspects of social and political influence* – This type of impact, though considerably less explored, pertains to aspects with a social and political orientation. These may include the motivational and attitudinal changes among the programme participants towards the ability and willingness to participate in decision making, becoming part of communal and social networks, participation in collective actions to take control of decisions that affect their livelihoods, and having a sense of belonging and security (Cagatay 1998; Cheston and Reed 1999; Schreiner 2002; Hermes, Lensink et al. 2003; Simanowitz 2003; Copestake 2004).

These have been summarised in Table 2-3 below:
Apart from the various aspects of life that microfinance touches, Dunford (2006) cautions that we must also be careful to specify the product in question as well as from which perspective the impact is being explored, and broadly classifies such perspectives in two major categories: impact assessed from the perspective of the clients and of society. **The client’s perspective** ‘involves a subjective assessment of net gain (value of the product to the individual client or household minus the sum of ‘price costs’—direct cash payments for interest and fees, and ‘transaction costs’—both non-cash opportunity costs, such as time taken to apply for a loan, and indirect cash expenses, such as for transport, documents, food, taxes needed to use a financial contract) which translates into strong or weak demand for the MFI product in question. **The society’s perspective**, on the other hand, seeks an objective assessment of cause and effect – the particular product and/or delivery system causing the particular impacts among the specified type of people – with an underlying question: Is this intervention worth subsidising, whether through grants or through loans/investments that yield below-market rates of return or no return at all? Objective assessment of cause and effect is very difficult in practice. It must cleanly distinguish change due to participation in microfinance from what would have happened without microfinance’ (ibid.:6).

<table>
<thead>
<tr>
<th>Economic benefits</th>
<th>Welfare and well-being at the household level</th>
<th>Wider aspects of social and political influence</th>
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<tbody>
<tr>
<td>– Increase in household income</td>
<td>– Empowerment (particularly women)</td>
<td>– Motivational and attitudinal changes</td>
</tr>
<tr>
<td>– Accumulation of assets</td>
<td>– Adult and children’s literacy</td>
<td>– Involvement in decision making</td>
</tr>
<tr>
<td>– Increase in savings</td>
<td>– Household health and access to facilities</td>
<td>– Becoming part of communal and social networks</td>
</tr>
<tr>
<td>– Participation in microinsurance schemes</td>
<td>– Access to improved housing conditions</td>
<td>– Participation in collective actions</td>
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<tr>
<td></td>
<td>– Better water and sanitation</td>
<td>– Sense of belongingness</td>
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<td></td>
<td></td>
<td>– Liveability and security</td>
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</table>
Literature on studies that pertain to the impact of microfinance can be broadly classified across five major areas. Amongst these, a substantial portion can be found on the positive aspects that microfinance brings to individual borrowers, their livelihoods and entire households, and to a certain extent, to the wider community in the form of ‘spillover’ effects. However, microfinance has not always had the desired affect and there have been cases of borrowers going deeper into debt and ending up in even greater poverty due to failed businesses, loan misuse and a host of other factors. Critics of microfinance, though small in number, have been quite vocal (see for example: Goetz and Gupta 1996; Neff 1996; Mallick 2002; George 2006; Chanana 2007). In between these two extremes, lies research that argues that microfinance is neither ‘harmful’ for borrowers nor is it a ‘magic bullet’ that lifts borrowers out of poverty.

Apart from the various types of impact that microfinance generates, a significant amount of the literature relates to discussions and extensive empirical work on how it actually enables borrowers to build a physical and capital asset base. Lastly, a major objective of microfinance has been the uplift and empowerment of deprived, weak and oppressed women, and a number of studies have been dedicated primarily to issues that surround gender empowerment (see Hashemi, Schuler et al. 1996; Chen and Snodgrass 2001; Mayoux 2002, 2001; Roy 2004; Khandker 2005; De Aghion and Morduch 2005; Swain and Wallentin 2007; Haq 2008).

Though gender-related issues are not the main focus of this study, owing to their significant representation in the total outreach (in 2006, 85 percent of the 93 million poorest microfinance clients were women1), it is necessary to examine their role in achieving and supporting arguments outlined in other impact factors as outlined above. Moreover, the impact of the woman’s role on a household’s overall well-being becomes even more important as females begin to contribute towards household income. According to Kakwani and Son (2006), it has been found that as women’s contributions to household monetary income increase, they are more able to influence how household resources are allocated. The reason is that their greater earning potential gives them greater bargaining power towards household-related decisions.

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1 According to the Microcredit Summit Campaign Report (2007).
2 This study makes use of the term microfinance interchangeably with microcredit, given that in Pakistan, associated services and products (microinsurance, microsavings, microleasing, etc.) are
Basher (2009) concludes from his findings in a study of Grameen Bank that programme participation transforms its participants from passive recipients of credit to responsive and active agents in economic and non-economic aspects of life.

The sections that follow explore and critically evaluate the major debates on the subject, and prominent empirical studies that have taken place across the developing world.

2.11.1 Evidence of positive impact of microfinance

There has been a substantial amount of research that depicts the positive impact of microfinance on borrowers’ livelihoods. These studies highlight areas such as increase in household income and expenditure, accumulation and ownership of household assets, increase in savings, engagement in higher-production activities at the microenterprise level, increase in enrolment ratios of school-age children, enhanced resistance to shocks and protections against risks, consumption smoothing, spill-over effects and benefits to the local rural economy, increase in income diversification, and consumption patterns of nutritious foods.

According to Khalily (2004), the quantitative impact assessment of microfinance, like the programmes themselves, originated in Bangladesh. One of the first comprehensive microfinance impact assessments was ‘Credit for the Alleviation of Rural Poverty: The Grameen Bank in Bangladesh,’ conducted in 1988 by Hossain (Goldberg 2005). It concluded that the average household income of Grameen members was 43 percent higher than target non-participants in comparable villages. The increase in income was also noted to be highest for the landless, followed by marginal landowners. A shortcoming of this research, as pointed out by the author, is that the impact findings might have been overstated as Grameen members were found to be younger and better educated than non-members, who were also more likely to be landless.

Perhaps one of the most widely-cited evaluations of microfinance programmes is the 1998 study by Pitt and Khandker. It makes use of rigorous statistical and econometric techniques to analyse and interpret panel data in order to examine the effects of microfinance on poverty reduction at both the participant and aggregate levels using
data from Bangladesh (Dunford 2006). The study utilises borrowers’ data from three microfinance programmes, namely BRAC, Grameen Bank, and the Bangladesh Rural Development Board’s (BRDB) Rural Development 12 (RD-12) programme. According to Goldberg (2005:6), the findings were influential because they were the ‘first serious attempt to use statistical methods to generate a truly accurate assessment of the impact of microfinance among these three Bangladeshi programs’. The results, according to Khandker, were resounding, as the findings clearly showed that ‘microfinance continues to reduce poverty among poor borrowers and within the local economy, albeit at a lower rate. It raises per capita household consumption for both participants and nonparticipants.’ Goldberg (2005) reports that the centrepiece of Khandker’s findings was that every additional taka lent to a woman adds an additional 0.18 taka to annual household expenditure – an 18 percent return to income from borrowing. Notably, the returns to male borrowing were considerably lower, only 11 percent. In addition, the paper reported a variety of external or ‘wider’ impacts, including:

- A one percent increase in credit to Grameen women increased the probability of girls’ school enrolment by 1.86 percentage points.
- A 10 percent increase in credit provided to women increased the arm circumference of girls by 6 percent.
- A one percent increase in credit to women increased the height-for-age of boys by 1.42 percent and girls by 1.16 percent.

The findings were criticised and challenged by Morduch (1998), who insisted that the selectivity correction of the model was flawed. The assumption was that all the three MFIs in the study targeted those poor households who had less than half an acre of land, whereas in reality, only 20-30 percent of the clients were found to be above the cut-off point. Morduch insisted that this would have led to a bias in favour of those who owned more than the specified area of land, especially when the same cut-off was applied to the comparison group. The other major criticism pertained to the econometric model employed in the Pitt and Khandker study. It was argued that the method used to correct the programme placement bias actually increased the bias. Morduch applied a simpler methodology to correct this bias and found little evidence of impact. His results did, however, confirm Pitt and Khandker’s initial findings that
microfinance leads to consumption smoothing, whereby it was reported that household consumption increased most during the lean seasons, when the poor often go hungry. Morduch’s conclusions supported this observation, showing that access to credit reduces the variability of consumption across seasons as it was down 47 percent for eligible Grameen households, 54 percent for eligible BRAC households, and 51 percent for eligible BRDB households (Goldberg 2005).

The critique levelled against Pitt and Khandker by Morduch was subsequently challenged on the basis that MFIs target on the basis of cultivatable land. A revised set of findings actually found slightly larger effects than they had reported in the original paper. Khandker (2005) was able to draw from a 1998/99 resurvey of the World Bank-BIDS data to improve the earlier model, and with the help of panel data, was able to employ a simpler model to gauge the impact of the three MFIs. This was a much less controversial estimate because it relied on fewer assumptions. Khandker’s 2005 paper may thus be the most reliable impact evaluation of a microfinance programme to date (Goldberg 2005). Khandker’s revised calculations showed that each additional 100 taka of credit to women increased total annual household expenditure by more than 20 taka: 11.3 taka in food expenditure and 9.2 taka in non-food expenditure. This turned out to be a greater effect than that measured in the earlier paper. With the benefit of panel data, Khandker was able to compare poverty rates in 1991/92 and 1998/99 and found that moderate poverty in all villages declined by 17 percentage points: 18 points in programme areas and 13 percentage points in non-programme areas. Among programme participants who had been members since 1991/92, poverty rates declined by more than 20 percentage points, which amounts to about 3 percentage points per year. Khandker estimated that more than half of this reduction was directly attributable to microfinance, and found the impact to be greater for extreme poverty than moderate poverty, which microfinance was found to reduce by 2.2 percentage points per year and 1.6 percentage points per year respectively (Pitt and Khandker 1998; Goldberg 2005; Khandker 2005). The study further found that microfinance has also a substantial impact on the non-borrowers, in the form of spillover effects, as it helps not only poor participants but also the local economy; Khandker (2005:23) states that ‘not only does the increase in consumption resulting from borrowing raise the probability that programme participants will escape poverty, but microfinance intervention also benefits non-participants through growth in local...
income. In particular, microfinance reduces the average village poverty level by one percentage point each year in programme areas, some 40 percent of the observed village-level poverty reduction. Microfinance has a slightly higher impact on extreme poverty than on moderate poverty for everybody’.

Pitt and Khandker’s studies from 1998 and later in 2005 concentrated on household income, expenditure and savings. Since these variables are generally considered to be a benchmark in microfinance quantitative impact assessments, a majority of studies focus on related areas. Banerjee, Duflo et al. (2009), for instance, carried out a randomised evaluation of the impact of introducing microcredit in a new market, an experiment in which half of 104 slums in Hyderabad in India were randomly selected for the opening of an MFI branch, while the remainder were not. Findings showed that intervention increased total MFI borrowing and 15 to 18 months after the programme began, there was no effect of access to microcredit on average monthly expenditure per capita, but durable expenditure did increase. The effects are heterogeneous: households with an existing business at the time of the programme invested in durable goods, and their profits increased; households with a high propensity to become business owners saw a decrease in non-durable consumption, consistent with the need to pay a fixed cost to enter entrepreneurship; and households with a low propensity to become business owners saw non-durable spending increase. These findings suggest that microcredit does have important effects on business outcomes and the composition of household expenditure (ibid.). Similarly, a study by Chen and Snodgrass (2001) compared the impact of clients who borrowed for self-employment to those who saved with SEWA Bank without borrowing, and compared both groups to non-clients. Findings showed that borrowers’ income was over 25 percent greater than that of savers, and 56 percent higher than non-participants’ income. Savers, too, enjoyed household incomes 24 percent greater than those of non-participants. These findings indicate that microfinance – credit or savings – can be effective (Goldberg 2005).

Mahjabeen (2008) conducted a survey that examines the welfare and distributional implications of MFIs in Bangladesh in a general equilibrium framework based on a Financial Social Accounting Matrix (SAM). This matrix is based on the dataset of the real-financial social accounting matrix of 1999–2000. The major findings were that
MFIs operating in Bangladesh raise income and consumption levels of households, reduce income inequality and enhance welfare. This implies that microfinance is an effective development strategy and has important policy implications for poverty reduction, income distribution and achievement of millennium development goals (MDGs) \(\text{(ibid.)}\). In a similar study in Bangladesh, also on Grameen Bank, Basher (2009) reported that microcredit enables borrowers to move progressively into more productive activities as they become increasingly experienced over time. The rural poor, according to Basher, are usually involved in low-risk, low-productive activities. Microfinance tends to increase the income of the participants either by scaling up these activities or by moving the participants into high-productive activities. Expansion of the low-productive activities can be identified as the \textit{protectional} role of microfinance and the shift to higher-productive activities can be identified as what Derez and Sen (1991) refer to as the \textit{promotional} role of microfinance. Basher’s findings conclude that there exists a positive monotonic relationship between the number of loans and the rate of return on investment of microfinance. Moreover, there is empirical evidence of movement into more productive activities for all borrowers, while the older members progress into even more productive activities as compared to the newer members.

An extensive study carried out by Barnes (2001) in Zimbabwe assessed the impact of Zambuko Trust, a microfinance provider, on clients’ households and their enterprises. The survey was conducted in 1997 and then repeated in 1999 with the same respondents. To assist in identifying whether the changes between the two survey periods were a result of participation in Zambuko’s programme, the survey included a random sample of non-client micro-entrepreneurs who met Zambuko’s basic eligibility requirements. The findings concluded that participation in a microfinance programme appears to have positive impacts on clients, as programme participation appears to have an impact on the ability of client households to make lump sum expenditures. Moreover, analyses showed that participation in Zambuko’s programme enabled client households to invest in household durable assets, and the impact was also apparent in the education of the household’s boys aged 6 to 16. Apart from this, participation appears to have had an impact on the diversification of income sources among departing clients. The findings imply that Zambuko had a positive influence on the ability of these households to smooth their income flows and manage risks. It
also suggests that even though clients may leave the programme they may have benefited from participation.

At the enterprise level, clients tend to have spent part, if not all, of their loan funds on their enterprise. More than half of the clients in 1997 and half of the continuing clients in 1999 stated that they would not have made those expenditures if they had not received the loan from Zambuko. These findings imply that the loans had a positive impact on at least half of the borrowers (Barnes 2001).

Extensive impact assessment exercises were conducted by Snodgrass and Sebstad (2002) and Dunn (2002) in which beneficiaries of three microfinance institutions were studied: SEWA Bank in India; Accion Communitaria del Peru/Mibanco in Peru; and Zambuko Trust in Zimbabwe. The individual studies provide a unique opportunity for cross-country comparison by sharing a common set of hypotheses at the household, enterprise and individual levels. The Indian study found ‘strong household-level impacts since results showed that household income (total and per capita), expenditure on housing improvements, expenditure on consumer durables, and school enrolment for boys were all positively affected. In Zimbabwe, there were positive impacts on income diversification for departing clients, but not for continuing clients. The study also found positive impact on the ownership of some durable assets for continuing clients. The enrolment ratio of boys improved and there were positive impacts on the consumption of meat, fish, chicken, and milk for extremely poor households. In Peru, there were fewer household-level impacts than in India and Zimbabwe. Among the positive impacts were household income (total and per capita) and intergenerational launching. Microcredit also helped client households diversify their income sources. Clients on average experienced more shocks than non-clients and those who did experience shocks were more likely than non-clients to sell assets to cope with them. However, this is a very small group. All three studies found that participation in microfinance programs helps extremely poor households meet basic needs and protect against risks. In Zimbabwe, there were significant positive impacts on the ability of clients to send boys to school and to purchase nutritious foods. While the Peru study found that impacts on poor clients are generally consistent with those for the full sample, microcredit helps poor client households to maintain their desired levels of greater diversification. However, poor clients were more likely to turn to
(negative) asset-reducing strategies than poor non-clients when faced with a financial shock’ (Snodgrass and Sebstad 2002:vii).

2.11.2 Studies that have criticised microfinance

Despite much empirical evidence of the positive impact of microfinance as discussed above, a small but vocal group of academics and practitioners have voiced concern over the resulting impact on individuals, their households and even the wider community. According to Banerjee, Duflo et al. (2009), such critics of microfinance fear that it is displacing more effective anti-poverty measures and contributing to over-borrowing and therefore creating even greater long-term poverty. Microfinance sceptic Milford Bateman, for instance, argues that ‘in nearly 25 years of academic and consulting work in local economic development, my experience is that microfinance programmes most often spell the death of the local economy. Put simply, to the extent that local savings are intermediated through microfinance institutions, the more that country or region or locality will be left behind in a state of poverty and under-development. This is an iron law of microfinance. Focusing on isolated cases of microenterprise success simply does not add up to economic development. The reason microfinance is supported is overwhelmingly political/ideological – the economic rationale is simply not there’ (Bateman 2008:1).

Bello (2006), on the other hand, commends Yunus’s work and his ‘winning idea that has transformed the lives of many millions of poor women’, but at the same time blames the World Bank and the United Nations for elevating microcredit to the status of a panacea, and thus presenting it ‘as a relatively painless approach to development’. Bello admits that through its dynamics of collective responsibility for repayment by a group of women borrowers, microcredit has indeed allowed many poor women to roll back pervasive poverty. However, the argument presented is that ‘it is mainly the moderately poor rather than the very poor who benefit, and not very many can claim they have permanently left the instability of poverty’. In sharp contrast to Bello’s argument, recent studies have shown that the ultra poor actually benefit more than the moderately poor.
BRAC, one of the largest MFIs in Bangladesh, has been at the forefront in targeting the ultra poor and launched an initiative called ‘Targeting the Ultra Poor’ (TUP) designed to meet the needs of the extremely poor in rural areas across the country. This programme was initiated after research showed that the ultra poor did not avail themselves of the mainstream microfinance programme, mainly due to self-exclusion. It tends to target the ultra poor who are either bypassed or fail to benefit and subsequently drop out from existing development programmes (Matin and Walker 2004). Reaching the core-poor is fundamental to programme design and success. In order to assess the effectiveness of targeting the ultra poor in the programme, Sulaiman and Matin (2006) observed that about three-quarters of the beneficiaries of this programme belonged to the poorest quartile.

One of the basic aims of the programme was ‘to build a more sustainable livelihood for the extremely poor, by providing a solid economic, social, and humanitarian foundation, which would enable this group to overcome extreme poverty’ (Hossain and Matin 2007). There has been substantial research to gauge the programme’s impact on the ultra poor. Rabbani et al. (2006), for instance, carried out an extensive survey to measure the success of the TUP programme and reported that the findings substantiated the fact that it has contributed significantly to improving the lives of the ultra poor and helping them help themselves. In another study that compares selected ultra-poor targeted households to non-participating ones, Haseen (2006) uses cross-sectional comparative analysis over a 24-hour recall period to investigate food and nutrient intake among both groups. Results showed that the overall food consumption of the programme households was significantly higher than that of the non-programme households. Ahmed and Rana (2005) conducted a mid-term survey of the CFPR/TUP programme participants which involved re-interviewing the same baseline survey households to study the effects of intervention over time. ‘Findings revealed substantial improvement in self-rated food-security status and perceived self-health among programme participants, which was matched by improved household capacity for health-expenditure and food consumption’ (ibid.:1). In a detailed study, Hulme and Karen (2007) concurred that there is substantial evidence not only of the programme’s outreach to significant numbers of the poorest people, but also of improving their economic and social conditions. In terms of the impact that the programme had produced over a period of three years, Hulme and Karen (2007:7)
stated that ‘TUP participants had a greater rate of asset accumulation than non-participants in all asset domains – financial assets (savings and credit), physical assets (a range of livestock, household and productive assets), natural assets (access to cultivable and homestead land), social assets (social and legal awareness), and human capital (household demographic structure, education, health and sanitation)’.

Goetz and Gupta (1996) have criticised the model in an extensive study that explores the control of women over money. The findings report that while women were obtaining loans from Grameen Bank and other MFIs, a significant proportion of those loans were actually being utilised by male relatives, while women bore the liability for repayment. In only 37 percent of the cases did women retain full or significant control over the businesses that were in their names. Worse, 22 percent of those surveyed did not know how their husbands, sons, fathers or brothers had used the loan and had not even been involved in ‘their’ enterprises. According to Chanana (2007), a significant proportion of women’s loans are directly invested by their male relatives, while women borrowers bear the liability for repayment.

While some of the criticism may hold weight, a number of these claims are unfounded. Neff (1996), for instance, argues that the Self-Employed Women’s Association (SEWA) in India offers credit as just one of a range of services, along with political organising, and training in business skills, leadership skills, mediation, lobbying and project assistance, whereas BRAC provides education for the daughters of borrowers as well as health services. But the Grameen model of banking for the poor is strictly quantifiable: ‘repayment rates,’ ‘cost effectiveness’ and ‘viability.’

What Neff fails to recognise is that both SEWA and BRAC provide microfinance services as well; in fact BRAC has a larger microfinance portfolio (in terms of amount disbursed and total borrowers) than Grameen Bank. It seems that Grameen Bank has been singled out for criticism, as opposed to the microfinance model in general. Moreover, the argument raised is that BRAC provides health services in addition to credit. Grameen Bank actually provides health services on a much larger scale than what BRAC offers. It runs a vast network of integrated hospitals, medical schools and clinics. Managed by Grameen Healthcare Services (GHS), 48 Grameen Clinics have been established across Bangladesh that include facilities such as laboratories,
pharmacies, and satellite camps providing community health outreach and emergency services. The clinics typically serve a population of around 50,000 persons living within 8-10 kilometres of the clinic. The bank also runs a micro-health insurance scheme to encourage positive health-seeking practices. The latest initiative is the Grameen Eye Hospital, targeted to perform 50,000 eye examinations and 10,000 cataract operations per year (Grameen Bank, 2009).

George (2006) criticises microfinance on the grounds that with little training and low capital, very few micro-businesses succeed. He refers to a survey carried out across some 17 villages and over 50 microcredit programmes in South India and argues that according to the findings, fewer than 5 percent of those receiving micro-loans start any business of their own, and these are activities that are unsustainable in the long run; consequently, less than 2 percent continue beyond the first three years, and very few succeed in any such ‘business’ with small amounts of money and little or no support, training or skills. George concludes with his argument that microcredit has become a ‘trendy cure-all’, and that the present form of microcredit, as practised in India, results in little or no sustainable development benefit for the poor. Despite such scathing criticism of the model, the arguments fail to offer a workable, practical alternative to end world poverty, suggesting only public-private partnerships as a possible solution, ‘with NGOs as project facilitators, whereby private institutions can deliver services at reduced prices, but at a profit, within a competitive and independently monitored system where the costs are subsidized or even fully paid for by the government’ (ibid.:1).

What George offers as a possible solution and as an alternative has been heavily critiqued by several others as a model that has failed the people. Kantz (2006:2), for example, states that ‘while the role of non-state actors is well analysed in the literature the role of Southern states in particular with regards to their interest representation remains underdeveloped and ambiguous’. Caplan (2001) argues that ‘multi-sector partnerships that bring together public, private and civil society stakeholders are, by nature, awkward arrangements that require significant compromise and negotiation’. In Bangladesh, in accordance with the privatisation agenda, the contracting-out of services to NGOs has been pursued by the government and donors in areas such as rural banking, primary education, adult literacy, primary health, rural works, crop
storage, and training extension (Farrington and Lewis 1993; Wood 1997; Haque 2004). Rahman (2000) states that according to one study, each year only one percent of the total population has a chance to overcome poverty though the microcredit programmes managed by NGOs in cooperation with the government. Haque (2004) concluded after carrying out an in-depth survey of partnerships between the state and NGOs that there are reasons to believe that the Government–NGO partnership may have negative impacts on rural development issues like poverty eradication.

Bateman and Chang (2009:1) argue that ‘while the microfinance model may well generate some positive short run outcomes for a lucky few of the ‘entrepreneurial poor’, the longer run aggregate development outcome very much remains moot. Microfinance may ultimately constitute a new and very powerful institutional barrier to sustainable local economic and social development, and thus also to sustainable poverty reduction’.

From the criticism levelled against microfinance, and the counter-arguments raised by others, it seems that the benefits, loss, danger, drawbacks, etc., of the model are highly subjective; unlike scientific arguments, clear and universally acceptable conclusions that satisfy all stakeholders can never be drawn. Microfinance involves human lives and everyday livelihoods; it involves a complex mechanism of behavioural factors that interact with other external forces in society that interplay to produce different results for different people that are interpreted by researchers in various ways. Hence it can never be stated conclusively that microfinance helps people or drives them deeper into poverty. As discussed in the section that follows, many researchers have taken a balanced, pragmatic approach to the issue.

2.11.3 Studies that have maintained a neutral stance

Despite scathing criticism of microfinance, there have also been immense praise and numerous empirical studies to prove how far this model can go in combating poverty. Some researchers have, however, maintained a cautious approach, and while ‘sitting on the fence’, argue that the direction of impact can go both ways. Banerjee, Duflo et al. (2009:1) for instance state that ‘certain issues make the evaluation of the impact of
microcredit a particularly difficult problem. Thus, there is so far no consensus among academics on the impact of microcredit’.

Khandker (2005) argues that since microfinance supports mainly informal activities that often have a low return and low market demand, it may therefore be hypothesised that the aggregate poverty impact of microfinance is modest, or even non-existent. Banerjee, Duflo et al. (2009:21) argue that ‘while microcredit succeeds in affecting household expenditure and creating and expanding businesses, it appears to have no discernible effect on education, health, or women’s empowerment. Of course, after a longer time, when the investment impacts (may) have translated into higher total expenditure for more households, it is possible that impacts on education, health, or women’s empowerment would emerge. However, at least in the short-term (within 15-18 months), microcredit does not appear to be a recipe for changing education, health, or women’s decision-making. Microcredit therefore may not be the miracle that is sometimes claimed on its behalf, but it does allow households to borrow, invest, and create and expand businesses’. Karlan and Zinman (2009:2) use a field experiment and follow-up survey to measure impacts of a credit expansion for micro-entrepreneurs in Manila. The effects are ‘diffuse, heterogeneous, and surprising’. The researchers conclude that ‘microcredit works broadly through risk management and investment at the household level, rather than directly through the targeted businesses’.

2.11.4 Empirical evidence for the impact of microfinance on women

Historically, microfinance was never meant to specifically target women, but as the model matured, it was recognised that it empowered the ‘weaker sex’, for a number of reasons. CGAP (2009) argues that there is strong evidence to show that access to financial services and the resultant transfer of financial resources to poor women, over time, leads to women becoming more confident and assertive. Access to finance enables poor women to become economic agents of change by increasing their income and productivity, access to markets and information, and decision-making power. Daley-Harris (2006) attributes the role of microfinance in women’s empowerment to the positive influence it brings about to their decision-making power and enhancing their overall socio-economic status. Given the scale of outreach as noted above, microfinance has the potential to make a significant contribution to
gender equality and promote sustainable livelihoods and better working conditions for women \textit{(ibid.)}. 

Sharma (2001) explains the assertions behind such targeting and the influence that it produces: (a) microfinance is an effective tool in improving women’s status, and (b) overall household welfare is likely to be higher when microfinance is provided to women rather than to men. Women’s status, household welfare, and microfinance interact in a number of ways. First, a woman’s status in a household is linked to how well she can enforce command over available resources, and an increased ability to tap financial resources independently enhances her control, which leads to her influence in household decision-making processes. Second, newly financed microenterprises serve as vital social platforms for women to interact with markets and other social institutions outside the household, thus enabling them to gain useful knowledge and access to social capital. Finally, women are thought to make better borrowers than men as empirical evidence has shown that timely repayment of loans is more likely to take place when women borrow \textit{(ibid.)}. 

According to Sharma (2001:1), ‘one important achievement of the microfinance movement has been its relative success in deliberately reaching out to poor women living in diverse socio-economic environments’. The gender outreach has been phenomenal: the Association for Social Advancement (ASA), one of the most prominent microfinance institutions in Bangladesh, has provided US$350 million exclusively to women borrowers, who constitute over 90 percent of the total borrowers (ASA 2009). With an outstanding loan portfolio of US$4.3 billion, Of the 20 million clients served by Women’s World Banking across 28 countries around the world, over 74 percent are women (WWW 2009); and of the 100,000 village bank members worldwide that have received loans from the Foundation for International Community Assistance (FINCA), 95 percent are women.

Like cognitive skills and quality of life, female empowerment is a concept that cannot be measured directly (Swain and Wallentin 2007), but according to CGAP (2009), several changes have been reported across the developing world that bear testimony to the fact that microfinance acts as a strong stimulus to empower women, as set out in the examples below:
- In Indonesia, female clients of BRI were more likely than non-clients to make joint decisions with their husbands concerning allocation of household money, children’s education, use of contraceptives, family size, and participation in community events.
- In Bangladesh, a survey of 1,300 clients and non-clients showed that credit clients were significantly more empowered than non-clients in terms of their physical mobility, ownership and control of productive assets (including land), involvement in decision making, and awareness of legal and political issues.
- In Nepal, 68 percent of Women’s Empowerment Programme members said that they made decisions on buying and selling property, sending daughters to school, arranging children’s marriages, and family planning.
- In India, SEWA clients have lobbied for higher wages, the rights of women in the informal sector, and resolution of neighbourhood issues.

CGAP, however cautions that it would be wrong to assume access to financial services automatically has a positive impact on women’s welfare. In some instances, women’s access to microfinance may result in increased violence within the household, leaving them with a greater loss of power. Women borrowing for a microenterprise may end up being forced to work longer hours and lose control over financial resources and decision making to male members of the family. Nor should microfinance be seen as a substitute for dealing with key structural issues pertinent to women and poverty, such as lack of skills and education, or legislation that discriminates against women (e.g. property rights, agrarian or land reform, trade agreements) (CGAP 2009).

Mayoux (2002:18) defines empowerment as ‘a multi-dimensional and interlinked process of change in power relations which operate in different spheres of life (e.g. economic, social, and political) and at different levels (e.g. individual, household, community, market, institutional)’. This is represented in Box 2-1 below:
According to Roy (2004), microfinance, with its combination of savings, loans, investment opportunities, insurance options and other financial services, combined with group solidarity, is a powerful instrument of social change, especially for women.

A majority of microfinance programmes target women with the explicit goal of empowering them. However, their underlying premises are different. Some argue that women are amongst the poorest and the most vulnerable of the underprivileged. Others believe that investing in women’s capabilities empowers them to make choices, which is valuable in itself, and also contributes to greater economic growth and development. Another motivation is the evidence from literature that shows that an increase in woman’s resources results in greater well-being of the family, especially children. Finally, an increasing number of microfinance institutions prefer women members as they believe that they are better and more reliable borrowers, thereby contributing to their financial viability (De Aghion and Morduch 2005; Swain and Wallentin 2007).
Microfinance has caused a shift in values and expectations that affects women’s roles in society. In Bangladesh, for example, a study of experience in a project aided by the International Fund for Agricultural Development (IFAD) has found that women involved in microfinance not only change the way they manage household income, they also change their own roles and the roles of others in their families and communities (Roy 2004).

Mayoux (2001, 2002) reviews literature on empowerment-related issues and identifies the aspects listed below, which are generally considered to be indicators of women’s empowerment by those donors who advocate financial sustainability models.

- significant increase in incomes from women’s own activities;
- enable women to control (have a choice over use of) income from loans and activities generated by loans;
- enable women to negotiate improvements in their well-being within the household, and;
- give women access to support networks which enable them to protect their individual and collective interests at the local and macro-levels.

Chen and Snodgrass (2001) carried out an impact assessment that was intended to measure the effect of microfinancial services on low-income women in the Indian city of Ahmedabad. The core of the study comprised a sample survey of 900 working class women who resided across ten wards of the city, along with their households, microenterprises, and other informal sector economic activities. Surveys conducted in early 1998 and early 2000 provided complete and consistent data for a panel of 798 respondents, permitting both cross-section and longitudinal statistical tests of the impact of micro-financial services. Survey findings indicated some impact at the individual level. They suggest that women who borrow repeatedly over an extended period of time benefit most. The case studies also suggested that women who participate most extensively in a range of SEWA activities enjoy more extensive benefits. Analysis of the quantitative survey findings indicates that women who borrow from SEWA Bank participate actively in the decisions regarding whether to borrow, how to use the loan proceeds, and how to use the resulting increases in microenterprise revenues, if any. These detailed case studies leave little doubt that
SEWA Bank and its sister institutions have been able to improve the lives and work of countless women in Ahmedabad in ways that the survey did not capture or measure (*ibid.*).

Another detailed impact assessment study was a quasi-experimental, longitudinal survey conducted by Dunn and Arbuckle (2001) in Peru, which included both clients of ACP/Mibanco and a comparison group of non-clients with similar characteristics. A two-stage sampling approach was followed, with representative geographical areas selected in the first stage, and random sampling of clients and non-clients in the second stage. The 1997 baseline survey included 701 respondent households, with the 1999 survey resulting in a longitudinal sample of 529 households. The findings concluded that microcredit appeared to have positive impacts on household income. According to Dunn and Arbuckle (2001), given the same 1997 income level, treatment group households were estimated to have US$ 1,200 more in 1999 annual income and US$ 266 more in per capita income (both in real terms) than comparable control group households. If put in context, a US$ 266 increase in per capita income represents more than 20 percent of the average per capita income for the sample. Such impacts on income can probably be attributed to growth in enterprise revenue, which would indicate that microcredit-driven changes in enterprises also result in improvements in household welfare. Results also showed a substantial impact on income diversification of the borrowers. The authors report that ‗among poor households, those who received microcredit appear to have been better able to maintain their levels of income diversification than poor households without microcredit, who became less diversified over the study period. This is consistent with the idea that poor households manage risk by having several sources of income, so that some income will be earned, even when one income source fails. For the non-poor, however, the findings indicate that microcredit had the impact of reducing income diversification among new entrants: non-poor households who were new borrowers maintained their original levels of diversification while similar control group households became more diversified over the study period. These results should be interpreted within the context of the recession. The treatment group poor were better able to maintain their desired higher levels of diversification than the control group poor, while the non-poor in the new entrant group were better able to maintain their desired lower levels of diversification (i.e. to maintain greater specialization)‘.
Pitt and Khandker (1998) used the eligibility threshold for getting a loan from Grameen Bank as a source of identifying variation in a structural model of the impact of microcredit, and find large positive effects, especially for women (Banerjee, Duflo et al. 2009). In a detailed study of the impact of microfinance on women and their empowerment in society, Hashemi, Schuler et al. (1996) investigated the change in women’s empowerment with the help of an ethnographic study and quantitative surveys. The analysis uses sample data from 1,300 women to measure the effects on women of microcredit from Grameen Bank and Bangladesh Rural Advancement Committee (BRAC). They create an empowerment indicator built on the following eight criteria: mobility, economic security, ability to make small purchases, large purchases, involvement in major household decisions, relative freedom from domination by the family, political and legal awareness, and participation in public protests and political campaigns (Swain and Wallentin 2007). The programmes were found to have significant effects on all of the eight different identified dimensions of women’s empowerment. The authors used a combination of sample survey, ethnographic and case study data, to argue that the success of Grameen Bank, in particular in empowering women, is due both to its strong, central focus on credit, and its skilful use of rules and rituals to make the loan programme function. The research addresses issues of women’s control over credit and the relative magnitude of their economic contributions to their families’ support, and discusses differences in the approaches of the two programmes. The authors argue that credit programmes empower women by strengthening their economic roles, increasing their ability to contribute to their families’ support, and that they also empower women through other mechanisms (Hashemi, Schuler et al. 1996; Swain and Wallentin 2007).

Swain and Wallentin (2007) contribute to the literature on empowerment by arguing that empowerment takes place when women themselves challenge the existing norms and culture, to effectively improve their well-being. The empirical analysis is based on data collected in 2003 from five different states of India. Using quasi-experimental sampling design, 1,000 households were surveyed and their responses were recorded for the years 2000 and 2003. The robust results strongly indicate that Self Help Group (SHG) members are empowered by participating in this microfinance programme in the sense that they have a greater propensity to resist existing gender norms and culture that restrict their ability to develop and make choices (ibid.).
In another comprehensive study, Pitt, Khandker et al. (2006) used a set of binary indicators that proxy for woman’s autonomy, decision-making power, and participation in household and societal decision making. The findings show that credit programmes lead to women taking a greater role in household decision making, having greater access to financial and economic resources, greater social networks, more bargaining power vis-à-vis their husbands and having greater freedom of mobility (Swain and Wallentin 2007). In an extensive study that analyses panel data from Bangladesh, Khandker (2005:1) concludes that the results suggest ‘access to microfinance contributes to poverty reduction, especially for female participants, and to overall poverty reduction at the village level. Microfinance thus helps not only poor participants but also the local economy’.

2.11.5 Asset-building and the role of microfinance

In terms of building and accumulating household assets, analyses showed that ‘spending on housing improvements and household appliances declined sharply between 1997 and 1999 for all groups, and there was no evidence that microcredit had an impact on these variables. The spending reductions were probably related to the downturn in the economy. During difficult economic times, households may delay the acquisition of any non-essential items. Purchases of small and large appliances for personal use serve primarily to increase living standards. Housing expenditures, on the other hand, represent a multipurpose investment, and can provide improved quality of life, enhanced microenterprise income, auxiliary rental income, and even retirement income. While the case study data indicate that credit plays an important role in facilitating housing investments, the growing availability of home improvement loan products may imply little additionality from microenterprise credit’ (Dunn and Arbuckle 2001:xv).

2.12 Microfinance Impact Assessment and Outreach in Pakistan – Review of Literature

This chapter has so far devoted substantial attention to issues surrounding empirical studies conducted across the developing world, relating to how microfinance affects borrowers’ livelihoods and what aspects of their economic and social lives are
transformed by programme intervention. As one of the research questions, poverty targeting and programme outreach have also been discussed at length.

As the fieldwork for this study is based in Pakistan, the remainder of this chapter will be devoted to a review of empirical research in Pakistan alone. It will identify gaps in the literature which this study will endeavour to address.

2.12.1 Overview of impact assessment studies in Pakistan

The microfinance sector in Pakistan has been operational in various forms and sizes for some four decades (Haq 2008). Nevertheless, there seems to be lack of reliable studies that have attempted to measure impact at credible levels. Claims about the impact of microfinance are not well documented and are not supported by verifiable evidence (Hussein and Hussein 2003), one of the primary reasons for which is the very limited primary data or secondary analysis available (OPM 2006).

According to Hussein and Hussein (2003), one of the most broadly shared perceptions about microfinance is that it is certainly beneficial and therefore everyone needs and demands it. Due to such self-perceived assurance, there has been very little questioning about its benefits and, until recently, little interest has been taken in trying to assess the nature and scale of its precise impacts. The approach generally followed has been to expound the benefits of microfinance without citing any empirical evidence. The Pakistan Poverty Reduction Strategy Paper (GoP 2001:40) for instance states that, ‘access to credit is the surest way of empowering the poor and improving their income generating opportunities’ and argues further that ‘international experience has shown that microcredit can be an important instrument in improving the income generating capabilities of the poor’. On a similar note, the Asian Development Bank’s assessment of the microfinance sector in Pakistan was that the poverty reduction potential of microfinance is widely recognised at the policy level and among the development community (ADB 2000, Hussein and Hussein 2003).

As the sector developed, there were few impact assessments and the mere growth in microfinance was used to commend its virtues, by simply quoting figures of repayment and disbursements as indicators of programme success; it was assumed
that if loan repayments were being made regularly and disbursements were growing then microcredit must be yielding benefits (Hussein and Hussein 2003). Maclsaac (1997) agreed with these views and states that most studies evaluated microcredit based on the indicators of repayment and disbursements, on the assumption that ‘efficient RFIs (Rural Financial Institutions) should lead to the desired development impact’ (Yaron et al., 1997). Maclsaac (1997) argued that there was no direct correlation between repayment and business success, and even less so between repayment and impacts on social and gender relations. Repayment is not an accurate indicator that funds were used to invest in successful productive activities in the first place and ‘even when a borrower repays a loan on time, the source of income is not necessarily from revenues generated by investing the loan in productive activities’ *(ibid.*:9).

In the early years when the microfinance sector was relatively new, many programmes in Pakistan followed this ‘superficial’ approach in attempts to measure impact. Thus MFI s such as AKRSP, NRSP and PRSP all assumed that by having repeat borrowers and expanding programme outreach, they could proclaim success in poverty reduction *(ibid.*). The authors further argued that in order to simply reconfirm such alleged programme benefits and to illustrate this to the donor community, most practitioners persuaded in-house staff and interns to document a range of case studies of successful borrowers to show how microcredit was transforming lives. Most of the cases were well written and while they did manage to demonstrate the benefits of microcredit, they were ‘romanticised’ versions of the power of credit and were generally poorly researched, while the analyses were undertaken in a fairly superficial and incoherent manner.

**2.12.2 The scarcity of impact assessment studies in Pakistan**

As argued above by Hussein and Hussein (2003), there is an absence of good quality studies that have attempted to measure impact at credible levels in the microfinance sector in Pakistan. One of the constraints that have led to the dearth of robust and reliable impact assessment in the country is the lack of motivation from primary stakeholders from the supply side of the market. Impact assessment exercises are done to meet certain donor requirements, but they require the drive and motive of actually
trying to find out how borrowers are responding to the ‘programme treatment’ of microfinance, so as to design and offer them better tailor-made products that conform to their specific needs. Hulme (2000) argued that while recipient agencies benefit from this, donor-initiated assessments are likely to be seen as an activity that has limited practical relevance for programme activities. Hulme quoted the director of a large Asian microfinance institution that has received substantial amounts of aid-financed impact assessment consultancy: ‘... impact assessment studies keep donors happy ... we don’t use them very much’.

Haq (2008:25) asserted that despite the fact that determining the impact of microfinance is a difficult and challenging task, ‘given the amount of funding flowing into the sector and the government’s focus on microfinance, it is important to look at evidence of its impact’. The significance of carrying out reliable impact assessments in the microfinance sector cannot be overemphasised, given that it is being employed as a major poverty alleviation tool in the country. Unfortunately, there seems to be an acute shortage of reliable studies. In considering the dearth of reliable impact assessment studies in Pakistan, OPM (2006) stated that ‘currently in Pakistan, there is very limited primary data or secondary analysis with which to understand how the poor use microfinance services2 (both formal and informal) or to understand whether the poor had access to the services being provided by the new wave of microfinance institutions’.

Hussein and Hussein (2003:6) argued that ‘in Pakistan there has been a tendency to use anecdotal evidence and claims about the impact of micro-credit are not well documented or supported by verifiable evidence. Some of the evidence is quite weak because of inadequate data or questionable methods used to collect and interpret the data. Some of the microcredit programmes assert that they cannot afford to undertake impact assessments because they are generally expensive and time-consuming. There are also serious disagreements among experts on the validity of methodologies used in

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2 This study makes use of the term microfinance interchangeably with microcredit, given that in Pakistan, associated services and products (microinsurance, microsavings, microleasing, etc.) are currently considerably less developed than credit. Although trends have changed over the recent past, debates, research and discussions about microfinance in Pakistan remain primarily focused on microcredit alone.
some of the published studies. In some cases, even the more rigorous studies have produced inconclusive results. The most frequently cited reasons for not undertaking impact are that it is not required, it is too soon for impact to be realised and that no matter what methodology one adopts, it will be criticised’.

2.13 Microfinance Impact Assessment in Pakistan – Review of Major Studies

A review of the microfinance sector in Pakistan reveals that the interest in assessing the widespread impact of microcredit on poverty is a relatively recent phenomenon as almost all the major studies in this regard have been undertaken since 2000. The only earlier study that is closest to an impact assessment exercise was commissioned by the State Bank of Pakistan in 1998. It was undertaken as part of a series of studies by the Applied Economic Research Centre (AERC) on rural financial markets in Pakistan. So far, this is the largest study on the subject covering more than 6,000 households and 24,000 respondents (Hussein and Hussein 2003). Various studies have been carried out more recently, at different scales and levels and with various objectives.

Table 2-4 below summarises these studies. The information has been divided across the organisations involved, along with the authors, the year they were conducted, the sample size employed and the methodology used.

<table>
<thead>
<tr>
<th>Organisation/Researchers and Topics</th>
<th>Year</th>
<th>Sample</th>
<th>Methodology Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Financial Markets Studies: Rural Credit Study &amp; Role of Women in the Rural Economy and the Credit Market Study</td>
<td>September 1998</td>
<td>6,020 households, 24,500 individuals interviewed, nearly half were females.</td>
<td>Nationwide study. All potential borrowers in each sampled household were simultaneously but separately interviewed.</td>
</tr>
<tr>
<td>AERC, PERI and PIDE</td>
<td>November 1999</td>
<td>Survey of women borrowers from 52 households and two focus groups for rapid appraisal comprising 6 and 5 women</td>
<td>Intra-household gender relations, decision-making, self-perception, perception of daughters’ future, obstacles to women’s growth and development</td>
</tr>
<tr>
<td>Study Title</td>
<td>Date (Year)</td>
<td>Respondents</td>
<td>Methodology/Findings</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>-------------</td>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The Impact Assessment Study: Analysis of Kashf’s Microfinance and Dastkaari Programme on Clients’ Socio-economic Lives (by Shazia Ali Khan)</td>
<td>December 2001</td>
<td>129 respondents</td>
<td>Comparison with control group for microfinance and enterprise workers</td>
</tr>
<tr>
<td>The PPAF Microcredit Financing: Assessment of Outcomes Study (Gallup Pakistan, PPAF)</td>
<td>September 2002</td>
<td>1,700 respondents</td>
<td>Comparison based on the ‘with and without - before and after’ models</td>
</tr>
<tr>
<td>Reaching the Poor through Social Intermediation: Micro-Finance and the Building of Social Capital (Aga Khan Foundation, Canada)</td>
<td>November 2002</td>
<td>AKRSP: 9 communities (6 women, 3 village orgs). Interviews with staff 10 interviews with members of organizations Interviews with other stakeholders KASHF Focus group Discussions 7 rural communities (9 respondents in each) 63 interviews in all with different stakeholders 12 additional with Kashf operational staff 11 with community leaders (7 men, 4 women 10 former clients 7 with non-Kashf Members</td>
<td>Field-based interviews focus group discussions and participant observation.</td>
</tr>
<tr>
<td>Microcredit for Development. The Impact of the OPP Orangi Charitable Trust Micro credit Programme on Urban Livelihoods. (S.Akbar Zaidi)</td>
<td>2003</td>
<td>110 clients 96 men 14 women 69 non-borrowers 63 men 6 women</td>
<td>Comparisons between borrowers and non-borrowers and gender-disaggregated data on increase in standard of living</td>
</tr>
<tr>
<td>National Human Development Report (Akmal Hussain et al.)</td>
<td>2003</td>
<td>PIDE survey of seven districts and survey of 277 respondents (40 for each of seven NGOs).</td>
<td>Comparisons between ‘before and after’ programme intervention</td>
</tr>
</tbody>
</table>
### Impact Assessment of Kashf’s Microfinance Programme

**Date:** October 2005  
**Methodology:** 174 clients of ‘mature’ branches and 76 clients from ‘new’ branches were interviewed, and 77 focus groups were conducted.  
**Findings:** Comparisons were made between two groups of borrowers: those who were new and those who had been with KF for between 3-5 years (mature).

### Khushhali Bank, Pakistan

**Author:** Heather Montgomery  
**Year:** 2005  
**Methodology:** 2,881 rural and urban households in Pakistan. A stratified random sample of 1,454 current and future clients was drawn from 139 rural villages and 3 urban cities where the bank operates. Similarly, a roughly equal number (1,427) of randomly selected non-clients from the same villages or settlements were also surveyed.  
**Findings:** Clients and non-clients were compared for determining impact on poverty levels.

### Study commissioned by the European Union-Pakistan Financial Services Sector Reform Programme

**Author:** Zaidi et al.  
**Year:** 2007  
**Methodology:** Around 3,400 respondents belonging to six microfinance institutions were interviewed.  
**Findings:** Coleman’s difference-in-difference (DID) or ‘double-difference’ model to assess the impact by netting out the differences between matured borrowers and the group of new, borrowers-to-be and non borrowers.

### Role of Pakistan Poverty Alleviation Fund’s Microcredit in Poverty Alleviation

**Author:** Shirazi and Khan  
**Year:** December 2009  
**Methodology:** A sample of more than 3000 households was employed, of which about 1500 were borrowers.  
**Findings:** The approach used combined the ‘with – without’ and the ‘before – after’ approaches to estimate differences in outcome.

Source: Updated from Hussein and Hussein (2003)

**Table 2-4: Selected impact assessments undertaken on microcredit in Pakistan**
Following from Table 2-4, the discussions that follow identify, review and analyse literature related to major research studies commissioned and conducted across Pakistan.

Following its 2001 study that compared clients with non-clients, in 2005 Kashf Foundation (KF) commissioned an impact assessment study to gauge programme outcomes on its borrowers’ livelihoods. Data was collected by means of around 250 household-level surveys and seven focus groups that constituted mature, new and drop-out clients. Findings showed the income of Kashf’s mature clients to be around 51 percent higher than that of new clients. Furthermore, it was ascertained that the longer clients are associated with Kashf, the higher is their income. In terms of savings, it was found that over 80 percent of both mature and new clients save, which constituted their main emergency coping mechanism. In terms of nutrition and health, mature Kashf clients experience significantly fewer days when they have to eat less, and have better access to healthcare (Kashf Foundation, 2005).

In another study that attempts to ascertain impact, Arif (2006) employed household-level, secondary data obtained from observations recorded from a number of ‘treatment’ (programme) and ‘control’ (non-programme) villages, as well as from participating and non-participating households. Data analysis showed that there are significant differences between participating and non-participating households in terms of monthly per capita expenditure, as figures for the overall sample average Rs.746, whereas member households average Rs.825 and non-member households show monthly household expenditure of just Rs.660. In terms of living conditions, the study reports a much higher proportion of non-participants and their families living in mud houses (over 54 percent) as opposed to 43 percent among participants, while a larger number of participating households (compared with non-participating households), were found to have electricity connections. Further, participating households showed much higher literacy rates among household heads than did non-participating households. Nearly 27 percent of respondents had completed their matriculation or attained a higher level of education, with 35 percent among participating households but only 14 percent among non-participating households. Participating households also showed a far higher proportion of literate males (67 percent) than non-participating households (47 percent). The statistics clearly indicate
that non-participating households are at a relative disadvantage as opposed to the participating ones. Finally, a considerable proportion of credit beneficiaries experienced a sustainable increase in their income after receipt of a loan. The economic impact of microcredit on rural participating households appears to be quite large and probably makes a significant difference to households close to the poverty line. However, further rigorous research work is still required to establish the link between microcredit and poverty reduction (Arif 2006).

In a similar study, Hussain (2003) reported increase in income after borrowing, as more than 80 percent of National Rural Support programme (NRSP) beneficiaries experienced a sustainable increase in income after borrowing. Hussain however cautioned that ‘it must be qualified that NRSP also has the highest proportion of well-off beneficiaries’.

The Poverty and Social Impact Assessment: Pakistan Microfinance Policy was carried out by Oxford Policy Management for DFID (2006), focusing on how access to financial services impacts the poor’s livelihoods. The study analysed national datasets such as the Pakistan Integrated Household Survey (PIHS) and the Pakistan Socio-Economic Survey (PSES) in order to get a baseline measure, and carried out a mixed-methods survey of around 100 households to get insights into changes in access and their impact (Haq 2008). Authors of the study highlighted certain inherent weaknesses in the data being ‘constrained by its methodological limitations’, primarily in the randomness of household selection. This study can thus perhaps be ‘best regarded as a pilot, highlighting the main issues and particular difficulties involved in assessing the impact of MF services’ (OPM 2006:9). Despite these concerns, the study did produce some interesting findings, discussed below.

The conclusions that this study draws after the re-analysis of the Pakistan Integrated Household Survey (PIHS) and the Pakistan Socio-Economic Survey (PSES) can be broadly divided into two major components: the first shows that in 2000, the poor had very little access to formal and semi-formal credit markets; the vast majority of loans were used for consumption rather than investment purposes and large loans were provided by formal and semi-formal credit providers. In terms of impact on the poor, evidence suggested that availability of credit may have played a significant role in
cushioning the poverty impact of the drought in the provinces of NWFP and Punjab. The second component produced some interesting results, such as that microfinance borrowing appeared to be the only source of funding for investment purposes.

Another finding was that MFIs tend to target those who are relatively better off in communities, due to their perceived lower risk of default. This leads to the poorest segment being deprived of an opportunity of having access to finance. Haq (2008) argues that benefit to the extreme poor could trickle down through the informal support mechanisms, such as the creation of employment opportunities in the locality and the relatively better off lending to the needy in times of emergency. However, it seems that greater emphasis should be put on actually designing and implementing a more inclusive lending mechanism to include the very poor, rather than waiting for the benefits of financial strength to trickle down to them. An additional significant finding was that there seems to be an immense potential for diversifying products, as most clients expressed the need for savings products. Microsavings, microinsurance, microleasing, etc., could be designed and extended to borrowers to meet their needs. The study concluded that, given the level of reported profits from enterprises financed through microfinance, the impact was both positive and substantial.

A very important finding that emerges from this study is that microfinance beneficiaries appear to be relatively better off than non-beneficiaries in all four of the localities sampled in this study. Deepening both breadth and depth of programme outreach could thus be a useful tool to combat poverty. The research also found that no respondents mentioned interest rates as a matter of concern, hence it ‘could be stated that interest rates could be raised sufficiently to cover the increased costs associated with lending to those with relatively greater chance of defaulting, whilst still being below the seemingly very high rates of return on potential investment opportunities’ (OPM 2006:10).

The Asian Development Bank (ADB) and State Bank of Pakistan (SBP) introduced a programme for developing and strengthening sustainable microfinance services in Pakistan. The programme was designed to provide sustainable microfinance services to the poor through an integrated policy and investment package, consistent with the strategies of the Government and ADB regarding poverty reduction and microfinance
(ADB 2008). Major components of the programme included developing government policies, laws, and regulations that would facilitate the growth of microfinance services in Pakistan and establishing and providing long-term funding for a lead microfinance bank – Khushhali Bank (KB) – whose success would catalyse the establishment of additional microfinance banks in the country (ibid.). The project completion report by ADB (2008:13) states that ‘by encouraging the creation and effective supervision of microfinance banks, the programme had a positive impact on the development of microfinance in Pakistan, however, empirical evidence is inconclusive regarding whether the programme’s lending component had any effect in increasing household income and alleviating poverty’. The same report, as mentioned earlier, refers to an impact assessment study carried out on the borrowers of the same bank that was established by project funding – Khushhali Bank. This detailed study was carried out by Montgomery in 2005. The research makes an attempt to explore whether programme participation for the ‘very poor’ borrowers has a more pronounced effect on various outcome measures than it does on average borrowers. The survey sample constituted primary data from 2,881 rural and urban households in Pakistan. A stratified random sample of 1,454 current and future clients was drawn from 139 rural villages and three cities where the bank operates. A similar number (1,427) of randomly selected non-clients from the same villages or settlements were also surveyed.

Montgomery (2005:14) reported a number of findings that emerged from this study:

1. Participation in KB’s microcredit programme has positive impacts on both economic and social indicators of welfare, as well as income-generating activities, especially for the very poorest participants in the programme.
2. Particularly encouraging is the fact that the bank has generated these impacts while remaining focused on the goal of financial sustainability.
3. Although the microfinance programme does not seem to impact consumption of either food or non-food non-durable items, there is, however, some evidence that it enables the very poorest of its borrowers to increase expenditure on their children’s education, perhaps affecting the finding that children of those households are more likely to be enrolled in school.
4. Participation in the programme also has positive impacts on non-expenditure indicators of children’s health: participating households are more likely to seek medical treatment for their children’s health problems and are also more likely to approach trained professionals to provide that treatment. For the very poorest households, there was an increased likelihood of children receiving basic vaccinations.

5. The highest aggregate impacts of the programme on income-generating activities were on agriculture and again, these positive impacts were higher for the poorest borrowers.

6. Participating households reported higher value of outside sales of their agricultural products and the impact of the programme on sales were again even higher for the very poorest borrowers. In addition, urban borrowers, 70 percent of whom were below the official poverty line, reported significantly higher sales and profits, the more they had participated in the programme.

Montgomery (2005) further argued that these findings challenge what has become the ‘conventional wisdom’ that microfinance is not an appropriate intervention for reaching the poorest of the poor. Although it should not be expected that all poor households would benefit from borrowing, these findings demonstrate that even the poorest of the poor, those living at less than half the official poverty line, benefit from microcredit. Empirical analyses presented here show that these ‘very poor’ clients are already seeing positive impacts from participation in the programme and are effectively using the loans to invest in their household enterprises and through investments in the health and education of their children, the future of those enterprises; these positive poverty reduction effects have been achieved by an institution that is clearly profit-focused. This provides important evidence for the ongoing debate as to whether or not commercially-oriented microfinance institutions can indeed reach the very poor (ibid.). Although strong evidence of how and to what extent the extremely poor benefit from microfinance intervention comes from Bangladesh (for details, see Ahmed and Rana 2005; Rabbani et al. 2006; Haseen 2006; Hulme and Karen 2007; Hossain and Matin 2007), no initiative on such a widespread scale specifically targeting the ultra poor has yet been initiated by any MFI in Pakistan.
Setboonsarng and Parpiev (2008) identified a critical shortcoming in Montgomery’s analyses and data handling with regard to biases in sample selection. In order to address the weakness that arises from self-selection bias, they applied the Propensity Score Matching (PSM) technique, and concurred that the positive impacts identified earlier by Montgomery did hold true, although they were less pronounced after correcting and accounting for the selection bias. They concluded that ‘the study confirms that Khushhali Bank has been effective, overall, in reaching out to the poor and has rapidly expanded its outreach to remote rural areas of Pakistan, consistent with the government’s poverty alleviation programme. Differing from most MFIs, which lend mainly to microenterprises and small traders, the bank’s lending is predominantly geared to agricultural households with limited microenterprise activities’ (ibid:17).

Evidence from Setboonsarng and Parpiev’s revised calculations show that Khushhali Bank’s lending programme contributes considerably to income generation activities such as agricultural production and, in particular, animal raising. However, it was noted that the impact of the programme appears to have limited significance on other Millennium Development Goals (MDGs), such as those concerned with education, health and female empowerment. The researchers attributed this to the fact that two-thirds of the bank’s clients are from agricultural households in poor communities with limited non-farming activities. Setboonsarng and Parpiev (2008) however cautioned that an impact study of this nature may have been premature since a majority of the sampled clients had been through just one cycle of borrowing at the time of data collection. At the same time, they noted that it is remarkable that with a loan of only Rs.10,000 (US$ 117), these households could improve their agricultural income significantly after a single cycle.

One of the most in-depth and large-scale impact assessments in the Pakistan microfinance sector was the 2007 study by Zaidi et al., commissioned by the European Union-Pakistan Financial Services Sector Reform Programme. The primary objective of this study was assessment of the impact of microfinance programmes on borrowers and their respective communities. Zaidi et al. (2007) concluded that despite there being numerous assumptions about what microfinance can do, and has done, in lessening poverty and improving livelihoods, there is insufficient empirical evidence
to support most of these claims. The authors of this report claimed that this was the first study of its kind and scale in Pakistan that attempted to quantify and demonstrate outcomes from microfinance interventions.

Six MFIs were selected for this study, based on criteria such as at least three years’ continuous work experience in microfinance and a strong business plan for the next three years; a portfolio of at least 2,000 active borrowers; audited accounts for the last three years; and willingness to participate in this social impact assessment study. The six institutions covered a range of sizes, ownership patterns, sources of funding, lending methodologies, programme areas, organisational structures, borrowers and communities. The MFIs themselves were Orangi Charitable Trust (OCT), Sindh Agricultural and Forestry Coordination Organization (SAFWCO), Kashf Foundation, National Rural Support Program (NRSP), as well as NRSP’s Urban Poverty Alleviation Project (UPAP), Akhuwat and Asasah. The sample constituted a mix of new, mature and pipeline clients (Zaidi et al. 2007).

The study surveyed a relatively sizeable sample of about 3,400 respondents, and primarily applied Coleman’s (1999), difference-in-difference (DID) or ‘double-difference’ model to assess the impact by netting out the differences between mature borrowers and the group of new, borrowers-to-be and non borrowers. The conventional single difference (borrowers and pipeline borrowers) model was also applied in instances where conditions of the DID model could not be met due to sampling and data collection issues (Jamal 2008). The use of a mixed methods approach allowed the researchers to capture not only quantitative data but also qualitative findings based on focus group discussions and interviews. The study also carried out personal interviews designed to capture the impact of microfinance programmes on income, expenditure, child education and women’s empowerment.

The major findings of the research are summarised below:

1. Across some areas and sectors, there is some evidence of positive impact; however, the single most important finding that emerges from this study is that the social and economic impact on borrower livelihoods, for the most part, is limited.
2. This does not in any way mean that the impact of microfinance intervention is negative; however, findings from this study have shown that the impact is not positive enough. There is thus a need for additional interventions along with microfinance, to make a significant impact on poverty.

3. The greatest impact found across most indicators was amongst microfinance institutions which have been operating for a longer period of time. This result, while perhaps expected, leads to questions about differences in management style and organisational structure being significant factors in suggesting impact, rather than just the extended time spent with clients.

4. Larger loan amounts seem to have a greater impact across observed variables, as opposed to smaller loan amounts; similarly, longer association between MFIs and borrowers leads to greater impact.

5. Just 23 percent of the urban borrowers were below the poverty line (based on the Pakistan official Poverty Line of Rs.1000 per capita), whereas 50 percent of the non-agricultural and 61 percent of agricultural borrowers were living below the poverty line.

6. Survey results show an important and unexpected finding: contrary to expectation, microfinance interventions does not seem to have a significant positive impact on the different aspects of women’s empowerment. In fact, women’s empowerment seems to have deteriorated after joining a programme.

7. Little impact was found of programme intervention on education and health, which prompts advice for greater targeted measures to be taken for such social aspects.

Zaidi et al. (2007) offer certain policy recommendations based on their findings from this study, chief amongst them being increasing loan size and taking adequate measures to retain clients over longer time periods. These recommendations result from the positive impacts associated with allied measures in the study. Jamal (2008) concluded from analysing the data collected by Zaidi et al.’s (2007) survey that
microfinance intervention does in fact help in consumption smoothing and, to some extent, augments income generation. The results also show greater incidences of child school enrolment among mature clients, as the impact coefficients were found to be both positive and significant. Findings did not show any significant differences between borrowers and non-borrowers regarding the expenditure on education, health and girls’ schooling.

Shirazi and Khan (2009) carried out an assessment exercise and employed a counterfactual combined approach to study the impact of microcredit on the poverty status of households. This approach combines the ‘with – without’ and the ‘before – after’ approaches to estimate differences in outcome. The official poverty line for the year 2004-05 and adjusted poverty line for 2003-04 were employed to decompose households into different poverty groupings. The most notable findings were that microcredit helps in reduction of overall poverty levels (by 3.07 percentage points) and that the borrowers tend to shift to higher income groups during the given period. Analyses also showed that the poverty status of the extremely poor borrowers increases only marginally (by 0.63 percentage point), thus showing no marked effects of microcredit on poverty status of such households. The authors argue that these results are consistent with other studies which show that the chronic poor borrow essentially for protectional purposes, as opposed to investing in entrepreneurial activities.

2.13.1 Studies concerning the impact of microfinance on women in Pakistan

The discussions above pertained mostly to impact regarding certain household-related characteristics such as household income and expenditure, assets, size of loans, length of borrowing, differences that exist between agricultural and non-agricultural households, household health and literacy. Since a majority of borrowers are women and most MFIs function with the sole intention of lending to women alone in order to empower them, this section looks into the impact that programme intervention has on women in the rural areas of Pakistan. Given the dearth of literature on research into microfinance impact in the country, it is natural that gender-specific impacts of microfinance have not been explored to a substantial level either. Nevertheless, a few studies have employed qualitative techniques to produce some interesting findings.
While discussing why women are targeted by microfinance programmes, Mumtaz (2000) stated that such schemes target women as clients because they constitute the poorer half of the most disadvantaged section of the population. By concentrating on women it is expected that the household will gradually move out of poverty, because women contribute their incomes to household welfare. Their status as borrowers within (and to some degree, outside the household) is enhanced because their perceived value is known to increase with the generation and management of monetary income. Efforts at mainstreaming women thus seek to increase their independence both within and outside the home (ibid.).

Hussein and Hussein (2003) state that interest in exploring the impact of microfinance on gender equity has been minimal in Pakistan. The authors argue that not only is there a scarcity of appropriate empirical research on the theme, but a review of impact studies also shows great variation in the extent to which gender equity issues have been addressed. They contend that in some studies, ‘the issue has been overlooked completely and in others it is marginalized. In some, data is not disaggregated by gender, in others, gender-disaggregated data is available but the gender dimension has not been highlighted in the analysis. In very few cases, has gender equity been examined in some depth. There is insufficient recognition of the need for gender-disaggregated intra-household analysis and the household continues to be the preferred unit of analysis’. A further reference is made by Hussein and Hussein (2003) to how gender issues are marginalised in impact assessment studies (even when empirical evidence points to significant changes to women’s livelihoods) by citing instances from a similar report: The PPAF Microcredit Financing: Assessment of Outcomes study by Gallup Pakistan (2002), which focused on gauging the socio-economic outcomes of microcredit programmes. Gender-disaggregated data was provided only for three hypotheses out of the seventeen that were studied and despite some significant findings, gender issues were not highlighted or discussed at length in the executive summary, main body or even conclusions. For instance, 54 percent of women borrowers reported a positive change in their incomes as opposed to 34 percent of male borrowers, but the conclusion highlighted the difference in the change in income reported between borrowers (41 percent) and non-borrowers (32 percent). This marginalisation of gender issues, even when data is available, reflects
the minimal concern with gender equity that characterises the microfinance sector in Pakistan (Gallup Pakistan 2002).

While arguing about the lack of quality gender-oriented empirical research on the impact of microfinance on women in Pakistan, Hussein and Hussein (2003) stated that there is a tendency for qualitative studies to show a much greater impact than can be substantiated through quantitative studies, with the exception of impact on women’s self-esteem. According to the authors, ‘the most popular methodology used by MFIs to show a positive impact on gender equity has been the case study method. Virtually every MFI has a stack of case studies which focus on success stories. Most show how women’s lives have been transformed with the provision of a loan they have invested in their own businesses. However, the dramatic impact on increase in income and well-being has not been corroborated by the quantitative surveys that have been conducted’.

In the in-depth study conducted by Zaidi et al. (2007) discussed earlier, it was reported that the overall surprising result from the survey was the finding that microfinance interventions do not seem to have a significant positive impact on different aspects of women’s empowerment, as the results came out as ‘mixed’, ‘contradictory’, and probably in many cases, ‘surprising’ and ‘unexpected’. It can be argued, therefore, that microfinance interventions do not seem to have a significant positive impact on the different aspects of female empowerment. The authors continued that ‘we had expected far more positive results in this regard, but with very few exceptions, the results show that not only has there been little improvement, in some noticeable cases, women’s empowerment has deteriorated after joining a programme’.

In a study that examines the gender component of the Urban Poverty Alleviation Project (UPAP) initiated by the National Rural Support Programme (NRSP) in the cities of Rawalpindi and Islamabad in Pakistan, Mumtaz (2000) conducted a survey consisting of a total of 444 households across the entire project area. While drawing conclusions on the resulting findings, Mumtaz argued that the very inherent design of the programme and the way it was conceived is fundamentally flawed, and does not lead to any form of so called ‘empowerment of the weaker gender’. Mumtaz
(2000:890) continues: ‘the essence of the need to concentrate on women is misunderstood by the programme. The Project emphasis is on ‘boosting the household economy’, rather than the empowerment of women. Given her structural disadvantage, a ‘boosted’ economy however, will not automatically increase the households’ expenditure on women’s welfare, unless the borrower herself is simultaneously empowered to bring about that change. Expecting the borrower to contribute all her income to the household, without empowering her, is actually tantamount to exploiting her disadvantaged position and thus perpetuating her subordination’.

Since a majority of Kashf Foundation’s clients are women, its impact assessment study (2005) focuses on gender-related issues and reports on findings that seem to indicate that mature clients seem to be performing better than new borrowers. According to the study, more than half of the clients across both groups are involved in the decision-making process related to household-related matters and also control household income to some extent. A large proportion of both mature and new clients were seen to be involved in household purchases ranging from daily consumables to more expensive items such as furniture and household repairs. However, the findings also revealed that a larger number of the newer clients reported physical abuse at home as compared to clients who are mature. A probable explanation that the authors offer is the discontent arising at home that is commensurate with greater poverty and desperation across the poorer households. While highlighting empowerment issues and the role that microfinance plays in achieving this objective, Kashf Foundation’s founder, Zafar (2002), touches on the essential feature of viewing a household from a holistic perspective and perceiving both men and women as agents of change rather than disjointed elements. According to Zafar (2002:64), ‘microfinance is actually a vehicle for enhancing women’s existing opportunities and their inherent capacities to view the economic progress of the household holistically. Men and women are rational economic agents who can promote the well-being of their families jointly’.

2.13.2 Assessing depth of programme outreach across rural Pakistan

One of the two research questions of this study relates to measuring how ‘deep down’ into the various classes of poverty the MFIs have been able to reach successfully. In order to achieve this objective, the ‘very poor’ have to be targeted and effective
poverty targeting can only take place if MFIs have inherent policy designs to distinguish between various poverty levels and target those who lie at the ‘bottom of the pyramid’. Zaidi et al. (2007) made an attempt to highlight this issue regarding identifying the poor for effective programme outreach and, as part of a larger impact assessment study (discussed in length above), argued that ‘since all MFIs in the study state that they are intervening in the market to “alleviate poverty”, they need to clearly state what those poverty criteria are, whether they are following the official poverty line criteria, or whether they are developing their own criteria. Whatever they do, they should state where their poor lie in terms of the poverty line, who they are, and what determines the definition of the ‘poor’ for them. They need to assess their own performance with these sets of criteria’ (ibid: xvii).

Arif (2006) states that a number of targeted programmes and interventions have been initiated in Pakistan intended to transfer benefits directly to the poor, and examines the targeting efficiency of three large poverty reduction programmes in the country: zakat (charitable donations), microfinance, and the Lady Health Workers Programme. Various targeting approaches used by microfinance organisations are discussed, such as ascertaining land ownership, determining household income, using various housing characteristics and aspects of general household well-being. According to Arif (2006), the Rural Support Programme (RSP) approach involves a number of key players in the process of poverty targeting. These include social organisers and activists within communities who bear the greatest responsibility for ensuring participation of the poor and channelling programme benefits to them. The main feature of this approach is that a considerable majority of the members of Community Organizations (COs) are drawn from amongst the poor and very poor. The risk, however, according to Arif, is that the poor either remain excluded or benefit very little from their participation in the programme. RSPs depend primarily on their communities to define and identify the poor and non-poor, rarely relying on verifiable economic and social indicators. Community members classify their households into one of five categories: (i) destitute, (ii) very poor, (iii) poor, (iv) better off, and (v) well off. Respondents enlist the name of their heads of households, and then classify each household through consensus. Once the CO has been organised, this information is cross-checked and verified by its members (ibid.).
Kashf Foundation’s (2005) assessment study reports that in terms of effectiveness of targeting the poor, over 90 percent of all its clients were living on less than $1 a day, which, according to the report, can be considered an achievement given its rapid growth and its aim to attain full operational and financial self-sufficiency.

In terms of breadth and financial services outreach, a report by the IFC (2008) states that the overall financial penetration in Pakistan is quite low. Pakistan has the highest number of people per bank branch in the region, second only to Bangladesh. Currently 37 percent of adults have bank accounts and the number of borrowers – 5.5 million – constitutes only 3.5 percent of the population. There are only 171 deposit accounts and 30 loan accounts per 1,000 people. Agriculture and SME credit reach 1.5 and 0.16 million borrowers respectively. Outreach of the documented microfinance sector was 1.13 million as of March 2007 (ibid.). Setboonsarng and Parpiev (2008), on the other hand, estimate that out of the 6.5 million poor people who need microfinance services, only about 5% are being served by microfinance institutions.

2.14 Conclusion

This chapter has reviewed empirical literature on microfinance across the two dimensions that form the core of this study:

(i) How do MFIs extend the depth of their outreach of services to the poor by effective targeting methods?

(ii) What role does microfinance play in improving borrowers’ livelihoods by reducing poverty across the rural landscape?

As an introduction to identifying and discussing relevant empirical literature, the chapter opened with discussions on broader issues of financial services outreach and poverty targeting, and further explored the contradicting views of the institutionists and welfarists as two major classes of theorists who support contradicting paradigms on whether such institutions should be more concerned about serving the ‘bottom poor’, (despite the high costs involved in reaching and serving them), or whether the
‘less-poor’ clients should be targeted instead; success should be measured by how well institutions expand the frontier of the mainstream economy over the long term. The various aspects of outreach were later discussed in depth, followed by a review of prominent studies that have explored depth of programme outreach in rural areas.

The second half of the chapter focused on empirical literature relating to the second research question: the impact of programme intervention on borrowers’ livelihoods. Major empirical studies conducted on the subject across the developing world were discussed in detail across various dimensions: the positive changes that microfinance brings in terms of increases in household income, expenditure, asset building, savings accumulation, improvement to household health, improvement in children’s literacy levels and decrease in school dropouts. The chapter also discussed those aspects of non-financial impact which have a social and political orientation, such as empowering women and enabling them to have greater control and influence on household affairs and financial matters. It also includes other ‘spillover’ effects such as the motivational and attitudinal changes among the programme participants towards their ability and willingness to participate in decision making, becoming part of communal and social networks, and having a sense of belonging and security.

The review of literature revealed mixed and conflicting findings, and disagreements were also found amongst academics and practitioners about the effectiveness of microfinance as a poverty reduction measure. At one extreme of the spectrum lie those studies that have concluded that microfinance is a positive and effective measure of poverty reduction (see for instance: Hossain 1988; Barnes 2001; Dunn 2002; Snodgrass and Sebstad 2002; Goldberg 2005; Khandker 2005; Rabbani et al. 2006; Haseen 2006; Mahjabeen 2008; Banerjee, Duflo et al. 2009). At the other extreme are those who have argued that employing this strategy has in fact driven people into even greater poverty and has weakened the position of women even further, rather than empowering them (see for example; Goetz and Gupta 1996; Neff 1996; George 2006; Chanana 2007; Bateman 2008). In between these two extremes lie those researchers who have cautioned against considering microfinance as a ‘cure-all’, yet have endorsed it as assisting people to a certain extent, and have urged that it should be used with ‘cautious optimism’ (see Bello 2006; Banerjee, Duflo et al. 2009; Karlan and Zinman 2009).
Regardless of the findings and the somewhat opposing and contradictory views that researchers have held, impact assessment nevertheless remains perhaps the only method by which programme effectiveness can be measured. A rational and cautious approach to interpreting the results can lead to effective policy formulation that may help re-design programme delivery for greater and improved effect. Mayoux (2001:3) argues that ‘existing impact assessments have made an important contribution to understanding some of the complex interactions between microfinance interventions, livelihoods and different dimensions of poverty reduction and empowerment. There remains nevertheless, a considerable gap between the potential contribution of impact assessment and the practical usefulness of existing findings’.

One of the complexities of the issue is that determining the impact of microfinance is a difficult and challenging task (Haq 2008); Montgomery concurs in her (2005:4) impact assessment of Khushhali Bank: ‘a perfect impact evaluation really needs to answer a counterfactual question: how does the status of participants in the programme compare with how those same individuals would have fared in the absence of the programme? Or alternatively, how would non-participants have fared in the presence of a programme?’ While accepting the intricacies involved in assessment exercises, Zaidi et al. (2007:ii) argue that ‘literature on impact assessment methodologies underscores the pitfalls of undertaking studies in which an attempt is made to observe, let alone quantify, the “impact” of any intervention in order to address poverty. Impact Assessment experts caution researchers about making grand statements and reaching firm, final, conclusions based on the quantification based on many measurables’. In the case of ‘softer’ indicators, which are even more difficult and complex to measure and quantify – such as ‘empowerment’ – they are doubly cautious and suggest that one always needs to be tentative in suggesting that they can ‘prove conclusively’, that such-and-such poverty alleviation or microfinance institution had a quantifiable impact on members or recipients of an intervention (ibid.::iii).
2.14.1 Microfinance impact and outreach in Pakistan – reflections on the literature

The second half of the chapter examined major studies on impact as well as on programme outreach that have taken place in Pakistan. The literature review explored studies ranging from research carried out by individuals (Setboonsarng and Parpiev 2008; Shirazi and Khan 2009) to large-scale nation-wide surveys carried out by both organisations and teams of researchers (Montgomery 2005; Arif 2006; Zaidi, et al., 2007; ADB 2008). It also looked at various types of impact of microfinance, such as those on income (Hussain 2003; Kashf Foundation 2005; Montgomery 2005; Arif 2006; Setboonsarng and Parpiev 2008; Haq 2008), household expenditure (Montgomery 2005; Arif 2006; Zaidi, et al., 2007; Haq 2008), asset building (Kashf Foundation 2005), children’s enrolment and adult household literacy levels (Montgomery 2005; Kashf Foundation 2005; Arif 2006; Zaidi, et al., 2007), gender-related issues (Hussein and Hussein 2003; Montgomery 2005; Kashf Foundation 2005), and impacts on health (Kashf Foundation 2005; Zaidi, et al, 2007; Shirazi and Khan 2009). Apart from the diversity in scale and scope of research, the range in selection of methods employed by researchers was also examined. Shirazi and Khan (2009), for instance, employ a counter-factual combined approach which combines the ‘with – without’ and the ‘before – after’ approaches to estimate differences in outcome. Montgomery (2005) uses stratified random sampling of both clients and non-clients in the same locations of operations and Arif (2006) and Zaidi et al., have employed ‘treatment’ (programme) and ‘control’ (non-programme) villages as well as participating and non-participating households, while Kashf Foundation’s (2005) study compares older clients to the new or ‘pipeline’ clients. Similarly, apart from the various methodologies applied, researchers have either employed secondary sources of data for analyses (Hussein and Hussein 2003; Arif 2006; Setboonsarng and Parpiev 2008; Haq 2008; Shirazi and Khan 2009) or have carried out research themselves (Montgomery 2005; Kashf Foundation 2005).

It was observed from the review of literature that various studies have reported a wide range of conclusions regarding the level, direction and extent of the impacts of microfinance. These are, in turn, guided by their objectives, design and scope. Impacts are the outcomes of a complex set of factors that interplay to produce affects which researchers seek to identify, interpret and report accurately, but despite
countless studies, certain inherent weaknesses and limitations still remain. Zaidi et al. (2007) argue that all previous studies which have examined the impact of poverty alleviation interventions – microfinance being one such important intervention – warn about problems with data and methodology. This is probably why there have been so few impact assessments of microfinance interventions, and the ones that have been conducted have all been criticised for one shortcoming or another. ‘Perhaps the main reason why impact assessment studies have been difficult, is that it takes many years before impact can be observed and quantified, if at all, convincingly. Clearly, on all counts, one has to be fairly cautious about reading impact assessment studies, whether they show a positive effect, a negative effect, or no effect, despite many years’ of intervention. It may still have to take some years when the methodology improves to be able to actually capture impact’ (ibid.:xvi).

The final section of the review was dedicated to empirical research carried out on the outreach of microcredit services in Pakistan. It was found that research on this subject still remains sparse and superficial. Most of the studies carried out under the broad umbrella of impact assessment pertain primarily to the economic (and to a lesser degree, social) impact of microfinance. Moreover, the small amount of research on outreach that has been carried out is heavily oriented towards breadth of outreach, as studies point to the number of borrowers, geographical areas covered by various MFIs, gender disaggregation, number of people accessing financial services, amount disbursed, and the rural-urban divide. No major, dedicated study has been carried out with the aim of measuring exclusively the depth of programme outreach in the country: how many very poor people are being served by various MFIs and what is their ranking in terms of the overall relative poverty/wealth status of other households within the same vicinity? How many of the borrowers are living above or below the poverty line, and how do these compare to the national and international poverty lines? Do MFIs target the ultra poor, and if so, what measures do they take to deliberately target these people, as opposed to merely lending to those who are moderately poor and hence are relatively better off? In summary: how deep down into the ‘layers’ of poverty have the MFIs succeeded in penetrating? Do they really help the ultra poor move out of destitution and progress gradually towards moderate poverty levels and ultimately out of poverty?
This study aims to fill this gap in the literature, regarding scarcity of dedicated research on depth of outreach as well as on programme impact across rural areas of Pakistan. In spite of the innumerable studies conducted in order to measure depth and impact of programme outreach, critics argue that there still remains, ‘a considerable gap between the potential contribution of impact assessment and the practical usefulness of existing findings’ (Mayoux 2001:3). The challenge that remains for impact assessment exercises is to build upon existing studies and move on from merely measuring ‘impact of individual programmes on incomes’ to developing ongoing and sustainable learning processes within, between and across programmes, between programmes and donors and also between microfinance users. Dunford (2006:3) sums up the discussion comprehensively: ‘the true question in the debate is not whether impact is more or less important than sustainability or whether poverty outreach is more or less important than scale. The true debate is between those who would answer “yes” or “no” to the question: Can sustainable microfinance bring substantial benefit even to the very poor at large scale? Put another way: Can microfinance reach very large numbers of the very poor and still be sustainable and have important impacts?’
Chapter 3 : Research Design and Methodology

3.1 Introduction

Chapter one introduced this study and outlined the research questions that it addresses. The second chapter reviewed literature relevant to the research questions and analysed various related studies conducted across the developing world, with particular emphasis on Pakistan. This chapter aims to describe the methodology employed to collect and analyse both quantitative and qualitative data that will be employed in subsequent chapters for the purposes of answering the research questions set out in the first chapter. In addition to expanding on the methodology outlined in chapter one, this chapter aims to ensure that appropriate methodological and design procedures have been followed for data collection and analysis.

Researchers have been given an increasing number of choices, and Creswell (2003) argues that it has become necessary to adopt a general framework in order to provide guidance about all aspects of the study. This chapter sets out to provide such a framework.

The chapter is divided into three parts. The first looks at the research process that this study follows. It discusses the theoretical underpinnings and underlying knowledge claims which set out the elements of the philosophical ideas, strategies and methods that form the core of the research approach. It examines how the elements of inquiry (alternative knowledge claims, strategies of inquiry and methods) are conceptualised for this study and how these concepts are subsequently translated into practice by employing various techniques such as administering questionnaires and conducting interviews, etc.

The second part (section 3.4) looks into the overall research design and methodology with a detailed discourse on three major strategies of inquiry (quantitative, qualitative, and mixed methods). It discusses all three methods and their application in the data-gathering process. Section 3.4.4 examines the mixed methods approach in detail,
given its suitability for a study of this nature; and out of the four major types of mixed methods designs (triangulation, embedded, explanatory and exploratory), the most appropriate approach (triangulation) is examined at length in section 3.4.5. Quasi-experimental research design is identified as the most suitable method, for its use of treatment and control groups.

The final part of the chapter (section 3.5 onwards) looks into the selection and choice of indicators and variables used for designing the questionnaire for administering face-to-face interviews for data collection in the field. Finally, the geography of the surveyed area is discussed alongside the sampling strategy used and aspects relating to data coding, data entry and reliability.

3.2 The Research Process

The entire research process (encompassing design and methodology) that surrounds this study comprises several ‘levels’ that have to be considered in a particular sequence before the research questions identified in the first chapter can be answered. Saunders et al. (2003) recommend a research process ‘onion’ that looks at these levels in the forms of ‘layers’ (see Figure 3-1). The first layer considers the research philosophy to be adopted, which in the case of this study, tends to fall within the realm of interpretivism, and perhaps reflects the stance of realism (Saunders et al. 2003). The next aspect to be considered relates to selecting the research approach to be adopted. As outlined in the first chapter, the onus of the study rests on investigating whether participation in microfinance lending programmes increases the well-being of borrowers in comparison to those who did not participate in the programmes. The survey attempts to establish a causal relationship between certain identified variables and outcomes that have been deduced based on data and observations collected from the field. The inductive approach can be helpful in certain aspects of the study as qualitative data is also collected and various propositions are induced as the fieldwork progresses. The theme of the study being a social science, as opposed to natural or physical sciences, there can be no rigid, sharply defined and mechanically-divided boundaries between various approaches to this research. Saunders et al. (2003) argue that not only is it perfectly possible to combine approaches within the same piece of research, it is often advantageous to do so.
The next stage deals with the research strategy to be adopted. It defines a general framework on how to actually proceed with the study, once the research philosophy and its approach have been conceived. Based on research questions detailed in the first chapter, the strategy defines the types and methods of data collection, the areas of survey, etc. As outlined in Figure 3-1 above, the overall research strategy is based on a number of elements, experimental design being at the heart of all these. Survey-based techniques for data acquisition have been applied, that encompass detailed case studies, participant observation, ethnography, etc. Regarding time horizons, the fourth layer, the nature of this study, requires single-instant gathering of data, cross-sectional, as opposed to conducting interviews over an extended period of time that may run across many years (longitudinal surveys). The final layer looks into data collection methods such as the sampling strategy to be adapted, secondary data to be collected, face-to-face interviewing and ethnographic observation.
In the sections that follow, each of the processes discussed in these ‘layers’ is examined in detail.

### 3.3 Theoretical Underpinnings and Underlying Knowledge Claims

The rationale for any specific research strategy is grounded in a network of implicit or explicit assumptions regarding ontology and human nature that underlie the researcher’s view of the social (and hence, economic) world. Methodologies link the research to the situation being studied in terms of rules, procedures and general protocol that operationalise the network of assumptions embodied in the researcher’s paradigm and favoured epistemological stance (Morgan 1983).

Graham (1997) states that the relationships between philosophies, theories, approaches and methods that shape empirical research are complex and greatly affect choices made at various stages throughout the design of a research methodology, while Melia (1997) argues that the link between what a researcher does and the philosophical position set out to justify the method is often problematic. In this study, although an extensive exploration of the range of underlying paradigms available to the researcher will not be made, the nature of the research warrants some discussion to place the underlying methodology within broader theoretical frameworks.

The first stage, as discussed above, deals with the research philosophy underlying the entire process. In order to develop a well-defined research design, it is necessary to investigate existing frameworks and approaches. According to Creswell (2003), first, a general framework has to be adopted to provide guidance about all possible facets of the study, from assessing the general philosophical ideas behind the inquiry to the detailed data collection and analysis procedure. Using such a framework allows researchers to lodge their plans in such ideas that are well grounded in literature and are recognized by audience that evaluate proposals for research (ibid.).

Creswell (2003) suggests that from the various types and terms that exist in literature, three are worth focusing upon: *quantitative, qualitative, and mixed methods* approaches. The first two types have been available for decades, while the last is new and still developing in form and substance. Each method has to be described in terms of philosophical assumptions about the nature of reality, epistemology, values and the
rhetoric of research and methodology. Consequently, a certain framework is needed
that combines the elements of philosophical ideas, strategies and methods into the
three approaches to research. The groundwork for such a framework was established
by Crotty’s (1998) ideas, whereby the following four questions were put forth to be
considered for designing a research proposal:

1. What **epistemology**—theory of knowledge embedded in the theoretical
perspectives—informs the research (i.e. objectivism, subjectivism, etc.)?

2. What **theoretical perspectives**—philosophical stance lie behind the
methodology in question (i.e. positivism, post-positivism, interpretivism,
critical theory, etc.)

3. What **methodology**—strategy or plan of action that links methods to outcomes
– governs our choice and use of methods (i.e. experimental research, survey
research, ethnography, etc.)

4. What **methods**—techniques and procedures do we propose to use (i.e.
questionnaire, interview, focus groups, etc.)

Three framework elements need to be considered in order to understand design:
philosophical assumptions about what constitutes knowledge claims, general
procedures of research called strategies of inquiry and detailed procedures of data
collection, analysis and writing, called methods. For these, Creswell (2003)
conceptualises Crotty’s model and proposes three questions central to any research
design:

1. What knowledge claims are being made by the researcher (including a
theoretical perspective)?
2. What strategies of inquiry will inform the procedures?
3. What methods of data collection and analysis will be used?

Figure 3-2 shows how the three elements of inquiry (knowledge claims, strategies and
methods) combine to form different approaches to research, which are, in turn,
translated into processes in the research design. These are discussed in detail in the following sections.

### 3.3.1 Alternative knowledge claims

According to Creswell (2003), knowledge claims means that researchers initiate a project with certain assumptions about how they will learn and what they will learn during their inquiry. These claims might be called paradigms (Lincoln and Guba 2000 in Creswell 2003). Philosophically, researchers make claims about what is knowledge (ontology), how we know it (epistemology), what values go into it (axiology), how we write it (rhetoric), and the process for studying it (methodology) (Creswell 1994).

Knowledge claims can be explained across four different schools of thought:

1. **Post-positive knowledge claims**

Post-positivism (also referred to as quantitative research, positivist research, and empirical science.) refers to thinking after ‘positivism’, challenging the traditional notion of the absolute truth of knowledge and recognising that we cannot be ‘positive’ about our claims of knowledge when studying human behaviour and actions. Post-positivism is also reductionist as the intent is to reduce the ideas into a small, discrete set of ideas to test, such as the variables that constitute hypotheses and research questions. The key assumptions of this approach are that knowledge is hypothetical.
and absolute truth can never be found. Thus, evidence established in research is always imperfect and fallible. It is for this reason that researchers do not prove hypotheses but instead indicate a failure to reject. Another assumption is that data, evidence, and rational considerations shape knowledge. Researchers collect information by using instruments that are completed by the participants or by direct observations (Crotty 1998; Creswell 2003; Bryman 2004).

2. Socially-constructed knowledge claims

According to the social construction of reality, individuals seek understanding of the world in which they live and work. Consequently, they develop subjective meanings of their respective experiences. These meanings are both varied and multiple and are directed towards certain objects or things and are constructed by human beings in their historical and social perspectives as they engage with the world they are interpreting. Therefore, researchers rely as much as possible on the participants’ views of the situation being studied. Open-ended questions are used by qualitative researchers so that respondents can express their views. This process of qualitative research is largely inductive, with the researcher generating meaning from the data collected in the field (Crotty 1998; Creswell 2003).

<table>
<thead>
<tr>
<th>Postpositivism</th>
<th>Constructivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Determination</td>
<td>- Understanding</td>
</tr>
<tr>
<td>- Reductionism</td>
<td>- Multiple participant meanings</td>
</tr>
<tr>
<td>- Empirical observation and measurement</td>
<td>- Social and historical construction</td>
</tr>
<tr>
<td>- Theory verification</td>
<td>- Theory generation</td>
</tr>
<tr>
<td><strong>Advocacy/Participatory</strong></td>
<td><strong>Pragmatism</strong></td>
</tr>
<tr>
<td>- Political</td>
<td>- Consequences of actions</td>
</tr>
<tr>
<td>- Empowerment issue-oriented</td>
<td>- Problem-centred</td>
</tr>
<tr>
<td>- Collaborative</td>
<td>- Pluralistic</td>
</tr>
<tr>
<td>- Change-oriented</td>
<td>- Real-world practice oriented</td>
</tr>
</tbody>
</table>

Source: Adapted from Creswell (2003)

Table 3-1: Alternative knowledge claim positions
Various perceptions of individuals and the way they seek understanding of their environment are shown in Table 3-1 above.

3. Advocacy/participatory knowledge claims

According to the advocacy school of thought, post-positivist assumptions impose certain structural laws and theories that do not fit marginalised individuals or groups or did not adequately address issues of social justice. The researchers of the advocacy school argue that inquiry needs to be intertwined with politics and a political agenda. Thus, research should contain an agenda for reform that may change the lives of the participants and the institutions in which individuals work or live. They point to specific issues which have to be addressed, such as empowerment, inequality, oppression, domination, suppression, and alienation. Advocacy may comprise providing a voice for these participants, raising their consciousness, or advancing an agenda for change to improve the lives of the participants (Creswell 2003).

Kemmis and Wilkinson (1998) summarise the key features of the *advocacy school* as follows:

- Participatory action is recursive (successive) or dialectical and focuses on bringing about change in practice. At the end, the researcher advances an action agenda for change.

- It focuses on helping individuals free themselves from constraints found in media, language, work and education.

- It is emancipatory in that it releases people from the constraints of irrational and unjust structures that limit self-development and self-determination.

- It is practical and collaborative because advocacy researchers engage the participants as active collaborators in their inquiries.
4. Pragmatic knowledge claims

There are many forms of pragmatism. Pragmatic knowledge claims are those that arise out of actions, situations, and consequences rather than antecedent (historic) conditions as in post-positivism. According to Creswell (2003), pragmatism provides a basis for the following knowledge claims:

- Pragmatism is not committed to any one system of philosophy or reality. Researchers thus draw liberally from both qualitative and quantitative assumptions while engaging in research.

- Individual researchers have a freedom to select methods, techniques and procedures of research according to their needs and purposes.

- Truth is what works at the time; it is not based in a strict dualism between the mind and a reality completely independent of the mind.

- Pragmatist researchers look to the ‘what’ and ‘how’ of research based on its intended consequences – where they want to go with it. Mixed-method researchers need to establish a purpose for their ‘mixing’, a rationale for the reasons why quantitative and qualitative data need to be mixed in the first place.

- Pragmatists agree that research always occurs in social, historical, political, and other contexts. In this way this method offers a theoretical lens that reflects social justice and political aims.

3.4 Research Methodology and Design

The preceding section explored the underlying philosophy of the research process, identified a series of knowledge claims and discussed how and which of these relate to this study. The sections that follow will examine how such thinking translates into conceiving and designing the research methodology.
Research methodology is the approach that shapes our choice, indicates the use of particular methods and links them to the desired outcomes (Crotty 1998). While the three most commonly used designs are qualitative, quantitative and mixed methods (Creswell 2003, 2008; Bryman 2008), Creswell (2008) argues that a study only tends to be more qualitative than quantitative or vice versa, rather than being either one of them, while according to Saunders et al. (2003), it would be misleading to state that there is a rigid division between the approaches. Unquestionably, the three approaches are not as discrete as they first appear and qualitative and quantitative approaches should not be viewed as polar opposites or dichotomies; instead, they represent different ends of a continuum (Newman & Benz 1998 in Creswell 2008). Table 3-2 below lists salient features of each of the three major methodologies in practice, followed by a brief explanation of what type of data each seeks to explore.

<table>
<thead>
<tr>
<th>Quantitative</th>
<th>Qualitative</th>
<th>Mixed Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predetermined</td>
<td>Emerging methods</td>
<td>Both predetermined and emerging methods</td>
</tr>
<tr>
<td>Instrument-based questions</td>
<td>Open-ended questions</td>
<td>Both open and closed-ended questions</td>
</tr>
<tr>
<td>Performance, attitude, observation and census data</td>
<td>Interview, observation, document and audiovisual data</td>
<td>Multiple forms of data drawing on all possibilities</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td>Text and image analysis</td>
<td>Statistical and text analysis</td>
</tr>
</tbody>
</table>

Source: Adapted from Creswell (2003)

Table 3-2: Alternative strategies of inquiry

3.4.1 Quantitative data collection

Quantitative data is the result of an attempt to quantify the association between two or more things, usually in a statistical or numeric manner (Livesey 2005). It is a means for testing objective theories by examining the relationship among variables, which can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures. Quantitative data comprises closed-ended information.
that might involve using a closed-ended check-list, on which the researcher records
the behaviours seen and observed in the field (Creswell and Clark 2007; Creswell
2008).

This research makes substantial use of quantitative data. For instance, interviewees
were asked questions about certain items in monetary terms, such as household
income and expenditure, monthly amount spent on children’s schooling, per capita
expenditure on clothing and footwear, amount borrowed from microfinance
institutions, monthly instalments, and monetary value of various household assets.
Other items in the questionnaire captured data in the form of numbers that represented
quantity, such as those pertaining to the number of rooms in the house, number of
household adults and children, number of children attending school, and number of
years they have been members of the MFI. Certain questions gave a fixed number of
choices and captured data in the form of preset codes in numeric form. Capturing data
in such a form helps in subsequent analyses, such as frequency counts and distribution,
averages, etc. Examples include questions that inquire if respondents are microfinance
borrowers or not, if they have borrowed from one or multiple institutions, area codes,
etc.

3.4.2 Qualitative inquiry

Qualitative data results when researchers make an attempt to specify the quality of the
relationship between two or more things. This usually involves the attempt to say
something about the way people experience the social world and their social
relationships. It is also concerned with the attempt to understand the interpretations
and meanings people give to things (Livesey 2005). It allows exploration and
understanding of the meaning individuals or groups ascribe to a social or human
problem. The resulting data consists of open-ended information that the researcher
gathers through interviews with participants, in which respondents are able to supply
answers in their own words (Creswell and Clark 2007). These words are noted in the
field in the form of field notes, or are recorded by some electronic device and later
transcribed as text. This research makes use of qualitative data collected mainly from
certain open-ended questions and detailed life history interviews of some of the
borrowers. Another popular and useful method of collecting qualitative data is by conducting focus group discussions, as discussed below.

### 3.4.2.1 Focus groups

Focus group interviews are a qualitative research tool often used in social research. They are typically small group discussions that address a specific topic or theme and usually involve 6-12 participants, either matched or varied on specific characteristics of interest to the researcher (Fern 1982; Morgan & Spanish 1984). A clear advantage of focus groups is that they tend to generate rich data and information through direct interaction between participants themselves and also the researcher. Moreover, the views expressed are spontaneous and participants are able to build on one another’s responses and react accordingly if they agree or disagree with what others are saying.

A total of eight focus groups comprising six to eleven participants were conducted during the course of this study, as shown in Table 3-3. Focus groups generated a rich and varied amount of information that was captured initially in the form of field notes and also recorded electronically and later transcribed as text.

<table>
<thead>
<tr>
<th>No.</th>
<th>District</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gujranwala</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Kasur</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Lahore</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>Muzaffargarh</td>
<td>9</td>
</tr>
<tr>
<td>5</td>
<td>Pakpattan</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Sahiwal</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Chakwal</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Bahawalpur</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Total participants</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: Survey data

**Table 3-3: Breakdown of focus group discussions conducted**
3.4.2.2 Collecting primary data – conducting interviews

Interviews are probably one of the most widely-used methods in qualitative research (Bryman 2004). As they are ‘specialised patterns of verbal interaction’ (Khan and Cannell 1957), interviews act as an important instrument of data collection since they make use of the interviewer as the primary catalyst tool for data collection (see Goode and Hatt 1952), which breaks with the neutrality associated with other forms of data collection that suggest that it is better to have subjects and instruments interacting without the presence of another subject. Following Kahn and Cannell (1957, in Mishler 1991), interviews are initiated for a specific purpose and are focused towards some specific content area, with subsequent elimination of extraneous material. Moreover, interviews are a pattern of interaction in which the role and relationship of interviewer and respondent are highly specialised, its specific characteristics depending somewhat on the purpose and character of the interview (ibid.).

Interviews that consist of open-ended questions allow participants to explore their own framework of meanings and context (Britten 1995), and for the interview process to develop more informally (Metzler 1989). The term semi-structured interview refers to the ‘middle ground’ between structured and unstructured interviews. Structured interviews aim at the standardisation of questions, answers and respondents in order to reduce the effect of various interview contexts. Unstructured interviews, on the other hand, can best be described using the words of Loftland (1971, in Mishler 1991) as ‘a flexible strategy of discovery, whereby its object is to carry on a guided conversation and to elicit rich, detailed material that can be used in qualitative analyses’. These interviews do not normally make use of a previously constructed set of questions and do not control the respondents’ answers. Researchers usually use the term qualitative interview to encapsulate both unstructured and semi-structured interviews (Bryman 2004).

Semi-structured interviews were employed in this study as the primary field instrument for data collection. As shown in the appendix, most of the questions gave respondents a fixed set of options to select from and respond to accordingly. Examples are as follows:


Other questions were less structured as they did not give any fixed options and enabled interviewees to freely quote figures to the best of their estimates and knowledge, such as household income and expenditure, number of rooms in the house, value of various household assets, and amount of loans and monthly instalments.

Yet, others were even less structured and allowed greater freedom to respondents to express their opinions, such as the reasons and purpose of applying and obtaining the loans and where the amount borrowed was ultimately spent, if it benefited them and whether they would consider borrowing again in the next credit cycle.

In the case of questions such as these (being the least structured and providing a free rein to respondents) interviewees themselves asked certain questions and raised issues and entered into (sometimes detailed) conversations that consequently formed an integral part of the interpretations and findings of the study. Such conversations provided a deep and rich insight into what both borrowers and non-borrowers thought about microfinance, how they responded to it, what perceptions they held about it, and how they thought services could be improved. Each interview added a new dimension to what notions respondents held and the ‘continuously building library’ of which was used in each successive interview. The words of Beardsworth and Keil (1992) in a similar study provide an accurate depiction of how this ‘anthology of thoughts and perceptions’ was used in subsequent interviews: ‘the open-ended, discursive nature of responses and conversation in general, permitted an iterative process of refinement, whereby lines on thought identified by earlier interviews could be taken up and presented later to interviewees to encourage them to express themselves freely in the same frame as the previous one had done’.
The foregoing sections saw how both quantitative and qualitative data was collected. Focus groups and interviews as methods of data collection were later examined in depth, quoting real-life examples and questions from the field. It should be noted, however, that either of these types of data used separately has its own inherent limitations which inhibit well-rounded analysis. This can, however, be improved substantially if both are used concurrently or are embedded as part of an overall programme design, as explained in the sections that follow.

3.4.3 Combining quantitative and qualitative data - mixed methods

Trochim (2006) argues that although data is typically defined as ‘quantitative’ if it is in numerical form and ‘qualitative’ if it is not, yet ‘most people draw too hard a distinction and that can lead to all sorts of confusion. In some areas of social research, the qualitative-quantitative distinction has led to protracted arguments with the proponents of each arguing the superiority of their kind of data over the other. The quantitative types argue that their data is “hard”, “rigorous”, “credible”, and “scientific”. The qualitative proponents counter that their data is “sensitive”, “nuanced”, “detailed”, and “contextual”. For many of us in social research, this kind of polarized debate has become less than productive, and it obscures the fact that qualitative and quantitative data are intimately related to each other. All quantitative data is based upon qualitative judgments and all qualitative data can be described and manipulated numerically’ (ibid.).

Mixed methods research is an approach to inquiry that combines or associates both qualitative and quantitative forms. This method resides in the middle of the continuum because it incorporates elements of both qualitative and quantitative approaches (Creswell 2008). Given the nature of the data involved in this research, a combination of both types of data would be most suitable. This is explained in greater detail in the sections that follow.

3.4.4 Research design – mixed methods approach

The foregoing section discussed the major approaches to collecting data. Despite being seemingly distinctive in nature, qualitative and quantitative methods can be
utilised to supplement each other for a well-rounded analysis. Jick (1979) argues that various notions share the conception that qualitative and quantitative methods should be viewed as complementary rather than as rival camps; moreover, there is a distinct tradition in the literature on social science research methods that advocates the use of multiple methods (ibid.). According to Creswell and Clark (2007), by mixing quantitative and qualitative datasets, researchers can provide ‘a better understanding of the problem [than] if the datasets are used alone’. A simple model is shown below in Figure 3-3 whereby both types of data are merged in the case of a single study for comparison and subsequent analysis.

These approaches cannot be used in isolation and therefore can be mixed and matched (Saunders et al., 2003) to give a more accurate picture of the research process.

![Figure 3-3: Merging quantitative and qualitative data in the case of a single study](image)

Creswell and Clark (2007) state that mixed methods research is based on the premise that it provides a better understanding of research problems than applying either approach alone, offsetting the weaknesses of each research technique used separately. This method thus seems to have strengths which are greater than the individual methods being applied alone, and provides a more comprehensive approach towards studying a research problem.
3.4.5 Triangulation

Of the four major types of mixed-method designs (triangulation, embedded, explanatory and exploratory designs), the most common and well-known approach is *triangulation* (Creswell and Clark 2007), which this study employs in order to analyse quantitative and qualitative data. Triangulation refers to the use of different data collection methods within one study, in order to ensure that the data are telling you what you think they are telling you (Saunders et al. 2003). Triangulation uses more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings. Since much social research is founded on the use of a single research method and as such may suffer from limitations associated with that method or from the specific application of it, triangulation offers the prospect of enhanced confidence (Bryman 2004).

According to Denzin (1978), triangulation combines methodologies of the same phenomenon in a study. Quantitative research provides answers to questions that ask ‘what, how many, how much, when, how long?’ while qualitative research seeks answers to questions such as ‘how, by whom and why?’. The combination of various methodologies leads to a well-rounded and informed formation of opinion. Jick (1979) argues that this design is largely a vehicle for cross-validation as two or more distinct methods are found to be congruent and yield comparable data, and it also tends to provide researchers with several important opportunities as it allows them to be more confident of their results, which is the overall strength of the multi-method design. The effectiveness of triangulation rests on the premise that the weaknesses in each single method will be compensated by the counter-balancing strengths of the other (*ibid.*).
By combining results obtained through various research techniques, triangulation tends to authenticate such findings.

Figure 3-4 above shows how data and information collected by three main methods (viz. semi-structured interviews, focus groups and direct observation) is combined to form an opinion. If only one of the methods is relied upon then, as expressed by Jick (1979), its weaknesses could go undetected, whereas employing all three methods will ensure that findings from one source can be checked by data/information from other sources. Bryman (2004) expresses this ‘validation process’ by stating that in triangulation, results of an investigation employing a method associated with one research strategy are ‘cross-checked’ against the results of using a method associated with the other research strategy. While interviews were being conducted in the field for this study, for instance, direct observation was also being made as an inherent element of the fieldwork. Certain observations were used to validate data collected during interviews. As most of the interviewing took place inside houses, it was easier to look at and physically verify certain household assets as interviewees gave the quantity and price. This was especially important for livestock, as the price of some of the buffalo and cows, for instance, could run into several thousands of rupees, depending on the breed. Some women who had borrowed for buying a cow or goats or chicken, would actually point to the livestock, their offspring and their estimated current market value. Similarly in the case of focus groups, special attention was
given to how the group participants reacted to certain arguments raised (amongst themselves) regarding issues on interest rates, usability of the loans, any benefit microfinance had, or whether it had plunged them even deeper into poverty. It was noted that some respondents who were otherwise shy and reclusive in talking much during the interview and were giving ‘one-line answers’ became suddenly charged with the atmosphere of the group discussion and the resulting conversation enabled cross-checking of what they had earlier expressed.

The interpretation of results, therefore, was based on interviews, notes and transcriptions from focus group discussions, with observation and validation as an ongoing process. Webb et al. (1966) suggest that once a proposition has been confirmed by two or more independent measurement processes, the uncertainty of its interpretation is greatly reduced. The most persuasive evidence comes through a triangulation of measurement processes. The purpose of using this design, therefore, is to bring together the differing strengths and non-overlapping weaknesses of quantitative methods (large sample size, trends, generalisation) with those of qualitative methods (small N, details, in depth) (Patton 1990, in Creswell and Clark 2007).

3.4.6 The convergence triangulation model

Within triangulation designs, Creswell and Clark (2007) identify four different models from which the convergence model has emerged for analysing the quantitative and qualitative data in this research. In this model, the researcher collects and analyses quantitative and qualitative data separately on the same phenomenon and then the different results are merged (by comparing and contrasting) during the interpretation. This enables researchers to directly compare and contrast quantitative statistical results with qualitative findings or to validate or expand quantitative results with qualitative data (Creswell and Clark 2007). Researchers need to consider the consequences of having different samples and different sample sizes when merging the two datasets. Different sample sizes are inherent in the design because quantitative and qualitative data are usually collected for different purposes (generalisation vs. in-depth description, respectively). It can be very challenging to integrate two sets of very different data and their results in a meaningful manner (ibid.).
This study uses semi-structured group interviews and focus groups to triangulate data collected via a structured questionnaire. These complementary research methods provide for both breadth and depth of understanding. Creswell and Clark (2007) state that the primary purpose of this design is to obtain different but complementary data on the same topic, which is why researchers use this model when they want to compare results or to validate, confirm, or corroborate quantitative results with qualitative findings.

Given the application of various quantitative and qualitative research techniques used during the course of this research, triangulation and particularly the convergence model will be most suitable to reach a well-informed analysis and interpretation of the data collected.
Figure 3-6: Evolitional account of the development of research paradigms

3.5 Research Design

The preceding sections discussed the methodological aspects of the research. It was noted that owing to the quantitative and qualitative nature of the data involved, the mixed-methods approach would be the most appropriate to answer the research questions as initially outlined. Furthermore, out of the four major types of mixed methods research designs, triangulation was identified as the most relevant to analyse both types of empirical data collected during the fieldwork. Based on these conclusions, the sections that follow examine how the research design and strategy can be best formulated to reflect the methodological issues discussed above. The research was designed in such a manner that appropriate, adequate and accurate empirical data could be gathered, upon which an opinion could be based regarding the depth of programme outreach and the impact of programme intervention on borrowers’ livelihoods.

*Research design* can be thought of as the structure of research – it is the ‘glue’ that holds together all the elements (Trochim 2006). It is used to structure the research, to show how all of the major parts of the research project – the samples or groups, measures, treatments or programmes, and methods of assignment – work together to try to address the central research questions (*ibid*.). As shown in Figure 3-7 below, Trochim (2006) categorises major types of research design across a simple threefold classification: if random assignment is used, the design can be called a *randomised experiment* or *true experiment*. On the other hand, if the design uses either multiple groups or multiple waves of measurement, it would be labelled as a *quasi-experimental design*, and if not, it would be called a *non-experimental design*. 
The section above discussed mixed methods and triangulation as approaches best suited for this study. Trochim’s (2006) model shown in Figure 3-7 above identifies two basic research designs: quasi-experiment and non-experiment. Before the relevant design is discussed at length, it would be appropriate to study a basic model to illustrate how and which factors interplay to bring change. Such a simple impact model is illustrated in Figure 3-8 below, showing how impact is brought about by an outside agent (in this case, microfinance programme intervention) and certain ‘external factors’. Such factors have been described as ‘those phenomena that cause or lead to changes, irrespective of the programme, such as increased level of household income due to increases not associated with the client’s activities, or macroeconomic conditions’ (Nelson et al. 2001). In addition to these obvious forces that have an impact, there are certain mediating variables which can be described as ‘those factors that enhance or constrain opportunities for change but are not directly linked to the programme intervention, such as gender of clients, number of household members and price of enterprise inputs’ (ibid.).
The design of this research centres on control and treatment groups in which the treatment or participation group is the one receiving the ‘treatment’, in this case, ‘borrowers’; the control group is used for comparison purposes (non-borrowers). Ideally, the control and treatment groups should have identical characteristics with the only difference being the administration of the treatment in question to the latter.

Briefly, the model operates as follows: to begin with, it employs two sets of people, both from the same rural dwellings and living in identical economic and social conditions. The only difference is that one set of individuals (the programme group) is subjected to microfinance intervention, while participants of the other (control) group are not subjected to any lending (the treatment). After a given period of time, the programme borrowers start to show signs of improvement (ceteris paribus) in terms of household income, expenditure, literacy, health, assets, etc. Subjects of the control group, on the contrary, continue (supposedly) to lead lives as before. The differences between the two groups, measured across identified dimensions and captured by variables and indicators, exhibit the impact that has taken place as a result of microfinance intervention.
Needless to say, there will be a wide range of factors that come into play, and impact being a highly complex phenomenon is not an entity that can be quantified so easily without recognising and appreciating the wider effects of the community and other external factors that come into play and may impact favourably or negatively towards the quasi-experiment.

In order to illustrate the model with the help of an algebraic expression, we can consider the following variables:

\[ a = \text{existing conditions of the inhabitants at start of programme} \]
\[ \delta = \text{dummy variable, will have a nil value if no borrowing has occurred, and '1' if the person is a programme beneficiary} \]
\[ x = \text{the change in circumstances (across identified indicators)} \]
\[ y = \text{the impact that occurs after a certain time}. \]

Since impact will be equal to the existing conditions of the borrowers (or non-borrowers) plus any changes that have taken place in the circumstances subsequent to programme intervention, the following equation can be derived:

Source: Modified from Hulme (2000)
This equation will now be tested under two possible scenarios:

**Scenario 1: no loan has been taken out, case of non programme-beneficiaries:**

\[ \delta = 0 \]
\[ y = a + 0 \times \]
\[ y = a \] ............. (2)

Other things remaining the same, the conditions of the inhabitants remain unchanged, as no borrowing has taken place.

**Scenario 2: A loan has been taken out, case of programme-beneficiaries:**

\[ \delta = 1 \]
\[ y = a + 1 \times \]
\[ y = a + x \] ............. (3)

The change \( (x) \) occurs in the circumstances due to borrowing, over and above their existing conditions \((a)\).

*The difference between the two scenarios*

\[ y = [a + x] - [a] \]
\[ y = a + x - a \]
\[ y = x \] ............. (4)

The difference between the two scenarios demonstrates that the programme group benefits, by an amount equal to ‘x’ from the borrowing, which shows the change in their circumstances, while the control group remains the same with no impact due to no borrowing taking place. This is represented graphically below:
3.5.2 Conducting Surveys to Collect Primary Data

The methods, design and research strategies discussed in the preceding sections were seen to have one underlying objective: to collect data and information through a variety of tools and techniques, such as face-to-face interviews, focus group discussions (or group interviews), structured and semi-structured questionnaires, and ethnographic observations. The nature of this study entails administering semi-structured questionnaires/interviews as a method for collecting primary data. Trochim (2006) argues that given advances in current research, sometimes it is hard to tell the difference between a questionnaire and an interview, as it is quite common to see questionnaires with open-ended questions (although they do tend to be shorter than in interviews) and there will often be a series of closed questions asked in an interview.

As discussed in detail in section 3.4.2.1, the primary survey instrument used for this study was a semi-structured questionnaire administered on a face-to-face basis. Eight focus groups were organised across various parts of the province of Punjab during the data gathering process, which generated valuable information and insight (details given in Table 3-3). Apart from these, various ethnographic procedures were adapted to gather first-hand knowledge of the livelihoods of the rural poor. Field notes, gathering a variety of information from different perspectives, cross-validation and triangulation of different kinds of data, direct observations, interviews, programme documentation and recordings, were all part of the field survey methods.
3.5.3 Questionnaire design: selection and choice of indicators applied

Section 3.4.2.2 has already looked in detail, along with examples from the field, at how the questionnaire was administered and what sort of data it captured. This section examines how and why the indicators were chosen that formed the underlying basis for designing and framing the questions in the primary field instrument.

In the sections above, semi-structured questionnaires were identified to be the primary instrument employed to gather field data. In social research, interviews tend to capture information on the respondents’ own behaviours or that of others as well as attitudes, norms, beliefs and values (Bryman 2004). As discussed earlier, a substantial part of the data gathering process was accomplished through face-to-face interviewing by means of a semi-structured questionnaire, which comprised both closed and open-ended questions. Certain indicators were classified into broad categories of rural livelihoods. These can be considered as the vehicles or the channels through which the actual process of impact takes place in development-related initiatives. Indicators that are selected to determine impact refer to measurable changes to borrowers’ livelihoods resulting from development initiatives instigated by third sector organisations, NGOs or MFIs. Broadly speaking, these variables pertain predominantly to indicators proposed by various institutions in an attempt to set forth a standardised and measurable set of indexes that determine human well-being in a society. This research principally explores the ‘harder’ and more tangible facets of impact as opposed to aspects such as gender and social well-being. However, owing to the intricacy of human behaviour and the complexity of outside elements or ‘externalities’ such as socio-political and socio-economic factors that come into play, it is difficult to identify a set of variables and indicators that are universally acceptable, applicable and appropriate.

Due to the multi-dimensional nature of poverty (Henry et al. 2003, Armendariz and Morduch 2005; Daley-Harris 2006), it is necessary to have representative indicators that accurately recognise, represent and characterise the poverty level of a typical household within the sample frame. Relying on only one (income or assets, for example) or even just a few indicators can seriously skew and distort the picture of the multi-dimensional nature of poverty (illustrated below in Figure 3-11) that this study captures.
This study classifies livelihoods across four dimensions, the characteristics of which are captured by a number of indicators. Briefly explained in the following paragraphs (and further detailed in Table 3-4 below) are the four major dimensions into which respective indicators were divided.

1. **Human resources**: perhaps one of the most detailed sections of the questionnaire, this part attempts to capture the demographic characteristics of households and their relationship to the earning capacity and overall well-being of individuals concerned. Aspects such as adult and children’s literacy, adults’ occupation, number of children, etc., are covered in this section.

2. **Dwelling-related indicators**: the indicators in this dimension tend to capture the dynamics that relate to fulfilment of basic needs by assessing the quality of housing and living conditions. Questions relate to house ownership, number of rooms in the house, source of water supply, type of toilet, bathroom waste disposal, energy for lighting in the house, type of fuel used for cooking, and type/material used for floor, exterior walls, and roof.

3. **Food security and vulnerability**: this dimension captures how well the household copes with food-related aspects such as number of days when staple and luxury food items are served.

4. **Ownership of household assets**: information is gathered regarding household assets in three categories: appliances and electronics, livestock, and transportation-related assets.

Source: Adapted from Henry, Lapenu et al. (2003)

![Figure 3-11: Dimensions, underlying components and their interrelatedness](source)
Dimensions were first identified and later screened to select those which are the strongest and have the capability to distinguish between relative levels of poverty. The final list was divided into four groups as shown in Table 3-4 below:

<table>
<thead>
<tr>
<th>Human resources</th>
<th>Dwelling-related indicators</th>
<th>Food security and vulnerability</th>
<th>Ownership of household assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age and sex of adults in household</td>
<td>House ownership</td>
<td>Number of days when staple foods were served</td>
<td>Livestock (Cattle and buffalo, sheep and goats, poultry, horses and donkeys, etc.)</td>
</tr>
<tr>
<td>Adult literacy</td>
<td>Type/material of floor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of children</td>
<td>Material used for exterior walls</td>
<td>Number of days when vegetables were served</td>
<td>Transportation-related assets (Motorcycle, bicycle, carts)</td>
</tr>
<tr>
<td>Occupations of adults in household</td>
<td>Material used for constructing roof</td>
<td>Number of days when meat was served</td>
<td>Appliances and Electronics (television, VCR, refrigerator, washing machine, audio/tape/stereo, mobile phone, sewing machine, etc.)</td>
</tr>
<tr>
<td>Number of children below the age of 15 in household</td>
<td>Number of rooms in the house</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual expenditure on clothing and footwear for all members in household</td>
<td>Source of water supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of toilet</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bathroom waste disposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Energy for lighting in the house</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of fuel used for cooking</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Structural condition of house</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3-4: Final list of variables used to construct poverty index

The choice of these variables for the calculation of the poverty scores was based on their global acceptability as indicators of poverty according to the CGAP poverty assessment tool (Henry, Lapenu et al. 2003). Due to the multi-dimensional nature of poverty, this approach is very sensitive in discriminating among different levels of poverty amongst both borrower and non-borrower households. In the context of this study, the rationale and grounds for selection of each dimension with associated variables is discussed at length in Chapter five, which
deals primarily with the application of data collected to generate a poverty index of surveyed households in the region.

3.5.4  The stakeholders involved and why they require assessment

Defining and categorising stakeholders of microfinance initiatives forms an essential element in conceptualising the framework of any impact assessment. Any effort to study programme impact will always begin by identifying the stakeholders interested in the results of the assessment exercise. They can be classified broadly into primary and secondary groups, the primary ones encompassing those who are the main intended beneficiaries, which form the target groups of the poverty alleviation programmes of the MFIs. Others may include the donors funding the programmes, the MFIs acting as the facilitators of the entire process, and to a certain extent, the MFI staff, who will be interested to know how well their efforts are materialising into visible impacts.

<table>
<thead>
<tr>
<th>Primary Stakeholders</th>
<th>Secondary Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowers</td>
<td>National and regional governments</td>
</tr>
<tr>
<td>Donors</td>
<td>Suppliers, customers, etc.</td>
</tr>
<tr>
<td>Microfinance Institutions (MFIs)</td>
<td>‘Third party institutions’, such as regular</td>
</tr>
<tr>
<td>MFI Staff</td>
<td>commercial banks, saving cooperatives, etc.</td>
</tr>
</tbody>
</table>

Source: Author’s construct

Table 3-5: The primary and secondary stakeholders involved in an impact assessment

Secondary stakeholders may include the regional and national governments which aid in providing policies at the macro-level by means of passing acts to provide a legal and constitutional administrative framework within which the MFIs and donors can operate conveniently. Programmes run by MFIs ultimately have a substantial impact on the national economy, which makes it even more important for the policy makers to have a clear idea of how well the entire MFI sector is performing in combating poverty. Another set of secondary stakeholders may be the suppliers and the customers of the microenterprises along with any third party institutions, such as regular commercial banks, or saving cooperatives. Both primary and secondary stakeholders have been listed in Table 3-5 above.
3.6 Ethical Considerations

Given the nature of this study, it was required to have an embedded and ongoing review of ethical issues regarding collection of data through interviews, focus groups and direct observation. In order to address the important issue of ethical principles involved, the six core principles articulated by the Economic and Social Research Council (ESRC 2008), called the Research Ethics Framework, were adopted as a guiding framework:

1. **Research should be designed, reviewed and undertaken in a way that ensures its integrity and quality.**

   Throughout the research design process, during the fieldwork and while analysing and interpreting the data for writing up findings, it was ensured that the highest possible levels of integrity, standards and professionalism would be adhered to.

2. **Research staff and subjects must be informed fully about the purpose, methods and intended possible uses of the research, what their participation in the research entails and what risks, if any, are involved.**

   This principle underpins the meaning of informed consent. Every participant was explained very clearly the objective of the interview, a general idea of what sort of questions would be asked, the importance of maintaining objectivity and integrity during the interview, how long it would take and what role their participation would play in the overall research.

3. **The confidentiality of information supplied by research subjects and the anonymity of respondents must be respected**

   From the outset, it was made very clear to interviewees that all information collected was purely for research purposes in order to better understand what sort of challenges they face and how borrowing has affected them. Anonymity was further ensured by stating that the interview would not capture any data on names or addresses. This proved instrumental in assuring respondents as well as encouraging them to provide candid responses.
4. **Research participants must participate in a voluntary way, free from any coercion**

All interviews and focus groups were conducted only after fully introducing the interviewer, and making respondents aware of the nature and type of questions and time involved. It was also ensured that informed consent was received freely from everyone involved. On a few occasions, some households refused outright to participate. In such cases, no attempt was made to convince, force or coerce them. Similarly, some consented to being interviewed but refused to participate when they were informed that certain questions would relate to household income, value of assets, etc. In such cases the questionnaire was not completed, respondents were thanked for their time, and no attempt was made to force them to participate further.

5. **Harm to research participants must be avoided**

This research did not involve any sort of physical examination, handling, etc. Gender-related issues were given special importance as most borrowers were women. They were all treated with respect and dignity, keeping in view religious observance, which becomes stronger in districts located in the remote, Southern part of the province.

6. **The independence and impartiality of researchers must be clear, and any conflicts of interest or partiality must be explicit**

The research was conducted in such a manner that it ensured the professional integrity of its design, the process of primary and secondary data collection, generation and analysis of data, and the publication of findings. There were no issues regarding conflicts of interest as the sample was selected at random, and borrowers were interviewed irrespective of the institutions of which they were clients.

3.7 **Assessing Depth of Outreach and Impact: Design Overview**

The first research question, as indicated in chapter one, relates to measuring the depth of programme outreach of various MFIs operating across rural Punjab in the North-Eastern part of Pakistan.
The underlying motive for this research was to assess and contrast the poverty levels of MFI clients with that of non-clients within the area being surveyed. The methodology applied was not designed or intended to provide information on the households’ absolute levels of poverty but to develop a poverty index of all the sample households. The ensuing poverty index provides a tool to calibrate relative poverty – the extent to which a household is worse off or better off compared to the other households within the surveyed sample frame (Henry, Lapenu et al. 2003). Once relative poverty levels are ascertained, the poverty index can be constructed, with which the depth of outreach can be subsequently determined. The impact on borrowers’ livelihoods, on the other hand, is measured by means of a series of statistical analyses that are based mainly on assessing whether borrowers fare relatively better than non-borrowers across the same rural dwellings. The steps to ascertain this are detailed in Chapter six.

3.8 Geography of the Surveyed Region

Out of Pakistan’s four provinces, Punjab is the second largest. It contributes more than 50 percent of the country’s GDP and is home to 56 percent of the total population. Punjab’s GDP growth rate for FY2007 was estimated at 7.8 percent (Haider 2008). The administrative structure of Punjab consists of 36 districts, further divided into 130 tehsils. The number of villages in every tehsil depends on the population density and geographical area. Figure 3-12 shows the location of Punjab along with the 36 districts into which it is divided.
3.9 Sample Selection Strategy

Given the nature of this study, it is necessary to draw samples of the individuals and households for interviewing purposes. Sampling is the process of selecting units (individuals and households, in this case) from a population of interest so that by studying the sample we may fairly generalise our results back to the population from which they were chosen (Trochim 2006). Samples are drawn from a ‘sampling universe’ that can be described as the largest entity from which the sample is drawn for analysis. In the case of this study, this is the entire province.

Sampling strategies can be classified as either non-probabilistic or probabilistic. Non-probabilistic sampling is used when the researcher is interested in specific areas and does not need to sample elsewhere. In such a technique, the probability of each case being selected from the total population is not known and it is impossible to answer research questions that require researchers to make statistical inferences about the characteristics of a given
population. **Probabilistic sampling**, on the other hand, is used when it is necessary to have a representative sample of the population (households or individuals, in this case), but it is possible to sample only a small percentage of the whole. By employing statistical methods, probabilistic sampling attempts to increase the probability that generalisations derived from the sample will be correct and applicable to the population as a whole, only if it is representative of the entire population (Saunders, Lewis et al. 2003; Trochim 2006).

Considering the nature of this study, the most appropriate sampling strategy would be one that is based on a combination of various methods, called multi-stage sampling. The dominating technique employed was based on Stratified Random Sampling, which involved dividing the population into homogeneous subgroups (or clusters) and then taking a simple random sample in each subgroup. In the case of this study, this was done along geographic boundaries.

In order to select households (as units of survey), the multi-stage sampling method in a four-stage random selection method was applied. In the first stage, 11 out of the 36 districts were selected from the entire province. Districts were picked systematically as opposed to random selection in order to control for social and economic disparities that occur across the province within various districts and tehsils. This ensured that the selected districts represented maximum and diverse geographical regions of the entire province. Starting from the North of the province, districts were selected towards the East, West and South (see Figure 3-12 and Table 3-6 for the selected districts). In the second stage, at least one tehsil was randomly selected from each identified district. In the third stage, at least two villages were subsequently selected from amongst the selected tehsils and in the fourth and final stage; participating and non-participating households were randomly selected for interviews. The size of the sample drawn from each village varied according to the population, but efforts were made to keep a balance of the borrower and non-borrower households so as to obtain a representative portrayal of each village covered in the survey.

By combining these different sampling methods, the process was able to make a representative selection from the sample universe.

A total of 1,132 households were interviewed for the survey, comprising 463 borrower and 669 non-borrower households.
Table 3-6 below lists the districts and gives a breakdown of the number of borrowers and non-borrowers interviewed during the course of this survey.

<table>
<thead>
<tr>
<th>No.</th>
<th>District</th>
<th>Non-Borrowers</th>
<th>Borrowers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chakwal</td>
<td>69</td>
<td>54</td>
<td>123</td>
</tr>
<tr>
<td>2</td>
<td>Khushab</td>
<td>75</td>
<td>27</td>
<td>102</td>
</tr>
<tr>
<td>3</td>
<td>Gujranwala</td>
<td>22</td>
<td>34</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>Chiniot</td>
<td>54</td>
<td>11</td>
<td>65</td>
</tr>
<tr>
<td>5</td>
<td>Lahore</td>
<td>71</td>
<td>31</td>
<td>102</td>
</tr>
<tr>
<td>6</td>
<td>Kasur</td>
<td>77</td>
<td>91</td>
<td>168</td>
</tr>
<tr>
<td>7</td>
<td>Sahiwal</td>
<td>38</td>
<td>17</td>
<td>55</td>
</tr>
<tr>
<td>8</td>
<td>Muzaffargarh</td>
<td>36</td>
<td>21</td>
<td>57</td>
</tr>
<tr>
<td>9</td>
<td>Bahawalpur</td>
<td>46</td>
<td>70</td>
<td>116</td>
</tr>
<tr>
<td>10</td>
<td>R.Y.Khan</td>
<td>76</td>
<td>50</td>
<td>126</td>
</tr>
<tr>
<td>11</td>
<td>Rajanpur</td>
<td>105</td>
<td>57</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>669</td>
<td>463</td>
<td>1,132</td>
</tr>
</tbody>
</table>

Source: Survey data

Table 3-6: Summary of the surveyed districts and the breakdown of borrowers and non-borrowers of the surveyed sample

3.10 Pilot Testing the Questionnaire

Pilot or pre-testing refers to the ‘trying out’ of a particular research instrument (Baker 1994) prior to its full-scale launch. One of the advantages of conducting a pilot study is that it might give advance warning about where the main research project could fail, where research protocols may not be followed, or if proposed methods or instruments are inappropriate or too complicated for the field (Teijlingen 2001). Pilot testing acts as a trial of the survey instrument prior to full execution of the survey, and helps to identify weaker areas of the questionnaire. It also assists in testing the effectiveness of the questions in capturing required indicators of relative well-being and in cross-checking validity of questions for implementation in the field.

The initial draft of the questionnaire was field-tested by conducting a series of full-length interviews. As a result, a number of indicators were altered in order to meet research objectives, to control for local specificities, and to ensure that they fully captured and reflected relative well-being and poverty levels of both groups of households. Indicators such
as those relating to highly contextual and subjective responses were subsequently dropped from the final field instrument.

The questionnaire initially contained questions that were designed to capture any savings held by both groups of respondents. During the pilot testing phase, it was discovered that very few people had savings accounts with mainstream financial institutions; even savings held with MFIs were almost non-existent, as requirements of most lenders for saving a specific amount each month were non-mandatory. In response to the savings-related questions, however, respondents mentioned saving via Rotating Savings and Credit Associations (ROSCAs), a popular and effective saving method in rural landscapes around the world. As a result, questions were tailored to capture information specific to this dimension, concerning monthly payment towards the scheme, how much they would get at their turn in the ballot, total amount of payments being made towards the programme, total amounts if participating in multiple schemes, etc.

Similarly, the initial version contained certain asset-related questions that were removed after pilot testing, as it became evident that they did not seem to effectively reflect relative poverty or well-being levels of respondents. Questions about beds, mattresses and fans, for instance were removed as most households possessed them. Radios were found to be almost non-existent. Electric or gas cookers were not found in rural areas; instead every house had an ‘earthen stove’, so questions about these were dropped. Questions of both ownership and value of mobile phones were included as it was observed that they are a good and effective indicator of relative well-being. In the final version of the questionnaire, interviewees were probed about the number and price of mobile handsets in the household.

One of the four dimensions related to food security and vulnerability and was designed to capture how well the household copes with food-related aspects. Preliminary versions of the questionnaire contained detailed questions such as consumption of eggs, meat, vegetables, lentils, fish, rice and dairy products. Initial testing of the questionnaire showed that it was very time-consuming and cumbersome for respondents to recall food items in such detail.

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3 Rotating Savings and Credit Associations (ROSCAs) are essentially a group of individuals who come together and make regular cyclical contributions to a common fund, which is then given as a lump sum to one member in each cycle, until all the members have received the lump sum in their respective turns. These turns are decided most commonly by a ballot or sometimes by mutual agreement (GDRC 1997).
with the accuracy required for effective analysis and interpretation of household food consumption patterns. The questions were subsequently revised and tested to be more effective by grouping food consumption into two broad categories, staple and luxury food items, and the recall period was found to be most accurate within the seven days immediately preceding the date of interview. The final field instrument therefore comprised questions about staple and luxury food items consumed during the last seven days, excluding any festival periods, and patterns of frequency of purchasing storable food items such as rice and wheat.

3.11 Secondary Data and Information

Apart from primary data collection from the field by means of semi-structured interviews, focus group discussions and ethnography, the research also places considerable emphasis on secondary data. A significant portion of this comprised the extensive review of literature on relevant themes, detailed in the previous chapter, which helped to clarify many issues relevant to the research. While discussing what information and knowledge a broad review of existing literature might reveal, Knopf (2006) argues that benefits might include new theoretical hypotheses, research methods, or policy recommendations. The review proved to be instrumental not only in establishing facts (Cook and Levington 1980), but also in identifying major findings in the area of inquiry. Rocco and Plakhotnik (2009) argue that a clear understanding of the differences among the literature review, theoretical framework, and conceptual framework provides better guidance for organising, conceptualising, and conducting research. Creswell (2003), on the other hand, states that a review of literature accomplishes many purposes including sharing with the researcher the results of other studies that are closely related to the study being reported. It also helps to relate to the larger ongoing dialogue in literature about a particular topic, filling gaps and extending prior studies; finally, it provides a framework for establishing the importance of this research as well as a benchmark for comparing the results of this study with other findings.

In addition to the review of existing literature, archival material comprising reports, publications and statistical information from a range of government documents was analysed to define, compare, reflect and contrast empirical findings in the study. Most of the information was drawn from surveys carried out at state level by state-run departments such as the Ministry of Finance, Federal Bureau of Statistics and State Bank of Pakistan. The
reports, monographs and findings published as a result of the surveys provide invaluable insight, data and statistics on the overall poverty-related trends of the country. Below are some of the documents that were drawn upon during the course of this study, listed out in two broad categories: national household-level surveys, and other data and reports published at the national level.

3.11.1.1 National Household-level Surveys:

- **Pakistan Social and Living Standards Measurement Survey (PSLM)** – is a national/provincial survey conducted by the Federal Bureau of Statistics and includes data on education, health, water supply, sanitation, and household perceptions of living standards. *(Latest edition: 2007-2008. Published in June 2009)*

- **Household Integrated Economic Survey (HIES) (2007-08)** is a national survey conducted by the Federal Bureau of Statistics and includes data on consumption, health, education, access to public health and other indicators of standard of living.

- **Pakistan Demographic Survey – 2007** comprises vital statistics such as the data from the Civil Registration System (birth and death registration system) and population census.

- **Pakistan Rural Household Survey (PRHS)**

- **Pakistan Socioeconomic Survey (PSES) 1998-1999**

- **Pakistan Labour Force Survey (LFS)** – is a national survey carried out annually and includes characteristics of the labour force (marital status, literacy education, etc); labour force participation rates; employment, unemployment and underemployment statistics; and occupational safety and health.

- **Poverty Reduction Strategy Paper-II (2009)**
3.11.2 Other Publications at the National Level:

- *Pakistan Economic Survey (PES – 2008-2009)*: Conducted by the Ministry of Finance, Government of Pakistan, contains data on growth and investment, agriculture, manufacturing and mining, poverty, fiscal development, money and credit, trade, external debt and liabilities, education, health and nutrition, population, transport and communication, energy and environment.


- *Federal Budget (2009-2010)*

- *Macro Economics Indicators (1951-52 to 2008-2009)*

- *National Accounts (Current) (1960-61 to 2008-2009)*

3.12 Data Coding, Entry and Reliability

3.12.1 Data coding

The questionnaire comprised structured and semi-structured questions designed to capture data across the four dimensions shown in Table 3-4 above. The type of each question was driven by the nature of information required and the nature of the information generated, therefore varied accordingly. The data collected by responses to individual questions had to be coded before being processed, analysed and reported. Before entering data into a computer, a code was developed to indicate how each variable was recorded (whether it was the actual value or a code). Given the nature of each question, classifications and subsequent coding were made according to the following three categories:
3.12.1.1 Ordinal variables

Those variables whose categories can be rank-ordered according to a clear classification mechanism are called ordinal variables (Bryman 2004). A unique characteristic is that the distances between the categories are not equal across the range. Some examples from the questionnaire are given below to show ordinal variables:


3.12.1.2 Nominal/categorical variables

Categorical or nominal variables are those which belong to two or more categories, but cannot be rank-ordered as there is no intrinsic ordering to the categories, which means that there is no agreed way to order them from highest to lowest. Categorical variables thus simply allow assignment of categories but not a clear ordering of the variables in terms of some specific order of preference. If the variable had a clear ordering, then it would be an ordinal variable, as described above. Questions that relate to the physical dwelling-related indicators can be considered as examples of this type of classification, as given below:


What were the consequences faced in case of a missed payment for loan instalments? [0] No missed payments [1] Had to borrow from family/friends [2] Had to sell household assets [3] Had to take out further loans [4] Assets were forcibly sold by MFI staff to recover payments.

3.12.1.3 Dichotomous variables

Discrete categorical variables with just two possible values, levels or choices are classified as dichotomous variables. Observations that can be classed into only two groups include ‘male
or female’, ‘true or false’, and ‘yes or no’. Examples from the questionnaire include the following:

Are you a current MFI client? [0] No [1] Yes

Have you borrowed from one MFI or more? [0] One [1] Multiple

Purpose of Loan: for new business or expansion: [0] New business [1] Expansion

3.12.2 Data entry

The data was initially entered in a Microsoft Excel® template. In order to analyse the data to seek answers to the two primary research questions, the depth of programme outreach and the impact on borrower livelihoods, a series of basic calculations were done in MS Excel® such as adding together the total amounts of borrowing, the total of assets across the various categories, value of assets per person, rooms in house per person and per person household expenditure. The data was eventually exported to specialised statistical applications (STATA and SPSS) for running various tests and further calculations.

3.12.3 Data cleaning and reliability

Chapman (2005) insists that no matter how efficient the process of data entry, errors will still occur and therefore data validation and correction cannot be ignored. Data cleaning is therefore an essential part of managing information in an efficient manner. Chapman (2005) defines it as ‘a process used to determine inaccurate, incomplete, or unreasonable data and then improving the quality through correction of detected errors and omissions’. Once the questionnaires were completed, the data cleaning process included a series of steps taken to ensure that data was accurate and consistent. Various checks were made such as format checks, completeness checks, consistency checks and rationality checks. Various dedicated computerised techniques were also applied (such as those offered by SPSS) to detect and account for outliers in the data.

3.13 Conclusion

This chapter focused primarily on research methodology and design. It opened with a discussion of the theoretical perceptions that underpin the study. Underlying knowledge
claims and relevant philosophical stances were also examined (positivism, post-positivism, interpretivism, constructivism, pragmatism).

Three major strategies of inquiry (quantitative, qualitative and mixed methods) were identified in the research methodology. Given the nature of the study, it was noted that all three strategies form an important and integral part of the research, but as the study makes use of both types of data collected simultaneously, the mixed-methods concurrent explanatory design would be the most suitable design (Creswell and Clark 2007). Moving on, out of the four major types of mixed-method designs (triangulation, embedded, explanatory and exploratory), the triangulation convergence model was found to be the most relevant as it uses more than one approach for investigating a research question in order to enhance confidence in the findings that follow. This model tends to obtain different but complementary data, which is why researchers use this model when they want to compare results or to validate, confirm, or corroborate quantitative results with qualitative findings (ibid.).

In terms of research design, and given the use of the treatment and control groups for comparison purposes, the quasi-experimental research design model was found to be most appropriate for this study. The four dimensions across which household characteristics are captured by a series of indicators were discussed, along with the geography of the surveyed region and the sampling strategy employed. The advantages of pilot testing the questionnaire before full-scale launch were also discussed, alongside the various changes and modifications that were made to adapt it to the local environment. This was followed by issues pertaining to the coding, entry, reliability and cleaning of data for further analysis and interpretation.
Table 3-7: Summary of levels of decision and selection of relevant approaches and strategies

Table 3-7 above shows the various levels of decision that were involved over the entire research process. Chapters five and six deal with the empirical aspect of this study and implementation of the identified research approaches, methodologies and data collection methods, to set the stage for further analysis and interpretation.
Chapter 4 : Poverty, Development and Microfinance: Reflections from Pakistan

4.1 Introduction

The first chapter comprised a discussion of this study and outlined the research questions that it subsequently addresses. The second chapter reviewed literature relevant to the research questions and analysed various related studies conducted across the developing world, with particular emphasis on Pakistan. The third chapter explored the theoretical underpinnings of this study and expounded the methodological approach that has been employed to address the research questions set out in the first chapter. It also laid out the design and methodology that was employed to collect and analyse data from the field. The current chapter examines the geographical and economic context within which this study takes place. It presents background information on Pakistan, the current state of poverty and well-being of its people, the political context and the overall economic standing of the country.

The rest of the chapter is organised as follows: the section that follows briefly explores the country’s history and looks at its geographic setting in South Asia. The current and past political state of affairs along with a demographic profile is also discussed. Section 4.3 examines Pakistan’s macro-economic outlook, its current state and the challenges it faces. GDP, inflationary and unemployment trends are discussed and regional comparisons are made to put the current state of the country’s affairs in the wider context. Section 4.4 is devoted to the history, current status and poverty incidence in Pakistan. This is followed by a section that explores various initiatives at the state level to combat poverty. Section 4.6 discusses the access and outreach of financial services in the country. The last section converses in detail on the microfinance sector in the country, how it evolved and developed over the years, how it is regulated by the state, its level and extent of outreach, and, finally, the challenges that the country faces today.

4.2 Background

4.2.1 Historical perspective and geographic setting

The Indus Valley civilisation, one of the oldest in the world and dating back at least 5,000 years, spread over much of what is now Pakistan (CIA 2010). The civilisation was centred in
the Western part of the Indian Subcontinent (Possehl 1990; Kenoyer 2008), and flourished around the Indus River and Punjab region extending into the Western part of India and across some parts of Afghanistan, Baluchistan and Iran (Leshnik 1968; Possehl 1990; McIntosh 2001; Ratnagar 2006). Over the centuries, the region was successively invaded by Indo-Aryans, Persians, Greeks, Arabs, Turks, Afghans, Mongols and eventually the British. According to Udayakumar (1997) ‘prior to British colonization, there were 88 true kingdoms in the South Asian sub-continent, each with its own rulers, distinct culture, language and religions’.

The British gradually took control after establishing the East India Company in 1608, through which they initially administered most of the Indian Subcontinent, until the Indian-led Sepoy Rebellion of 1857 seriously challenged British occupation and caused the British government to administer India directly (The Library of Congress, 2005). Their rule lasted until 1947 when the British Indian Empire was eventually partitioned into two sovereign dominion states: the Union of India (later the Republic of India) and the Dominion of Pakistan (later the Islamic Republic of Pakistan) (Brown et al. 2009). Unfortunately, ensuing migration across borders resulted in great losses of human life as violence erupted during the process. Bharadwaj et al. (2008) contend that the partition of Pakistan and India along religious lines resulted in the largest migration in human history, with over 17 million people fleeing across the borders in both directions to escape consequent sectarian violence.

As shown in Figure 4-1 below, Pakistan is located in a region broadly referred as ‘South Asia’. It has common borders with four countries: Iran is situated towards the Southwest (909 kilometres), Afghanistan (2,430 kilometres) to the West and North, China (523 kilometres) to the Northeast, and India (2,912 kilometres) to the East. The Arabian Sea marks Pakistan’s Southern boundary with a coastline spreading over 1,064 kilometres. The country’s exact size is debatable due its disputed border with India. The United Nations and the Pakistan government place the total area at 796,095 square kilometres. This figure, however, does not include the Pakistan-administered portions of Jammu and Kashmir (known as Azad Kashmir and the Northern Areas, 11,639 and 72,520 square kilometres, respectively). These areas are claimed by Pakistan, but because their possession is disputed, they are not included in official land area statistics (The Library of Congress, 2005).
4.2.2 Current and past political state of affairs

Despite being rich in natural resources, manpower and fertile land, unfortunately the country has been struggling both politically and economically ever since independence. The political upheaval in the form of assassinations, military coups d’état and political squabbling within and across parties, and the recent involvement of the judiciary in politics have led to continuous political unrest. All such activities resulted in unstable periods of power that have alternated between democratically-elected representatives and military rule almost since its creation (Kronstadt 2003, 2008).

Despite several diplomatic efforts, Pakistan has never been able to normalise relations with its neighbour, India. A major source of tension between the two countries has been a
terrestrial dispute over the Kashmir region that originated with the partition in 1947 and remains unresolved. It has borne a heavy share of responsibility for two wars between the countries, for their massive arming, and for the entanglement of both in cold war alliances. In spite of various talks and confidence-building measures that have begun to defuse tensions over Kashmir, particularly since the October 2005 earthquake in the region; Kashmir still remains the site of the world’s largest and most militarised territorial dispute (CIA 2010) which, according to Wirsing (1998), has inflicted immeasurable costs on both countries’ social, economic and political systems and has been an enormous impediment to the normalisation of their relations. They have been waging a frustrating and exhausting struggle for Kashmir, a struggle that consumes heavy budgets that burden their already uncertain economies (Brecher 1953; Korbel 1954; Zacher 2001). According to IFC (2008), despite the prolonged dispute and although the peace process currently appears to be generating dividends, regionally there still remains the potential for further conflict with India over Kashmir.

Afghanistan, on the other hand, disputes the legitimacy of its border with Pakistan and so far, all international efforts have failed to address longstanding disagreements over ‘the Durand Line’ border dispute and the Pushtunistan issue – which in turn impairs the two countries’ cooperative capacity in the anti-Taliban campaign (Qassem 2007).

Apart from the border issue, over the decades Pakistan has been inadvertently involved and dragged into war in neighbouring Afghanistan with both local as well as invading armies. The recent involvement of the country in the ‘war against terror’ in Afghanistan and its repercussions have drained the economy even more and caused further instability and conflict within the country itself. Reporting on the associated economic costs, Salman (2009) writes that the country suffered $6 billion economic losses during 2007-08 and $10 billion during 2008-09, while in July 2009, the Government claimed that the war on terror had already cost the country $35 billion. Apart from this heavy financial burden, the loss of human lives has also been phenomenal and no other nation has lost more troops in the fight against terrorism than Pakistan. The figure now stands at nearly 3,000 since 2001, but in addition more than 10,000 Pakistani civilians have lost their lives to terrorism since 9/11 (Tavernise, Gall, et al 2010; Hasan 2010; Komireddi 2010).
As the war is prolonged, the US and allied forces continue to seek co-operation and accountability from Pakistan. In spite of all efforts, the US continues to find it difficult to achieve its goal in the region of nullifying what it calls ‘Islamist militancy’ even if it receives unstinting and effective long-term co-operation from the Pakistani government and military. Despite assurances, it is highly unlikely to receive this degree of co-operation from Pakistan, particularly as the US is considered to be using its presence in South Asia merely to advance its own priorities and is also perceived to be trying simultaneously to strengthen its relationships with India, Pakistan’s long-standing enemy (The Economist 2010).

While Pakistan faces war and conflict with neighbouring countries, internally, the government’s perceived bias towards Punjab, the most affluent province in the country, has upset the population of underdeveloped areas, such as Baluchistan. This unrest often results in political violence, with militants sabotaging important infrastructure, such as natural gas pipelines (IFC and Kfw Bankengruppe, 2008). Grare (2010) argues that reforming civilian security forces, particularly the police, would help restore confidence in the government and its ability to protect its people, thereby increasing its political legitimacy. The escalating violence has taken a heavy toll on the economy, and according to IFC (2008), Pakistan’s long-term outlook is unpredictable because terrorism, sectarian tension, and deepening socio-economic divisions are undermining stability, while security concerns are being raised by threats from militant groups and regional conflicts.

4.2.3 Demographic profile of Pakistan

According to the Government of Pakistan’s Population Census Organization (GoP 2010), the estimated population stood at 170 million in September 2010. With an average annual growth rate of 1.5 percent, it is expected to reach almost 200 million by 2015, the year to achieve the Millennium Development Goals (MDGs). Despite falling growth rates, Pakistan is still the sixth most populous country in the world; 36 percent of the total population is urbanised, with an estimated 113 million still living in rural areas (CIA 2010). Given an area of 796,095 square kilometres, the population density is 214 persons per square kilometre, with 2 percent of the world’s population living on less than 0.7 percent of the world’s land (The Library of Congress 2005). According to the projections of the United Nations, Pakistan will become the world’s third most populous country by 2050.
<table>
<thead>
<tr>
<th>Country</th>
<th>World Population Rank</th>
<th>Population</th>
<th>Urbanisation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Millions (July 2010 est.)</td>
<td>Growth Rate (% P.A)</td>
</tr>
<tr>
<td>India</td>
<td>2</td>
<td>1,173</td>
<td>1.4</td>
</tr>
<tr>
<td>Pakistan</td>
<td>6</td>
<td>170</td>
<td>1.5</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>7</td>
<td>158</td>
<td>1.3</td>
</tr>
<tr>
<td>Nepal</td>
<td>43</td>
<td>29</td>
<td>1.4</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>55</td>
<td>21.6</td>
<td>.86</td>
</tr>
<tr>
<td>Bhutan</td>
<td>164</td>
<td>0.7</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Sources: Compiled from CIA World Factbooks and Government of Pakistan’s Population Census Organization (2010)

Table 4-1: Pakistan’s population and urbanisation in the South Asian context

Table 4-1 shows Pakistan’s standing in the South Asian regional context in terms of estimated population and its density (at July 2010), the rate of population growth and its urbanisation. Hussain, Malik et al. (2009) state that Pakistan is experiencing a continuous increase in its population growth rate because of sustained high fertility and declining mortality. According to the UN’s World Fertility Report (2010), for the period 1994-2005, fertility in those Asian countries with available data ranged from a minimum of 0.9 children per woman in Macao (China) to 6.7 children per woman in Yemen. Pakistan stood in third place with 4.8 children per woman.
Compiled from a variety of sources, Figure 4-2 shows Pakistan’s population growth rate over a century. It ranges from 1.6 percent (recorded in 1911) to the CIA’s (2010) estimate of 1.5 percent in 2010. The rate of growth has altered inconsistently over the years, growing steadily till the mid-eighties, peaking at 3.6 percent, after which it dropped constantly, reaching 1.82 percent, the lowest recorded rate in recent times, after which it is estimated to have been stable at 2 percent over the last five years. Sathar (2001) attributes the high growth rate to high fertility and declining mortality, and argues that Pakistan needs to converge rapidly with the lower fertility patterns of neighbouring countries in the region; if the rate is not controlled, ‘it is very likely that Pakistan will continue to lag behind its South Asian neighbours’ (ibid.).

4.3 Pakistan’s Economic Situation and Regional Comparisons

Pakistan’s economic and political history has been turbulent, with periods of stability and growth often followed by sudden instability and economic slowdowns and even downturns (PMN 2008). During the five years immediately preceding the fiscal year 2007/08, the country’s economy more than doubled in size with an annual GDP growth rate averaging 7
percent. With relative price stability, the debt burden was reduced to one-half, foreign exchange reserves were sufficient to provide import cover for over six months, the stock market was one of the best performing in emerging markets; foreign direct investment touched close to 6 percent of GDP (GoP 2009). Major accomplishments during that period were wide-ranging reforms, macroeconomic stability and reduction in poverty levels (MFI-PFN-2008).

The slow but persistent road to prosperity was short-lived, however, and the economy nose-dived in the next fiscal year. The strategic geographical location of the country and various militant factions on its borders exposed its economic activities to drastic changes with far-reaching implications for its people, especially the rural poor who are more susceptible to such shocks. According to the Ministry of Finance (GoP 2009), the outlook for economic growth has become increasingly pessimistic, the import demand has constantly been shrinking, tax collection has declined, and inflows of foreign investment have slowed. The economy still faces pressures from higher inflation driven by increases in food prices, power shortages, an unstable stock market, a perceptible slowdown in the manufacturing and services sectors, lower than anticipated inflows and growing financing requirements. The ministry has, however, taken a series of measures for long-term sustainable economic growth, such as the macroeconomic stabilisation programme, which aims at tightening the monetary policy to aggregate demand compression up to a meaningful level and lower the national inflationary trend (GoP 2009).

4.3.1 GDP growth trend – country and regional perspectives

Gross Domestic Product (GDP) is a standard indicator used to measure any country’s economic performance. It is perhaps the mostly widely used indicator of well-being and can be described as the market value of all final goods and services a country produces in a given year. It equates to total consumer, investment and government spending, plus the value of exports minus the value of imports (Maro 2007). Although some economists argue that GDP is merely a simple measure of production, over time the idea has evolved that a growing GDP means a stronger economy and improvement at the societal level (Messinger, in Haggart 1999).
By convention, as opposed to referring to the actual ‘dollar-value’ GDP figures, the rate of growth in GDP over a given time period (expressed in percentage terms) is used to depict an economy’s performance. Haggart (2000) argues that as the GDP growth rate reflects changes in an economy, it provides a better snapshot than any existing measure since it summarises a whole range of economic information in one number.

The pattern in Pakistan’s GDP growth rate has been erratic. It enjoyed an impressive growth rate averaging almost 5.7 percent per annum for nearly four decades until the end of the 1990s. It peaked at 6.8 percent during the 1960s and gradually dropped to a mere 2.0 percent during 2000-01. The economy started to recover in the second half of 2002, and gained momentum during 2003, when it expanded at a pace not seen in the preceding six years. The substantial improvement in key macroeconomic fundamentals achieved in 2002 was further consolidated in 2003, with the current account surplus increasing sharply, foreign exchange reserves touching new highs, the overall fiscal deficit declining further, and inflation remaining low, while export growth was also recorded as the highest in over a decade (ADB 2004). The growth consistently touched 9.0 percent in 2004-05, the highest recorded in the country’s history.

Such growth was short-lived, however, and after achieving a rate of 6.8 percent in 2006-07, Pakistan experienced a declining rate of economic growth; during 2007-08 it was recorded at just 3.7 percent and continued to drop constantly, reaching its lowest ebb in the country’s history at just 1.2 percent during 2008-09, owing to the global economic crises during that period. According to government surveys (GoP 2010), measures of macroeconomic stability achieved over the past two years have kindled a moderate recovery in the economy, despite one of the most serious economic crises in the country’s recent history. Although the economy grew by a provisional 4.1% in the past year (2009-10), the recovery is still fragile and stabilisation needs to be consolidated so that the gains over the past two difficult years are not lost.

Figure 4-3 below shows how the GDP has oscillated from the 1960s, up to the government’s latest provisional estimate of 4.1 percent.
Although the economic survey cited above (GoP 2010) defends the extremely low growth rate of 1.2 percent in 2008-09 and attributes the poor performance to the global recession, a regional comparison, however, portrays a different picture. As shown in Table 4-2 and expressed graphically in Figure 4-4, it is obvious that the country’s performance was the worst in the entire region, with all other countries (apart from Sri Lanka) posting GDP growth rates of well over 4 percent. Surprisingly, the South Asian region as a whole performed well and registered high growth rates (5.7 percent), while the world (taken together) posted a negative growth rate (-0.6 percent) during this period of recession. Viewed in the perspective of regional average, Pakistan’s extreme fragility, lack of resilience and dependence on the world’s economy becomes evident.

Sources: Data compiled from: Economic Surveys of Pakistan (GoP 2009,2010)

Figure 4-3: GDP growth rates of Pakistan from the 1960s to the present
Table 4.2: Comparison of real GDP growth rates of South Asian countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Real GDP Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>World</td>
<td>3.0</td>
</tr>
<tr>
<td>South Asia</td>
<td>5.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>6.2</td>
</tr>
<tr>
<td>India</td>
<td>6.7</td>
</tr>
<tr>
<td>Nepal</td>
<td>5.3</td>
</tr>
<tr>
<td>Pakistan</td>
<td>3.7</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Sources: Data compiled from: World Economic Outlook 2010, IMF and Economic Survey of Pakistan (GoP 2010) and Economic and Social Survey of Asia and the Pacific 2010 (ESCAP, UN).

Figure 4.4: Comparison of Pakistan’s GDP growth rate against other South Asian countries and the world
4.3.2 Economic outlook and challenges ahead

Despite the optimistic provisional growth rate for 2010 of 4.1 percent (as opposed to 1.2\% recorded in the previous year) good macroeconomic performance remains difficult in the near term with continuing challenges. The global economy remains in turmoil, with uncertain prospects in the demand for Pakistan’s exports. In addition, the energy and water shortage, floods, the internal security situation, and involvement in the war in Afghanistan could constrain growth in 2010-11 (GoP 2010). According to the Economic Survey of Pakistan (GoP 2010), the more positive outturn for economic growth in the current fiscal year comes despite heavy costs that the economy has had to bear in the previous two years on account of the internal security situation, combined with the severe energy shortfall. The latter is estimated to have reduced overall GDP growth by approximately 2.0\% in 2009-10. Despite the weakening internal security situation, overall military spending as a proportion of budget outlays has declined. Another major expense has been the rehabilitation of Internally Displaced Persons (IDPs) and reconstruction of affected areas. It is relevant to note that during 2009, Pakistan had one of the largest IDP populations in the world, with an estimated 3 million people displaced from their homes in Swat, Bajaur, Malakand division, and South Waziristan Agency (SWA). The associated costs with re-housing, lost revenues and stabilising millions of displaced livelihoods caused a severe dent in the economy.

The modest growth in the economy during 2009-10 is owed partially to substantial transfers to the rural sector over the past two years via the government’s crop-support price policies which, combined with higher remittances from workers overseas, have sustained aggregate demand in the economy. Moreover, an unexpectedly large cotton harvest aided in offsetting the moderately negative impact on the wheat crop caused by a delay in seasonal rains (GoP 2009, 2010). Despite the optimistic outlook, the durability of the economic turnaround is far from assured; given the significant challenges the economy faces, primarily because not all sectors of the economy or regions of the country appear to have participated so far in the modest upturn. Furthermore, in order to meet the employment aspirations of the large number of entrants to the labour force, a higher sustained growth rate will need to be achieved in the medium term (GoP 2010).

Although this chapter has used the government’s estimates of 4.5\% growth in GDP, and an inflation rate of around 9.5\% in the next financial year, the targets do not seem
achievable owing to the recent widespread flooding. Pasha (2010) argues that according to one extreme estimate by the Ministry of Finance, there could be zero GDP growth in 2010-11 and inflation could rise sharply to as much as 25 percent. According to Pasha (2010), contributory factors to such high inflation rates are ‘supply shortages of basic food items including food grains, vegetables and livestock products, faster expansion in money supply (including borrowings from the SBP) to finance the expected higher fiscal deficit and the likelihood now of a somewhat faster depreciation of the rupee. Of particular concern is the prospect of food prices rising by up to 25 per cent with severe impact on poverty levels. The economic prospects are indeed very depressing. The economic managers of the country will have to develop an effective strategy of not only mobilising and disbursing resources for the relief and rehabilitation and for the subsequent large-scale reconstruction effort but also for providing some protection to the general population affected by rising unemployment and exploding food prices’.

4.3.3 Inflationary trends in Pakistan

Despite drastic corrective monetary policy measures, inflation still remains a major impediment to growth and a threat to the overall economy. In the long term, inflation is considered to be in Friedman’s (1963) words ‘always and everywhere a monetary phenomenon’. Therefore, understanding the factors that drive inflation is fundamental to designing monetary policy (Khan and Schimmelpfennig 2006).

Figure 4-5 plots the inflationary trend in Pakistan for the two decades 1990-2010. The economy seemed to maintain a consistent tendency until the fiscal year 1995-1996, after which it began to drop consistently until it was recorded at its lowest point of 3.1 percent. During the past decade, inflation peaked at 9.28 percent in the financial year 2004-2005, primarily due to global oil prices and strong domestic demand. Tightening the monetary policy led to controlling inflation at 7.77 percent in the 2006-2007 financial year, but it worsened again in the following year, touching 12 percent (PMN 2008). The situation continued to worsen in tandem with the declining economic performance, rapidly escalating to an all-time high of 20.77 percent in 2008-2009.
Sources: Economic Surveys of Pakistan (GoP 2009, 2010)

**Figure 4-5: Pakistan’s inflationary trend from 1990 to 2010**

Plotted against the GDP growth rate shown in Figure 4-6, the pattern becomes obvious, particularly after 2006-2007 when the GDP growth rate plummeted and inflation rose correspondingly. Inflation today remains one of the biggest challenges to policy makers as food and oil prices can push an increasing number of people below the poverty line, with an energy shortage resulting in a slowdown in production and investment (PMN 2008; GoP 2009, 2010).
According to the *Economic Survey of Pakistan* (GoP 2010), other factors that have contributed to the spike in inflationary pressure over the past two years include:

- The weakening of the Rupee over the past two years
- Increase in the domestic procurement price for wheat
- Residual Aggregate Demand pressures in the economy emanating from substantial transfers to the rural economy on account of an unprecedented government-run commodity procurement programme, and a healthy increase in worker remittances
- The ‘washing out’ of a favourable base effect is now exerting a negative influence on the inflation comparison from year-ago levels, and is likely to intensify over the next few months.

Sources: Economic Surveys of Pakistan (GoP 2009, 2010)

**Figure 4-6: Comparison between inflationary and GDP growth rate trends**

Inflation and GDP growth rates chart
4.3.4 GDP and inflation: regional comparisons

Given this backdrop of global price developments, it is unsurprising that the sharp resurgence of inflation is not restricted to Pakistan and is both a global as well as a regional phenomenon, though with varying orders of magnitude. India’s food-price inflation soared to 19.2 percent in December 2009, before settling at 16.7 percent in March 2010. Similarly, food inflation in Bangladesh rose from 3.3 percent in July 2009, to 10.9 percent in February 2010 (GoP 2010). As in the case of falling GDP growth rates in the backdrop to the global financial crisis, inflationary trends show a similar pattern, as shown in Table 4-3 below.

<table>
<thead>
<tr>
<th>Source</th>
<th>Real GDP Growth</th>
<th>Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td>South Asia</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>6.2</td>
<td>5.9</td>
</tr>
<tr>
<td>India</td>
<td>6.7</td>
<td>7.2</td>
</tr>
<tr>
<td>Nepal</td>
<td>5.3</td>
<td>4.7</td>
</tr>
<tr>
<td>Pakistan</td>
<td>3.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>6.0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Sources: Data compiled from: World Economic Outlook 2010, IMF and Economic Survey of Pakistan (GoP 2010) and Economic and Social Survey of Asia and the Pacific 2010 (ESCAP, UN)

Table 4-3: Rate of economic growth and inflation in South Asian economies, 2008-2010

As the sharp rise in food and fuel prices generated a rapid acceleration of inflation in both high-income and developing countries during 2008, the unprecedented slowdown in the global economy, on the other hand, witnessed a mixed trend of inflation during 2008-09. In Table 4-4 the pattern seems uniform across both developing and developed countries. Peaking at 3.8 percent in high-income countries, inflation in the developing world was recorded at 10.3 percent, while the rate in Pakistan almost touched a staggering 21 percent, the highest recorded in the country’s history.
<table>
<thead>
<tr>
<th>Year</th>
<th>Developed Economies</th>
<th>Developing Economies</th>
<th>Pakistan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>2.3</td>
<td>3.6</td>
<td>3.54</td>
</tr>
<tr>
<td>2003</td>
<td>2.1</td>
<td>4.4</td>
<td>3.10</td>
</tr>
<tr>
<td>2004</td>
<td>2.0</td>
<td>4.5</td>
<td>4.57</td>
</tr>
<tr>
<td>2005</td>
<td>2.1</td>
<td>6.0</td>
<td>9.28</td>
</tr>
<tr>
<td>2006</td>
<td>2.2</td>
<td>6.1</td>
<td>7.92</td>
</tr>
<tr>
<td>2007</td>
<td>2.1</td>
<td>6.5</td>
<td>7.77</td>
</tr>
<tr>
<td>2008</td>
<td>3.8</td>
<td>10.3</td>
<td>12.00</td>
</tr>
<tr>
<td>2009</td>
<td>0.8</td>
<td>3.9</td>
<td>20.77</td>
</tr>
<tr>
<td>2010</td>
<td>1.6</td>
<td>4.9</td>
<td>11.49</td>
</tr>
</tbody>
</table>

Sources: World Economic Outlook April 2010 (IMF), GoP 2009, 2010

Table 4-4: Rate of inflation in developed and developing economies compared to Pakistan: 2002 to 2010

Figure 4-7 below shows the trend that compares how rates of inflation have altered over the years across the developing and developed countries. Pakistan’s inflation, illustrated for comparative purposes, depicts how the inflation rate gradually rose, in tandem with both the developing as well as developed countries, particularly until 2008 (which seems to tie up neatly with the global economic recession), but the country’s poor performance is reflected in the following year in which, when the developed countries registered a drop from 3.8 percent to just 0.8 percent and the developing countries’ inflation rate went down from 10.3 percent to 3.9 percent, Pakistan’s inflation went up almost nine percentage points from 12 percent to almost 21 percent.
Inflation and unemployment trends in Pakistan

According to the classical view, inflation is triggered by changes in money supply, and as the money supply rises, so do the price levels. Inflation in Pakistan has been a major impediment to development-related efforts and the country’s economy still faces pressures from higher inflation driven by a spike in food prices, acute power shortages, a bewildering stock market, perceptible contraction in large-scale manufacturing, slowdown in the services sector, lower than anticipated inflows and growing absolute financing requirements (GoP 2009a).

While the population suffers from rising prices, unemployment has seen a steady shift upwards, estimated at 5.5 percent in 2008-09, up from 5.2 percent in 2007-08 (GoP 2009e), thus adding to the misery of those already in poverty. Productive, full and decent employment are central elements of development as well as decisive elements of human identity. Sustained economic growth and sustainable development together with the expansion of
productive employment opportunities should go hand in hand. Full and adequately remunerated employment is an effective method of combating poverty as well as promoting social integration (UN 1995; ILO 2009).

Unemployment and inflation have always been viewed by economists as two intricately linked concepts. The relationship between unemployment and inflation is generally known as the ‘Phillips curve’, which shows a rough and stable but inverse correlation between the two (Phillips 1958; Young and Barnett 1978, 1980; Pallis 2006). Put simply, it means that when unemployment is high, inflation is low; and when inflation is high, unemployment is low. In the short term, the Phillips curve happens to be a declining curve; in the long term, however, the relationship does not hold true as it has been observed that unemployment and inflation are not causally related (Phillips 1958; Young and Barnett 1980).

During recent years, the rates of growth of employment in Bangladesh, India and Pakistan have failed to keep pace with the growth rates of the labour force and GDP. In other words, the economic growth of the region during this period has failed to absorb the incremental labour force, for two reasons: first, economic growth itself had started faltering in the second half of the 1990s; and second, the pattern of the growth process – capital intensive and urban oriented – did not help in generating better employment outcomes, even in countries that had experienced higher growth rates (MHHDC 2004).

Table 4-5 shows the trend in the rate of unemployment in the country from fiscal year 2003-04 onwards, and compares it with rates in the world and South Asia. The rate decreased to 5.2 percent in 2007-08 from 6.2 percent in 2006-07, but increased marginally to 5.5 percent during 2008-09. The agricultural sector, the largest source of employment (45.1%), although improved in terms of growth in 2008-09, is projected to witness a lower growth rate in 2009-10, namely 2.0 percent. On the other hand, the services sector, the second largest job provider (34.5%) and that having the highest employment elasticity, is expected to grow at 4.56 percent in 2009-10 compared with 1.58 percent in 2008-09 (GoP 2009a).
<table>
<thead>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GDP Growth Rate (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>4.9</td>
<td>4.5</td>
<td>5.1</td>
<td>5.2</td>
<td>3.0</td>
<td>-0.6</td>
</tr>
<tr>
<td>South Asia</td>
<td>6.9</td>
<td>7.0</td>
<td>7.2</td>
<td>8.5</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Pakistan</td>
<td>7.5</td>
<td>9.0</td>
<td>5.8</td>
<td>6.8</td>
<td>3.7</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Unemployment Rate (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>6.3</td>
<td>6.2</td>
<td>6.0</td>
<td>5.7</td>
<td>6.0</td>
<td>6.1</td>
</tr>
<tr>
<td>South Asia</td>
<td>5.3</td>
<td>5.4</td>
<td>5.3</td>
<td>5.3</td>
<td>5.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Pakistan</td>
<td>8.3</td>
<td>7.7</td>
<td>7.6</td>
<td>6.2</td>
<td>5.2</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Inflation Rate (%)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>4.57</td>
<td>9.28</td>
<td>7.92</td>
<td>7.77</td>
<td>12</td>
<td>20.77</td>
</tr>
</tbody>
</table>


Table 4-5: Comparison of Pakistan’s GDP growth rates and corresponding unemployment and inflation rates with the world and South Asia

4.3.6 Economic development in the social context

Given the monolithically asymmetric relationship that exists between the rich and poor in Pakistan, it becomes pertinent to understand and appreciate factors that go beyond mere monetary terms in depicting economic progress. Given the wide use of GDP growth rates and various other economic factors to portray the economic progress of any country, Sen (2001) argues that ‘the process of economic growth is a rather poor basis for judging the progress of a country as it is not irrelevant but only one factor among many that depict overall national progress’.

The UNs Human Development Index (HDI) attempts to capture such ‘non-economic’ dimensions and is perhaps the most widely used scale to portray the average progress of a country towards human development. A similar indicator, the Human Poverty Index for developing countries (HPI-1), focuses on the proportion of people below a defined threshold level and looks at indicators such as living a long and healthy life, having access to education, and a decent standard of living. By looking beyond mere income deprivation, the HPI-1 tends to represent a multi-dimensional alternative to the conventional $1.25 a day (PPP US$) poverty measure. The Gender-related Development Index (GDI) measures achievements in
the same dimensions using the same indicators as the HDI but captures inequalities in achievements between women and men (UNDP 2008, 2009).

<table>
<thead>
<tr>
<th>Country</th>
<th>HDI Rank</th>
<th>Life expectancy (Years)</th>
<th>Human Poverty index (HPI-1) Rank</th>
<th>GDP Per Capita (US$) 2009 est.</th>
<th>GDI Rank</th>
<th>Adult Literacy (%) age 15 and above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sri Lanka</td>
<td>102</td>
<td>74.0</td>
<td>67</td>
<td>4,500</td>
<td>83</td>
<td>92.7  89.1</td>
</tr>
<tr>
<td>Bhutan</td>
<td>132</td>
<td>65.7</td>
<td>102</td>
<td>5,400</td>
<td>113</td>
<td>65.0  38.7</td>
</tr>
<tr>
<td>India</td>
<td>134</td>
<td>63.4</td>
<td>88</td>
<td>3,100</td>
<td>114</td>
<td>76.9  54.5</td>
</tr>
<tr>
<td>Pakistan</td>
<td>141</td>
<td>66.2</td>
<td>101</td>
<td>2,600</td>
<td>124</td>
<td>67.7  39.6</td>
</tr>
<tr>
<td>Nepal</td>
<td>144</td>
<td>66.3</td>
<td>99</td>
<td>1,200</td>
<td>119</td>
<td>70.3  43.6</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>146</td>
<td>65.7</td>
<td>112</td>
<td>1,600</td>
<td>123</td>
<td>58.7  48.0</td>
</tr>
</tbody>
</table>


Table 4-6: Comparison of Pakistan against major human development and economic indicators in South Asia

Table 4-6 summarises HDI, HDI-1 and GDI rankings along with the GDP per capita, life expectancy at birth and a breakdown of both male and female rates of adult literacy for the countries in the South Asian region. Pakistan ranks at 141 out of 179 countries worldwide for which data is available, falling below Sri Lanka, Bhutan and India; with a GDP per capita of US$ 2,600, it ranks fourth in the region, ahead of Nepal and Bangladesh. Life expectancy averages around 65 years at birth for all countries in the region, apart from Sri Lanka which is far ahead at 74 years, along with its GDI rank of 83 as opposed to the regional average of 119. In terms of adult literacy, Pakistan is ahead of Bangladesh and Bhutan in male literacy but (apart from Bhutan) has the lowest female literacy rate in the region.

4.4 Poverty Profile of Pakistan

Poverty has multi-dimensional characteristics in Pakistan; the poor not only have low levels of income, they simultaneously lack access to basic services such as clean drinking water, adequate sanitation, proper education, access to financial services, employment opportunities, efficient market access, and sufficient and timely health facilities (World Bank 2009). A primary factor contributing to rising poverty levels is the lack of access that the poor have to basic services and facilities, which ultimately undermines their capabilities, limits their opportunities to secure employment, results in their social exclusion and exposes them to
exogenous shocks; to make matters worse, the vicious cycle of poverty is accentuated when the governance structures exclude the most vulnerable from the decision-making process (GoP 2009).

**4.4.1 Historical perspective of poverty trends in Pakistan**

Despite considerable efforts through various poverty alleviation programmes, widespread social and economic poverty remains a core problem in the country. The country’s economy is based predominantly on agriculture. Almost 65 percent of the population resides in rural areas (CIA 2010), and FAO (2009) estimates that around 66 percent of the population in Pakistan depends on agriculture for its livelihood. Although the agricultural sector showed high growth rates during the 1960s, the country witnessed high levels (about 40 percent) of poverty, which was particularly severe in the rural areas. One possible explanation for this increasing trend in poverty was that the initial beneficiaries of agricultural subsidies were generally large-scale farmers (Shirazi and Khan 2009).

The high poverty rates of the 1960s, however, continued to decline after 1970, with the trend continuing till 1987-1988 when it was recorded at 17.32 percent. Foreign remittances, increased private investment and good performance of the agricultural sector can be pinpointed as the primary factors for the declining trend in poverty (ibid.). After 1987-88, however, this trend reversed, and poverty in the country rose in the 1990s, peaking at an estimated 35 percent during 2001-02. Poverty estimates showed a downward trend in subsequent years and was recorded at around 24 percent in 2004-05, which coincided with the high levels of GDP growth rates during the same period (recorded at 9 and 5.8 percent respectively). According to the World Bank (2006), however, while provisional poverty estimates suggest that poverty declined between 2001 and 2005, the proportion of the population below the poverty line remains high, and despite recent indications of improvement, social and living standards remain well below those of countries with similar incomes and growth rates. The situation has worsened subsequently and it is expected to rise by at least 8 percentage points, to touch almost 30 percent, according to the latest available government statistics.

At the time of writing, there were no officially published poverty figures for Pakistan for 2009, and researchers have estimated these at various levels. Ahmed and Donoghue (2010)
for instance, estimate poverty to have climbed to as much as 40 percent, an increase of almost 80 percent from the 22 percent recorded in 2006. Given the poor performance that the country showed in terms of GDP growth rate (only 1.2 percent in 2009), coupled with the high inflation experienced during 2008-09 (22 percent) and the country’s involvement in internal and external conflicts, estimates such as these cannot be regarded as excessive. The recent flooding in the country will place an additional burden on the already weak and dwindling economy and, as analysts say, will drag the country back by many years. Given these signs, poverty levels are set to rise in the coming years, and the targets set forth and forecasts seem over-ambitious.

% of Population living below the official poverty line

Sources: Compiled from GoP 2008, 2009, 2010; IMF 2010a; Ahmed and Donoghue 2010

Figure 4-8: Poverty trend in Pakistan – percentage of population living below the official poverty line (1987-2009)

A long-term trend of poverty in Pakistan over a period of 23 years, from 1986-2009, is shown in Figure 4-8. Poverty, measured in terms of the headcount of the poor (the proportion of the population with consumption below the official poverty line) shows how it has fluctuated over the period, as discussed above. The government’s Mid-Term Development Framework (MTDF) aims to reduce poverty to 21 percent during 2009/10. The Millennium Development
Goal of eradicating extreme poverty and hunger and halving (between 1990 and 2015) the proportion of people earning less than $1.25 a day is also given in order to put the current status in perspective. As shown in the figure above, if Pakistan is to meet the target, poverty will have to be reduced to at least 13 percent by 2015. If estimates put poverty figures at around 40 percent for 2009, the targets set forth for the medium term are unlikely to be achieved.

4.4.2 Classification and distribution of the poor in Pakistan

Two-thirds of the poor people of Pakistan live in rural areas and most of them are directly or indirectly linked to agriculture (The World Bank 2002). Consequently, the poor are overwhelmingly concentrated in rural areas, where the poverty headcount is 27 percent, more than double the size of urban areas. Furthermore, 80 percent of the total poor population lives in rural areas (IMF 2010a). According to the 2007-08 estimates, 22.3 percent of the country’s population lives below the poverty line, with another 20.5 percent living in vulnerable conditions (Haq 2008). A detailed breakdown of the 2005-06 statistics for the poor across four major groups (extremely poor, ultra poor, poor, and vulnerable) is shown in Table 4-7 along with a comparison of data from 2001-02. There are positive signs of reduction across all categories between the two time periods, as discussed in the section above and shown in a separate column in the table below.
<table>
<thead>
<tr>
<th>Poverty Band</th>
<th>Ranking Range</th>
<th>Percentage of Population</th>
<th>Difference between 2001-02 and 2005-06</th>
<th>Estimated Head Count (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2001-02</td>
<td>2005-06</td>
<td></td>
</tr>
<tr>
<td>Extremely poor</td>
<td>&lt;50% of poverty line</td>
<td>1.1</td>
<td>0.5</td>
<td>-0.6</td>
</tr>
<tr>
<td>Ultra poor</td>
<td>&gt;50% and &lt;75% of poverty line</td>
<td>10.8</td>
<td>5.4</td>
<td>-5.4</td>
</tr>
<tr>
<td>Poor</td>
<td>&gt;75% and &lt;100% of poverty line</td>
<td>22.5</td>
<td>16.4</td>
<td>-6.1</td>
</tr>
<tr>
<td>Vulnerable</td>
<td>&gt;100% and &lt;125% of poverty line</td>
<td>22.5</td>
<td>20.5</td>
<td>-2</td>
</tr>
<tr>
<td>Quasi Non-poor</td>
<td>&gt;125% and &lt;200% of poverty line</td>
<td>30.1</td>
<td>36.3</td>
<td>6.2</td>
</tr>
<tr>
<td>Non-poor</td>
<td>&gt; 200% of poverty line</td>
<td>13.0</td>
<td>20.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Total Population</td>
<td></td>
<td>100</td>
<td>100</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(Source: Compiled from Pakistan Economic Survey 2007-08, Finance Division, Ministry of Finance and PMN estimates, GoP 2008, 2009)

Table 4-7: Poverty profile of Pakistan

Table 4-7, which follows the PRSP classification, reinforces the observations from Figure 4-8. The proportions of the extreme poor, the ultra poor and the poor have all declined substantially since FY 2001-02 (0.6 percent, 5.4 percent and 6.1 percent, respectively). Correspondingly, the proportion of the rich, including both ‘Quasi Non-poor’ and ‘Non-poor’, increased noticeably by 6.2 and 7.9 percent respectively. Interestingly, the massive drop in the poverty headcount seems to coincide with GDP growth rates during the same periods. As shown in Table 4-5, GDP growth rate was recorded at just 3.10 percent during 2001-02, whereas in 2005-06 it was recorded at 9 percent, the highest rate the country has managed to achieve so far.
The most recent available classification of the poor in accordance with PRSP is exhibited in the pie chart in Figure 4-10, which illustrates that the vulnerable group constitutes almost 21 percent of the total population; the ‘poor’ category is 16 percent, which is still substantial, particularly when compared with neighbouring countries.

(Sources: Compiled from Pakistan Economic Survey 2007-08, Finance Division, Ministry of Finance and PMN estimates, GoP 2008, 2009)

**Figure 4-9: Comparison of drop in poverty headcount between 2001-02 and 2005-06**
4.4.3 Millennium Development Goal No. 1: Poverty Reduction, regional performance and Pakistan’s progress

Poverty is most often measured in monetary terms, captured by levels of income or consumption per capita or per household. The commitment made in the Millennium Development Goals to eradicate absolute poverty by halving the number of people living on less than $1.25 a day represents the most publicised example of an income-focused approach to poverty (GoP 2010). Across the developing world, based on this income approach, the last 20 years have seen a significant reduction in the depth and severity of extreme poverty (UN 2010, World Bank 2007, 2007a, 2009).

At the regional level, Devarajan and Nabi (2006) contend that despite obstacles in the region such as conflict, corruption and high fiscal deficits in some countries, South Asia has achieved impressive economic growth and poverty reduction in the past decade, thanks mainly to economic reforms during the 1990s. The authors argue that if this growth accelerates to 10 percent a year, the region could see single-digit poverty rates by 2015. Given the most recent GDP growth rate statistics for 2009 and forecasts for 2010, this expectation seems over-ambitious, particularly considering the case of Pakistan which recorded a growth rate of just 1.2 percent in 2009, while Sri Lanka’s economy grew at 3.5
percent and Nepal recorded a rate of 4.7 percent (see Table 4-10 below for detailed regional comparisons of GDP and poverty headcounts).

On a more positive note, however, the region seems to be moving gradually towards achieving the Millennium Development Goal of halving (between 1990 and 2015) the proportion of people earning less than $1.25 a day. Based on 1990 as the baseline measure, South Asia requires an annual poverty reduction rate of 4.4 percent to meet the goal. Bhutan needs to reduce poverty by just 0.5 percent per annum, Sri Lanka by 3.2 percent and India by 4.8 percent, while Bangladesh needs the highest rate of 7.1 percent.

In the case of Pakistan, since the proportion of people living on less than $1.25 per day stood at 58.5 percent in 1990 and was recorded at 22.6 percent in 2005, the country has already achieved the 2015 target of halving poverty for this category of its poor.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepal</td>
<td>-</td>
<td>38.5</td>
<td>-2.3</td>
<td>-16.2</td>
<td>-3.5</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>77.0</td>
<td>54.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>44.2</td>
<td>24.9</td>
<td>0.1</td>
<td>-25.6</td>
<td>-7.1</td>
</tr>
<tr>
<td>Bhutan</td>
<td>47.4</td>
<td>25.5</td>
<td>-4.3</td>
<td>-1.3</td>
<td>-0.5</td>
</tr>
<tr>
<td>Pakistan</td>
<td>72.9</td>
<td>29.3</td>
<td>-6.3</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>31.0</td>
<td>7.5</td>
<td>-2.5</td>
<td>-2.8</td>
<td>-3.2</td>
</tr>
<tr>
<td>Total (South Asia)</td>
<td>59.4</td>
<td>25.9</td>
<td>-1.6</td>
<td>-14.5</td>
<td>-4.4</td>
</tr>
</tbody>
</table>


a: By 2005-06, the country had achieved the 2015 target of halving poverty, using 1990 as the baseline.

Table 4-8: Proportion of the population living on less than $1.25 a day in countries of South Asia, 1981, 1990 and 2005, and the change needed to reach the 2015 target (all figures in percentages)

While Table 4-8 shows the standing of the South Asian region in terms of progress towards the MDG-1 (at $1.25 per day), Table 4-9 traces Pakistan’s performance over the years at $1 per day (head-count index based on the official poverty line of Rs. 673.54 per capita per month at 1998-99 prices, consistent with attainment of 2,350 calories per adult equivalent per day). As shown in Table 4-9 the country’s performance in terms of poverty reduction based
on the national poverty line was on track up to 2005-06 and estimated to be so up to 2007-08. The pace was however overshadowed by the global economic crisis as well as Pakistan’s poor economic performance vis-à-vis the region, as discussed at length in preceding sections.

<table>
<thead>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of population below the calorie based food plus non-food poverty line</td>
<td>Head-count index based on the official poverty line of Rs 673.54 per capita per month in 1998-99 prices consistent with attainment of 2,350 calories per adult equivalent per day</td>
<td>26.1%</td>
<td>34.5%</td>
<td>23.9%</td>
<td>23.3%</td>
<td>21%</td>
<td>13%</td>
</tr>
</tbody>
</table>

Source: Planning & Development Division (GoP 2010)

Table 4-9: MDG-1- Eradicate Extreme Poverty and Hunger – Pakistan Case at $1 per day

Table 4-10 below presents Pakistan’s poverty profile in a different context, in relation to other countries in the region. Based on the UNDP’s latest available annual Human Development Report (2009), countries in the region are ranked according to their Human Poverty Indexes (HPI-1). Each country’s percentage of population that lives below the standard measures of less than $ 1.25 and $ 2.00 per day and below the national poverty line are also given along with their GDP per capita. Although Pakistan ranks below Nepal and India, it fares better in terms of the percentage of population that lives below $1.25 and $2.00 per day. In comparison with Nepal, this can be attributed to the relatively better standing in terms of GDP per capita ($ 2,600 compared with $1,200).
Government Strategies and Policies for Poverty Reduction

The last four years have witnessed several positive policy developments in the country. The important areas of policy focus have been developing a poverty-reduction strategy, addressing the issue of unsustainable public indebtedness, and controlling the fiscal imbalance (ADB 2004). According to IFAD (2007) and the World Bank (2006), ‘the Government of Pakistan has been implementing a strategy for reducing rural poverty since 2001 and has increased expenditure on social and poverty-related issues. In recent years, the strategy has taken a new approach. Together with priorities such as acceleration of economic growth and devolution of power to the provinces, it includes programmes designed to combat the social, political and economic emargination that is at the root of poverty’. It identifies the following four main goals of the government’s development strategy:

- Achieving broad-based economic growth, with a particular focus on the rural economy and agriculture.
- Improving governance and consolidating devolution.
- Investing in human capital with an emphasis on providing basic social services.
- Bringing poor and isolated regions into the mainstream of development.

Regardless of the poverty reduction strategy, there has always been a strong emphasis on rural development and strengthening the agricultural sector. Attention to the agricultural sector is particularly important since it is the single largest sector of the country’s economy.
accounts for 22 percent of GDP and is its main source of foreign exchange earnings. Agriculture also employs nearly half of the labour force and contributes to economic growth as a supplier of raw materials to industry, and as a market for industrial products. Moreover, approximately 67 percent of the country’s population lives in rural areas and directly or indirectly relies on the agricultural sector for their livelihood (FAS 2009).

4.5.1 Documenting poverty reduction strategies and policies

The national policies for poverty reduction and human development of the Government of Pakistan have been articulated in the following four documents:

1. Vision 2030 and its Approach Paper
2. Pakistan Millennium Development Goals
3. Mid Term Development Framework (MTDF)
4. Poverty Reduction Strategy Papers (PRSPs)

Vision 2030 and its accompanying Approach Paper set a vision of the country from a long-term perspective, and outline a picture of the future from 2005 to 2030. Pakistan Millennium Development Goals also show long-term views, which were originally set at the UN Millennium Summit in 2000, and as one of the signatory countries, Pakistan is responsible for achieving these eight goals within the required timeframe. Mid Term Development Framework (MTDF) 2005-10 is the medium-term plan to achieve the objectives of Vision 2030 as well as Pakistan’s Millennium Development Goals, while Poverty Reduction Strategy Papers (PRSPs) are regarded as the strategy to realise these medium-term plans as set out in the MTDF 2005-10 (Japan Bank for International Cooperation 2007).

4.5.1.1 Poverty Reduction Strategy Papers (PRSPs)

The first series of major steps towards poverty reduction was documenting the Poverty Reduction Strategy Papers (PRSPs), initiated to formally plan and document the planning phases of reducing social and economic poverty in the country. These papers are currently the most widely used policy formulation and implementation national strategic plans used in most developing countries of the world. Out of the four documents noted above, only PRSPs outline a detailed framework to achieve development-related goals as it is a document that
sets out an analysis of poverty in a country and defines a national strategy for reducing it (GoP 2009, IMF 2010a).

4.5.1.2 Interim Poverty Reduction Strategy Papers (I-PRSPs)

The PRSP is usually the outcome of a process that starts with an ‘interim’ version (I-PRSP). At the heart of the government’s strategy in the I-PRSP is a programme of macroeconomic adjustment to foster growth, improve governance, and initiate reforms in key sectors of the economy. The interim version of this develops an elaborate framework for tracking pro-poor public expenditure and poverty monitoring in a coordinated way. It identifies a tentative set of indicators to track progress on important aspects of poverty, and intermediate indicators that can be tracked on a short-term basis (GoP 2001). This document is drafted by the national government, led by the Ministry of Finance, along with consultation and advice from the World Bank and IMF, other donors and civil society. The interim version then becomes a road map for drafting the final paper (GoP 2001, 2009). Since the PRSP approach was introduced at the 1999 annual meeting of the World Bank and the IMF in Washington DC, it has been adopted by nearly 80 low-income countries worldwide.

The interim strategy paper focused on reducing poverty and restoring economic stability in the country. It was adopted in November 2000 and articulated in a document that was launched in 2001 and finalised with minor changes in 2003. The underlying focus of effective, pro-poor poverty reduction focused on working towards ‘four pillars’ towards development:

**Pillar I** focused on *accelerating economic growth* and referred to such issues as budgetary reform, development of capital market, trade liberalisation, promotion of investment, deregulation, development of infrastructure, agricultural development and so on.

**Pillar II** introduced the issues of *improving governance and devolution*, and presented the government’s undertakings related to decentralisation, improvement of judiciary access and civil service reform.

**Pillar III** was concerned with *investing in human capital*, and specific targets were presented regarding education, health, water supply, sanitation, nutrition, population welfare and the environment.
Pillar IV concentrated on targeting the poor and the vulnerable and presented the relief measures for socially-vulnerable populations who suffered from external shocks such as natural disasters by accelerating economic growth, improving governance and devolution, investing in human capital, and targeting the poor and the vulnerable (Japan Bank for International Cooperation 2007).

4.5.1.3 The second Poverty Reduction Strategy Paper: PRSP-II – 2008

PRSP-II, the second version of the strategy paper, was launched in 2008 and was followed by an extensive and participatory consultation process, incorporating the views and suggestions of all stakeholders – parliamentarians, line ministries, development partners, civil society, media and poor communities themselves (GoP 2009). The poverty reduction strategy in this paper was built upon a nine-point plan, as listed in Box 4-1 below.

**The government’s ‘9-point’ Plan for Poverty Reduction**

An assessment conducted by the Planning Commission (PC) and the Prime Minister’s Economic Advisory Council (EAC) over end-May to September 2008, broadly identified nine areas as priorities for deep, broad-ranging, and sustained policy intervention with a view to addressing deep-seated structural impediments to sustained and more equitable economic growth. The nine areas are:

1. Macroeconomic Stabilization
2. Social Development, including Social Protection
3. Agriculture
4. Industrial Competitiveness
5. Human Capital Development
6. Energy
7. Capital Markets
8. Public-Private Partnerships for Infrastructure
9. Institutional/Administrative Reform

These nine points from the pillars of the government’s poverty reduction strategy as articulated in the Poverty Reduction Strategy Paper (PRSP) – II

Source: GoP 2010

Box 4-1: The Government’s ‘9-point’ plan for poverty reduction

Summarised from the poverty reduction strategy paper (GoP 2010), salient features of each of the nine pillars of the poverty reduction strategy are presented below:
I – Macroeconomic stability and real sector growth

The first pillar underscores the government’s top priority in regaining macroeconomic stability, which ultimately acts as an umbrella over all other government policies and on the basis of which assumptions and targets of all policies are set.

II – Protecting the poor and the vulnerable

The second pillar undertakes to protect the poor and vulnerable by ensuring that adequate social safety nets are available that act as their minimal safeguard. Such measures form an essential element of any poverty reduction strategy and Pakistan has an elaborate network of direct and indirect social protection mechanisms.

III – Increasing productivity and value addition in agriculture

Agriculture contributes the largest share of the country’s GDP and therefore receives high priority in the PRSP-II as the bulk of the poor are concentrated in rural areas. The strategy supports self-reliance in commodities, and food security through improved productivity of crops as well as development of livestock and dairy.

IV – Integrated energy development programme

The rapid rate of urbanisation in Pakistan (currently at three percent a year) has brought tremendous challenges as cities struggle to absorb population growth. Ensuring energy provision, security, and efficiency form the government’s top priorities in order to tackle the current energy crisis and enable an adequate supply of energy for domestic as well as commercial use.

V – Making industry internationally competitive

The poverty reduction strategy recognises the need for improving the general business environment to provide a platform conducive to efficient economic activity. This can be achieved by creating a more outward-looking trade strategy, and by upgrading its technological capacity and increasing the focus on skills development.
VI – Human development for the 21st century

The overarching philosophy that informs the government’s poverty reduction and growth strategy is the country’s need to be responsive to the market, so as to enable it to meet fierce international competition. Amongst other measures, the strategy envisages massive investment in strengthening its human resource base to produce a skilled and competent workforce.

VII – Removing infrastructure bottlenecks through public-private partnerships

The government’s vision for economic growth and poverty reduction sets targets that require massive investments in sound, affordable infrastructure (roads and highways, dams, energy, transport) in order to sustain high rates of private sector-led growth, enhance economic competitiveness and optimise Pakistan’s geographic advantage.

VIII – Capital and finance for development

Financial institutions are instrumental in carrying out the government’s poverty reduction strategy as they allocate resources and ultimately aid in accumulation of physical and human capital and technological progress, which in turn leads to higher economic growth - a prerequisite for poverty alleviation.

IX – Governance for a just and fair system

Good governance is a critical pillar of Pakistan’s Poverty Reduction Strategy, as it protects the rights of the poor who most suffer from lack of security, empowerment, and opportunities. The strategy proposes and highlights a number of institutional and governance reforms to address this aspect.

4.5.2 Monitoring the implementation of the MDGs and PRSP: Pakistan Social and Living Standards Measurement Survey

The Pakistan Social and Living Standards Measurement Survey (PSLM) is one of the main mechanisms for monitoring the implementation of the MDGs and PRSP. It provides a set of representative, population-based estimates of social indicators and their progress under MDGs and PRSP. These include intermediate as well as ‘output’ measures, which assess
what is being provided by the social sectors – enrolment rates in education, for example. They include a range of ‘outcome’ measures, which assess the welfare of the population immunisation rate, etc. (GoP 2009c). The field work for the most recent survey was carried out between July 2007 and June 2008, its findings published in 2009. The previous three rounds of PSLM Surveys were conducted in 2004-05, 2005-06 and 2006-07.

4.6 Financial Services Access and Outreach in Pakistan

Financial outreach is associated with providing access to capital and job opportunities to the poor. The limited access to financial services in the developing world is one of the main obstacles to both income generation and social protection. It is estimated that over 4 billion people lack access to basic financial services such as credit, savings, remittances, leases and insurance (Ghalib and Hailu 2008). Although providing financial services access in developing countries has always been of concern, lately, in the wake of the Millennium Development Goals, it has become an important policy objective. The relevant goal recognises that ‘meaningful economic inclusion and reduction in poverty’ can be accelerated substantially by both deepening and widening outreach of the financial services sector (Ghalib and Hailu 2008; Nenova, Niang, et al. 2009; Demirguc-Kunt, Beck, et al. 2008).

Although several policy measures in Pakistan directed towards increasing financial services access have made some progress towards meeting this goal, Nenova, Niang et al. (2009) argue that policy measures cannot single-handedly increase financial access; the willingness of financial institutions to expand access in the country has been hindered by slow technological advances, weak legal foundations, and unsuitable financial processes and products. Meanwhile, poor socio-economic conditions, gender bias, and low levels of basic education and financial literacy still act as barriers. The authors contend that of all these hindrances, perhaps the single strongest driver of low demand for financial access has been income.

Apart from issues surrounding efficiency, scale and sustainability as noted above, another area that warrants greater attention is to take pragmatic steps towards removing barriers that poor people face in attempting to access (the already limited) financial services available. Economic growth can be accelerated substantially if the financial sector’s outreach is both deepened and widened (Chandrasekhar 2004; Beck, Demirguc-Kunt et al. 2005; Honohan
The State Bank of Pakistan (SBP) also recognises these barriers and classifies them as shown in Box 4-2. Pakistan’s MFIs could perhaps pay special attention to such aspects while formulating policies for both widening and deepening outreach, particularly in rural areas.

### Barriers to Access of Financial Services in Pakistan

1. **Geographical constraints:** a large proportion of population lives in rural areas and there are pockets of areas with low population density and difficult remote terrain.

2. **Provincial-level environment weaknesses:** lack of an enabling environment at the provincial level due to poor land records and weak law enforcement.

3. **Banking practices:** banking sector’s stagnation in terms of target market, traditional modes and products, and high transaction costs.

4. **Illiteracy and/or poverty of clients:** low financial literacy of clients or cultural linguistic barriers due to which the awareness and understanding of financial services is low.

5. **Regulatory barriers:** regulatory requirements such as money laundering guidelines require proof of identification that the poor may not have.

Sources: Akhtar 2007; Haq 2008

### Box 4-2: Barriers to accessing financial services in Pakistan

An extensive national household survey (*Access to Finance ‘A2F’ survey*) was conducted across Pakistan in 2007, relating to all the main financial services (transaction banking, savings, credit and insurance), needs and usage among consumers in both the formal and informal sectors. Nenova, Niang et al. (2009) report on certain interesting findings from the survey:

- The average Pakistani household remains outside the formal financial system, saving at home and borrowing from family or friends in cases of dire need.
- Fourteen percent of Pakistanis are using a financial product or service of a formal financial institution (including savings, credit, insurance, payments, and remittance services).
- When informal financial access is taken into account, 50.5 percent of Pakistanis have access to finance.
- Informal access can occur through the organised sector (though committees, shopkeepers, moneylenders, hawala/hundi money transfers, and so forth), or through friends and family

Despite the huge growth in the financial sector over recent years, financial outreach seems to be very poor in the country. Demirguc-Kunt, Beck et al., at the World Bank (2008) use a composite measure of access to an account with a financial intermediary. In the case of Pakistan, this is estimated to be just 12 percent, compared to 48 percent in India, 59 percent in Sri Lanka, and 32 percent in Bangladesh (Haq 2008). Moreover, Nenova, Niang et al. (2009) report that of the nearly 50 percent of Pakistanis who do not engage in either formal or informal financial systems, an estimated 19 percent have voluntarily excluded themselves through lack of understanding, awareness, or need, due to poverty, or for religious reasons. Financial exclusion precludes people from reducing risk, managing fluctuations in income, and investing in microenterprises or in health and education.

Source: Adapted from Nenova, Niang, et al. (2009)

Figure 4-11: Scale of financial services inclusion in Pakistan

Figure 4-11 and Figure 4-12 show the extent of financial services access in the country, with just less than half of the total population being excluded from either access or provision of financial services, while almost a quarter are informally served by the organised sector. The share of those served by the unorganised sector, such as moneylenders, has been recorded as a substantial 26 percent. Out of the 50 percent of the population that is financially excluded, (ignoring the 19 percent that has voluntarily excluded itself), 30 percent are involuntarily
excluded and this segment of the population is the one that warrants most attention, so as to bring them gradually to mainstream financial services.

![Financial Services Access in Pakistan](image)

Source: Constructed from data obtained by Nenova, Niang, et al. (2009)

**Figure 4-12: Breakdown of financial services access in Pakistan**

### 4.6.1 Development of the formal financial services sector in Pakistan

The financial sector is one the main driving forces of economic growth in any country, as it plays a key role in development by mobilising savings, allocating investable resources, and by providing a mechanism for making payments. It also helps to identify good business opportunities; monitor the performance of businesses; and enable the trading, hedging, and diversification of risk. Empirical evidence suggests that financial development, inclusion and access have a significant impact on the growth of income of the poorest (GoP 2010; Claessens and Tzioumis, 2006).

In Pakistan, the formal financial sector is regulated by the central bank (the State Bank of Pakistan) along with the Securities and Exchange Commission (SECP). All regular commercial banks are supervised by the State Bank, while various other Development Financial Institutions (DFIs), housing finance companies, leasing companies and the capital markets, are regulated by the SECP. The microfinance sector falls in the domain of the state
bank under the Microfinance Institutions Ordinance 2001, whereas various NGOs, non-financial societies, cooperatives, and not-for-profit companies are regulated by the Companies Ordinance 1984.

The banking and financial services sector in Pakistan underwent a major reform process during the late 1990s, focusing on the building of an efficient and competitive banking sector through privatisation (GoP 2010). This exercise resulted in the transformation of a predominantly state-owned and weak banking system into a healthier, market-based system, owned primarily by the private sector (nearly 80 percent of sector assets are now under private ownership compared with 34 percent in 1999, and just 8 percent in 1990) (World Bank 2006). This process was carried out by the restructuring of major banks, ongoing consolidation of the sector, strengthening of regulatory capacity, improvements in transparency (greater disclosure and financial reporting), effective corporate governance, strengthening the supervisory capacity of the Central Bank by introducing a modern information system, gaining greater autonomy from the Ministry of Finance (MoF), and reforming its human resources and credit culture (IMF 2010a, World Bank 2006).

<table>
<thead>
<tr>
<th>Banks and Non-Bank Financial Institutions (NBFIs)</th>
<th>Numbers</th>
<th>Assets (Rs. Billion)</th>
<th>Advances (Rs. Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Banks</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State owned</td>
<td>7</td>
<td>8</td>
<td>392.3</td>
</tr>
<tr>
<td>Public sector Commercial Banks</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Specialised Banks</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Private</td>
<td>-</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>Foreign</td>
<td>17</td>
<td>6</td>
<td>33.4</td>
</tr>
<tr>
<td><strong>NBFIs</strong></td>
<td>36</td>
<td>157</td>
<td>133.9</td>
</tr>
<tr>
<td>State owned</td>
<td>13</td>
<td>6</td>
<td>124.3</td>
</tr>
<tr>
<td>Private</td>
<td>23</td>
<td>151</td>
<td>9.6</td>
</tr>
</tbody>
</table>

Source: GoP (2010)

Table 4-11: Comparison of financial sector in 1990 and 2008

This broad-based programme of financial sector reforms initiated in the early 1990s promoted competition by privatising a number of financial institutions and restructuring others. The result was a widely recognised restoration of flexibility to the financial system, and Table 4-11 above shows the impact that it had on the sector between 1990 and 2008. Apart from a growth in number of branches, both assets and advances of financial organisations grew substantially during this period.
4.7 Microfinance in Pakistan

The Microfinance Ordinance (2001) regulates microfinance practice in Pakistan, and describes a MFI as *a company that accepts deposits from the public for the purpose of providing microfinance services*. MFIs in Pakistan are classed as Microfinance Banks (MFBs) regulated by the State Bank of Pakistan, in addition to some NGOs, RSPs and CFIs. These are described in Box 4-3 below:

<table>
<thead>
<tr>
<th>Microfinance Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microfinance Ordinance (2001) defines a Microfinance Institution (MFI) as a company that accepts deposits from the public for the purpose of providing microfinance services. MFIs in Pakistan include: Microfinance Banks (MFBs) regulated by the State Bank of Pakistan, in addition to some NGOs, RSPs and CFIs as detailed below:</td>
</tr>
<tr>
<td><strong>Non-government Organizations (NGOs):</strong> These include NGOs operating as microfinance institutions as well as those running microfinance operations as part of their multi-dimensional development programme. Specifically, Kashf, Sind Agricultural and Forestry Workers Coordination Organization (SAFWCO), Akhuwat, Orangi Pilot Project (OPP), and Asasah are operating as MFIs. Development Action for Mobilization and Emancipation (DAMEN), Taraqee Foundation and Sungi are proving microfinance services as a part of their overall integrated development services.</td>
</tr>
<tr>
<td><strong>Rural Support Programmes (RSPs):</strong> These programmes are running microfinance operations as part of their multi-dimensional rural development programme.</td>
</tr>
<tr>
<td><strong>Commercial Financial Institutions (CFIs):</strong> These are financial institutions in the mainstream financial sector, providing microfinance services as a separate function within the broader organizational context. Two such CFIs are Orix Leasing and The Bank of Khyber.</td>
</tr>
</tbody>
</table>


Box 4-3: Microfinance institutions defined

4.7.1 Evolution and development of microfinance in Pakistan

The presence of microfinance in Pakistan dates back to the 1960s when initiatives such as the Comilla Project experimented with microcredit. The first large-scale projects were the Orangi Pilot Project in Karachi and the Agha Khan Rural Support Programme (AKRSP), while the Agricultural Development Bank of Pakistan (ADBP) was established primarily for lending to poor farmers (Haq 2008). The AKRSP model was replicated throughout Pakistan during the
1990s with the establishment of the National Rural Support Programme (NRSP) and the Sarhad Rural Support Programme (SRSP). These programmes were general support institutions that provided a wide variety of social services, including financial services (Duflos, Latortue et al. 2007).

However, the microfinance sector did not gain momentum until the late nineties, when a number of specialised MFIs were incorporated. Kashf Foundation, one of the largest MFIs in the country, was established in 1996, while in 2000 the Pakistan Poverty Alleviation Fund (PPAF) started disbursements to the rural poor. A leap forward was made when the Microfinance Ordinance came into force in 2001. The State Bank of Pakistan (SBP) established a specialised Microfinance Unit and laid the foundations to stimulate the development of an inclusive financial system. This strategy was driven mainly by the insight that MFBs can play an important role in increasing the outreach of financial services. To this effect, by 2007, six MFBs had received licences (Duflos, Latortue et al. 2007; Haq 2008).

Box 4-4 below summarises the trajectory of microfinance development phases in Pakistan.
Timeline of Microfinance in Pakistan

The development of microfinance in Pakistan through different times:

1960s *Comilla Project* established as one of the pioneers of microcredit in Pakistan.

1961 *Agriculture Development Bank* (now ZTBL) started its operations to meet the credit needs of the agricultural sector across the rural areas of Pakistan.

1982 *Orangi Pilot Project* (OPP), initiated by a social scientist and activist, Akhtar Hameed Khan in Orangi, Karachi, Pakistan.

1982 *Agha Khan Rural support Program* (AKRSP) launched for providing sustainable solutions to the poor people of Northern areas of Pakistan.


1996 *Kashf Foundation* is established as the first Microfinance Institution of Pakistan with focus on providing quality and cost effective microfinance services to the low income households, especially women.

1997 *Pakistan Microfinance Network* (PMN) was established to support retail microfinance providers (MFPs) to improve their outreach. The idea was to have a forum to share experience and disseminate learning from practitioners.

1999 GoP established a *Pakistan Poverty Alleviation Fund* (PPAF) to give financial and non-financial support to civil society organizations with a goal to assist the rural and urban community in poverty alleviation especially for empowering women.

2000 *Khushhali Bank* founded as the first microfinance bank (under the Khushhali Bank Ordinance 2000) to improve the accessibility of financial services to the poor.

2001 *Microfinance Institutions Ordinance* (MFI 2001) was issued to regulate the operations of Microfinance institutions. The Ordinance stated that microloans cannot exceed Rs.100,000 and microfinance client income must be below the taxable amount. This was to assure that the focus of MFIs remains on the target market (the poor).

2008 Six microfinance banks (four national and two district-wide) begin operations across the country.

2010 In a significant step towards enhancing Microfinance risk management practices, a pilot *Microfinance Credit Information Bureau* (MCIB) is launched through a partnership between the Central Bank (SBP), PMN, PPAF and 11 microfinance providers, with support from DFID and Citi Foundation.

Sources: Compiled and updated from Hind Tazi 2006; Duflos, Latortue et al. 2007; Akhtar 2009

Box 4-4: Timeline of microfinance sector development in Pakistan
4.7.2 Regulation of the microfinance sector in Pakistan

The principal policy instruments for development and poverty reduction (PRSPs, MTDF) laid particular emphasis on microfinance as an important strategy for poverty reduction and social mobilisation in the country. As a result, the government took a series of steps to regularise MFIs in both formal and informal sectors (NGOs). Broad access to financial services was made available through the Microfinance Sector Development Program (MSDP) in 2000, which was followed by the Microfinance Institutions (MFI) Ordinance in 2001 to provide a separate regulatory framework for the microfinance sector.

According to Haq (2008), since the promulgation of the MFI Ordinance, a number of supportive regulations have been issued by the central bank, including:

4. Fit and Proper Criterion for CEOs/member of Boards of MFBs (2005)

Wholesale credit to various NGOs is provided by the Pakistan Poverty Alleviation Fund (PPAF) which acts as the umbrella organisation. According to a World Bank report (2007) on promoting rural growth and poverty reduction in Pakistan, following recent legislation Pakistan’s microfinance policy environment now appears to be conducive to efficient delivery of microfinance to poor households. The challenge, according to the report, is now for the various actors to seek out efficiency and scale.

4.7.3 Outreach of microfinancial services

Despite considerable efforts, microfinance has been slow to scale up, and outreach to women has been especially limited. It is estimated that only about 8 percent of poor households receive credit from formal sources (The World Bank 2007). Table 4-12 presents the latest
available outreach statistics collated by the Pakistan Microfinance Network (PMN). Active microcredit borrowers stood at over 1.9 million while 2.7 million active savers were recorded with a gross loan portfolio of Rs. 23.3 billion and Rs. 8.3 billion in savings. The size of Pakistan’s population and number of poor imply that there is a large potential market for microfinance in Pakistan. According to PMN estimates, and as indicated in the table, this is close to 27 million individuals (Haq 2008; PMN 2009), thus bringing the penetration rate to just 6.97 percent.

<table>
<thead>
<tr>
<th>Offices</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Fixed</td>
<td>1,593</td>
</tr>
<tr>
<td>Mobile</td>
<td>6</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Microcredit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Active Borrowers</td>
<td>1,909,100</td>
</tr>
<tr>
<td>Gross Loan Portfolio (PKRs. Millions)</td>
<td>23,354</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Micro-Savings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Active Savers</td>
<td>2,720,967</td>
</tr>
<tr>
<td>Value of Savings (PKRs. Millions)</td>
<td>8,346</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Micro-Insurance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Policy Holders</td>
<td>3,913,516</td>
</tr>
<tr>
<td>Sum Insured (PKRs. Millions)</td>
<td>54,823</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Microfinance Market</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27,407,048</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Penetration Rate (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.97</td>
</tr>
</tbody>
</table>

Source: Compiled from Pakistan Microfinance Network (2010)

Table 4-12: Summary of microfinance outreach in Pakistan (as at March 2010)
Figure 4-13: Pakistan microfinance potential and current market

Figure 4-13 shows the comparisons between the actual number of microfinance clients in Pakistan, the target for 2010 and the potential market (estimated at 27.40 million).

4.7.4 Challenges and opportunities for microfinance in Pakistan

From humble beginnings in the early 1960s, the microfinance sector has come a long way on the path to self-sustainability and growth. The combined number of active borrowers, savers and micro-insurance policy holders stands close to nine million as of March 2010 (PMN 2010). The sector has been further strengthened by recent legislations that regulate and streamline operations, as discussed in earlier sections. The World Bank (2007) states that Pakistan’s microfinance policy environment now appears to be conducive to the efficient delivery of microfinance to poor households. Despite promising results, the sector still faces several challenges, as discussed below.

4.7.4.1 Microfinance, institutional sustainability and achieving sound portfolio management

MFI s have to be financially sustainable in order to survive over the longer term and hence remain in the field to serve the poor effectively and contribute towards poverty reduction. Microfinance is often criticised for not being sustainable, and many governments, including
Pakistan’s, assume that the poor need charity, welfare or subsidised credit, rather than basic financial services (CFR 2003). The long-running and ongoing debate between welfarists and institutionists about the trade-off between assisting the poor and developing sustainable institutions was discussed at length in Chapter two. Given Pakistan’s population and the proportion of the poor, PMN (2010) estimates the total potential market for microfinance in the country to be around 27 million. Such a large number of potential clients offers the opportunity for MFIs to achieve both scale and sustainability.

Apart from sustainability, sound portfolio management is crucial to the success of microcredit enterprises. According to CFR (2003), most private sector lending institutions in Pakistan achieve only an 87 to 94 percent recovery rate. Compared to the international average of 97 percent, this rate is insufficient to achieve sustainability; if a recovery rate of less than 95 percent is projected over the next five years, the lending agency would significantly undermine its asset base. In part, the existence of subsidised loan agencies allows clients to default on loans, creating a cycle of poor credit and further indebtedness (ibid.).

4.7.4.2 Availability of funds

One of the most important means of support of microfinance institutions is the amount of access that they have to debt funds for onward lending. Donor funding is limited and as the government allocates development funds to other priority areas, MFIs face increasing challenges and pressure to generate enough capital to ensure sustainability. Haq (2008) contends that if microfinance banks start mobilising deposits, it will lead to availability of a permanent as well as stable source of financing, which is also cost-effective given the current volatile interest rate market.

4.7.4.3 Product diversification

The microfinance sector in Pakistan remains predominantly focused on credit. Just as providers assume that credit is the sole service of MFIs, so do consumers. Compared to similar organisations in other developing countries, there is a dire need for offering creative and tailor-made solutions adapted to local conditions. Haq (2008) argues that lack of product diversification exists despite the emergence of specialised MFBs with full regulatory cover to
offer products beyond mere credit; and while they do offer other products such as savings and insurance, these services have been largely limited to existing regular ‘credit clients’.

4.7.4.4 Technology, microfinance and the poor

Compared to the rest of the developing world, Pakistan lags behind in the use of technology-related services for the poor. Given the rapid expansion of mobile phone subscribers (currently estimated at 80 million), branchless banking facilities and services can be offered to clients, thus opening up new avenues for mobile phone service providers, MFIs and clients. Grameen Bank, for instance, has forged a successful partnership with Telenor, and in Africa and South America there are many examples of NGOs and MFIs that are offering cellular technologies as part of bundled packages to clients, which has resulted in enabling them to be connected directly with markets, eliminating middlemen (see Boateng 2010; Duncombe and Boateng 2009).

4.8 Conclusion

The empirical nature of this study required a household survey conducted across Pakistan. While the previous chapter outlined the methodological aspects of the survey, this chapter places the survey area, its people and the economy in a wider national context.

The chapter opened with a brief historical account and geographic setting of the country. The current and past political situation of the country was discussed, pointing out the instability in almost every elected government over the years. Political squabbling, assassinations and intermittent military control have resulted in a cycle that has continued almost since independence. Section 4.2.3 discussed the demographic profile of Pakistan. Currently estimated at over 170 million and growing at a rate of around 2 percent, it was contrasted with neighbouring countries in the South Asian region. Given the importance of GDP and its influence on any country’s economic performance, an entire section was devoted to understanding how GDP growth rate has fluctuated in the past and where it stands today. Inflation is an important feature of any country’s economic performance. Pakistan’s inflationary trends over the past 20 years were discussed and contrasted with unemployment trends. Once again, regional comparisons were made to better comprehend where the country stands today in terms of economic performance.
The second half of the chapter looked at dynamics of poverty in Pakistan. The classification and distribution of the poor was discussed along with Pakistan’s progress towards the MDG of halving poverty by 2015. The government has been making several efforts to alleviate poverty. Various policy documents were discussed, along with financial services outreach and the evolution, development, regulation and outreach of the microfinance sector. The final section examined the challenges and opportunities that the sector faces today.

In the first half of the chapter, viewed from the perspective of the rates of GDP growth and inflation, it was noted that the country has been performing poorly. The growth rate was recorded at a mere 1.2 percent during the financial year 2008-09, while inflation stood at 20.8 percent during the same period. Examined from a regional perspective, GDP growth was the lowest and inflation highest amongst South Asian countries. The Economic Survey of Pakistan for the period 2009-10 (GoP 2010) argues that such poor performance was due to the global economic downturn. While this factor may have been contributory, a quick look at neighbouring countries’ performance across the same indicators and period points to the fact that this was not the only reason. South Asia as a whole recorded a growth rate of 5.7 percent, while India and Bangladesh posted growth rates of 7.2 and 5.9 percent respectively. If these figures are compared to the global negative growth rate of -0.6 percent, this performance is laudable. The survey, as quoted above, has projected a GDP growth rate of 4.1 percent, with inflation to be reduced to 11.49 percent during the next financial year. Given the latest quarterly economic performance reports, the devastation caused by recent floods and the country’s constant involvement in both internal and external conflict, these targets seem over-ambitious.

The intricate relationship between inflation and unemployment was discussed at length in section 4.3, and given that unemployment was estimated at a high rate of 5.5 percent during 2008-09, rising levels of poverty in the country become obvious. The latest available figures of poverty, for 2008-09, were recorded at almost 30 percent, while for 2009-10, Ahmed and Donoghue (2010) estimate poverty to have risen to as much as 40 percent, which means that there is an increase of almost 80 percent from the rate of 22 percent recorded in 2006. One of the many tools to combat rising poverty is to provide the poor with small amounts of collateral-free credit, as well as savings and insurance facilities. Section 4.7 was devoted to a detailed discussion of the microfinance sector in Pakistan; it was noted that from humble
beginnings in the 1960s, the industry has now grown to serve almost 8.5 million users. Despite this growth, however, the penetration rate is low at 6.97 percent.

In order for the sector to grow substantially and cater for the large amount of underserved poor, MFIs will have to increase both depth and breadth of outreach across the country, an issue that the next chapter addresses: how ‘deep’ down have the various MFIs been able to reach in terms of providing services to the poorest in rural areas, and what category of the poor they are currently serving.
Chapter 5: Estimating the Depth of Microfinance Programme Outreach

5.1 Introduction

The first chapter set out the research context and discussed in detail the two research questions that this study addresses. This was followed by an exhaustive review of literature on the depth of programme outreach and the impact of microfinance programmes on borrower livelihoods, with particular focus on Pakistan. Chapter three addressed issues pertaining to the design and methodology of this study, and the fourth chapter dealt with the political, geographic, national and economic setting of Pakistan, exploring policies and frameworks the government has devised to tackle poverty. The chapter also discussed the origins of microfinance and where the sector stands today. The current chapter deals with the first research question of the study that relates to the depth of outreach of microfinance programmes across the rural areas in the province of Punjab.

As discussed in the third chapter, the study comprises detailed household surveys conducted over eleven districts across the rural parts of Punjab. It is based on quasi-experimental design whereby comparison is made between two groups of respondents: borrowers and non-borrowers. The total surveyed sample of 1,132 respondents comprises 463 borrowers and 669 non-borrowers. In order to assess the depth of programme outreach, the poverty assessment tool developed by Henry et al. (2003) on behalf of the CGAP was used to construct a household poverty index based on a range of indicators drawn from the household survey.

The chapter is organised as follows: the section that follows discusses the multi-dimensional nature of poverty and looks at the selection and choice of dimensions and indicators that were used to develop the field instrument employed for conducting interviews. Section 5.4 presents descriptive statistics of the surveyed households’ socio-economic characteristics. The poverty index is developed in section 5.5, ranking all households in order of their relative wealth. Section 5.5.2 is devoted to the ranking process, creation of terciles and determining the depth of programme outreach. Finally, survey findings are discussed in section 5.6 along with policy implications for deepening programme outreach.
5.2 The Multi-Dimensional Nature of Poverty and Selection of Indicators

Poverty has a multi-dimensional nature (Henry et al. 2003, Armendariz and Morduch 2005; Daley-Harris 2006; Asselin 2009), and in order to accurately recognise, represent and characterise the relative poverty level of every surveyed household, indicators are needed that are representative of the several dimensions and forms of poverty. If only one dimension is relied upon in estimating poverty, such as household income or assets alone, it can misrepresent the actual nature and extent of poverty that exists in that particular setting. Figure 5-9 illustrates how various dimensions and indicators are interrelated to represent poverty in its totality.

The various indicators of poverty were drawn from a variety of sources in order to fully capture its various dimensions. In an attempt to conform to local specificities, efforts were made to adapt indicators recommended and used by various ‘flagship’ programmes and tools such as the Poverty Assessment Tool (Henry et al., 2003), which has already been tested extensively throughout various countries to arrive at a set of highly sensitive indicators. The USAID’s ‘Poverty Assessment Tools’ (USAID 2007) are a series of downloadable tools available in the form of templates, certified and approved by USAID for use across specific countries, with new countries being added to the list regularly. Since Pakistan was not on when the fieldwork was carried out, the nearest and most closely-related country, India, was used as a sample to adapt various indicators to suit country-specific sensitivities. Several other studies were consulted that employed similar proxy measures of economic welfare across household characteristics (see for instance: Brockerhoff 1990; Bollen, Guilkey, et al. 1995; Speizer 1995).

In order to establish a more localised context, the Pakistan Social and Living Standards Survey (PSLM) was referred to, as it provides a set of representative, population-based estimates of social indicators and their latest progress under the poverty reduction strategy programmes in the country. The PSLM also investigates progress made towards meeting the targets set for the MDGs (GoP 2009c). Another relevant resource was the Household Integrated Economic Survey (HIES) (the latest one being from 2007-08), which presents household income and consumption expenditure data.
The *unit of observation* in the questionnaire is a ‘household’ and the individuals within each household form the subjects of the interview. A household in this context is generally defined as a group of persons eating and living together (GoP 2009d). Various variables were included to capture demographic features, along with other household-related characteristics, as discussed in detail in the sections above. Given the time constraints and the nature of the study, it was based on a single-instance, one-off, cross-sectional model, as opposed to a *longitudinal survey*.

After careful screening and extensive pilot testing, the final field instrument comprised questions designed to capture information across the following four dimensions: human resources, food security and vulnerability, dwelling, and ownership of household assets, as shown in Figure 5-1 below and discussed in the sections that follow.

![Figure 5-1: The four dimensions across which household data was captured in the field](image)

Source: Author’s construct

### 5.2.1 The indicators employed

A substantial part of the data for this study was gathered by means of face-to-face interviewing through a semi-structured questionnaire, comprising both closed and open-
ended questions. Classes of indicators were intended to capture relative poverty levels of respondents. These indicators can be considered as the ‘vehicles’ or the channels through which impact takes place in development-related initiatives and were selected to determine impact via measurable changes to borrowers’ livelihoods. As discussed above, the multi-dimensional nature of poverty calls for a wide array of indicators to capture the many dimensions and give results that are both balanced and are able to portray an accurate picture of the nature and extent of poverty.

The indicators were selected after careful screening and extensive pilot testing, keeping in view the local variations and households’ reaction to various aspects of poverty and well-being. Criteria for the final selection of these indicators are explained below.

5.2.2 Representativeness

Only those indicators were selected that were representative of the actual poverty and well-being of households’ relative wealth status. Every selected indicator eventually formed part of the questionnaire and comprised one or more questions to capture relevant data and information. It was thus futile to include questions that were irrelevant and which would not have formed part of the ultimate analysis. Moreover, each indicator was selected only if it was deemed to be able to correlate to the benchmark indicator: per capita expenditure on clothing and footwear.

5.2.3 Adaptation to local specifics

Every poverty assessment tool must be locally adapted to meet the specific nature of the unique country, region or area being surveyed. Aspects relating to weather and climate, local customs and traditions, demographics, economic status, socio-political and religious issues, etc., must be taken into consideration in designing the questionnaire. According to Henry et al. (2003), ‘researchers can begin the customization process by first assessing local perceptions of poverty to see how well these aspects are addressed in the standard questionnaire’. Of all the variables chosen for this study, food varies significantly from one area to another. What may be classed as ‘luxury’ food in one area might be staple food in another. Wheat in a predominantly rice growing region might be a luxury food, whereas rice is considered a luxury in certain drought-prone regions of Pakistan. Similarly, for religious
reasons, meat might not be consumed in certain areas and hence alternate ‘luxury’ food items have to be identified. Henry et al. (2003) cite the instance of electric fans, which had to be excluded from the list of household assets in a survey in the Kenyan highlands, but formed a very sensitive poverty indicator when the same survey was adapted for India.

For this research, wheat was selected as the staple food as it is the primary food consumption item throughout the study area and throughout the year. Rice was the second staple food, whereas lentils and vegetables were classed as ‘inferior foods’ and all forms of meat were classified as ‘luxury food items’. Items such as beds, mattresses and fans were dropped after pilot testing since such items seemed to show a weak correlation with relative household poverty. Mobile phones were included, as was participation in local and traditional saving schemes such as ROSCAs, as the relatively better-off households participated in such schemes and this indicator proved instrumental in distinguishing between levels of poverty. Similarly, questions that inquired about gas, electric or kerosene stoves were omitted after the pilot tests, as it became clear that almost all households used earthen stoves and both the type of cooking stove and the fuel used (firewood, animal dung, kerosene) showed weak association with relative household well-being. The availability and type of toilet facilities and the source of water, on the other hand, showed a high degree of correlation with relative poverty.

5.2.4 Ease and accuracy of data collection

The indicators of a well-designed poverty survey should be both easy and accurate to collect and the questions should be straightforward, requiring minimal explanation to elicit information. The respondents should be able to comprehend questions immediately and respond instantly without much deliberation and clarification (USAID 2008; Reyes and Due 2009). The questionnaire was administered in the local language and the questions were designed to be easily understood by the respondents.

5.2.5 Ability to meet data analysis requirements

Ideally, the data collected from a survey should be in a form that can be easily managed in the field and eventually coded and transformed into ordinal and scaled variables (Henry et al. 2003; Sur 2006; USAID 2008; Asselin 2009). This questionnaire was designed so that the
responses could be coded, enabling ease and accuracy in all stages of the process, from recording responses in the field, to sorting, filtering and organising data, calculating variables and performing data analysis.

In addition to data collected and coded as stated above, a substantial and valuable amount of information was amassed through observation, focus group discussions and informal discussions in the field. While such information could not be coded, it provided a rich insight into the lives of the respondents and proved invaluable in subsequent interpretation and analysis of results.

5.3 Dimensions of Well-Being Selected for the Questionnaire

Survey data was collected across four dimensions, captured by specific indicators in the form of explicit questions. These are discussed below:

5.3.1 Human resources

One of the most detailed sections of the questionnaire, this part attempts to capture the demographic characteristics of households and endeavours to establish their relationship to the earning capacity, spending behaviour and overall well-being of the household members. Table 5-1 below lists some of the salient dimensions covered in this section.

<table>
<thead>
<tr>
<th>Human resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, sex and relationships of all individuals in household</td>
</tr>
<tr>
<td>Adult literacy levels and maximum grades achieved</td>
</tr>
<tr>
<td>Number of children and school attendance</td>
</tr>
<tr>
<td>Number and reasons of school drop-outs of children</td>
</tr>
<tr>
<td>Occupations of adults in household</td>
</tr>
<tr>
<td>Number of children involved in child labour</td>
</tr>
<tr>
<td>Annual expenditure on clothing and footwear for all members in household</td>
</tr>
</tbody>
</table>

Table 5-1: Main indicators captured in the ‘Human Resources’ section
5.3.2  *Dwelling-related indicators*

Variables in this dimension tend to capture the dynamics that relate to fulfilment of basic dwelling-oriented needs by assessing the quality of housing and living conditions. Questions related to house ownership, number of rooms in the house, source of water supply, type of toilet (if any), bathroom waste disposal arrangements, energy for lighting in the house, type of fuel used for cooking and type/material used for floor, exterior walls, roof, etc.

Table 5-2 gives a list of the major characteristics associated with residential conditions captured in this section.

**Dwelling-related indicators**

- House ownership (owned or rented)
- Type/material of floor (bricked, cemented, mud/earth)
- Material used for exterior walls (bricks, wooden or timber, mud, metal/aluminium sheet)
- Material used for constructing roof (metal beams and bricks, concrete or cement, wood and bricks)
- Number of rooms in the house
- Source of water supply (pipe-borne water, well water, borehole, hand pump, hand pump with motor)
- Availability and type of toilet (no toilet/outside, flush toilet, pit latrine)
- The method for bathroom waste disposal (into outside gutter-covered, outside gutter-open, soak pit)
- Energy for lighting in the house (electricity, kerosene lamp, gas lamp)
- Type of fuel used for cooking (electricity, gas, kerosene, firewood, charcoal, animal dung)
- Structural condition of house (very bad, average, good structure)

<table>
<thead>
<tr>
<th>Table 5-2: A list of dwelling-related indicators used in questionnaire</th>
</tr>
</thead>
</table>

5.3.3  *Food security and vulnerability*

These variables capture how well households cope with food-related aspects. During the pilot testing phase, levels of stock of storable staple foods held in households were found to be highly correlated to their relative poverty/wealth status. Households that were relatively better-off showed a more stable consumption pattern and had a larger stock of storable staple food (in the current context, whole wheat grains packed in jute sacks and ground to flour in the local mill in smaller quantities as and when required during the year). Rice, an alternative, showed a much lower level of correlation with relative wealth status, as wheat is the staple
diet and households tend to purchase rice only as and when required. Poorer households were found to have lower levels of stocks of wheat, and the poorest households were observed to buy flour on a daily basis, after earning enough money or receiving their daily wages by casual labour. The slightly better-off would hold stocks for a week, followed by fortnightly, monthly, half-yearly and yearly purchases, in order of relative wealth.

Another indicator that was found to be highly correlated with relative poverty status was the number of days on which ‘luxury’ or ‘staple’ foods were consumed. The nature of the question required the recall period to be such that respondents would be able to easily and accurately recall how many times and what sort of foods they had consumed in the past. Data on this variable was therefore collected on a weekly-recall basis. The poorer households were seen to consume staple foods throughout the week, while those who were better-off would consume meat averaging 1-2 times per week.

<table>
<thead>
<tr>
<th>Food security and vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock of wheat held (number of weeks)</td>
</tr>
<tr>
<td>Stock of rice held (number of weeks)</td>
</tr>
<tr>
<td>Number of days when staple foods were consumed</td>
</tr>
<tr>
<td>Number of days when vegetables and lentils ('inferior foods') were consumed</td>
</tr>
<tr>
<td>Number of days when meat ('luxury food') was consumed</td>
</tr>
</tbody>
</table>

Table 5-3: Food security and vulnerability related variables

5.3.4 Ownership of household assets

Assets are considered to be relatively good indicators of household wealth and information relating to this variable was gathered in three categories:

1. Appliances and electronics
2. Livestock
3. Transportation-related assets

Since almost all interviews were held on the premises, it was easy to physically verify and identify most of the assets. This was especially true for livestock such as goats, cows and
buffalo tied in the courtyard (where the interviews would usually take place). Respondents were eager and willing to show other assets such as televisions, mobile phones, bicycles and carts. The price quoted for each asset was also cross-checked with similar assets possessed by other households. This was especially easy and applicable to livestock (particularly straightforward if it was the same breed and age of cow, buffalo or goat). Electronics such as televisions and particularly mobile phones were also easy to verify as respondents would show them and, in the case of mobile phones, pull them out of pockets and give the precise amount they had paid for them. Only the current, estimated market or resale price of assets was noted as opposed to the original price paid at the time of purchase, and if assets had been purchased on instalments (as was the case for some televisions and washing machines), only the down payment plus the amount of instalments paid up to the date of interview were recorded. After the first few weeks of interviewing, it became easy to estimate the value as there was little disparity in the nature and type of assets held, especially within the same villages.

Table 5-4 lists the assets captured by the interviewing process. During final calculations, separate heads were created that gave sub-totals of each category: livestock, transportation-related assets and household appliances and electronics. This step was carried out to determine if households showed special sensitivity to a particular class of assets, as opposed to the overall value of household assets.

<table>
<thead>
<tr>
<th>Ownership of household assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock (cattle and buffalo, sheep and goats, poultry, horses and donkeys, etc.)</td>
</tr>
<tr>
<td>Transportation-related assets (motorcycle, bicycle, carts)</td>
</tr>
<tr>
<td>Appliances and Electronics (television, VCR, refrigerator, washing machine, radio/tape/stereo, mobile phone, sewing machine, etc.)</td>
</tr>
</tbody>
</table>

Table 5-4: List of household assets captured by the questionnaire

5.3.5 Other borrower-related indicators

Since this study uses the quasi-experimental research design, it was necessary to interview both borrowers (the treatment group) and non-borrowers (the control group). The initial section of the questionnaire comprised basic questions about the nature of the occupation and
the number of years spent in it. While it was designed to capture data on various basic household characteristics, the straightforward questions also acted as a ‘ground-breaker’, putting respondents at ease and building their confidence.

After this ‘opening’ session, the questions that followed were intended to capture data that would differentiate between the two categories of respondents: loan-related questions, the quantity and names of MFIs the respondents were clients of, the number of cycles (in years) they had been borrowing from such MFIs, the total amount borrowed, total monthly instalment, the original purpose of the loan, where and how it was used, if it had been of any benefit to them and if they still planned to borrow next year, if they had missed any instalment and what were the consequences that they faced in the case of missed payments.

This part of the questionnaire was omitted for non-borrowers, before moving on to the more detailed and sensitive section on physical dwelling-related indicators and household characteristics. Table 5-5 lists some of the questions that this section of the questionnaire covered.

<table>
<thead>
<tr>
<th>Loan-related Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature and type of occupation</td>
</tr>
<tr>
<td>Years in current occupation</td>
</tr>
<tr>
<td>Names(s) of Microfinance Institution(s) of which respondent is a member</td>
</tr>
<tr>
<td>Total amount borrowed</td>
</tr>
<tr>
<td>Number of years with MFI</td>
</tr>
<tr>
<td>Total monthly instalment</td>
</tr>
<tr>
<td>Purpose of loan</td>
</tr>
<tr>
<td>Eventual use of loan amount</td>
</tr>
<tr>
<td>Any plans of borrowing in the future?</td>
</tr>
<tr>
<td>Any incidences of missed payment and the consequences that ensued</td>
</tr>
</tbody>
</table>

Table 5-5: Loan-related questions in survey
5.4 **Descriptive Statistics of Survey Data**

Descriptive statistics are used to describe the main features of a collection of data quantitatively (Mann 1995; Deaton 1997) by providing simple summaries about the sample and its measures. Together with simple graphic analysis, they form the basis of subsequent quantitative analysis of data (Trochim 2006). Descriptive statistics include numbers, tables, charts and graphs used to describe, organise, summarise and present raw data. This section summarises the basic attributes of the survey data that was generated by administering the questionnaire.

Chapter four discussed various state-level policies formulated to assist social and economic development. These policy frameworks are articulated in the Poverty Reduction Strategy Papers (PRSPs) and Medium Term Development Framework (MTDF). Data required for these documents is collected by means of extensive household surveys conducted by the Ministry of Finance and the Federal Bureau of Statistics over regular intervals in the country (GoP 2009c). Listed below are the most recent versions of three major forms of such surveys:

2. Pakistan Social & Living Standards Measurement Survey (PSLM – 2007-08), (GoP 2009c)

These surveys aim to provide detailed outcome indicators on characteristics such as education, health, population welfare, water supply and sanitation, income and expenditure. In the case of the survey conducted for this study, section 5.3 above comprehensively discussed the type of variables and associated indicators employed to capture the household characteristics on which the final set of questions was based. Since it captures household-related data along similar dimensions to those carried out by the Ministry of Finance, comparisons and frequent references are made to the most recent versions of these surveys.

### 5.4.1 Geographic location of surveyed region

The survey was administered in the Punjab province in Pakistan. Figure 5-2 displays the districts that were covered and Table 5-6 gives a list of the borrowers and non-borrowers in each district interviewed during the survey.
Figure 5-2: Map of Punjab showing its location and the names of the eleven districts surveyed, along with relevant area codes
<table>
<thead>
<tr>
<th>No.</th>
<th>District</th>
<th>Non-Borrowers</th>
<th>Borrowers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chakwal</td>
<td>69</td>
<td>54</td>
<td>123</td>
</tr>
<tr>
<td>2</td>
<td>Khushab</td>
<td>75</td>
<td>27</td>
<td>102</td>
</tr>
<tr>
<td>3</td>
<td>Gujranwala</td>
<td>22</td>
<td>34</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>Chiniot</td>
<td>54</td>
<td>11</td>
<td>65</td>
</tr>
<tr>
<td>5</td>
<td>Lahore</td>
<td>71</td>
<td>31</td>
<td>102</td>
</tr>
<tr>
<td>6</td>
<td>Kasur</td>
<td>77</td>
<td>91</td>
<td>168</td>
</tr>
<tr>
<td>7</td>
<td>Sahiwal</td>
<td>38</td>
<td>17</td>
<td>55</td>
</tr>
<tr>
<td>8</td>
<td>Muzaffargarh</td>
<td>36</td>
<td>21</td>
<td>57</td>
</tr>
<tr>
<td>9</td>
<td>Bahawalpur</td>
<td>46</td>
<td>70</td>
<td>116</td>
</tr>
<tr>
<td>10</td>
<td>R.Y.Khan</td>
<td>76</td>
<td>50</td>
<td>126</td>
</tr>
<tr>
<td>11</td>
<td>Rajanpur</td>
<td>105</td>
<td>57</td>
<td>162</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>669</td>
<td>463</td>
<td>1,132</td>
</tr>
</tbody>
</table>

Source: Survey data

Table 5-6: List of districts surveyed along with breakdown by borrowers and non-borrowers

5.4.2 Basic household characteristics: Principal occupation of survey respondents

Table 5-7 below presents a breakdown of survey respondents by principal occupation. Overall, the largest group of respondents are involved in casual labour, at over 32 percent. There is, however a disparity when respondents are distinguished across borrower and non-borrower categories, with significantly fewer borrowers in casual labour (22 percent) as opposed to almost 40 percent of non-borrowing households. A probable explanation is that borrowers are more involved in regular income-generating activities, as opposed to irregular/casual work. The pattern is reversed for participation in farming and non-farming related occupations. Borrowing households show larger degrees of involvement in both these sectors, accounting for over 60 percent of the total sample, whereas the figure is just over 40 percent for non-borrowers. Once again, credit obtained from MFIs and its utilisation in such income-generating activities as farming, livestock and trading, can be considered to contribute towards this behaviour. The distribution of participants from both groups across the ‘salaried’ and ‘retired or unemployed’ categories is similar.
### Table 5-7: Distribution of principal occupations among survey participants

<table>
<thead>
<tr>
<th>Sector/Occupation</th>
<th>Borrower Households</th>
<th>Non-Borrower Households</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>% age</td>
<td>Frequency</td>
</tr>
<tr>
<td>Casual labour</td>
<td>102</td>
<td>22.03</td>
<td>262</td>
</tr>
<tr>
<td>Self employed in non-agriculture-related activities</td>
<td>148</td>
<td>31.97</td>
<td>175</td>
</tr>
<tr>
<td>Self employed in agriculture-related activities</td>
<td>134</td>
<td>28.94</td>
<td>111</td>
</tr>
<tr>
<td>Salaried</td>
<td>67</td>
<td>14.47</td>
<td>99</td>
</tr>
<tr>
<td>Retired/unable to work or unemployed</td>
<td>12</td>
<td>2.59</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>463</td>
<td>100.00</td>
<td>669</td>
</tr>
</tbody>
</table>

Source: Survey data

5.4.3 **Household size**

The Household Integrated Economic Survey (HIES) (GoP 2009d) defines a multi-person household as a group of two or more persons who make common provision for food or other essentials of living and who normally live and eat together and consider the living quarter/space occupied by them as their usual place of residence and have no usual place of residence elsewhere.
For social and cultural reasons, extended families are common in Pakistan, particularly in the rural areas. Figure 5-3 shows distribution of household sizes. The most commonly-occurring size of households (mode) was five members. The mean size calculated from the data is 5.98 members per household and the median value is 6.00. Household sizes of five to seven members constituted almost 50 percent of the entire sample. Families consisting of eight or more members amounted to around a quarter, while one to four-member families accounted for the remaining 25 percent of the sample.

The national average household size is 6.58 members according to Household Integrated Economic Survey (GoP 2009d), while the average for Punjab was reported as 6.33 members for 2007-08, close to the mean (5.98) and median (6.00) values reported in the survey results.

5.4.4 Distribution of MFIs covered in survey

Table 5-8 below shows a breakdown of the various MFIs of which the interviewees were members. As some individuals borrowed from more than one institution simultaneously, the table also gives the details of such instances (shown in the digits in the topmost row, where ‘2’
and ‘3’ are the first and second MFIs that members joined after obtaining credit from the first one, denoted by ‘1’).

Given the nationwide presence of National Rural Support Programme (NRSP), particularly in the northern and southern parts of the province, its borrowers head the list representing almost 32 percent of the total sample. Kashf Foundation’s strong presence and extensive outreach in the districts surrounding the provincial capital as well as further South gives it a share of more than a quarter of the total sample. Punjab Rural Support Programme (PRSP) has a strong presence particularly in agriculture-related districts of the province. It represents over 14 percent of the sample, while Khushhali Bank constitutes around eight percent. Other smaller-scale MFIs were operative in certain areas of the province without a wide geographical presence, such as Pak Oman Bank and First Microfinance Bank which were found to have a strong presence in Chakwal district and Bahawalpur respectively.

<table>
<thead>
<tr>
<th>Microfinance Institution</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>%</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Rural Support Programme (NRSP)</td>
<td>153</td>
<td>4</td>
<td>1</td>
<td>31.66</td>
<td>158</td>
</tr>
<tr>
<td>Kashf Foundation</td>
<td>138</td>
<td>2</td>
<td>0</td>
<td>28.06</td>
<td>140</td>
</tr>
<tr>
<td>Punjab Rural Support Programme (PRSP)</td>
<td>67</td>
<td>2</td>
<td>2</td>
<td>14.23</td>
<td>71</td>
</tr>
<tr>
<td>Khushhali Bank</td>
<td>39</td>
<td>0</td>
<td>0</td>
<td>7.82</td>
<td>39</td>
</tr>
<tr>
<td>Pak Oman Bank</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>5.01</td>
<td>25</td>
</tr>
<tr>
<td>CSC</td>
<td>22</td>
<td>8</td>
<td>3</td>
<td>6.61</td>
<td>33</td>
</tr>
<tr>
<td>1st Microfinance Bank</td>
<td>13</td>
<td>2</td>
<td>1</td>
<td>3.21</td>
<td>16</td>
</tr>
<tr>
<td>Asasah</td>
<td>6</td>
<td>8</td>
<td>3</td>
<td>3.41</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>463</strong></td>
<td><strong>26</strong></td>
<td><strong>10</strong></td>
<td><strong>100</strong></td>
<td><strong>499</strong></td>
</tr>
</tbody>
</table>

*Table 5-8: Distribution of institutional participation among survey participants*

### 5.4.5 Period with MFIs/loan cycles

The survey was conducted on a random-selection basis, and as opposed to targeting borrowers who had spent a specific number of years with MFIs, interviews were conducted irrespective of time spent. Table 5-9 below gives a breakdown of the number of loan cycles
that respondents had completed at the time of interview. Almost 60 percent were found to be within their first two years of borrowing, while 16 percent had completed three loan cycles.

<table>
<thead>
<tr>
<th>Number of Loan Cycles Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Percentage</td>
</tr>
</tbody>
</table>

Table 5-9: Number of loan cycles completed by respondents at the time of interview

Although the mean value of loan cycles from Table 5-9 and Figure 5-4 above is 2.83, it cannot be considered representative of the sample, as there is only one respondent each with 12, 14 and 15 years, which distorts the picture. The median value (at 2.00 years) more accurately depicts the most commonly-occurring period spent with MFIs.
5.4.6 Borrowers’ credit use and perception

The field instrument contained certain questions that were designed to capture elements of borrowers’ behaviours, views and thoughts. Table 5-10 below gives a general representation of perception of loan use and borrower attitude towards credit facilities at the rural level. In terms of purpose of obtaining credit, 43 percent stated that it was for establishing a new business, while 57 percent used it for expanding running businesses. These figures correspond with Table 5-9, which shows that the majority of the respondents were in the first or second loan cycles. When asked about the usefulness of the loan, around 81 percent expressed satisfaction, while 19 percent did not find it beneficial. This figure of unsatisfied borrowers matches the proportion of those who had no plans for borrowing in future (17 percent); around 75 percent were willing to borrow in the next year and almost eight percent were still undecided at the time of interview.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of obtaining credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New business</td>
<td>202</td>
<td>43.63</td>
</tr>
<tr>
<td>Expansion</td>
<td>261</td>
<td>56.37</td>
</tr>
<tr>
<td>Was the loan beneficial?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>375</td>
<td>80.99</td>
</tr>
<tr>
<td>No</td>
<td>88</td>
<td>19.01</td>
</tr>
<tr>
<td>Plans for future borrowing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>346</td>
<td>74.73</td>
</tr>
<tr>
<td>No</td>
<td>80</td>
<td>17.28</td>
</tr>
<tr>
<td>Not sure/will think about it</td>
<td>37</td>
<td>7.99</td>
</tr>
<tr>
<td>Missed payments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>458</td>
<td>98.92</td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Table 5-10: Basic indicators showing loan use and satisfaction among survey participants

Further probing and focus group discussions revealed that dissatisfaction amongst borrowers was for a number of reasons. Some of the respondents claimed that the interest was too high for them to afford, while others stated that the amount lent was too small to set up a
reasonable and sustainable business. The constant pressure of monthly repayments was also a struggle, especially after failed businesses.

However, the repayment rate was noted to be very high (at almost 99 percent), an indication that borrowers continue to repay regularly, despite the difficulties that they face, as noted above, or their decision not to borrow in future. What is noteworthy, however, is that non-payments were only ‘missed’, being paid in the following month, and hence cannot be considered ‘defaults’ per se.

In a similar study in Pakistan, Setboonsarng and Parpiev (2008) found a 97 percent recovery rate. The researchers attribute high repayment rates to two factors: either good portfolio management or rapid expansion into new areas. In the latter case, high repayment rates among first-time borrowers bolster the average. This argument is strengthened by observing from Table 5-9 that first-time borrowers in the survey constitute the largest share of respondents, while almost 60 percent are within their first two years of the initial loan. It was also noted that regular payment behaviour was encouraged by the group-based lending model, in which group members, although not jointly or individually responsible for others’ payments, are subjected to peer pressure, which consequently ensures timely payments. The closely-knit social fabric in rural areas and the social ties between borrowing group members translates into internal group pressure to repay loans. Such ‘peer monitoring’ significantly affects the borrowing groups’ performance through stimulating intra-group insurance (See for instance, Conning 1999; Wydick 1999; Hermes, De Aghion and Gollier 2000; Lensink, et al. 2003; Setboonsarng and Parpiev 2008).

5.4.7 Size of loans and instalments

Table 5-11 below details the amounts of loans disbursed and the corresponding amounts of instalments. 22 percent of respondents fall into the lowest range, whereas the largest share (30 percent) goes to loans in the second lowest. Taken together, loans up to Rs.15,000 constitute more than half of the sample. These figures correspond with Table 5-9, where the largest proportion of respondents is those within their first two years of borrowing.
<table>
<thead>
<tr>
<th>Loan Amount (Pakistani Rupees)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Instalment Amount (Pakistani Rupees)</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000-10000</td>
<td>103</td>
<td>22.25</td>
<td>0-1000</td>
<td>57</td>
<td>12.31</td>
</tr>
<tr>
<td>11000-15000</td>
<td>141</td>
<td>30.45</td>
<td>1001-1500</td>
<td>153</td>
<td>33.05</td>
</tr>
<tr>
<td>16000-20000</td>
<td>138</td>
<td>29.81</td>
<td>1501-2000</td>
<td>146</td>
<td>31.53</td>
</tr>
<tr>
<td>21000-25000</td>
<td>33</td>
<td>7.13</td>
<td>2001-2500</td>
<td>56</td>
<td>12.10</td>
</tr>
<tr>
<td>26000-30000</td>
<td>22</td>
<td>4.75</td>
<td>2501-3000</td>
<td>24</td>
<td>5.18</td>
</tr>
<tr>
<td>31000-35000</td>
<td>11</td>
<td>2.38</td>
<td>3001-3500</td>
<td>8</td>
<td>1.73</td>
</tr>
<tr>
<td>36000-40000</td>
<td>10</td>
<td>2.16</td>
<td>3501-4000</td>
<td>11</td>
<td>2.38</td>
</tr>
<tr>
<td>41000-45000</td>
<td>3</td>
<td>0.65</td>
<td>4001-4500</td>
<td>3</td>
<td>0.65</td>
</tr>
<tr>
<td>46000-55000</td>
<td>2</td>
<td>0.43</td>
<td>4501-5500</td>
<td>5</td>
<td>1.08</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>463</strong></td>
<td><strong>100</strong></td>
<td><strong>Total</strong></td>
<td><strong>463</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 5-11: Loan sizes and instalment amounts of borrowers interviewed

Instalment amounts also correspond proportionately with the size of loans, as seen in the second half of Table 5-11. More than 60 percent of the amounts of instalments vary from Rs.1,000 to Rs.2,000 followed by smaller amounts of up to Rs.1,000 and larger amounts that range from Rs.2,000 to Rs.2,500, which account for a quarter of the total sample. The sample mean is Rs.17,473, while the median value comes to Rs.15,000.
In five cases, loans ranged from Rs.42,000 to Rs.51,000, where members had ‘graduated’ to higher levels and MFIs were ready to advance them substantial amounts for large investments, such as machinery. Such cases tend to distort averages (Rs.17,000 for loan amount and Rs.1,800 for instalments), whereas median values depict more representative values: Rs.15,000 for loan amount and Rs.1,600 for monthly instalments.

5.4.8 **Literacy-related indicators**

Literacy rate, according to the Pakistan Social & Living Standards Measurement Survey for 2007-08 (for both males and females – aged 10 and above) was 56 percent at the national level and 53 percent for rural Punjab (GoP 2009c:43). Data from this survey found the adult literacy rate (household members aged 15 and above) to be 39.92 percent, whereas it was 40.02 percent according to PSLM (2007-08). UNESCO’s Asia-Pacific Literacy Data Base (2009) estimates Pakistan’s adult literacy rate at 54.9 percent (2007 figures estimated in 2008). In order to put Pakistan’s literacy rate in perspective, equivalent regional figures for South Asian countries are: India: 66%, Bangladesh: 53.5%, Nepal: 56.5%, Sri Lanka: 91.5%.
and Bhutan: 55.6%. Apart from Sri Lanka, Pakistan seems to be fairly consistent with regional averages, but still needs to improve literacy in rural areas.

Table 5-12: Adult literacy across both groups of respondents

<table>
<thead>
<tr>
<th>Number of literate adults in household</th>
<th>Borrower Households</th>
<th>Non-Borrower Households</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>% age</td>
<td>Frequency</td>
</tr>
<tr>
<td>0</td>
<td>153</td>
<td>33.0</td>
<td>261</td>
</tr>
<tr>
<td>1</td>
<td>138</td>
<td>29.8</td>
<td>193</td>
</tr>
<tr>
<td>2</td>
<td>93</td>
<td>20.1</td>
<td>101</td>
</tr>
<tr>
<td>3</td>
<td>41</td>
<td>8.9</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>3.9</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>2.8</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>.9</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>.2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>.4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>463</td>
<td>100.0</td>
<td>669</td>
</tr>
</tbody>
</table>

As seen from Table 5-12 above, apart from outliers in the sample (18 households had 6-8 literate adults), households that reported 1-2 literate adults were 525 (46 percent) and those with no single literate adult were 414 (almost 37 percent).
Figure 5-6: Comparison of borrower and non-borrower households for adult literacy

Figure 5-6 plots the percentages of literate adults across both borrower and non-borrower households which were interviewed. Both groups exhibit a fairly uniform pattern, with the non-borrowers in a slightly better position where there is just one literate adult. Across most of the others classes, borrower households, however, seem to be better and have more literate adults.

5.4.9 Water supply and sanitation facilities

Most households in Pakistan do not have access to adequate clean water, and many of them also lack toilets and adequate sanitation systems. The government aims to expand access to clean drinking water and to improve sanitation particularly in rural areas by promoting the construction of household latrines and open surface drains with street pavements, and providing hygiene education (GoP 2009c).

The PSLM (GoP 2009c), captures data across a series of indicators divided into rural and urban areas across all four provinces, but comparison will only be made with rural Punjab, the subject of this study. According to the PSLM survey, 18 percent of the total households in
rural parts of Punjab have access to piped water, 44 percent use hand pumps and 35 percent have motorised pumps in their homes. These figures were similar to those obtained by the present survey: as shown in Figure 5-7, 53 percent used hand pumps and 30 percent had motorised pumps. Figures published by PSLM for access to toilet facilities were close to the survey results. According to PSLM, 51 percent had access to flushed toilet systems and 49 percent did not have any facility at all; survey results for this study reported 57 percent and 42 percent respectively. Data for drainage systems were captured across three categories: covered, open and no facility. Survey results reported these at 6 percent, 67 percent and 27 percent respectively. All three variables are illustrated in Figure 5-7.

Figure 5-7: Types of water supply and sanitation facilities available to survey respondents

### 5.4.10 General dwelling conditions

Apart from water and sanitation facilities, the survey for this study also captured vital data relating to households’ general dwelling conditions. Figure 5-8 presents the salient findings. The first set of bars (blue) represent home ownership, showing that around 94 percent of respondents owned the houses they were living in. Roofing structures were dominated by metal beams and bricks at 52 percent, followed by wooden beams and bricks at 42 percent.
Concrete roofs had been used in only 6 percent of the houses. For construction of exterior walls, bricks were used in 75 percent of the cases, and mud for the remaining 25 percent. Mud was more commonly used as flooring material (68 percent) as opposed to the bricked or cemented floors found in only 32 percent of houses.

Electricity is common in Pakistan, with over 95 percent using it for lighting. The most common form of energy for cooking, however, was firewood (65 percent), followed by 27 percent of households that used animal-dung cakes (the cheapest alternative); only 8 percent reported using methane gas cylinders.
5.5 Developing a Poverty Index of Households

The previous section discussed the characteristics of the household data collected during the survey. Various distributions of the data were discussed: borrower vs. non-borrower groups; the specific district to which respondents belonged; the MFIs that had been borrowed from; how many borrowers had borrowed from more than one institution, and how many years they had been borrowing for; how much credit they had obtained; how much they were paying as instalments, and what sort of housing conditions they were living in. The underlying assertion of this survey was that, amongst all the various dimensions of poverty captured, ‘a subset of indicators exists that measures different aspects of relative poverty at the household level’ (Henry, Lapenu et al. 2003). According to Zeller, Sharma et al. (2001), the use of multiple indicators captures a more comprehensive description of household poverty and well-being, but at the same time it complicates the task of drawing comparisons, since the wide array of indicators has to be summarised in a logical manner in a single index. The creation of this index means finding a method of weighting that can be meaningfully applied to different indicators to reach an overall conclusion.

In order to develop an accurate index of poverty from the households surveyed, the strongest indicators out of all the ‘dimensions of poverty’ must first be identified. This list is then subjected to further analysis to arrive at the index. The steps taken to allocate each household a ‘poverty score’, which will reflect its relative well-being in comparison to all other households in the survey, are explained in the following sections.

5.5.1 Procedures for filtering poverty indicators

Developing an objective measure of poverty requires first identifying the strongest individual indicators that distinguish relative levels of poverty, and then pooling their explanatory power into a single index (Henry, Lapenu et al. 2003). In order to develop this index, first, the linear correlation coefficient procedure is applied to determine which of the variables best appear to capture differences in relative household poverty levels. This is done by screening indicators from the questionnaire to identify which ones show a high level of correlation with the relative well-being of the surveyed households. For this purpose, a poverty benchmark indicator is first selected. Henry, Lapenu et al. (2003) suggest using per capita expenditure on clothing and footwear as the benchmark indicator, for its high level of association with
relevant poverty levels. The linear correlation coefficient procedure is applied to estimate the degree and direction of correlation of each variable to this benchmark indicator.

The *linear correlation coefficient* is a statistical procedure used to determine both the direction and degree of association between two variables (Porter and Hamm 1986). The correlation coefficient determines both the level and the direction that two variables have between each other. Since linear correlation does not require both variables to be in the same unit of measurement, any combination of variables can be used for testing the degree of correlation. For instance, we can estimate the strength, direction and level of correlation between the *number of household members* (measured in numbers) and the *per capita expenditure on clothing and footwear* (measured in Pakistani Rupees); or we can estimate correlation between *weeks of storable staple food* (measured in number of weeks) and the number of *literate adults present in the household* (expressed as a quantity in numbers).

The value of the coefficient of correlation (represented by \( r \)) ranges from a minimum of -1.00 to a maximum of +1.00. A value of +1.00 represents a *perfect positive correlation*, which means that the two variables are precisely related and that as the values of one variable increase, the values of the other variable will also increase. As \( r \) approaches negative values, it shows that the variables are inversely related: a higher value of one variable is associated with a lower value of the other, and a value of -1.00 signifies a *perfect negative correlation* (Porter and Hamm 1986; Saunders et al. 2003; Dewhurst 2002).

Drawing examples from this study, there are instances of negative correlation between certain variables such as the *per capita expenditure on clothing and footwear* and the *consumption of inferior quality or staple foods*. This shows that as the expenditure on clothing and footwear increases, there is a corresponding decrease in the consumption of inferior foods (since it results in greater consumption of luxury foods, due to such households being better-off and being in a position to afford consumption of luxury foods 2-3 times a week). There is also a very strong relationship between *per capita expenditure on clothing and footwear* and total household income, total household assets, stock of foods held, and adult literacy, etc. These strong relationships mean that if a household reports relatively larger amount of spending on clothing and footwear, then there will be a relative and corresponding occurrence of greater household income and assets. Moreover, such households will be storing larger stocks of food supplies, and more adults in the household will be literate, as compared to those
households which do not spend so much on clothing and footwear. As the coefficient values approach zero, weaker relations can be inferred between the two variables. The interpretation of results is based on the probability theory which determines the level of significance of differences among sample groups that can be subsequently applied to the entire survey population.

The first step towards generating the poverty score was to filter out those indicators that were most sensitive to relative household poverty levels. By determining the extent and direction of correlation of each variable with the selected poverty benchmark indicator, a list was drawn up of variables with the highest degree of correlation. As the poverty assessment tool recommends that the final list should not exceed 20 variables, a total of 19 highly-correlated variables were selected for the final list. Since a balanced set of indicators is necessary to avoid over-emphasising a single aspect of poverty and for the accurate representation of poverty, these indicators were drawn up to represent all four dimensions of indicators. Such a step becomes necessary to ensure that relative well-being is reflected accurately and that the model does not present a distorted picture due to too much emphasis on a particular indicator or group of indicators.

In addition to ensuring that the indicators are representative, a fundamental criterion for their inclusion was that they had to be significant at \( p = 0.01 \), thus indicating a 99 percent certainty that the correlation was not generated at random. Table 5-13 shows the final list of indicators across the four dimensions that were found to be significantly correlated (where \( p < 0.01 \)) to the underlying benchmark indicator.
<table>
<thead>
<tr>
<th>Indicators</th>
<th>Significance (2-tailed)</th>
<th>Pearson Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total family size</td>
<td>8.233 E-06</td>
<td>-.132**</td>
</tr>
<tr>
<td>Total children dropped out from school</td>
<td>0.001</td>
<td>.095**</td>
</tr>
<tr>
<td>Total sources of income</td>
<td>7.793 E-07</td>
<td>.146**</td>
</tr>
<tr>
<td>Males in household aged 15 and above</td>
<td>7.857 E-07</td>
<td>-.146**</td>
</tr>
<tr>
<td>Percentage of literate adults</td>
<td>6.150 E-23</td>
<td>.287**</td>
</tr>
<tr>
<td>Household income</td>
<td>9.853 E-60</td>
<td>.458**</td>
</tr>
<tr>
<td>Household expenditure</td>
<td>2.391 E-51</td>
<td>.427**</td>
</tr>
<tr>
<td>Children's monthly schooling expenditure</td>
<td>5.445 E-06</td>
<td>.135**</td>
</tr>
<tr>
<td><strong>Household assets and Dwelling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total assets</td>
<td>1.476 E-08</td>
<td>.167**</td>
</tr>
<tr>
<td>Value of television</td>
<td>1.620 E-13</td>
<td>.217**</td>
</tr>
<tr>
<td>Value of refrigerator</td>
<td>7.103 E-13</td>
<td>.211**</td>
</tr>
<tr>
<td>Value of mobile phone</td>
<td>8.776 E-17</td>
<td>.244**</td>
</tr>
<tr>
<td>Value of agricultural land</td>
<td>1.484 E-10</td>
<td>.189**</td>
</tr>
<tr>
<td>Total value of livestock</td>
<td>0.000</td>
<td>.119**</td>
</tr>
<tr>
<td>Number of rooms</td>
<td>1.615 E-19</td>
<td>.264**</td>
</tr>
<tr>
<td><strong>Food security and vulnerability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inferior food consumption: vegetables, lentils, etc.</td>
<td>1.707 E-18</td>
<td>-.257**</td>
</tr>
<tr>
<td>Frequency of purchase of storable staple foods: wheat</td>
<td>1.538 E-19</td>
<td>.264**</td>
</tr>
</tbody>
</table>

Source: Survey data

**Correlation was found to be significant at the 0.01 level (2-tailed)

Table 5-13: Final list of indicators selected by level of association with benchmark poverty indicator
5.5.2 Using Principal Component Analysis to estimate the household poverty index

The preceding section discussed how a final list of indicators was drawn up by calculating their strength of association with the underlying benchmark indicator. The list (as shown in Table 5-13) will be used to develop a poverty index of surveyed households.

Before any types of analysis are performed on the survey data, all respondent households have to be ranked in order of relative well-being. This ranking will be done by allocating each household a ‘poverty score’ which signifies its position and standing on the scale. Each household is unique due to which respondents replied differently to interview questions. According to Henry, Lapenu et al. (2003), ‘one of the reasons why households answer differently to indicator questions is because of their relative poverty status’. These differences are initially captured by the surveys and are ultimately reflected in the poverty scores of the households. A key phase of this study is the development of the household poverty index, on the basis of which respondents can be ranked.

This ranking is carried out by applying Principal Component Analysis (PCA). It is a typical multi-variable statistical method which helps to reveal a simpler pattern from a complex set of variables (Lian, Lai, et al. 2002; Márquez and García-Pardo 2009). Shlens (2005) describes results generated from PCA as one of the most valuable from applied linear algebra, and argues that ‘PCA is used abundantly in all forms of analysis – from neuroscience to computer graphics – because of its simple, non-parametric method of extracting relevant information from confusing data sets’. According to Shlens (2005), with minimal additional effort, PCA provides a roadmap for how to reduce a complex dataset to a lower dimension, to reveal the sometimes hidden, simplified structure that often underlies it.
In the context of this study, PCA will be applied to identify (or extract) underlying components within a group of interrelated indicators (see Figure 5-9 above) that explain why the indicator values differ between households in the way that they do. Each component is assumed to capture a unique attribute shared by survey households. With the PCA model, each underlying component which is calculated represents a linear combination of the indicator variables used in the model. The first component is the combination that accounts for the largest amount of variance in the sample. The second component accounts for the next largest amount of variance and is uncorrelated with the first. Successive components explain progressively smaller portions of total sample variance (Zeller, Sharma et al. 2001; Henry, Lapenu et al. 2003). The outcome of running the model is a poverty score that is assigned to every household in the dataset. This score signifies the poverty of every household relative to all others that have been interviewed. A lower score signifies greater relative household poverty and vice versa.

As a first step, those indicators which show a very powerful correlation with each household’s poverty/wealth status have to be identified. This was carried out by applying the linear coefficient correlation as discussed in Section 5.5.1.

Next, a test model is run after screening the various indicators and the results are interpreted to ensure that one group of indicators is not over-represented to distort the picture of poverty or well-being. According to Henry, Lapenu et al. (2003), when those indicators that show
weaker correlation are removed from the model, the coefficients of the remaining variables often increase in magnitude and the number of extracted components declines. Once a uniform combination of the various indicators has been obtained, and the PCA model has been run to satisfaction, the finally-generated scores reflecting the relative poverty status can be saved as a separate variable in the dataset, to be used for subsequent analysis as discussed in the sections that follow.

The assessment tool develops the relative poverty index by applying PCA as described above and this determines how data and information from a range of indicators can be utilised most effectively and efficiently to measure the relative poverty of each household in the dataset. The end result of PCA is a single index of relative poverty that assigns a specific value to each sample household (a score), representing that particular household’s poverty status in relation to all other households in the sample (Henry, Lapenu et al. 2003).

The resulting poverty index is estimated from standardised indicator values. Standardisation of the variables strips away the units in which the variables are measured (ibid.). The standardised variable has a mean of zero and a standard deviation of one, as shown in the histogram in Figure 5-10 below, illustrating the distribution of the poverty scores in a standardised form. The scores derived from the PCA range from -1.599 to 4.863.
Out of the total 1,132 households in the dataset, 667 (about 60 per cent) fall below zero, that is, those with negative scores, reflecting greater levels of poverty. Out of these, 413 (about 36 percent) belong to the non-borrower category, while 254 (22 percent) are clients of various MFIs.

5.5.3 Forming relative poverty groups (terciles)

The preceding section discussed the complete process of calculating the poverty scores of each household in the survey. Once these scores have been obtained, a number of analyses can be carried out. As stated earlier, the first research question is aimed at ascertaining the depth of microfinance programme outreach.

In order to estimate depth, the first measure is to rank all households in order of ascending poverty levels (using the poverty score obtained in the steps above) and then allocate them across a grouping such as low, medium and high levels of poverty. In a similar framework for classifying clients’ poverty status proposed by Woller, Simanowitz, et al. (2004), various

Figure 5-10: Histogram showing poverty scores of respondents’ households
socio-economic indicators, such as labour market participation, physical assets, savings and credit, social and cultural resources and vulnerability, are viewed across three classifications: high, medium and lower levels of poverty. It is apparent from Table 5-14 that as the status shifts towards greater levels of poverty, there is a proportional rise in incidences of inconsistency in labour activities accompanied by lower levels of asset ownership, whereas the reliance on informal credit and financial services increases as opposed to making use of the formal banking and financial services sector. Moreover, households who live in a higher state of poverty are also classed as being highly vulnerable, whereas those which are relatively better-off have a diversified portfolio and enhanced capacity to manage shocks.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Higher Poverty</th>
<th>Middle Poverty</th>
<th>Lower Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Labour market</strong></td>
<td>Casual and/or unskilled limited employment; limited formal education</td>
<td>Limited employment but secure claims on other household members with stable employment</td>
<td>Stable, salaried employment or good employment prospects</td>
</tr>
<tr>
<td><strong>participation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical assets</strong></td>
<td>Very few — hand-to-mouth existence</td>
<td>Some — including household goods and business capital</td>
<td>Diverse — especially own dwelling</td>
</tr>
<tr>
<td><strong>Savings and credit</strong></td>
<td>Unbanked; reliant on informal services</td>
<td>Maybe a savings account; but saving has a high opportunity cost</td>
<td>Direct access to regulated savings and credit services</td>
</tr>
<tr>
<td><strong>Social and cultural</strong></td>
<td>Dependent on informal sources of patronage as security against shocks often on exploitative terms</td>
<td>Intermediate — scope for diversification away from dependence on a single patron</td>
<td>Diversified social networks; forms of security against shocks</td>
</tr>
<tr>
<td><strong>resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vulnerability</strong></td>
<td>Medium/high — but at cost of losing autonomy (&quot;security through servitude&quot;)</td>
<td>High — overwhelming fear of falling back into low group (e.g., through resources through separation or illness)</td>
<td>Low — diversified portfolio of which to manage shocks</td>
</tr>
</tbody>
</table>


*Table 5-14: Framework for classifying clients' poverty status*
In order to classify respondents of this survey in a similar pattern, the entire dataset is first filtered to select the non-borrower sample. These respondents are then sorted in ascending order according to the poverty score. Finally, they are divided into three equal parts: *terciles*, each consisting of 223 households, as shown in Table 5-15 below.

<table>
<thead>
<tr>
<th>Poverty Group</th>
<th>Relative Tercile Category</th>
<th>Frequency of Non-Borrower Households</th>
<th>Percentage of Non-Borrower Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Poor (Lowest)</td>
<td>223</td>
<td>33.33</td>
</tr>
<tr>
<td>2</td>
<td>Moderately Poor (Middle)</td>
<td>223</td>
<td>33.33</td>
</tr>
<tr>
<td>3</td>
<td>Less Poor (Highest)</td>
<td>223</td>
<td>33.34</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>669</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

*Table 5-15: Distribution of non-borrowers across three groups*

After classification, the bottom tercile households (lowest) are the *very poor* ones, followed by the *moderately poor* (second tercile, middle) and then the *less poor* (third tercile, highest). The cut-off scores that are thus obtained for each tercile define the limits of each poverty group as shown in Table 5-16 below.

<table>
<thead>
<tr>
<th>Poverty Groups</th>
<th>Minimum Poverty Score</th>
<th>Maximum Poverty Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor (Lowest)</td>
<td>-1.599</td>
<td>-0.630</td>
</tr>
<tr>
<td>Moderately Poor (Middle)</td>
<td>-0.631</td>
<td>0.112</td>
</tr>
<tr>
<td>Less Poor (Highest)</td>
<td>0.113</td>
<td>4.863</td>
</tr>
</tbody>
</table>

*Table 5-16: Cut-off scores for each category*

Once the cut-off scores have been obtained, borrower households are allocated to the three terciles on the basis of poverty scores. This will show how many households of the borrower sample fall in each of the three poverty groupings.
Figure 5-11 below shows how the cut-off scores obtained by segregating non-borrowers across the three different categories are employed to allocate borrowers according to the same minimum and maximum scores.

The cut-off scores now form the basis for classifying the borrowers across the same three groups (lowest, middle and highest level of poverty). The borrowers can be eventually divided across the three levels of poverty rankings. The result is shown in Table 5-17, with the distribution of the borrowers across the three levels as follows: 22.5 per cent in the ‘very poor’ group, 35.4 per cent in the ‘moderately poor’ group and 41.1 per cent in the ‘less poor’ group.

<table>
<thead>
<tr>
<th>Poverty Group</th>
<th>Relative Tercile Category</th>
<th>Frequency of Borrower Households</th>
<th>Percentage of Borrower Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very Poor (Lowest)</td>
<td>104</td>
<td>22.50</td>
</tr>
<tr>
<td>2</td>
<td>Moderately Poor (Middle)</td>
<td>164</td>
<td>35.40</td>
</tr>
<tr>
<td>3</td>
<td>Less Poor (Highest)</td>
<td>195</td>
<td>41.10</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>463</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5-17: Cut-off scores of the three terciles used to allocate borrowers
The entire dataset can now be distributed across the three terciles as shown in Table 5-18 below. This table is graphically represented in Figure 5-12 showing that there is an unequal distribution of borrowers across the three categories, with 42.8 percent in the less poor (highest category) and 20.3 in the very poor category.

<table>
<thead>
<tr>
<th>Poverty Groups</th>
<th>Frequency (N)</th>
<th>Total</th>
<th>Poverty Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Borrower Households</td>
<td>Non-Borrower Households</td>
<td>% age</td>
</tr>
<tr>
<td>Lowest</td>
<td>104</td>
<td>223</td>
<td>2.50</td>
</tr>
<tr>
<td>Middle</td>
<td>164</td>
<td>223</td>
<td>5.40</td>
</tr>
<tr>
<td>Highest</td>
<td>195</td>
<td>223</td>
<td>10.10</td>
</tr>
<tr>
<td>Totals</td>
<td>463</td>
<td>669</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5-18: Summary of distribution of the entire dataset across the three poverty levels
Figure 5-12: Distribution of borrowers and non-borrowers amongst the relative terciles

As can be seen from Figure 5-12 above, a higher representation of borrowing households in the less poor category dominates the distribution, with less than a quarter of the entire surveyed sample of borrowers belonging to the very poor classification. Figure 5-12 below presents the same data in the form of a radar graph, where the ‘pull’ of the borrower households (blue triangle) can be seen to incline towards the less poor classification.
5.6 Conclusion and Discussion of Findings

This chapter has focused primarily on the empirics of one of the most important factors that surround microfinance: poverty targeting and depth of programme outreach. The geographical areas explored were districts across rural Punjab in North-Eastern Pakistan and data was collected by means of a detailed household survey across eleven districts in the province. Poverty was evaluated on the basis of a series of poverty dimensions and associated indicators that were designed and filtered to capture relative poverty levels across households. The strength of these poverty indicators was determined by calculating the level of significance and direction of each variable to the benchmark indicator: per capita expenditure on clothing and footwear.

Once the level of association of various indicators to the benchmark indicator had been determined, households were ranked using the Principal Component Analysis (PCA) model. The result was a single index of relative poverty that assigned a specific value to each sample household, called a poverty score. This score represented the poverty status of that particular household relative to all other households within the survey (Henry, Lapenu et al. 2003.).
households’ resulting poverty score enabled ranking of all surveyed cases, eventually grouping them across three poverty levels (terciles), to ascertain what level of poverty various MFIs in the province had been able to successfully reach in order to extend credit services. Relative comparisons between households’ poverty levels were finally made based on this index.

Survey results reveal that the poorest households amongst the surveyed sample are not being reached to the desired extent. Given that the sample has been drawn at random across different districts located throughout the province, it seems that various MFIs operating in the province do not seem to be targeting the poorest households and the outreach to this segment of the society remains low. As shown in Table 5-18 and Figure 5-12 above, a large portion (over 41 percent) of total outreach is focused on the least poor, as opposed to 22 percent of the middle poor category, whereas outreach to the poorest people is considerably low, which was measured to be less than a quarter (22 percent) of all surveyed households.

Most discussions about outreach argue that there is a trade-off between depth of programme outreach and institutional sustainability: if MFIs focus on achieving depth, they have to sacrifice breadth, as the poor are more difficult and costly to reach and generate lower revenues. Lending to the poor is therefore not considered to be financially viable as serving them entails higher processing costs and generates little income; moreover, they do not have a good credit history and are more prone to default (Pischke 1991; Chigumira and Tyhs 2000; Churchill, Hirschland et al. 2002; Masiyandima 2003; Ivatury 2005). Maes and Foose (2006a, 2006b), on the other hand, claim that despite the high risk, high transaction costs, and other challenges described above, a number of microfinance organisations, NGOs, and multilateral agencies are already specifically targeting microfinance services at very poor people, while other microfinance programmes, realising that they are not reaching very poor people, are interested in finding new approaches.

How can the extremely poor be reached? Matin and Hulme (2002) recommend three ways of making MFI services more poverty focused: identifying and reaching the poor, attracting the poor, and discouraging or excluding the non-poor. On top of these, a fundamental driving force towards achieving greater depth of outreach is rooted in visionary leadership and organisational commitment, a fact that several studies have highlighted (see Hulme and
Mosley, 1996; Johnson and Rogaly, 1996). If the top management is strongly committed with a social mission towards reaching the very poor (even if this means foregoing revenues, as discussed above), organisational procedures will ultimately be designed and implemented around this objective. Maes and Foose (2006a) argue that while buy-in from top management is essential, this commitment needs to be accompanied by an overall institutional culture dedicated to providing continued microfinance services to very poor people. Staff incentives (that take into account client outreach and impact) can be introduced to target the very poor as opposed to selecting the relatively better-off. Simplified branch-level operations and reduced paperwork in the field can lead to assist towards cost reduction and can also help in deterring the very poor from joining such programmes.

Designing specialised and targeted products has been shown to be beneficial in reaching the very poor. Grameen Bank and BRAC for example, both large development organisations in Bangladesh, in addition to regular microcredit programmes offer tailored products that specifically target very poor people. BRACs Income Generation for Vulnerable Groups Development (IGVGD) programme, for instance, ‘provides food subsidies and intensive skills training to vulnerable women, as well as a standard package of microcredit, healthcare and social services; and another recent programme, Challenging the Frontiers of Poverty Reduction/Targeting the Extreme Poor (CFPR/TUP), abandons loans altogether and offers enterprise asset grants instead, to the same target group’ (Maes and Foose 2006a:11). If such targeted programmes can be sustainable and have proven beneficial to the intended, excluded segment of the poor, they can be replicated with localised modifications across rural Pakistan in order to achieve greater depth of programme outreach.
Chapter 6: Assessing the Impact of Microfinance

6.1 Introduction

The previous chapter described how applying the PCA model generated a poverty index that enabled ranking of all surveyed households in order of relative well-being. These scores subsequently enabled grouping and classification of non-borrower households into terciles: the very poor, middle poor and less poor, to assess depth of outreach. Results provided evidence of an extremely low level of outreach to the very poor category of borrowers. While chapter five dealt with programme outreach in surveyed areas, this chapter addresses the second research question that inquires into the type, level, direction and extent of impact that microfinance has on borrower households.

The remainder of this chapter is organised as follows: the section that follows discusses in detail how some respondents are at an advantage over others and hence 'self-select' themselves for microcredit programme intervention, thus resulting in bias. Section 6.3 discusses two major methodological approaches to control such bias, while econometric methods to control them are discussed in section 6.4, followed by a detailed discussion of the model used for this purpose: propensity score matching, the underlying assumptions, estimation strategy adopted and matching algorithms. Finally, once both groups of respondents have been balanced in terms of the selection bias, tests are carried out to assess programme impact on borrower households. Programme impacts are discussed at length in section 6.8 onwards, across all four dimensions and the relevant indicators employed in the study, prior to drawing conclusions as to whether participation in MFI lending programmes has really benefited the poor, and if so to what extent and across which dimensions.

6.2 Comparison of Households and the Issue of ‘Self-Selection’ Bias

This chapter assesses if, how and to what extent microfinance impacts the rural poor. The assessment is carried out by means of the household survey that was administered across eleven districts in the province of Punjab in Eastern Pakistan. Setboonsarng and Parpiev (2008) claim that one of the most difficult issues a researcher has to address in any impact study is to sort out whether wealth was created due to programme participation or whether borrowers were already relatively wealthy when they joined the programme. According to
the authors, ‘when people decide to join the programme, they first self-select into it and are subsequently also selected by their peers in the group-lending scheme. This double selection can ultimately create a bias in several instances. First, those who are wealthy or possess more entrepreneurship abilities and skills are likelier to self-select into the programme. Second, even if the poor want to join the programme, they may not be selected into it by the wealthier peers’ (ibid:9). Tedeschi (2008) argues that micro-entrepreneurs who borrow may have unobservable traits, such as more entrepreneurial ability. Such traits could make them more likely to have higher levels of the impact variables, even without access to credit. Imai, Arun et al. (2010) attest that individuals with similar characteristics (e.g. education or age) might have different levels of entrepreneurial spirit or ability, which may ultimately lead to different probabilities of their participating in the scheme, and hence become the source of the bias.

Heckman (1979, 1997) attributes bias in sample selections to two possibilities: first, there may be self-selection by the individuals or data units being investigated; second, sample selection decisions by analysts or data processors operate in much the same fashion as self-selection. In clinical trials, as well as social behavioural studies, researchers often cannot or do not implement randomised experiments. As a result, many studies estimate causal effects of treatment relative to a comparison condition based on observational data (Gou et al. 2006). The problem, however, arises when these groups are not ‘balanced’ at the start of the experiment. As people may self-select into treatment or are selected on some non-random basis in various kinds of quasi-experiments (Campbell and Stanley 1963), impact assessments may result in the misrepresentation of statistics since the sample being surveyed selects itself to form part of the group being surveyed. According to Silva (2006) unobservable characteristics affecting participation can influence outcomes; for example, it may be that highly motivated individuals are more likely to participate in microfinance programmes and are also more likely to have higher incomes and savings. On the other hand, programme entry may be a function of administrator selection. It is reasonable to believe that administrators discriminate between the less and the better able as a basis for programme selection. ‘If administrators are “cream-skimming” by selecting the best for the programme, then programme effects will be overstated’ (ibid:55).

Statistical distortion is therefore created when certain inherent characteristics of such samples are over-represented because they correlate with their initial willingness to be included in the group of samples being surveyed. Their willingness to be included in the microcredit
programme, coupled with their relative ease in joining a peer group, results in the strength of the impact being overstated. Previous findings (see e.g. Coleman 1999; Tedeschi 2008; Pitt and Khandker 1998; Setboonsarng and Parpiev 2008) have established that empirical estimations that ignored selection bias tend to overstate the impact of borrowing. Tedeschi (2008:505) asserts that ‘if bias is a problem and is not properly dealt with, we could be overstating the benefits of microfinance, creating an imagined benefit that is only the result of poor econometric techniques’.

During the fieldwork carried out for this research, this possibility was brought to the researcher’s attention on a number of occasions by interviewees who had not been able to join groups for gaining access to credit from various MFIs. A number of reasons are suggested. Box 6-1 gives the account of one such interviewee who, despite needing a loan and also being capable of running a business, was not accepted in a group.\(^4\)

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\(^4\)Most MFIs in Pakistan replicate the ‘Grameen model’ of group lending and advance loans based on the peer group lending model. The terms may vary across MFIs, but generally credit is advanced to groups of around 5-6 borrowers; one member acts as the group leader who manages the group voluntarily. Each group member is individually responsible for the repayment. Loans are initially advanced to only two members and if repayment is made according to schedule for at least two months, the next two members become eligible for loans. This peer pressure creates a form of ‘social collateral’ that acts as a stigma if repayments are not made. Although the original Grameen group lending model made the whole group liable for any member’s default, more recently most MFIs have taken a more lenient stance and in the case of default, each member is individually liable; nevertheless, the element of social pressure still acts as a powerful means to ensure that defaults are almost nonexistent.

Wydick (1999) reiterates the importance of group pressure and peer monitoring and finds that groups help to repay loans for borrowers who cannot pay because of a verified unavoidable mishap; they expel borrowers from the group who have misused borrowed capital, replacing them with another group member. For further details, see extensive studies on the mechanisms behind the success of group lending carried out by Stiglitz (1990), Besley and Coate (1995), Morduch (1998), Armendáriz de Aghion (1999), Armendáriz and Morduch (2000) (Natarajan 2004) and Ghatak and Guinnane (1999).
‘I moved to this village from another district about six months ago. I know just a handful of people here and have no permanent source of income. I am working in this roadside hotel on daily wages, which are not enough for me to sustain my family of a wife, three children and parents. When groups were being formed last month, I tried to join one of them with others who were acquainted with me, so that I could avail myself of the credit facility and start a small business of my own to sustain my family. I was blatantly refused by the group leader on the pretext that I did not have any utility bills to my name, and also because my National Identity Card did not bear my current address. These issues could have been taken care of (as it was in cases of other members) but I was not allowed to join for the simple reason that I am very poor and do not have a business or a stable source of income, valuable assets, or a house of my own or land. I needed the cash to set up my own tea-stall and I would have been able to generate enough money to pay off the instalments and also fend for my family’.

Interview narrative of a non-borrower in a village in Chakwal District, North Punjab, 9th October 2009

Box 6-1: Narrative of interview (non-borrower)

From the case cited in Box 6-1 above, it becomes clear how potential programme participants can be either left out as ‘they are not selected by the wealthier peers’ (Setboonsarng and Parpiev 2008:9) or become victims of what Silva (2006:55) refers to as ‘cream-skimming’ by programme selectors. In contrast to the case cited above, it was observed during interviews and focus group discussions that even if certain borrowers had not been advanced credit, they would have been financially stable. This was usually the case when the household showed a stable pattern of income through multiple sources, or possessed agricultural landholdings and livestock. Such cases are ‘safe bets’ for the programme officers who initiate group formation and indirectly advocate the inclusion of such people as it is almost certain that they will not default (during payment of instalments) and even if they do face financial constraints, given their good standing and access to ‘social capital’ it will not be a problem for them to borrow the small instalment amounts and keep their payment record up-to-date. Such borrowers look good on the books, do not create issues for the group as a whole, and cause no trouble for the MFI field staff during collection of instalments. But a critical issue arises here: how did they get accepted into the programme in the first place?

Selection into the programme occurs in two stages: upon hearing that staff from a certain MFI is operating in the village and groups are being formed, they approach group leaders who have been appointed by field staff to form groups, and express their willingness to join.
Given their relative better financial and social standing, they are selected to join the programme. Sometimes they may even be approached by the group leaders and invited to join the programme. This is the point where ‘self-selection’ and hence, biased results occur. Critics argue, it may lead to a biased opinion of the ensuing impact of microfinance programmes, because it leads to overstating the positive effects of borrowing, as they were not randomly selected to form part of the group, and this non-random assignment leads to falsely assuming that whatever wealth they have accumulated over a certain time period is the direct outcome of the lending programme in question.

6.3 Research Design and Methods to Control Selection Bias

The section above discussed how and why bias in the sample arises, and what consequences ensue when comparisons are made in such a survey. A critical question arises at this stage: how can the research and sampling strategy be formulated to address this issue at the outset? Using ‘new and veteran’ members and randomisation are two major research designs that can inherently control for such bias. These two designs are discussed below.

6.3.1 New and veteran members

A valid control group is the ‘holy grail’ of any microfinance impact assessment and must consist of participants who possess the same ‘entrepreneurial spirit’ as those in the treatment group that receive the loans (Karlan 2001). The cross-sectional approach uses new members (forming the control group) and ‘veterans’ (representing the treatment group) to compare differences, claims to fulfil this requirement, since both the control and treatment groups consist of individuals who have already opted to participate in the lending programme. The rationale behind this is that new members have not been exposed to or ‘contaminated’ by the treatment long enough to show signs of any impact, whereas the older members would have been exposed long enough to show characteristics of improvement (or otherwise) to enable the researcher to make rational judgements of programme impact.

As respondents from both groups have already joined the programme, they have both opted to participate; hence the issue of self-selection ceases to exist. Already in the programme, they all had the same probability of joining, so it is not necessary to control for any
selectivity-related issues. Advocates of this approach claim that studies designed on this basis are quick and inexpensive, as non-borrowers do not have to be identified.

Despite the apparent straightforward manner by which new and old members can be compared to assess impact, researchers have voiced concern at the perils of using new members as a control group. Karlan (2001), for instance, argues that a number of factors may affect the results. Some borrowers may drop out of the programme, either because they were performing poorly and could not cope or because they had been in the programme long enough and could successfully sustain their businesses without further borrowing. Quite naturally, cases such as these (dropouts) will not be picked up while drawing the sample. Karlan (2001) also asserts that since an impact assessment should examine the affect of the programme in its entirety, not just its success cases, these individuals must be considered in the sample as well; he further argues that the claim that this method takes care of self-selection bias only does so statistically and fails to recognise the full dynamics of the decision to participate, so that other questions still remain unanswered: why did those in the treatment group join two years ago whereas those in the control group joined just now, and did they join only at a certain point in their life? Or if peer selection determines participation, why was one person chosen two years ago and the other not until recently, and what were the factors that led to his selection now and not before?

The use of new and old members can be applied successfully only if a certain specific organisation is being targeted for survey purposes, if the lender itself is carrying out a survey of the area to assess impact or if it has outsourced it to some external agency, or if the donors have recruited external assessors to measure impact. In such cases, borrowers are randomly selected from available records and are subsequently filtered as being ‘new’ or ‘old’. Another important issue to be bear in mind is that the choice and application of this method depends on the nature and scope of the study as it might not be possible to apply it to every kind of survey. In the context of this research, villages were selected in rural areas at random, and respondents were picked randomly irrespective of their being borrowers or non-borrowers, or how long they had been borrowing from any microfinance institution. Moreover, no distinction was made of which lender members had borrowed from.
6.3.2 Randomised control trials

If participants and non-participants in any experiment are not allocated to groups before treatment, investigators have no control over the treatment assignment, and therefore any direct comparisons with outcomes from the treatment groups may lead to misleading judgements. Moreover, if the subjects of the experiment decide to allocate themselves into either of the two groups, selection biases are bound to result, thereby distorting the results. Randomisation takes care of the issue of selection bias; this involves controlled trials that are quantitative, comparative experiments in which a group of investigators studies two or more interventions by administering them to groups of individuals who have been randomly assigned to receive each intervention (Stolberg, Norman, et al. 2004)\(^5\).

In a randomised experiment, first, samples from the population are drawn and assessed for programme eligibility. Once they fit selection criteria, they are randomly assigned to either the control or treatment group. The randomisation of units (that is, of subjects) to different treatments guarantees that on average there should be no systematic differences in observed or unobserved co-variates (that is, bias) between units assigned to the different treatments (D’Agostino 2005).

Randomised controlled trials are considered one of the simplest but most powerful tools of research (Stolberg, Norman, et al. 2004), as the subjects for experiment are allocated, at random, to either of two groups. The randomisation procedure gives the method its strength. Random allocation means that all participants have the same chance of being assigned to each of the study groups (Altman 1991). The allocation, therefore, is not determined by the investigators, the clinicians, or the study participants (Jadad 1998). The purpose of random allocation of participants is to assure that the characteristics of the participants are likely to be as similar as possible across groups at the start of the comparison (also called the baseline). If randomisation is done well, it reduces the risk of a serious imbalance in known and unknown factors that could influence the clinical course of the participants. No other study design allows investigators to balance these factors (Stolberg, Norman, et al. 2004).

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As shown in Figure 6-1 above, a typical parallel randomised experiment takes place in four phases: enrolment, intervention allocation, follow-up, and data analysis of the two groups in the study. After first being assessed for programme eligibility, participants are randomly allocated to either of the two groups: treatment or control (allocation phase). Both groups receive treatment in the case of a parallel randomised trial, as shown in the figure above; in a non-parallel trial, the control group does not receive the treatment. Programme participants are followed up to keep track of those who discontinue intervention or are lost during the experiment. Finally, both groups are analysed to assess for programme impact.

Though randomisation may prove applicable and successful in laboratory-based or clinical trials, it has different implications in the social sciences. In the case of microcredit, for instance, exogenous factors are bound to play an important role in the lives of both groups, those that have been extended credit and those that have not. This is particularly relevant if participants are not selected carefully. As an example, consider the impact that remittances
from abroad can have on a household’s living standards, or if participants change, gain or lose jobs.

In the light of the above discussion, and given the nature of this study, it is apparent that randomisation could not be applied to this case. Since programme participants were already borrowers of various MFIs, there was no control over respondents’ allocation to any of the two groups. As borrowers had already joined lending programmes (some of them many years earlier, as shown in Figure 5-4), they had already been ‘contaminated’ by selection bias before and during their decision to participate in programmes.

Section 6.2 above set out potential sources of bias and how the quality of the results can be affected during data handling and econometric analysis if these are not accounted for. One method of control for such biases is to design the survey and sampling technique in such a manner that all potential biases are intrinsically controlled for in the surveyed sample. This section discussed two common research designs that serve this purpose.

The data that was collected during the course of this study does not have a structure that controls such bias, as in the case of data collected in the new and veteran members and randomised control trial models discussed above. Instead, the data is quasi-experimental and suffers from selection bias, as discussed in section 6.2. Instead, this study controls for bias using statistical techniques, as discussed in the section below.

### 6.4 Impact Estimator and Selection Bias

#### 6.4.1 Impact estimator

As the study is based on quasi-experimental research design, the impact of programme participation on borrowers’ livelihoods will be assessed by estimating differences between those individuals that received the ‘treatment’ and those that were not subjected to such treatment, i.e. participating in microfinance programmes. This is a standard approach, formalised by Roy (1951) and Rubin (1974). The difference in the outcome of the treatment is formally defined as:

$$\Delta_i = Y_i^1 - Y_i^0$$  \hspace{1cm} (6.1)
where $\Delta_i$ is the treatment effect of individual $i$, in which $i=1,2,\ldots,N$. $Y_i^1$ and $Y_i^0$ are the potential outcomes for treated and non-treated individuals respectively. Equation (6.1) allows, in theory, estimating the difference between the potential outcomes before and after receiving the treatment for each individual.

Note that in (6.1), for each individual $i$, there is only one observed outcome and the other is counterfactual. This makes it impossible to estimate the difference between the outcomes before and after treatment for each individual. Thus, equation (6.1) is modified to estimate the average treatment effect. Consequently, this study uses a key evaluation parameter, namely, the Average Treatment Effect on Treated (ATT)\(^6\).

ATT represents the mean effect on those who *actually participate* in the programme. Thus, as $\Delta_i$ is not observable directly, equation (6.1) is modified to estimate the average treatment effects on the treated, $\Delta_{TT}$. In this context, $\Delta_{TT}$ is applied and defined formally as:

$$\Delta_{TT} = E(\Delta \mid D = 1) = E(Y^1 \mid D = 1) - E(Y^0 \mid D = 1)$$ (6.2)

$\Delta_{TT}$ as defined in equation (6.2) measures the difference between the expected outcome with and without treatment for the actual participants. The term $E(Y^1 \mid D = 1)$ represents expected outcomes for programme participants, while $E(Y^0 \mid D = 1)$ is the hypothetical outcome that would have resulted if the programme participants had not participated. In short, equation (6.2) allows extraction of the effect of the treatment programme on the treated from the total effects estimated\(^7\). Finally, equation (6.2) is used in this chapter as an estimator to answer this counterfactual question: what would be the state of those individuals who actually

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\(^6\) One can estimate the effect using the *average effect on the outcome* defined as $\Delta_{TE} = E(Y^1 - Y^0)$. This measure does not, however, focus solely on individuals for whom the treatment programme is meant. In addition to individuals of interest, $\Delta_{TE}$ includes the effect on those for whom the treatment programme was not intended, which makes it irrelevant to the issue discussed in this study.

\(^7\) Note that a number of estimators are proposed in literature to measure the difference between treated and non-treated, such as the before-after, the difference-in-difference, and the cross section estimators. See Heckman et al. (1999) for further details regarding these estimators.
participated in microfinance programmes (were subjected to treatment), if they had not borrowed (and hence had not been treated with lending)?

### 6.4.2 The issue of selection bias

From (6.2), the selection bias becomes obvious, as \( E(Y^0 | D = 1) \) is an unobserved counterfactual outcome of treated individuals. If \( E(Y^0 | D = 1) = E(Y^0 | D = 0) \) holds true, then non-participants can be conveniently used as the comparison group. But owing to non-experimental data, this condition does not hold, since the components which determine the participation decision also determine the outcome variable of interest. Thus, the outcomes of the participants would differ even in the absence of programme participation, leading to selection bias (Silva 2006). Thus, it has been suggested that a proxy or substitute be used such as applied by Caliendo and Kopeinig (2010), Zhao (2004) and Heckman (1997).

In addition, the outcomes \( Y^0 \) and \( Y^1 \) cannot be observed for the same individual simultaneously. This absence of information about the outcomes, estimating the impact of treatment using equations (6.1) and (6.2), leads to biased estimates. The bias in this context is due to the differences in individuals’ characteristics between participants and non-participants, known as self-selection bias, as explained above.

While the sections above discussed various research designs and methodological issues to control bias, econometricians and applied econometricians tend to deal with them in various ways according to the source or cause of the bias. One common way to deal with bias is to correct for it using the Heckman (1979) bias selection test and two-stages estimator. Imbens and Rubin (1996a, b), Angrist and Imbens (1999), Heckman (1997) and Moffitt (1996) propose the use of instrumental variables to deal with the issue of bias and controlling for endogeneity. The latter method, although its application is controversial, is a popular approach in econometrics. When the bias is due to unobservables, such as in the case of data collected for this study (i.e. the outcomes are not observed for all individuals since they

---

8 As explained in Chapter 3 (section 3.5) and Chapter 5 (section 5.3) programme participants are those households that have been subjected to treatment, and hence form part of the borrower-group, whereas non-participants are the non-borrowers. The term treated refers to programme participants while control, comparison or counterfactual group refers to non-participants in MFI programmes.

9 One of the difficulties in implementing this approach is the lack of suitable instruments especially when data has a cross-sectional structure.
cannot participate in the treatment programmes at the same time), one way to handle it is to make use of matching procedures, such as co-variates matching, (Rubin 1980) and propensity scores (Rosenbaum and Rubin 1983).10

The self-selection bias that this study faces is due to borrower selection11 for extending credit. The individuals in the sample are different and therefore take the difference of the averages; moreover, their outcomes as both borrowers and non-borrowers cannot be observed. Thus non-participants’ available information is used to estimate impact. Matching, as mentioned above, involves first identifying non-programme participants who are comparable in essential characteristics to participants, and subsequently comparing differences in mean outcomes between these two groups to estimate programme impact.

The co-variate matching procedure suffers from the problem of multi-dimensionality, which occurs when there are a large number of co-variates. This makes this approach impractical (see for example Zhao 2004 and Westat 1981). Propensity score matching (PSM), however, provides a solution to the problem of multi-dimensionality. Thus, PSM is applied as the primary econometric technique that will be used in this study to solve the evaluation problem.

6.4.3 Defining bias

In the context of this study, bias is defined as the difference between the outcomes of programme participation and non-participation. Formally:

\[
\text{bias} = E(Y^1 | D = 1) - E(Y^0 | D = 0)
\]  

(6.3)

The bias defined above is derived as follows: recall the definition in (6.3) and its implications. Since the effect of interest of those treated participants is captured by (6.3), we need to remove further the effect of non-treated participants. This latter is defined as:

---

10 One might also think of using Tobit models to control for the issue of bias due to observables. In this context, selection bias occurs when the data are truncated, censored or not observing the outcomes observing the co-variates (i.e. latent and limited dependent variables). See for example Imai et al. (2010) and any econometric text book such Cameron and Trividi (2005) and Green (2004).

11 ‘Selection’ may refer to either self-selection by willing individuals, ‘hand-picking’ or as to referred by Silva (2006) ‘cream-skimming’ by field staff.
Equation (6.5) defines the sub-set of all individuals who are non-participants and have not been treated. Therefore the bias is the difference between the effect on the treated participants and the difference between effects of non-treated participants and non-participants. Formally:

\[ \Delta_{TT} = E(Y^0 | D = 0) - E(Y^0 | D = 1) = E(Y^1 | D = 1) - E(Y^0 | D = 1) - E(Y^0 | D = 0) + E(Y^0 | D = 1) \]  

(6.5)

\[ \Delta_{TT} = E(Y^0 | D = 0) - E(Y^0 | D = 1) = E(Y^1 | D = 1) - E(Y^0 | D = 0) \]  

(6.6)

In the ideal case, the bias is zero, which implies:

\[ E(Y^1 | D = 1) - E(Y^0 | D = 0) = 0 \Leftrightarrow E(Y^1 | D = 1) = E(Y^0 | D = 0) \]  

(6.7)

Therefore, \( \Delta_{TT} \) is identified only when equation (6.7) holds, thus solving the issue of self-selection.

6.5 Propensity Score Matching and Assumptions

The previous sections discussed the issue of bias created in a sample if the respondents self-selected themselves into the experiment (in this case, the lending programme), and further discussed how such bias can be controlled by econometric modelling. Since the second question of this research identifies and tests for any significant differences between clients and non-clients, it becomes necessary to ensure that adequate and appropriate econometric techniques are applied that result in ‘balancing’ both groups in the survey. Once both the treatment and control groups are balanced, all subsequent impact-related estimations are naturally in a better position to reflect a more accurate picture.

6.5.1 Introducing PSM

According to Dehejia and Wahba (2002), ‘an important problem of causal inference is how to estimate treatment effects in observational studies, situations (like an experiment) in which a group of units is exposed to a well-defined treatment, but (unlike an experiment) no
systematic methods of experimental design are used to maintain a control group. It is well-recognized that the estimate of a causal effect obtained by comparing a treatment group with a non-experimental comparison group could be biased because of problems such as self-selection or some systematic judgment by the researcher in selecting units to be assigned to the treatment’. Since this study explores causal inferences of the lending programmes, it is necessary to first address the sample selection bias in the survey so that units in the comparison group are comparable to the treatment units.

Methods to evaluate programme effectiveness and outcomes have undergone significant transformation in the past 25 years, as researchers have recognised the need to develop more efficient approaches for assessing service effects from observational data and programme evaluation (Gou et al. 2006). Consequently, both statisticians (e.g. Rosenbaum & Rubin 1983) and econometricians (e.g. Heckman 1978, 1979) have made considerable progress by developing new approaches to estimate causal effects from available data. Chief amongst these approaches is Propensity Score Matching (PSM), which this study applies to control for bias (as discussed above). Gou et al. (2006) contend that the motivation for developing the PSM approach stems from the need to analyse causal effects of treatment from observational data as well as to reduce selection bias in programme evaluation.

A propensity score is the conditional probability that a person will be in one condition rather than in another (e.g. get a treatment rather than be in the control group) given a set of observed co-variates used to predict the person’s condition (Rosenbaum and Rubin 1983). This conditional probability of selection into a treatment (called the propensity score), plays a central role in classical selection and matching models (see, e.g., Heckman 1980; Heckman and Navarro 2004; Rosenbaum and Rubin 1983). Propensity score analysis is a relatively recent statistical innovation that is useful in the analysis of data from quasi-experiments. The goal of this method is to balance two non-equivalent groups on observed co-variates to obtain more accurate estimates of the effects of a treatment on which the two groups differ (Luellen et al. 2005). D’Agostino (1998) contends that the propensity score for an individual (defined as ‘the conditional probability of being treated given the individual’s co-variates’), can be used to balance the co-variates in the two groups, and thus reduce this bias.

Formally, the propensity score for an individual is the probability of being treated conditional on (or based only on) the individual’s co-variate values. Intuitively, the propensity score is a
measure of the likelihood that a person *would have been treated using only their co-variate scores*. Rosenbaum and Rubin (1983) showed that the propensity score is a balancing score and can be used in observational studies to reduce bias through the adjustment methods mentioned above (D’Agostino 1998).

PSM was specifically designed to assist researchers from all fields in drawing causal inferences in observational studies. Rubin (1997) argues that evaluations based on observational data ‘are not based on the results of carefully conducted randomized clinical trials, but rather represent data collected through the observation of systems as they operate in normal practice without any interventions implemented by randomized assignment rules’.

While contemplating the rationale behind using PSM, Dehejia and Wahba (2002) assert that the motivation for focusing on this matching method is that in many applications of interest, the dimensionality of the observable characteristics is high. If there are a small number of characteristics (for example, two binary variables), matching can be straightforward (one would group units in four cells); however, when there are many variables, it is difficult to determine along which dimensions to match units or which weighting scheme to adopt. The researchers further attest that ‘propensity score matching methods are especially useful under such circumstances because they provide a natural weighting scheme that yields unbiased estimates of the treatment impact’, thus proving invaluable in observational studies, as they are ‘used primarily to reduce bias and thus increase precision’ (D’Agostino 1998).

Thus, the ATT or the average effect on the treated is estimated via a PSM estimator. The estimator is formally defined in the following section along with the assumptions required to ensure its validity.

### 6.5.2 Assumptions

*Counterfactual unobserved outcome of stable unit treatment value* is assumed to hold in the context of this chapter (see Rubin 1980). The assumption implies that individuals’ potential outcomes depend on their own participation and not on the treatment status of other individuals in the population. The importance of this assumption is that it rules out the possibility of peer and general equilibrium effect. In addition to the above assumption, two broad assumptions are imposed at this stage to estimate the treatment effect that is selection-
bias free. The first is exogeneity of the treatment, known as *unconfoundness*, and the second is the *overlap* condition.

The assumption of unconfoundness implies that differences in outcomes – before and after treatment outcomes – are due only to the implementation of the treatment programme. Moreover, the set of co-variates, \(X\), is not affected by the treatment and is assumed to be fully captured in the model (i.e. no omitted variables). The assumption is formally defined as:

\[
Y^0, Y^1 \perp D \mid X
\]

(6.8)

The second requirement is to ensure that all individuals with the same characteristics in the sample (e.g. the same co-variates) have a positive probability of being participants and non-participants. In order to achieve this condition, one needs to define the following overlap condition, as:

\[
0 < P(D = 1 \mid X) < 1
\]

(6.9)

The overlap condition rules out the perfect predictability of participation, conditional on the characteristics identified by the set of covariates \(X\).

When combined, these two assumptions allow estimating both effects, \(\Delta_{TE}\) and \(\Delta_{TR}\). The assumptions above can be relaxed when estimating only \(\Delta_{TR}\) to weaker unconfoundness and overlap assumptions:

\[
Y^0 \perp D \mid X
\]

(6.10)

\[
P(D = 1 \mid X) < 1
\]

(6.11)

The weaker unconfoundness assumption in (6.10) requires the independence of only the outcome for the controls; while the weaker overlap condition in (6.11) requires that all conditional probabilities are strictly less than 1. Thus, since this chapter is concerned with
estimating the effect on the treated only, assumptions in (6.10) and (6.11) are assumed to be both satisfied.

From the discussion above, equation (6.2) needs to be estimated using the PSM estimator. Rosenbaum and Rubin (1983) introduced what is known as a balancing score to avoid the problem of high dimensionality. This balancing score is defined as a propensity score, which is a function that estimates the probability of participating in the programme given the observed co-variates (e.g. observed characteristics for each individual). Formally, the propensity score is defined as:

\[ P(D = 1 | X) = P(X) \]  
\( (6.12) \)

This latter ensures that it satisfies the unconfoundness assumption, which implies in this case that potential outcomes are independent of treatment, given the set of co-variates \( X \) such that: \( Y^0, Y^1 \perp D | P(X) \) (and \( Y^0 \perp D | P(X) \) in its weaker version). Assuming, in addition, the overlap condition, we may estimate the average effect on the treated \( \Delta_{TT} \) using a PSM estimator defined in general as:

\[ \Delta_{TT}^{PSM} = E_{P(X)}[E(Y^1 | D = 1, P(X)) - E(Y^0 | D = 1, P(X))] \]  
\( (6.13) \)

Equation (6.13) provides us with estimates of the mean difference within the common support region and weighted by the propensity score distribution of participants estimated using (6.12). In other words, it reflects the difference between treated and non-treated who lie within the overlap region. The PSM estimator expressed in (6.13) is selection-bias free as long as assumptions (6.11) and (6.12) hold.

Hence, the estimation strategy involves: the estimation of the propensity score, variable choice, common support and matching algorithms, inference and testing as highlighted in the section below.
6.6 The Estimation Strategy

The previous section introduced the econometric model that this study employs to match respondents from both groups to remove any selection bias. Assumptions that form an integral part of the model were also explained and, finally, the PSM estimator was discussed. This section involves details of the steps followed to produce the output of estimating the impact of MFI programmes, the results of which will be reported in section 6.8.

6.6.1 The set of co-variates

As discussed earlier, predictor variables have first to be selected to estimate the multiple regression model. When selecting such co-variates, however, certain precautions have to be taken to ensure that these independent variables are not ‘so highly correlated with one another that it becomes difficult or even impossible to distinguish their individual influences on the response variable’ (Dallal 2008), thus leading to the issue of multicollinearity.

In order to justify the choice of the set of independent variables, or the co-variates, this study adopts both qualitative and statistical approaches, in the light of arguments put forth by Caliendo and Kopeinig (2008), who state that researchers do not necessarily have to rely exclusively on statistical techniques to arrive at the final list of co-variates, but can also include those variables that they have observed to reflect association with programme participation.

The statistical approach adopted, in addition to qualitative selection, is based solely on the statistical significance of the coefficients associated with the co-variates involved. The level of significance adopted is flexible within the range 1% and 10% level significance. In other words, any variable with a coefficient with level of significance 10% or less is retained in the model. This range is not ideal; however, the lack of variation in the cross-section data is general, and the data of this study in particular would have a great impact on the presence of highly statistically significant variables. In addition to statistical significance, all variables that are highly correlated with the main co-variates are excluded to prevent the model from suffering from multicollinearity which, as discussed above, overestimates variances of the model thus inducing the co-variates included to appear to be statistically insignificant. This was found to be particularly applicable to instances in which co-variates from within the
same dimension were over-represented. For instance, when selecting from the *food security and vulnerability* dimension, the entire model suffered from insignificance if the consumption of all three classes of luxury food were included in the model (chicken, beef and mutton), which led to inclusion of only beef consumption in the final model. Similarly, in the case of the dwelling-related dimension, the model was weakened if co-variates reflecting housing quality were included that reflected the same living standards (availability and type of toilet, quality and type of flooring, material used for constructing walls and roof, source of water supply). The model was strengthened if one of each class of indicators in the dwelling-related dimension was used to run it: electricity supply in house, availability and type of toilet, home ownership status and number of rooms in the house. As there is no overlap in any four of the co-variates listed above, they will not influence the response variable and thus the model would not be expected to suffer from the issue of multicollinearity.

The final variables that were used in the model were selected so as to be both statistically sound and qualitatively justifiable, and were balanced across all four dimensions of relative household well-being, as captured by the questionnaire. These were classed as the dimensions of *human resources* (average age of household adults, type of occupation of household head, child dependency ratio, percentage of literate adults and instances of child labour), *dwelling-related indicators* (electricity supply in house, availability and type of toilet, home ownership status-owned or rented and number of rooms in the house), *household assets* (value of agricultural land and value of goats/sheep), *food-related indicators* (consumption of luxury food: beef, consumption of staple food and stock of wheat held).

6.6.2 *Matching algorithms*

A number of matching algorithms are available to estimate (6.13). The purpose of all matching algorithms is to contrast the outcome of treated individuals (i.e. borrowers) with outcomes of individuals in the comparison group (i.e. non-borrowers). Note that these algorithms produce different estimates for (6.13) because of how the neighbourhood for each borrower is defined, handling the common support issue and the weights given to these neighbours. In addition, each algorithm displays a trade-off between the bias and variance of the estimates. Thus, this study applies the two most relevant algorithms to avoid any shortcomings that may ensue by relying on a single method, as well as checking for the
The robustness of the estimated impact. The following sections briefly discuss these two algorithms.

**6.6.2.1 The stratification matching algorithm**

Stratification matching is an algorithm based on splitting the predicted propensity score within the common support region into intervals (strata) so that in each interval there are both treated and controls. The number of intervals, or blocks, is the same as that was used to test whether the balancing property is satisfied before any matching procedure is implemented. This method is also known as interval matching (Caliendo and Kopeinig 2008) and blocking and sub-classification matching (Rosenbaum and Rubin 1984). In general, five blocks are enough to remove the bias, as argued by a number of authors such as Cochran (1968) and Imbens (2004). Once the number of blocks is determined and the balancing property is satisfied, we compute the difference for each interval. The $\Delta_T$ is simply the average of the $\Delta_{TT}$ of each block with weights given according to the distribution of treated units across blocks. The main drawback of this method is that it does not account for the absence of observations in either treated or control groups. This problem can be handled with alternative methods such as *kernel matching*.

**6.6.2.2 Kernel matching algorithm**

This algorithm is a non-parametric algorithm that uses weighted averages of almost all the individuals in the control group to construct the counterfactual outcome. In this method, all treated individuals are matched with a weighted average of all controls. The weights implemented are inversely proportional to the distance between the propensity scores of treated and controls. This leads to lower variance, which is the key feature of this algorithm. It however implies that some bad matches might also be included in the matching procedure, which may increase the bias. These two properties are again the trade-off feature between variance and bias that matching algorithms have.
6.7 PSM Estimates of the Impact of MFI Programmes

6.7.1 Estimating the propensity score

Table 6-1 reports the estimation output of the propensity score using the probit model reported in the first panel along with its estimated marginal effects reported in the second panel. In general, value of agricultural land, type of occupation of household head, electricity supply in house, home ownership, consumption of luxury food (beef), number of rooms in the house, consumption of staple food, and stock of wheat held, had a negative impact on the likelihood of borrowing money, or joining the programme. This implies that better living conditions, represented by these indicators, lowered the probability of individuals joining the programme. On the other hand, indicators such as average age of household adults, child dependency ratio, instances of child labour, value of goats/sheep, percentage of literate adults and availability and type of toilet increase the probability of borrowing or joining the programme. Once again, these indicators signal more probability of borrowing as they are directly related to relative household well-being. Households with a greater child dependency ratio and more instances of child labour reflect poverty and availability of ‘free’ labour that can be put to use, thus inciting such households to borrow to set up small family-run businesses. Households that possess goats (as opposed to cows) also hint that they cannot afford to own a cow, and prefer to join the programme, most likely to purchase cows and buffalo.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Probit Estimates</th>
<th>Probit Marginal Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$p$ – value</td>
</tr>
<tr>
<td>Intercept</td>
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</tr>
<tr>
<td>Value of agricultural land</td>
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<td>Average age of household adults</td>
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<td>Type of occupation of household head</td>
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<tr>
<td>Child dependency ratio</td>
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<td>Child labour</td>
<td>0.206</td>
<td>0.021</td>
</tr>
<tr>
<td>Electricity supply in house</td>
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<td>0.216</td>
</tr>
<tr>
<td>Value of goats/sheep</td>
<td>0.000</td>
<td>0.009</td>
</tr>
<tr>
<td>Home ownership status (owned or rented)</td>
<td>-0.465</td>
<td>0.008</td>
</tr>
<tr>
<td>Consumption of luxury food: beef</td>
<td>-0.233</td>
<td>0.031</td>
</tr>
<tr>
<td>Occupation of adults</td>
<td>-0.050</td>
<td>0.129</td>
</tr>
<tr>
<td>Percentage of literate adults</td>
<td>0.002</td>
<td>0.093</td>
</tr>
<tr>
<td>Number of rooms in house</td>
<td>-0.030</td>
<td>0.400</td>
</tr>
<tr>
<td>Consumption of staple food</td>
<td>-0.196</td>
<td>0.010</td>
</tr>
<tr>
<td>Availability and type of toilet</td>
<td>0.174</td>
<td>0.028</td>
</tr>
<tr>
<td>Stock of wheat held</td>
<td>0.003</td>
<td>0.155</td>
</tr>
<tr>
<td>N</td>
<td>1127</td>
<td></td>
</tr>
</tbody>
</table>

Table 6-1: LPM and Probit estimated score

Notes:

$\beta$ refers to estimated coefficients and $N$ is the number of observations.

The $p$ values for the estimated probit model are based on the standard normal distribution.

$N$ is the number of observations.
Figure 6-2: Estimated propensity score distribution

Figure 6-2 shows the estimated propensity score distribution of all surveyed households.

6.7.2 **Imposing the common support region**

In this context, we need to impose the overlap or common support condition so that all our analysis will consider the intersection of the supports of the propensity score of the treated and non-treated. Moreover, it improves the quality of the matches to estimate the average effect on the treated (Becker and Ichino 2002). The common support region is identified to lie between the range [0.131, 0.821], which implies that around 11 observations are dropped from the matching procedure since they lie outside the overlap region. This is shown in Figure 6-3, in which the propensity score distributions for both groups are displayed. The bar estimations in blue refer to those individuals outside the region of common support and are thus dropped.
Table 6-2 reports the blocks identified and the balancing property test for each block. Six blocks are estimated to be within the common support region, where all individuals within the range [0.138, 0.982] are kept in the model. Thus 462 borrowers are to be matched to 659 non-borrowers. The intervals identified are of [0.131, 0.2], [0.2, 0.3], [0.3, 0.4], [0.4, 0.6], [0.6, 0.8], and [0.8, 0.982] with 42, 195, 303, 512, 61 and 8 overlapped individuals in each block respectively. This gives the fourth block the largest overlap, while the last interval has the least number of individuals with common characteristics. In all blocks, the balancing property is tested and there is no significant difference between the means of treated group and control group as reported. With the balancing property satisfied and six blocks estimated, the PSM estimator is ready to be computed.
<table>
<thead>
<tr>
<th>Inferior of block of pscore</th>
<th>Borrower or Non-Borrower</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Borrowers</td>
<td>Borrowers</td>
</tr>
<tr>
<td>0.1307706</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>0.2</td>
<td>142</td>
<td>53</td>
</tr>
<tr>
<td>0.3</td>
<td>197</td>
<td>106</td>
</tr>
<tr>
<td>0.4</td>
<td>260</td>
<td>252</td>
</tr>
<tr>
<td>0.6</td>
<td>21</td>
<td>40</td>
</tr>
<tr>
<td>0.8</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>659</td>
<td>462</td>
</tr>
</tbody>
</table>

Note: the common support option has been selected

Table 6-2: The inferior bound, the number of treated and the number of controls for each block

6.7.3 Assessing the quality of matching

The matching of co-variates is well balanced using the propensity score estimated within the common support region. Table 6-3 shows the $t$ test of the equality of the two samples before and after matching. The test is run for each co-variates in which the null hypothesis states that the means of a co-variates in the comparison and treated groups are equal. If we accept the null hypothesis, the two groups are well balanced. The output reported in Table 6-3 indicates that all co-variates are well balanced after matching, and thus matching quality for each co-variates individually is no longer an issue.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample</th>
<th>Mean</th>
<th>t-stat</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Treated</td>
<td>Control</td>
<td></td>
</tr>
<tr>
<td>Value of agricultural land</td>
<td>Unmatched</td>
<td>0.294</td>
<td>0.236</td>
<td>2.17</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>0.292</td>
<td>0.272</td>
<td>0.66</td>
</tr>
<tr>
<td>Average age of household adults</td>
<td>Unmatched</td>
<td>34.834</td>
<td>34.601</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>34.658</td>
<td>34.583</td>
<td>0.14</td>
</tr>
<tr>
<td>Type of occupation of household head</td>
<td>Unmatched</td>
<td>2.7</td>
<td>3.212</td>
<td>-5.49</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>2.697</td>
<td>2.728</td>
<td>-0.31</td>
</tr>
<tr>
<td>Child dependency ratio</td>
<td>Unmatched</td>
<td>1.081</td>
<td>0.947</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>1.061</td>
<td>1.035</td>
<td>0.44</td>
</tr>
<tr>
<td>Child labour</td>
<td>Unmatched</td>
<td>0.151</td>
<td>0.085</td>
<td>2.47</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>0.134</td>
<td>0.107</td>
<td>0.86</td>
</tr>
<tr>
<td>Electricity supply in house</td>
<td>Unmatched</td>
<td>1.039</td>
<td>1.057</td>
<td>-1.32</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>1.04</td>
<td>1.044</td>
<td>-0.32</td>
</tr>
<tr>
<td>Value of goats/sheep</td>
<td>Unmatched</td>
<td>5017.7</td>
<td>2929.0</td>
<td>3.81</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>4195.6</td>
<td>3540.6</td>
<td>1.24</td>
</tr>
<tr>
<td>Home ownership status (owned or rented)</td>
<td>Unmatched</td>
<td>1.035</td>
<td>1.085</td>
<td>-3.43</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>1.035</td>
<td>1.033</td>
<td>0.18</td>
</tr>
<tr>
<td>Consumption of luxury food: beef</td>
<td>Unmatched</td>
<td>0.199</td>
<td>0.190</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>0.2</td>
<td>0.219</td>
<td>-0.59</td>
</tr>
<tr>
<td>Occupation of adults</td>
<td>Unmatched</td>
<td>2.805</td>
<td>3.341</td>
<td>-5.24</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>2.814</td>
<td>2.842</td>
<td>-0.26</td>
</tr>
<tr>
<td>Percentage of literate adults</td>
<td>Unmatched</td>
<td>39.793</td>
<td>35.025</td>
<td>2.27</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>40.257</td>
<td>39.018</td>
<td>0.54</td>
</tr>
<tr>
<td>Number of rooms in house</td>
<td>Unmatched</td>
<td>2.268</td>
<td>2.211</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>2.27</td>
<td>2.23</td>
<td>0.48</td>
</tr>
<tr>
<td>Consumption of staple food</td>
<td>Unmatched</td>
<td>6.48</td>
<td>6.626</td>
<td>-3.40</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>6.489</td>
<td>6.544</td>
<td>-1.10</td>
</tr>
<tr>
<td>Availability and type of toilet</td>
<td>Unmatched</td>
<td>1.652</td>
<td>1.559</td>
<td>2.99</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>1.649</td>
<td>1.612</td>
<td>1.09</td>
</tr>
<tr>
<td>Stock of wheat held</td>
<td>Unmatched</td>
<td>23.991</td>
<td>21.806</td>
<td>1.58</td>
</tr>
<tr>
<td></td>
<td>Matched</td>
<td>23.95</td>
<td>22.346</td>
<td>1.06</td>
</tr>
</tbody>
</table>

Table 6-3: *t* test for the equality showing the means of treated and control groups before and after matching
6.8 Discussion of Survey Findings

The sections above discussed the methods and various procedures adopted to control the surveyed sample of any selection bias. Once tests showed that both groups (control and treatment) were at par, various tables were generated (produced below) that show the average treatment-on-treated effect (ATT) and the t-statistics for each indicator across the four dimensions of well-being captured in the household survey. As the final model employed to estimate impact (equation 6.13), determines $Y^1 - Y^0$, the tables below reflect the differences from treated on non-treated, hence positive values favour the treated (borrowers) and vice versa. The more statistically significant such differences are, the stronger is the evidence that such disparities in both groups did not occur merely by chance, but are attributable to programme participation. Another point worth noting is that the tables show both methods (Kernel and Stratification) used for matching, as discussed earlier is section 6.6.2. The differences in magnitude across various indicators can be attributed to calculations using both methods to ensure methodological and analytic rigour.

6.8.1 Asset accumulation and household well-being

Of the four dimensions across which various indicators were captured by the survey, a substantial emphasis was placed on human, physical and financial assets. Assets are the stock of wealth in a household or other unit (Sherraden 1991) and therefore represent the gross wealth of the unit (Cohen and Barnes 1996). From a review of existing studies, it appears that statistically weighted asset-based indices have the potential for providing alternative welfare rankings of the population (Falkingham and Namazie 2002). As opposed to employing income or household expenditure as proxies for relative well-being, assets have been used in several studies. Cohen and Barnes (1996) argue that assets tend to be more stable over time and hence are a better indicator of economic well-being than income or expenditure, since these are normally constructed to represent an annual estimate and represent the enduring results of income flows and expenditures. Moreover, coping strategies are reflected in patterns of asset accumulation, divestiture or liquidation that indicate strategies employed by households and individuals to plan for, confront and take risks, which makes asset ownership an important means of differentiating households according to wealth measures (Cohen and Little 1996; Cohen and Barnes 1996). Another important role that household assets play during ‘lean’ periods is that they help to cope in adverse conditions and assist in periods of
low and unstable income, as their disposal can ‘smooth’ consumption and expenditure activities during crises (Cohen and Little 1996).

In order to ensure accuracy and facilitate ease in recall, data on various indicators across the four dimensions was kept within realistic timeframes. Consumption of staple and luxury food items was queried on a weekly basis, household expenditure and income, and expenses on healthcare and children’s schooling were recorded on a monthly basis. The value of assets was captured on the basis of net realisable value and in the case of assets purchased on instalments; any down payment made at the time of purchase plus all instalments that had been paid up to the date of interview were taken as the asset value. This was usually the case of household assets such as televisions, washing machines and motorcycles.

Household assets in the survey were captured across two dimensions: physical assets (tangible) and human capital (intangible). The impact of microfinance programme intervention on both classes is explained below.

6.8.2 Physical household assets

Tangible household assets were further classified into livestock, transport-related assets, savings (financial capital), and appliances and electronics. The categories were devised after extensive pilot testing of the questionnaire and were intended to reflect assets that a typical rural household owns. Items such as beds, mattresses, fans, kitchen utensils and items of furniture were dropped from the final questionnaire as it was noted during pilot interviews that they did not reflect relative household well-being, and it was becoming very difficult for respondents to count and place a monetary value on items such as kitchen utensils and beds. Below are the differences across both groups of respondents.

6.8.3 Livestock

Livestock constitutes an important category of assets for the rural poor, as they can be classified as ‘income-generating’ assets and provide a means of livelihood. A substantial portion of borrowing was done to purchase cows and goats, and some households relied exclusively on them as a source of income, although they were found to provide supplementary income in most cases.
Survey findings show that borrowers seem to fare better in terms of livestock-related assets, as seen in Table 6-4. Across all classifications of livestock, borrowers seem to be better off, albeit not to a significant level. Differences in poultry being of small monetary value show borrowers to be marginally at an advantage (on the average between both methods) by around Rs.170. The largest difference exists in the value of cattle and buffalo, with borrowers owning this class of livestock at over Rs.4,000 greater than those that non-borrowers own. In terms of overall value, borrowers own more livestock (ranging from Rs.4,958 to Rs.5,241 across both methods) than non-borrowers. The differences in values shown in Table 6-4, reflect the same trend of proportionality that exists in values of relevant livestock assets. The means of the various classes in this category (poultry: Rs.189, sheep/goats: Rs.3,783, cattle: Rs.36,078 and total livestock: Rs.41,404) show that there are no inconsistencies in the data.

One possible explanation for this difference (in livestock owned by respondents from the control and treatment groups) is that a substantial portion of the microcredit was originally advanced for investing in purchasing cows and buffalo. The sample mean of loans disbursed comes to Rs.17,473, while the median value is Rs.15,000. As compared to the mean value of cows/buffalo reported (Rs.36,078), it becomes evident that loans advanced are not sufficient to purchase cows, etc. It was learnt from focus groups that borrowers tend to either sell off previously-owned livestock or use their savings or borrow from other sources (generally informal or semi-formal) to cover the difference and purchase livestock of higher value.
<table>
<thead>
<tr>
<th>Variables</th>
<th>KERNEL</th>
<th>STRATIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ATT*</td>
<td>t-stat</td>
</tr>
<tr>
<td>LIVESTOCK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>168.89</td>
<td>1.5</td>
</tr>
<tr>
<td>Cows</td>
<td>4,292.73</td>
<td>0.89</td>
</tr>
<tr>
<td>Total livestock value</td>
<td>5,241.99</td>
<td>1.06</td>
</tr>
<tr>
<td>TRANSPORT-RELATED ASSETS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcycle</td>
<td>-591.33</td>
<td>-0.66</td>
</tr>
<tr>
<td>Bicycle</td>
<td>142.55</td>
<td>1.62</td>
</tr>
<tr>
<td>Carts</td>
<td>-231.3</td>
<td>-0.19</td>
</tr>
<tr>
<td>Total transport assets value</td>
<td>-680.08</td>
<td>-0.46</td>
</tr>
<tr>
<td>SAVINGS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROSCA (participation in schemes)</td>
<td>0.08</td>
<td>3.99***</td>
</tr>
<tr>
<td>Total ROSCA Encashment Amount</td>
<td>1,722.99</td>
<td>1.2</td>
</tr>
<tr>
<td>Monthly ROSCA Instalment</td>
<td>105.65</td>
<td>1.68*</td>
</tr>
<tr>
<td>APPLIANCES AND ELECTRONICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile phones</td>
<td>-104.63</td>
<td>-0.84</td>
</tr>
<tr>
<td>Radio</td>
<td>-87.57</td>
<td>-1.62</td>
</tr>
<tr>
<td>Fridge</td>
<td>0.59</td>
<td>0</td>
</tr>
<tr>
<td>Sewing Machine</td>
<td>33.01</td>
<td>0.32</td>
</tr>
<tr>
<td>Television</td>
<td>364.03</td>
<td>1.97**</td>
</tr>
<tr>
<td>VCR</td>
<td>-15.29</td>
<td>-0.2</td>
</tr>
<tr>
<td>Washing Machine</td>
<td>-65.38</td>
<td>-0.48</td>
</tr>
<tr>
<td>Total appliances and electronics</td>
<td>124.76</td>
<td>0.18</td>
</tr>
<tr>
<td>Value of assets per person</td>
<td>601.43</td>
<td>0.64</td>
</tr>
<tr>
<td>Total value of household assets</td>
<td>4,686.67</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Source: Survey data

*All figures are in Rupee values

1% t critical value is 2.576 (***significant at 1%).
5% t critical value is 1.96 (** significant at 5%).
10% t critical value is 1.645 (*significant at 10%).

Table 6-4: Comparisons across various classes of household assets
6.8.4 Transport-related assets

In the case of transport-related assets, non-borrowers seem to fare better, though the differences were not statistically significant. Bicycles were the only asset where borrowers seemed to be better off, by small amounts, as compared to non-borrowers, by values ranging from Rs.136 to Rs.142 across the two methods used for comparison. The largest difference in values was reported in motorcycles.

6.8.5 Participation in savings schemes/ROSCA

Savings constitute an important component of financial capital. Robinson (2001: 21) argues that ‘deposit services are more valuable than credit for poorer households. With savings, not only can households build up assets to use as collateral, they can also better smooth seasonal consumption needs, finance major expenditures such as school fees, self-insure against major shocks, and self-finance investments’.

As discussed earlier, some of the MFIs in the sample had some form of formal mandatory saving schemes, such as opening an account with Rs.100 and contributing any amount (at will) on a monthly basis towards the scheme. The amounts, terms and conditions and withdrawal limits vary from one MFI to other. It was, however, noted during interviewing that a substantial number of borrowers had no savings at all, or that there was a continuous cycle of depositing and withdrawing very small sums from the saving schemes. Consequently, it could not be established how much they had actually managed to save (if anything at all) with their respective lenders at the time the interviews were conducted. Moreover, if the savings with MFIs were used to assess savings behaviour, comparisons with the control group (non-borrowers) would not have been possible, as they were not members of any MFI, and hence were not participating in any institution-led schemes. The most suitable and relevant proxy for establishing saving behaviour of respondents was therefore participation in ROSCA (Rotating Savings and Credit Association) schemes, which are a form of informal saving model found in many parts of the world, known by different names.\footnote{\textit{Rotating Savings and Credit Associations (ROSCAs) are essentially a group of individuals who come together and make regular cyclical contributions to a common fund, which is then given as a lump sum to one member in each cycle, until all the members have received the lump sum in their respective turns. These turns are decided most commonly by a ballot or sometimes by mutual agreement (GDRC 1997).}}
Survey findings show that there is a marked difference in saving behaviour across both groups. As shown in Table 6-4, borrowers show a much higher probability and incidence of participation in ROSCA schemes, as opposed to non-borrowers. Moreover, there was an average difference (ranging from Rs.1,723 to Rs.1,545, across Kernel and Stratification methods) in the encashment amount of the scheme, with borrowers saving greater amounts, and as would be expected, contributing more (around Rs.105) towards monthly instalments. A possible explanation is that once rural households start to participate in microcredit programmes they develop a sense of financial access and realise the importance of participating in saving schemes. In the absence of formal options, they resort to semi-formal models (such as ROSCA, in this case) and commit a certain amount to be contributed. During focus groups and general discussions with interviewees, it was found that at most times, participants had a pre-determined motive to invest the amount once they had access to the full amount in the scheme. Depending on individual needs and requirements, usage of saving amounts could vary across a range of purposes; generally, respondents reported repairing the house, paying off loans to moneylenders or other creditors, purchasing livestock, investing in productive assets, such as a motorised rickshaw, or building a tube-well for irrigating agricultural land.

6.8.6 Appliances and electronics

As opposed to livestock, the impact of borrowing on appliances and electronics was not so pronounced. There is a very small, almost negligible difference across household electronics such as fridges, VCRs and sewing machines, whereas non-borrowers seem to fare slightly better in terms of owning washing machines and radios. Borrowers, however, seem to be better off in owning televisions (with average difference in values ranging from Rs.344 to Rs.364 across both methods) as compared to non-borrowers. As shown in Table 6-4 above, the value is statistically significant (at the 5 percent level). Borrowers were also found to be better off if comparisons were made of the overall value of appliances and electronics, although the difference was not statistically significant.

6.8.7 Overall value of household assets

The overall value of household tangible assets owned by borrowers was found to be greater (by amounts ranging from Rs.4,168 to Rs.4,686 depending on the matching method applied)
as compared to those who had not borrowed. A similar ratio was maintained when the amount was calculated on a *per capita* basis, as shown in Table 6-4 above.

### 6.8.8 Human resources

This section of the questionnaire captures various demographic characteristics of household members, household income, amount spent on clothing and footwear, children’s schooling and healthcare.

As discussed in Chapter five, the poverty index was calculated by applying PCA that employed clothing and footwear expenses as the baseline indicator, given its extreme sensitivity to relative household wealth. As would be expected, it shows a high degree of statistical significance (at the 5% level) and a difference ranging from Rs.569 to Rs.632 in which borrower households spend more than non-borrowers. The same indicator is significant if calculated on a per capita basis, with borrowers spending over Rs.100 more than non-borrowers. Another interesting comparison shows that if the same indicator is computed as a percentage of income, it shows a negligible negative difference, whereas as a percentage of total household expenditure, it appears to be statistically significant (at the 10 percent level), which points to the fact that a (statistically) significant amount of total household expenditure is devoted to purchasing clothing and footwear for household members.

Findings also show a difference in the amount that both groups of respondents spend on healthcare\(^{13}\), with borrowing households spending on average Rs.148 more than non-borrowers. Given that data for this indicator was collected on a monthly recall basis, as expected this difference was also found to be statistically significant (at the 1 percent level), as shown in Table 6-5.

According to Cohen and Little (1996:12), expenditure on education (as a form of human capital) is ‘probably one of the best means of improving incomes in the medium and long-term and of enhancing a household’s human assets. Increased expenditure on education by households is a positive proxy of income growth that should be included in any research approach on incomes and assets’. In terms of literacy-related indicators, borrowing

\(^{13}\) For ease and accuracy, the recall period for this indicator was captured on a monthly basis.
households were found to be slightly better in terms of adult literacy. School attendance was found to be almost the same for both groups. There was, however, a small difference in the amount of average monthly schooling expenditure with borrower households spending more on a monthly basis.

There are minor, almost negligible, differences when households are compared for total adults and children and total family size.

<table>
<thead>
<tr>
<th>Variables</th>
<th>KERNEL</th>
<th>STRATIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per capita expenditure on clothing and footwear</td>
<td>112.37</td>
<td>103.35</td>
</tr>
<tr>
<td>Clothing and footwear expenses per annum</td>
<td>632.08</td>
<td>569.86</td>
</tr>
<tr>
<td>Clothing expenditure: percentage of income</td>
<td>-0.15</td>
<td>-0.16</td>
</tr>
<tr>
<td>Clothing expenditure: percentage of expenditure</td>
<td>0.48</td>
<td>0.4</td>
</tr>
<tr>
<td>Monthly expenditure on healthcare</td>
<td>148.1</td>
<td>148.28</td>
</tr>
<tr>
<td>Poverty ranks</td>
<td>0.1</td>
<td>0.09</td>
</tr>
<tr>
<td>Poverty Score</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Children currently at school</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>Monthly children’s schooling expenditure</td>
<td>53.33</td>
<td>17.46</td>
</tr>
<tr>
<td>Total children in household</td>
<td>0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>Total family size</td>
<td>-0.02</td>
<td>-0.02</td>
</tr>
<tr>
<td>Monthly household expenditure</td>
<td>229.84</td>
<td>211.01</td>
</tr>
</tbody>
</table>
| Monthly household income                       | 1,301.16 | 1,221.75       | 2.60***

Source: Survey data

1% t critical value is 2.576 (***significant at 1%).
5% t critical value is 1.96 (** significant at 5%).
10% t critical value is 1.645 (*significant at 10%).

Table 6-5: Comparisons across human development indicators

---

14 When obtaining data for expenses relating to schooling expenditure, interviewees were asked to provide an estimated total amount on a monthly basis that included tuition fees, expenses on stationery, pocket/lunch money, uniform, shoes, etc.

15 Based on the type of matching technique employed, the difference in children’s schooling expenditure ranges from Rs.17 to Rs.53.
Borrowers are also found to be in a better position in poverty rankings, where their standing (over the three categories of poor: very poor, middle poor and less poor), as discussed in the previous chapter, is seen to be statistically significant. Moreover, as would be expected, borrowers' corresponding edge (that ranges from 0.6 to 0.7) can also be witnessed in the poverty score. The range of the poverty score of all 1,132 individuals interviewed for this study is -1.599 to 4.863, as calculated in the previous chapter.

6.8.9 Household income and expenditure

As discussed in section 6.1.2, assets act as important proxy measures for relative household well-being. Cohen and Little (1996) however, analyse income and assets as variables for tracking changes in household welfare, within the context of a household economic portfolio model, and conclude that both income and assets are valid indicators to achieve this purpose. According to Alibhai (2009), household income serves as an all-encompassing proxy indicator for the attainment of livelihood aspirations. Cohen and Inserra (1996), on the other hand, assert that income is regarded as a critical variable for measuring the impact of microenterprise credit services on both the assisted enterprise as well as the household. Income is a general indicator of household welfare and poverty status and ‘long run increases in income contribute to an improved quality of life, because income provides the means to obtain improved nutrition, health, education, and overall socio-economic status’ (ibid:v). Falkingham and Namazie (2002:21) argue that both income and expenditure reflect consumption patterns and state that ‘in theory, the best indicator of welfare is the actual consumption of the individuals, and ideally this consumption would include both consumption of food and other goods as well as consumption of services such as education and health. In practice, income and expenditure data are commonly used to proxy for the level of consumption enjoyed. They are normally easier to measure directly and have the advantage of providing a monetary definition of poverty. Such a definition is readily understood by the wider public’.

Table 6-5 portrays the differences that both groups of respondents have in terms of monthly household income and expenditure. While the difference in expenditure is inconsequential (varies between Rs.211 and Rs.230 across matching methods), the difference in income is both substantial (given that the sample's median income is Rs.7,500), as well as statistically significant at the 1 percent level. Depending on the matching method used, monthly income
of borrowers is Rs.1,221 to Rs.1,301 on a monthly basis. This disparity can be attributed to a number of factors. One possible explanation is that borrowers supplement their income by obtaining microcredit and investing the amount in livestock or other small income-generating assets, such as a sewing machine, bicycle or cart. On the other hand, if they have access to savings, borrowers can combine credit from the MFI and invest in a larger asset, which acts as the primary source of income. Examples from the survey include setting up a roadside hotel, a barber’s shop, a bicycle repair shop, buying a donkey-cart, purchasing a cow or selling an existing one and ‘upgrading’ to a better breed. Box 6-2 narrates similar stories from the field.

Success stories from the field

**The barber**

I used to run my business from the roadside by setting up just a mirror and chair under a tree. Daily earnings averaged around Rs.100 and my monthly income was about Rs.2,500. Savings were non-existent with such meagre income. My house was in the form of a shelter constructed of wood and straw. Six years ago, I borrowed Rs.10,000 from Punjab Rural Support Programme (PRSP) which I used to rent and set up a proper shop to run my business. The following year, I borrowed Rs.15,000 and expanded the business by trading in animal fodder simultaneously. In the third year, I borrowed Rs.20,000 and with savings, I managed to build a house. The next year, I borrowed Rs.25,000, sold the house and built one on the main road with four shops on the ground floor and my accommodation above it. I run my business from one of these shops and have rented out the other three at Rs.1,000 per month. My monthly income now averages Rs.15,000 and household expenditure is around Rs.8,000.

*PRSP borrower from District Kasur, interviewed on 11th January 2008*

**The shopkeeper**

I worked as a casual labourer and used to earn around Rs.120 per day. I could not afford to live separately and had to manage with my extended family to survive. I joined one of the groups that were formed in the village in 2004 when Khushhali Bank began operations in our area. I borrowed Rs.10,000 with which I purchased three calves, and sold them for Rs.18,000 after six months. In the next year, I borrowed Rs.15,000 and bought five calves, which I sold after a year for Rs.100,000. I used this amount to pay off all personal loans and build a small house of my own. In the third year, I borrowed Rs.17,000 and bought five calves for Rs.25,000, that I sold for Rs.150,000 after rearing them for a year. In the fourth year, I borrowed Rs.20,000 and along with sale proceeds of the cows, I set up a small grocery shop. I still buy and sell calves and run my grocery store simultaneously. Today, after five years, I have a house of my own, savings of around Rs.100,000, business assets worth over Rs.300,000 and all of my three children go to private school.

*Khushhali Bank borrower from District Rajanpur, interviewed on 4th November, 2009*
6.8.10 Food security and consumption behaviour

Food security is described as access by all people at all times to the food needed for an active and healthy life (Adekoya 2009). The Food and Agriculture Organization of the United Nations defines food security as a situation in which people at all times have both physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for leading an active and healthy life (FAO 1996).

Numerous studies have been carried out to establish a relationship between rural poverty, food security and coping strategies adopted by households, particularly during lean times. Kruger, Schönfeldt, et al. (2008) conducted a cross-sectional survey in South Africa to assess household hunger and the patterns of food coping in farm-worker households. Findings revealed that households employed various food-coping strategies to alleviate food stress or poor food availability. The two most common strategies used were relying on cheaper or less preferred foods, followed by consumption of seed stock (maize, the ‘staple’ alternative to wheat in the survey area), reduced portion sizes of protein foods and increased consumption of starch-based diets of poor variety. In a similar study on the strategies adopted by rural households in Nigeria, Adekoya (2009) found that consumption of vegetables (consumed by up to 90%) was the most affordable food item because of its accessibility. Oldewage-Theron, Dicks, et al. (2006) concluded in a study conducted in South Africa that caregivers changed their food consumption patterns to cope with food shortages, resulting in compromised nutrition. Lawson (2009) reported a study in Uganda that found that chronically-poor households were more likely to reduce food intake during lean times.

Aiga and Dhur (2009) from the UN’s World Food Programme (WFP) argue that measuring food security continues to challenge the humanitarian and development community, because although internationally recognised indicators and standardised anthropometric measurements exist to assess the prevalence and severity of malnutrition, equivalent indicators and procedures are not available to assess the extent and severity of household food security. Instead, according to these authors, a variety of indicators and approaches are used to describe the multi-faceted dimensions of food insecurity and the status of household food availability, access and utilisation.
This study focuses on dietary diversity, food quality, and frequency of purchase and stock of storable staple foods as proxy indicators for food security. As shown in Table 6-6, borrowers were seen to fare better in terms of consuming the ‘luxury food’ (chicken) more often than non-borrowers. The indicator was captured by inquiring how many days the household consumes chicken or mutton (both identified as luxury foods in the local context). For ease of recall and to ensure accuracy, the period was kept to one week. The frequency of chicken consumption was found to be significant (at the 10 percent level), while mutton favoured non-borrowers by a negligibly small amount. Since borrowing households consume more luxury foods, consumption of staple food (wheat, in the case of this survey) was found to occur in greater frequency in non-borrowing households, as would be expected.

<table>
<thead>
<tr>
<th>Variables</th>
<th>KERNEL</th>
<th>STRATIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ATT</td>
<td>t-stat</td>
</tr>
<tr>
<td>Consumption of luxury food: Chicken</td>
<td>0.06</td>
<td>1.93*</td>
</tr>
<tr>
<td>Consumption of luxury food: Mutton</td>
<td>-0.02</td>
<td>-0.6</td>
</tr>
<tr>
<td>Purchase of staple food: Wheat</td>
<td>0.34</td>
<td>1.86*</td>
</tr>
</tbody>
</table>

Source: Survey data

1% t critical value is 2.576 (**significant at 1%).
5% t critical value is 1.96 (** significant at 5%).
10% t critical value is 1.645 (*significant at 10%).

Table 6-6: Food consumption and purchase-related indicators

Other indicators in this dimension were the frequency of purchase and the stocks of storable staple food held on the premises. These indicators are very sensitive and capture relative household well-being by estimating the number of weeks of wheat that the household has in store, the proxy for which was the frequency of its purchase. Poorer households were observed to purchase more frequently, due to liquidity constraints, with the poorest having to purchase on a daily basis. The frequency was captured across an ordered variable ranging from a daily basis to weekly, fortnightly, monthly, biannually and annually. Table 6-6 shows that borrowers seem to be better off in terms of holding stocks of wheat, as the purchase of wheat indicator was found to be statistically significant (at the 10 percent level).
Box 6-2 above narrated stories of successful borrowers who had thrived in their micro-enterprises. Unfortunately, not all borrowers prosper and some of those interviewed narrated how they had gone deeper into debt. Box 6-3 below is the narration of one such borrower.

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**Story of an unsuccessful borrower**

**The labourer**

I have been working as a casual labourer since I was fifteen. I borrowed Rs.10,000 from NRSP for setting up a business of my own, but used up more than half of the money to pay off the loan that was due to the village shop keeper. I spent the remaining amount on repairing the roof of the house. The amount was consumed within just two days, and I struggled to keep up with the payment for the rest of the year. I had to borrow from friends and family to keep up with the instalments every fortnight. I was also supposed to attend monthly group meetings which were difficult to attend regularly. When I missed two consecutive meetings, I was struck off the register and the foundation refused to lend to me again. Sometimes I think that I would have been better off if I had not borrowed at all in the first place, as I have gone deeper into debt instead of prospering like some others of the group.

*NRSP borrower from District Lahore, interviewed on 25th January, 2008*

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**6.8.11 Dwelling-related indicators**

The dimension that measured housing conditions was captured across various indicators, such as the type of cooking fuel used, energy used for lighting, material used for constructing floors, roofs, walls, source of water supply, and the method used for waste water disposal. Finally, the overall condition of the house was ranked during interviews by observing its condition. All these indicators were captured by means of coding from high to low. As shown in Table 6-7, borrowers seem to live in better conditions than non-borrowers across all indicators except for the type of cooking fuel used and the method of disposing of waste water, whereas non-borrowers show very slight, negligible instances of being at an advantage. The most pronounced and statistically significant differences were found in the type and material used for constructing roofs, internal and external walls and the source of water supply in the house, all of which are indicators that reflect better dwelling conditions enjoyed by borrowers.

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16 See Appendix 1 for coding and ranking of all indicators in questionnaire
<table>
<thead>
<tr>
<th>Variables</th>
<th>KERNEL</th>
<th>STRATIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ATT</td>
<td>t-stat</td>
</tr>
<tr>
<td>Type of cooking fuel used</td>
<td>-0.07</td>
<td>-0.98</td>
</tr>
<tr>
<td>Material used for constructing floors</td>
<td>0.06</td>
<td>1.3</td>
</tr>
<tr>
<td>Overall condition of house</td>
<td>0.05</td>
<td>1.3</td>
</tr>
<tr>
<td>Material used for constructing roof</td>
<td>0.18</td>
<td>2.71***</td>
</tr>
<tr>
<td>Material used for constructing walls</td>
<td>0.15</td>
<td>2.84***</td>
</tr>
<tr>
<td>Source of water supply in house</td>
<td>0.26</td>
<td>3.26***</td>
</tr>
<tr>
<td>Method used for waste water disposal</td>
<td>-0.02</td>
<td>-0.67</td>
</tr>
</tbody>
</table>

Source: Survey data

1% t critical value is 2.576 (**significantly significant at 1%).
5% t critical value is 1.96 (** significant at 5%).
10% t critical value is 1.645 (*significant at 10%).

Table 6-7: Dwelling-related indicators and their comparisons across both groups

6.9 Conclusion

This chapter explored the second research question of this study: evaluation of microfinance programme impact on borrowers’ livelihoods in the surveyed regions. The first half of the chapter was devoted to controlling the sample for any selection bias. Once this was achieved, tables 6-1 to 6-4 were generated, summarising differences between the groups of respondents to decide whether programme participation had really benefited borrowers (as postulated) and if so, to what extent. As the survey is based on a quasi-experimental design, any differences found to occur between the groups can be attributed to programme participation.

As discussed at length in the previous section, borrowers were seen to fare better in most of the indicators across various dimensions of relative household well-being. While the extent of the difference across both groups was substantial as well as statistically significant in some indicators, it was found to be weak and negligible in others and even negative in some cases, favouring non-borrowers, as was observed in the case of transport-related assets where, apart from being better off in the case of owning bicycles, non-borrowers were seen to be at an advantage in all other classes of assets, such as motorcycles and carts. Borrowers performed better in terms of owning livestock, participation in savings schemes, and overall value of...
household assets. Borrowers’ household income and expenditure was also seen to be better and in terms of food consumption, they had a slight edge over non-borrowers in terms of consuming greater amounts of luxury foods and stocking staple foods. In the case of dwelling-related indicators, non-borrowers seemed to use better quality cooking fuel and had improved waste water disposal systems, while borrowers had a better quality of floors, roofs, walls, and water supply in the house.

Although, generally speaking, borrowers do seem to be doing better when comparisons are made across various indicators, it has to be taken into consideration that there are several factors that come into play in assessing impact of such magnitude and nature. The overall economic situation of the country, borrower preferences, attitudes and behaviour, and financial products designed to meet unique client requirements all come into play when trying to assess how the microfinance model has an impact on the lives of the rural poor. Despite such constraints, however, the model seems to have some degree of positive impact, albeit not a substantial one, on borrowers. Finally, the findings of this survey correspond to those of similar studies carried out in Pakistan (see for instance, Hussain 2003; Hussein and Hussein 2003; Montgomery 2005; Arif 2006; Zaidi et al. 2007; Haq 2008) which concluded, after similar household assessments and using existing data from government surveys, that microfinance does have a positive impact on alleviating poverty in Pakistan, although not at a significant level.
Chapter 7: Conclusions and Policy Implications

The first chapter opened up the research context with a detailed discussion of the two research questions that this study addresses: the impact of microfinance programmes on borrower livelihoods and the depth of programme outreach. Chapter two was an exhaustive review of the literature on previous studies pertaining to outreach and impact of microfinance programmes in the developing world, including Pakistan. Chapter three addressed issues pertaining to the research design and methodology of this study and discussed the household survey that was carried out in the Punjab province to collect data, while the fourth chapter was devoted to the political, geographic, national and economic setting of Pakistan. Chapter four also explored the policies and frameworks that the Government has devised to tackle poverty, the origins of microfinance in Pakistan, and where the sector stands today. Chapters five and six focused exclusively on empirical analyses of data collected through a household survey and reported on findings concerning depth of outreach of microfinance programmes and their impact across the surveyed areas. The present chapter concludes the study with a synopsis of the research findings, discusses a series of policy implications and suggests directions for further research.

7.1 Study Background

Microfinance is a deceptively simple but powerful idea: without access to capital, it is difficult to start or grow a business, even a small-scale operation (MacAdam 2002); microfinance institutions extend credit services to the poor by providing loans, a safe place to save, and other financial services such as leasing and insurance (Dunford 2007). According to Weiss, Montgomery, et al. (2003), the case for microfinance as a mechanism for poverty reduction is simple: if access to credit can be improved, it is argued, the poor can finance productive activities that will allow income growth, provided there are no other binding constraints.

Access to financial services, as discussed above, assists the poor by opening up avenues for them. In order to be truly effective, however, these services need to be designed in such a manner that they are made available to those segments of the society that are poorest and most deserve such facilities, as opposed to the ‘middle’ or ‘less’ poor. Barua and Sulaiman (2006) argue that despite universal acceptance and recognition that the poorest need greater
flexibility in the financial services, there has not been any such innovation so far that can successfully address their needs on a large scale. Hulme (2000) goes further, disagreeing with the claims of MFIs that they assist ‘the poorest’ and ‘the poorest of the poor’ as they virtually never work with the poorest – the mentally and physically disabled, the elderly, street children, the destitute and refugees – and many MFIs have high proportions of clients who are non-poor.

Given the extensive popularity and application of microfinance as a key poverty reduction model worldwide, it has become necessary to gauge its impact, and this is the second question to which this study has sought answers. According to Mayoux (2001), impact assessment in microfinance has received more attention than any other area of enterprise development, and it is now generally accepted that impact assessment is a critical element in further improving microfinance services and promoting innovation. There is a substantial amount of diversity of methods, tools, and techniques in the type, level, target, range, scale and scope of the impact of microfinance. According to Cohen (1999), impact assessment in the area of microfinance is a ‘work in progress’ and anyone wishing to undertake such an appraisal is presented with a range of options – the purpose and resources guide the choice.

### 7.2 Research Synopsis

The previous section discussed the backdrop against which this study is set and outlined the two questions that it addresses. The study centres on an extensive household survey that was conducted over eleven districts across the rural parts of Punjab in the eastern region of Pakistan. As discussed in chapter three, since the research is based on a quasi-experimental design, comparisons could be made between two groups of respondents: borrowers and non-borrowers of eight microfinance institutions operating across the province. The total sample of 1,132 respondents comprised 463 borrowers and 669 non-borrowers.

Ledgerwood (1999) argues that although outreach is often recorded by the total number of clients served by an MFI (scale of outreach), estimating the depth of outreach (which category of poor is being served) is a more nebulous measure. Owing to the multi-dimensional nature of poverty, and as argued by Schreiner (1999), the direct measurement of depth through income or wealth alone is difficult, which makes it necessary to consider a wide range of characteristics. Consequently, several constituent elements had to be taken into
account in categorising households. The final field instrument captured these characteristics across four dimensions which enabled measurement of relative well-being. These dimensions build a comprehensive picture of each surveyed household’s socio-economic standing. Chapter five discussed how a household poverty index was constructed by applying the poverty assessment tool developed by Henry et al. (2003) based on a series of indicators drawn from the survey. The poverty index allocated a specific score to every household to reflect its relative poverty or well-being in comparison to all others that were sampled in the survey. Households were subsequently ranked in order of ascending poverty, based on these scores.

7.2.1 Study findings: outreach and impact

To find out the depth of outreach, first, non-borrowers were filtered and divided into three equal parts. The cut-off poverty scores obtained from each tercile were later used to allocate borrowers to the three classes, thus revealing information on the extent of outreach by assessing to which category of the poor the MFIs had advanced credit. Findings (detailed in chapter five) reveal that there is a proportionately higher distribution of borrowers in the ‘less poor’ category (41.10 percent); the ‘middle poor’ classification represents 35.40 percent of borrowers, and the lowest proportion of borrowers being served (22.50 percent) belongs to the ‘very poor’ category. Depth of outreach, therefore, can be seen to be inadequate in the sampled population, which was drawn randomly from eleven of the 36 districts in the Punjab province.

The second research question, examined in chapter six, related to an estimation of the level and direction of programme impact on borrowers, assessed through a range of dimensions that captured and reflected relative well-being of a typical rural household in Pakistan. Household characteristics were captured across four dimensions (human resources, housing and dwelling-related indicators, household assets, and food security and vulnerability). These dimensions were further segregated into various indicators, the data on which was gathered by posing specific questions to respondents. The research was based on the quasi-experimental design that compared differences between borrowers and non-borrowers. In order to atone for any selection bias that may have arisen during sampling of households and when they were initially advanced credit, the propensity score matching model was applied, through which the average treatment-on-treated effect was finally computed.
Results reveal that both groups of respondents had varied outcomes when they were assessed and compared across various indicators. Borrowers were found to be better off in possessing more tangible household assets, such as livestock and savings. They were also seen to perform better in expenditure on healthcare. In terms of food consumption, they were assessed to consume more ‘luxury’ foods and also had larger stocks of storable staple foods. Participation in microfinance programmes assisted in generating more income along with increased household expenditure. Borrowers also fared better when compared by housing conditions; statistically significant differences were observed in quality of roofs, walls and source of water supply. Non-borrowers, on the other hand, were found to own more transport-related assets and in terms of dwelling conditions, they were found to use better-quality cooking fuel and also had better systems for waste water disposal. The most prominent (and statistically significant\textsuperscript{17}) differences across both groups favoured borrowers, and were observed in savings, televisions, expenditure on healthcare, monthly household income, expenditure on clothing and footwear, and certain dwelling characteristics such as water supply and quality of roofing and walls. Overall, borrowers were seen to be better in around 70 percent of the indicators across which comparisons were made in the final model.

7.2.2 \textit{Policy implications from practitioners’ and organisational perspectives}

\textit{(i) Policies concerning deepening programme outreach}

As discussed at length in chapter two (section 2.13), empirical studies on the microfinance sector in Pakistan have largely been dedicated to estimating scale or breadth as opposed to depth of programme outreach. Zaidi et al. (2007) highlight the issue of targeting the poor for effective programme outreach and argue that MFIs should clearly define their criteria to target them and should assess their own performance within these sets of criteria. Rauf and Mahmood (2009) concluded that the depth of outreach is low and the scope of diverse microfinance services is also limited in the country to a large extent; while according to Arif (2006), most microfinance programmes fail to target the poorest households or reach the most disadvantaged areas. Let alone depth, even in terms of scale of outreach, Pakistan’s MFI sector has performed poorly. A report by the IFC (2008) states that the overall financial penetration in Pakistan is low, and Setboonsarng and Parpiev (2008) estimate that out of the

\textsuperscript{17} If considered at the 1\% and 5\% \textit{t} critical values.
6.5 million poor people who need microfinance services, only about 5 percent are being served by microfinance institutions.

A key question arises here: why has such outreach been disproportionally biased towards the ‘less poor’? Ivatury (2005:3) offers a possible explanation and argues that ‘for decades, thousands of specialized microfinance institutions have wrestled with a difficult choice: struggle to cover costs by delivering services to these excluded populations, or earn profits by making larger loans to customers who are better off. For most commercial banks and other mainstream financial institutions, the choice was clear. Customers who seemed unlikely to yield profits were largely ignored’. This view was further strengthened by an empirical study by Hermes, Lensink, et al. (2007), which used stochastic frontier analysis (SFA) to examine whether there is a trade-off between outreach to the poor and efficiency of MFIs. Using a sample of more than 1,300 observations, the study suggested that outreach and efficiency of MFIs were indeed negatively correlated.

One of the research questions that this study addressed pertained to the depth of programme outreach. The findings of the study revealed that outreach towards the poorest was particularly low. Making financial services available to the poorest people, especially investment loans for micro-business development, is recognised as an important part of any poverty reduction strategy. Mathison (2005) argues that despite its successes, microfinance has barely scratched the surface, and while ‘increasing outreach’ has been the catch-cry for at least the last five years, the present delivery models are not quite meeting the challenge, especially when it comes to serving communities in remote locations characterised by low population density.

What restricts MFIs in servicing the poor? High transaction costs limit the number of people who can be provided with access to formal financial services, especially those who are very poor or live in remote rural areas. Reaching clients in remote areas is relatively expensive, which makes MFIs less efficient and therefore less sustainable. Reaching this category of people poses the real outreach challenge for institutions as it requires innovative, yet unproven, business models and processes that include the very poor, while simultaneously keeping operations sustainable (Conning 1999; Thys 2000; Paxton and Cuevas 2002; Mathison 2005; Gonzalez and Rosenberg 2006; Balkenhol 2007).
Depending on organisational commitment, certain measures can, however, be adopted to enhance outreach without compromising institutional sustainability. Such policies may vary from one region to another and even across MFIs, given that each organisation has a unique mission, objectives, areas of operation and establishment. Nevertheless, certain policies, if implemented can assist towards reaching the ultra-poor.

Setboonsarng and Parpiev (2008) suggest that in order to systematically exclude and prevent the wealthy from joining microfinance programmes, MFIs usually have some built-in mechanisms such as small loan amounts, risk of stigmatisation by being in a club for the poor and, in some cases, explicit participation criteria. An important aspect to be considered at this point is that targeting alone is not enough to reach the poor. According to the World Bank (2005), even strong NGO interventions such as the Pakistan Aga Khan Rural Support Program, most recently evaluated in 2001 and operating for nearly 20 years, have found it difficult to reach the poorest. The reason is that the process involves not just economic change, but also a series of social and cultural changes. Effecting such fundamental transformation requires considerable time and sustained effort.

Another helpful measure could be diversifying the product mix and considering services and features that may better suit the extreme poor, such as small initial loan size over a short term with frequent and flexible regular repayment options and tailored financial products that correspond with seasonal income streams. Apart from product diversification, proximity is also vital, and if services are delivered close to homes and clients are served in the form of groups rather than individually in offices, the targeted ultra-poor will be in a better position to access services with greater convenience. According to Nenova, Niang et al. (2009) outreach to rural and remote locations in Pakistan is difficult and services are not sufficiently customised to client needs; for example, women who might need doorstep delivery and the poor who rarely have the requisite documentation and accounts. Along with proximity, branch operations can also be simplified and decentralised in order to save costs and make services more approachable and congenial to clients.

(ii) Use of technology

While new technology and innovative financial products are propelling an unprecedented expansion of the frontiers of microfinance outreach (SEEP 2009), MFIs in Pakistan rank
particularly low in harnessing the power of technology to meet client demands. Most established MFIs in the world have designed efficient, low-cost technology-based solutions for serving low-income clients, thus saving costs that have resulted in increased competitiveness from engaging with low-income populations. FINCA’s operations in Mexico, for instance, switched the microcredit disbursement method from paper cheques to electronic prepaid banking cards in partnership with HSBC.

Another technological application in the development sector has been gaining pace recently: the use of communication technologies. Sachs (2008) argues that ‘extreme poverty is almost synonymous with extreme isolation, especially rural isolation, but mobile phones and wireless internet end this isolation, and will therefore prove to be the most transformative technology of economic development of our time’. Various initiatives use mobile phones to provide financial services to ‘the unbanked’, which take a variety of forms, including long-distance remittances, micropayments, and informal airtime bartering schemes (Donner and Tellez 2008).

While borrowers in many parts of the developing world are using their handsets to gain direct access to markets, check balances, send and receive advice regarding farming activities and livestock, transfer money, pay bills and even pay tuition fees to schools and make purchases at retail outlets, microfinance clients in Pakistan still have a long way to go in becoming part of the m-banking revolution. Let alone using mobile phones for accessing such services, according to the survey carried out for this research almost half (over 44 percent) of the borrowers did not even have a mobile phone in the household18. MFIs in the country can forge partnerships with telecommunication service providers19 and enable their customers to reap the benefits of being connected.

(iii) Product diversification, innovation and flexibility

As the nature of poverty is multi-dimensional, people’s needs are unique and hence have to be addressed by offering them unique, tailored and customised solutions. MFIs in Pakistan lack innovation and have a limited number of programmes to offer. The ‘one size fits all’

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18 This figure is slightly better than for non-borrowers, of whom 48 percent did not own a mobile phone.

19 The successful partnership between Telenor and Grameen Bank in Bangladesh is one of many such joint ventures.
approach was observed across almost all lenders who formed part of the survey, as most of them offered just credit and saving facilities, with rigid rules regarding interests rates, loan sizes, borrower selection criteria, etc. Most of the successful MFIs in the world have been observed to have an assortment of products and services that are tailor-made to suit specific groups of vulnerable clients. BRACs programmes committed to targeting the ultra poor (TUP and IGVGD) and Grameen Bank’s beggar loans are such examples. These programmes combine livelihood protection (food aid, employment) with livelihood promotion (financial services with skills training) and are geared towards assisting the poorest to gradually move out of poverty.

As this is being written, the country continues to suffer from torrential floods, declared by the UN to be one of the worst-ever disasters of the world, that have submerged a fifth of the country and left more than 20 million of its people homeless (Reitman and Azmi 2010; Pasha 2010). Most MFIs\(^\text{20}\) operating in the affected areas have pledged to write off up to Rs.3 billion in outstanding portfolios and have initiated rehabilitation drives across affected areas. At a time like this, MFIs will have to come up with innovative, customised products and services to meet demands that are as varied as the areas and clients themselves. Relief packages will have to be provided to cater for immediate needs, while long-term and low-cost credit facilities will have to be extended over the longer term to rebuild livelihoods.

During focus groups and individual interviews, many borrowers complained of the credit advanced in the initial loan cycles being too small to start any business (usually around Rs.10,000, or US$117). They explained that such small amounts were more likely to be consumed and spent on non-productive activities rather than being used for productive activities. It was also observed that many borrowers who had the necessary skills and expertise to establish micro-enterprises, required adequate capital, at least twice of what they were offered. If credit officers identify these individuals and assess them against a set of criteria, larger loans will definitely be helpful for them. It was also observed that certain MFIs had a mechanism in place to offer higher amounts, in subsequent loan cycles, but even in such cases the increments were small and borrowers had to undergo many cycles to reach a reasonable sum (of around Rs.25,000, or US$290). Apart from the credit amount, some borrowers complained of the frequency of loan instalments, as in certain cases these were

\(^{20}\) At the time of writing, these were Kashf Foundation, Punjab Rural Support Programme, National Rural Support Programme, Khushhali Bank and First Microfinance Bank.
collected on a bi-weekly basis. They argued that it would be more convenient for them to repay on a monthly basis. If lenders are sensitive to such basic borrower demands, the impact will be more pronounced without affecting institutional sustainability.

(iv) **Client graduation into the formal financial sector**

Limited access to financial services in the developing world is one of the main obstacles to both income generation and social protection. Demirguc-Kunt, Beck et al., (2008) use a composite measure of estimating financial inclusion and reveal that only 12 percent of people in Pakistan have access to an account with a financial intermediary. MFIs should train and support their clients and encourage them to ‘graduate’ into the mainstream banking and financial services sector, where they can benefit from diversified services and larger portfolios. In order to address specific needs, MFIs should have a policy to assess individual cases and sanction loan amounts accordingly to meet realistic demands. Clients can then benefit to a larger extent and gradually progress towards graduating into the regular financial sector.

7.3 **Applicability of Research Findings and Future Directions**

The preceding section explored various policy implications in the light of research findings that could assist towards maximising the benefits of microfinance. Amongst others, increased use of technology, diversification of products, inducing innovation and flexibility, and facilitating client graduation into the formal financial sector were discussed as possible policy interventions that could be utilised both to deepen outreach and enhance programme impact. Although the survey was carried out in just one of the four provinces of Pakistan, the findings can be assumed to be fairly representative on a national scale, given that Punjab has the highest percentage of scale of outreach at 8.74 percent; Baluchistan records the lowest share at only 0.97 percent, followed by Khyber-Pakhtunkhwa at 2.21 percent and Sindh at 6.71 percent.

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21 This is seen to be especially low if compared to 48 percent in India, 59 percent in Sri Lanka, and 32 percent in Bangladesh (Haq 2008).

22 ‘Scale of outreach’ here is taken as the percentage of *actual microfinance clients to the potential market* in each province, as calculated by the Pakistan Microfinance Network (Khalid 2010), and represents the outreach over a geographical area, as opposed to the *depth of programme outreach*, which measures which category of the poor are being served.

23 The province was previously known as North Western Frontier Province (NWFP), and was officially renamed as Khyber-Pakhtunkhwa on 15th April, 2010.
percent (Khalid 2010). Given the limitations of scope and time, it was possible to sample only a limited number of districts in one province. For a more comprehensive, country-wide assessment, the existing survey can be extended to the rest of the three provinces, and districts can be sampled accordingly.

Another aspect that requires further investigation is that in the current research, the household survey was designed on a cross-sectional basis, implying that responses pertained to a specific time in respondents’ lives. As an alternative, if subsequent rounds of interviews are carried out, in the form of a panel survey in which the same set of interviewees are approached over a number of years (usually from three to five), a more accurate respondent profile can be built, thus creating a better picture of programme outcomes.

The findings of this survey show that outreach to the very poor category of borrowers is inadequate and needs to be deepened by institutions that extend credit and associated services to those living in rural areas. As far as impact is concerned, there are mixed results. Although borrowers seem to fare better across around 70 percent of the indicators, less than a third of these are statistically significant, which sends signals that despite producing some degree of positive impact, MFIs still have to do a lot more to ensure that impact is more pronounced so as to make a real difference to the poors’ livelihoods.
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Appendices
### APPENDIX 1: Questionnaire for Household Survey

#### (A) Business Activity

<table>
<thead>
<tr>
<th>A1.) Type of business/principal source of income:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Agriculture</td>
</tr>
<tr>
<td>2- Non-farm enterprise/trader</td>
</tr>
<tr>
<td>3- Student</td>
</tr>
<tr>
<td>4- Labourer</td>
</tr>
<tr>
<td>5- Salaried worker</td>
</tr>
<tr>
<td>6- Unemployed</td>
</tr>
<tr>
<td>7- Retired or unable to work</td>
</tr>
<tr>
<td>8- Household work</td>
</tr>
<tr>
<td>9- Infant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A2.) How long have you been involved in the business stated above?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Less than 2 years</td>
</tr>
<tr>
<td>2- 2-5 years</td>
</tr>
<tr>
<td>3- 10 years</td>
</tr>
<tr>
<td>4- 11 years and above</td>
</tr>
</tbody>
</table>

#### (B) MFI and Other Borrowings

<table>
<thead>
<tr>
<th>Are you a current MFI client?</th>
</tr>
</thead>
<tbody>
<tr>
<td>0- No</td>
</tr>
<tr>
<td>1- Yes</td>
</tr>
</tbody>
</table>
### B1.) Borrowing from one MFI or more?

1- One  
2- Multiple

### Name(s) of MFI(s):

1- Kashf  
2- Asasah  
3- PRSP  
4- CSC  
5- NRSP  
6- 1st M.F Bank  
7- Khushhali Bank  
8- Pak Oman Bank

### B2.) A:

### B3.) B:

### B4.) C:

### B5.) Total amount borrowed: **(Actual)**

### B6.) Total number of years in MFI Programme (Round off to nearest year):

### B7.) Total monthly instalment: **(Actual)**

### B8.) Purpose of Loan: for new business or expansion:

1- New business  
2- Expansion

### (C) Loan use

### C1). Original reason for taking out loan
**C2). Eventual use of loan amount:**

1- As applied for  
2- To pay off existing debt to moneylenders  
3- To pay off debts to friends/family  
4- Marriage  
5- Household expenditure  
6- Home improvement  
7- Sickness/health  

**C3). What portion was used for original purpose?**

0- None  
1- All of it  
2- Less than half  
3- More than half  
4- Half  

**C4). Any plans for future borrowing?**

0- No  
1- Yes  
2- N/A  
3- Will think about it/not sure
C6). Have you missed any instalment payments?

0- No  
1- Yes  
2- N/A

C7). If yes, what were the consequences faced?

0- No missed payments  
1- Had to borrow from family/friends  
2- Had to sell household assets  
3- Had to take out further loans  
4- Assets were forcibly sold by MFI staff

C8). Loan amount used for production/consumption

1- Production  
2- Consumption  
3- Both

(D) Physical dwelling-related indicators

D1). House ownership

1- Owned  
2- Rented
D2). Number of rooms in the house (Actual)

D3). Roof:

1- Metal beams and bricks (T.R Garder)
2- Concrete (Cement)
3- Wood and bricks
4- Straw

D4). Material used for exterior walls?

1- Bricks
2- Wood (timber)
3- Mud
4- Metal/aluminium sheet

D5). Type of floor

1- Bricked
2- Cemented
3- Mud/Earth

D6). Source of water supply

0- No supply
1- Piped water
2- Well water
3- Borehole
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4-</td>
<td>Hand pump</td>
</tr>
<tr>
<td>5-</td>
<td>Hand pump with motor</td>
</tr>
</tbody>
</table>

D7). Type of toilet

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-</td>
<td>No toilet/outside</td>
</tr>
<tr>
<td>2-</td>
<td>Flush toilet (WC)</td>
</tr>
<tr>
<td>3-</td>
<td>Pit latrine</td>
</tr>
</tbody>
</table>

D8). Bathroom waste disposal

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1-</td>
<td>Into outside gutter (covered)</td>
</tr>
<tr>
<td>2-</td>
<td>Outside gutter (open)</td>
</tr>
<tr>
<td>3-</td>
<td>Into soak pit</td>
</tr>
</tbody>
</table>

D9). Energy for lighting in the house?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1-</td>
<td>Electricity</td>
</tr>
<tr>
<td>2-</td>
<td>Kerosene Lamp</td>
</tr>
<tr>
<td>3-</td>
<td>Gas Lamp</td>
</tr>
</tbody>
</table>

D10). What do you use for cooking?

<p>| | |</p>
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<tr>
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<tbody>
<tr>
<td>1-</td>
<td>Electricity</td>
</tr>
<tr>
<td>2-</td>
<td>Gas</td>
</tr>
<tr>
<td>3-</td>
<td>Kerosene</td>
</tr>
<tr>
<td>4-</td>
<td>Firewood</td>
</tr>
</tbody>
</table>
5- Charcoal
6- Animal dung/‘Thapi’

D11). Structural condition of house:

1- Seriously dilapidated
2- Average/needs major repairs
3- Sound structure

(E) Other asset-based indicators

E1). Does the household own any agricultural/cultivable land?

0- No
1- Yes

E2). Current value of any such land (Actual)

E3). Participation in any ROSCA scheme?

0- No
1- Yes

E4). Amount of monthly contribution to the ROSCA scheme (Actual)

E5). Total amount of ROSCA scheme on encashment (Actual)

Household Assets

Livestock
1) Cows, Cattle and buffalo
2) Sheep and Goats
3) Poultry
4) Horses and Donkeys

Transportation-related assets
1) Motorcycle
2) Bicycle
3) Carts

Appliances and electronics
1) Television
2) VCR
3) Refrigerator
4) Washing machine
5) Radio/Tape/Stereo
6) Mobile phone
7) Sewing Machine

(G) Food-related indicators

Luxury Food item

During the last seven days how many days were the following foods served as a **main** meal in the household?

G1). Mutton
G2). Chicken
G3). Beef
### Inferior Food items

During the last seven days, for how many days did a main meal consist of the following foods?

G4). Vegetables, Lentils, etc.

### How often do you purchase the following staple foods items?

G5). Wheat flour

G6). Rice

1. Daily
2. Twice a Week
3. Weekly
4. Fortnightly/Every two weeks
5. Monthly
6. Bi-Annually
7. Annually
8. Do Not Purchase
9. Received as Labour
10. Own Production

### Weeks of stock held of storable staple food items

G7). Wheat/flour

G8). Rice
### HOUSEHOLD-RELATED DATA

<table>
<thead>
<tr>
<th>No</th>
<th>M/F</th>
<th>Age</th>
<th>Relationship to HH Head</th>
<th>Occupation</th>
<th>Monthly Income</th>
<th>Can read/write</th>
<th>School Y/N</th>
<th>Max. schooling/current grade</th>
<th>Grade delay</th>
<th>Drop out? Y/N</th>
<th>Reason Code (See codes below)</th>
<th>Children’s schooling expenditure (Monthly)</th>
<th>Clothing/footwear expenses (per year)</th>
<th>HH. Exp. on healthcare (Monthly)</th>
<th>General Household Health</th>
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</thead>
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</tbody>
</table>

**Codes: reasons for children’s school dropout:** (1) Inability to pay fees and other expenditure (2) Child truancy (3) Death of sponsor (4) Child involvement in family business/other labour (5) Because child was a girl (6) Due to the teachers’ attitude (7) School too far (8) Other (please specify) __________

**Health Codes:** 1-Good 2- Average 3- Poor
### APPENDIX 2: Balancing property test by block

#### Block 1: $0.131 \leq \text{Score}_\text{PROBIT} < 0.2$

<table>
<thead>
<tr>
<th></th>
<th>Obs</th>
<th>Mean</th>
<th>Std.Err</th>
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<tbody>
<tr>
<td>Non-Borrowers</td>
<td>37</td>
<td>0.171</td>
<td>0.003</td>
</tr>
<tr>
<td>Borrowers</td>
<td>5</td>
<td>0.162</td>
<td>0.011</td>
</tr>
<tr>
<td>Combined</td>
<td>42</td>
<td>0.170</td>
<td>0.003</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>0.009</td>
<td>0.008</td>
</tr>
<tr>
<td>Test (p-value)</td>
<td></td>
<td>0.283</td>
<td></td>
</tr>
</tbody>
</table>

#### Block 2: $0.2 \leq \text{Score}_\text{PROBIT} < 0.3$

<table>
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<th></th>
<th>Obs</th>
<th>Mean</th>
<th>Std.Err</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Borrowers</td>
<td>142</td>
<td>0.259</td>
<td>0.028</td>
</tr>
<tr>
<td>Borrowers</td>
<td>53</td>
<td>0.260</td>
<td>0.029</td>
</tr>
<tr>
<td>Combined</td>
<td>195</td>
<td>0.259</td>
<td>0.028</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>-0.0002</td>
<td>0.005</td>
</tr>
<tr>
<td>Test (p-value)</td>
<td></td>
<td>0.96</td>
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</table>

#### Block 3: $0.3 \leq \text{Score}_\text{PROBIT} < 0.4$

<table>
<thead>
<tr>
<th></th>
<th>Obs</th>
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<th>Std.Err</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Borrowers</td>
<td>197</td>
<td>0.348</td>
<td>0.002</td>
</tr>
<tr>
<td>Borrowers</td>
<td>106</td>
<td>0.356</td>
<td>0.003</td>
</tr>
<tr>
<td>Combined</td>
<td>303</td>
<td>0.351</td>
<td>0.002</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>-0.008</td>
<td>0.003</td>
</tr>
<tr>
<td>Test (p-value)</td>
<td></td>
<td>0.02</td>
<td></td>
</tr>
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</table>

#### Block 4: $0.4 \leq \text{Score}_\text{PROBIT} < 0.6$

<table>
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<th>Obs</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Non-Borrowers</td>
<td>260</td>
<td>0.480</td>
<td>0.003</td>
</tr>
<tr>
<td>Borrowers</td>
<td>252</td>
<td>0.492</td>
<td>0.004</td>
</tr>
<tr>
<td>Combined</td>
<td>512</td>
<td>0.486</td>
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#### Block 5: $0.6 \leq \text{Score}_\text{PROBIT} < 0.8$

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<tr>
<td>Non-Borrowers</td>
<td>21</td>
<td>0.670</td>
<td>0.012</td>
</tr>
<tr>
<td>Borrowers</td>
<td>40</td>
<td>0.678</td>
<td>0.008</td>
</tr>
<tr>
<td>Combined</td>
<td>61</td>
<td>0.675</td>
<td>0.007</td>
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<tr>
<td>Difference</td>
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<td>-0.008</td>
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<tr>
<td>Test (p-value)</td>
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<td>0.58</td>
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</table>

#### Block 6: $0.8 \leq \text{Score}_\text{PROBIT} \leq 0.982$

<table>
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<th>Std.Err</th>
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<tbody>
<tr>
<td>Non-Borrowers</td>
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<td>0.809</td>
<td>0.009</td>
</tr>
<tr>
<td>Borrowers</td>
<td>6</td>
<td>0.907</td>
<td>0.021</td>
</tr>
<tr>
<td>Combined</td>
<td>8</td>
<td>0.883</td>
<td>0.022</td>
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<tr>
<td>Difference</td>
<td></td>
<td>-0.098</td>
<td>0.038</td>
</tr>
<tr>
<td>Test (p-value)</td>
<td></td>
<td>0.04</td>
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</table>
APPENDIX 3: Summary of impact and level of significance of programme intervention

Summary of impact and level of significance of programme intervention across various indicators in four dimensions captured by survey

<table>
<thead>
<tr>
<th>Variables</th>
<th>Borrowers</th>
<th>Non-Borrowers</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HOUSEHOLD ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIVESTOCK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cows</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total livestock value</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSPORT-RELATED ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcycle</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carts</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Total transport assets value</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>SAVINGS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROSCA (participation in schemes)</td>
<td>✓</td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>Total ROSCA Encashment Amount</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly ROSCA Instalment</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>APPLIANCES AND ELECTRONICS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile phones</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td>✓</td>
<td>✓</td>
<td>*</td>
</tr>
<tr>
<td>Fridge</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sewing Machine</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCR</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Washing Machine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total appliances and electronics</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of assets per person</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total value of household assets</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HUMAN DEVELOPMENT</strong></td>
<td></td>
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</tr>
<tr>
<td>Exp. Cloth</td>
<td>✓</td>
<td></td>
<td>**</td>
</tr>
<tr>
<td>Clothing and footwear expenses per annum</td>
<td></td>
<td>✓</td>
<td>*</td>
</tr>
<tr>
<td>Clothing expenditure percentage of income</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Clothing expenses: percentage of expenditure</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly expenditure on healthcare</td>
<td>✓</td>
<td></td>
<td>***</td>
</tr>
<tr>
<td>Poverty ranks</td>
<td>✓</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Poverty Score</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children currently at school</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly children’s schooling expenditure</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total children in household</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total family size</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FOOD CONSUMPTION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption of luxury food: Chicken</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption of luxury food: Mutton</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of staple food: Wheat</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DWELLING INDICATORS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of cooking fuel used</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material used for constructing floors</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall condition of house</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material used for constructing roof</td>
<td>✓</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Material used for constructing walls</td>
<td>✓</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Source of water supply in house</td>
<td>✓</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Method used for waste water disposal</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>29</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey data

1% $t$ critical value is 2.576 (**significant at 1%).
5% $t$ critical value is 1.96 (** significant at 5%).
10% $t$ critical value is 1.645 (*significant at 10%).
APPENDIX 4: Millennium Development Goals

United Nations Development Programme

Millennium Development Goals

MDG Targets and Indicators

Goal 1. Eradicate extreme poverty and hunger

Target 1: Reduce by half the proportion of people living on less than a dollar a day
1. Proportion of Population Below $1 (PPP) per Day (World Bank)
2. Poverty Gap Ratio, $1 per day (World Bank)
3. Share of Poorest Quintile in National Income or Consumption (World Bank)

Target 2: Reduce by half the proportion of people who suffer from hunger
4. Prevalence of Underweight Children Under Five Years of Age (UNICEF)
5. Proportion of the Population below Minimum Level of Dietary Energy Consumption (FAO)

Goal 2. Achieve universal primary education

Target 3: Ensure that all boys and girls complete a full course of primary schooling
6. Net Enrolment Ratio in Primary Education (UNESCO)
7. Proportion of Pupils Starting Grade 1 who Reach Grade 5 (UNESCO)
8. Literacy Rate of 15-24 year-olds (UNESCO)

Goal 3. Promote gender equality and empower women

This list and the explanation of the Millennium development goals has been reproduced from the web pages of the United Nations Development Programme: http://www.undp.org/mdg/goallist.shtml
Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015

9. Ratio of Girls to Boys in Primary, Secondary, and Tertiary Education (UNESCO)
10. Ratio of Literate Women to Men 15-24 years old (UNESCO)
11. Share of Women in Wage Employment in the Non-Agricultural Sector (ILO)
12. Proportion of Seats Held by Women in National Parliaments (IPU)

Goal 4. Reduce child mortality

Target 5: Reduce by two thirds the mortality rate among children under five

13. Under-Five Mortality Rate (UNICEF)
14. Infant Mortality Rate (UNICEF)
15. Proportion of 1 year-old Children Immunised Against Measles (UNICEF)

Goal 5. Improve maternal health

Target 6: Reduce by three quarters the maternal mortality ratio

16. Maternal Mortality Ratio (WHO)
17. Proportion of Births Attended by Skilled Health Personnel (UNICEF)

Goal 6. Combat HIV/AIDS, malaria and other diseases

Target 7: Halt and begin to reverse the spread of HIV/AIDS

18. HIV Prevalence Among 15-24 year-old Pregnant Women (UNAIDS)
20. Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years

**Target 8: Halt and begin to reverse the incidence of malaria and other major diseases**

21. Prevalence and Death Rates Associated with Malaria (WHO):
22. Proportion of Population in Malaria Risk Areas Using Effective Malaria Prevention and Treatment Measures (UNICEF):
23. Prevalence and Death Rates Associated with Tuberculosis (WHO):
24. Proportion of Tuberculosis Cases Detected and Cured Under Directly-Observed Treatment Short Courses (WHO)

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**Goal 7. Ensure environmental sustainability**

**Target 9: Integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources**

25. Forested land as percentage of land area (FAO)
26. Ratio of Area Protected to Maintain Biological Diversity to Surface Area (UNEP)
27. Energy supply (apparent consumption; Kg oil equivalent) per $1,000 (PPP) GDP (World Bank)
28. Carbon Dioxide Emissions (per capita) and Consumption of Ozone-Depleting CFCs (ODP tons):

**Target 10: Reduce by half the proportion of people without sustainable access to safe drinking water**

30. Proportion of the Population with Sustainable Access to and Improved Water Source (WHO/UNICEF)
31. Proportion of the Population with Access to Improved Sanitation (WHO/UNICEF)

**Target 11: Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020**

32. Slum population as percentage of urban population (secure tenure index) (UN-Habitat)
Goal 8. Develop a global partnership for development

Target 12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system. Includes a commitment to good governance, development, and poverty reduction — both nationally and internationally.

Target 13. Address the special needs of the least developed countries. Includes: tariff and quota free access for least developed countries’ exports; enhanced programme of debt relief for HICPs and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction.

Target 14. Address the special needs of landlocked countries and small island developing States.

Target 15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

Target 16: In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.

Target 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

Target 18: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.

Official development assistance

32. Net ODA as percentage of OECD/DAC donors’ gross national product (targets of 0.7% in total and 0.15% for LDCs)
33. Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water and sanitation)
34. Proportion of ODA that is untied
35. Proportion of ODA for environment in small island developing States
36. Proportion of ODA for transport sector in landlocked countries
Market access

37. Proportion of exports (by value and excluding arms) admitted free of duties and quotas
38. Average tariffs and quotas on agricultural products and textiles and clothing
39. Domestic and export agricultural subsidies in OECD countries
40. Proportion of ODA provided to help build trade capacity

Debt sustainability

41. Proportion of official bilateral HIPC debt cancelled
42. Total Number of Countries that Have Reached their HIPC Decision Points and Number that Have Reached their Completion Points (Cumulative) (HIPC) (World Bank-IMF)
43. Debt Service as a Percentage of Exports of Goods and Services (World Bank)
44. Debt Relief Committed Under HIPC Initiative (HIPC) (World Bank-IMF)
45. Unemployment of 15-24 year-olds, Each Sex and Total (ILO)
46. Proportion of Population with Access to Affordable, Essential Drugs on a Sustainable Basis (WHO)
47. Telephone Lines and Cellular Subscribers per 100 Population (ITU)
48. Personal Computers in Use and Internet Users per 100 Population (ITU)