Reaching the Poorest Through Microfinance: Learning from Saving for Change Program in Mali

Mukul Acharya
University of Massachusetts Amherst, acharyamukul@hotmail.com

Follow this and additional works at: https://scholarworks.umass.edu/open_access_dissertations
Part of the Economics Commons, and the Education Commons

Recommended Citation
Acharya, Mukul, "Reaching the Poorest Through Microfinance: Learning from Saving for Change Program in Mali" (2009). Open Access Dissertations. 49.
https://scholarworks.umass.edu/open_access_dissertations/49

This Open Access Dissertation is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.
REACHING THE POOREST THROUGH MICROFINANCE: LEARNING FROM SAVINGS FOR CHANGE PROGRAM IN MALI

A Dissertation Presented

by

MUKUL ACHARYA

Submitted to the Graduate School of the University of Massachusetts Amherst in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

May 2009

School of Education
Education Research, Policy and Administration
REACHING THE POOREST THROUGH MICROFINANCE: LEARNING FROM SAVING FOR CHANGE PROGRAM IN MALI

A Dissertation Presented

by

MUKUL ACHARYA

Approved as to style and content by:

_______________________________________
David R. Evans, Chair

_______________________________________
Alfred S. Hartwell, Member

_______________________________________
James M. Theroux, Member

_______________________________________
Craig S. Wells, Member

_________________________
Christine B. McCormick, Dean
School of Education
DEDICATION

To my
wife Sujata
and
daughter Preeta
for their endless patience and ultimate sacrifice for my final educational degree,
and
my
late father Uttam Raj Acharya
and
mother Durga Devi Acharya
who always gave first priority to my education!
ACKNOWLEDGMENTS

This dissertation is a final product of my formal academic pursuit which started decades ago. Countless souls influenced my academic quests all along this journey, which at times seemed never-ending, and shaped me into who I am now in various degrees. I would like to thank all of them from the bottom of my heart. I truly believe that I was only an instrument in putting this document together and bringing it to you. They are the source and inspiration for every single word you see in the pages to follow. Paying due respect to all of them is an impossible task. However, a few of those souls are mentioned below. This is not an exclusive list of names by any account.

Jeffrey Ashe, the Manager of Community Finance at Oxfam America provided unlimited access to data and responded promptly with solutions to any query. Without Jeff’s support this project would not have been possible. My sincere gratitude goes to him and his staff. Through Jeff and his staff, I would also like to thank all the participants of the Saving for Change Program in Mali, particularly those women who were part of the surveys conducted both in 2005 and 2006.

My sincere gratitude also extends to my committee chair and members. David R. Evans, chair, was always encouraging. His comments on the draft chapters shaped the final form of this document. Craig Wells guided me particularly in transforming data, performing statistical tests, interpreting the results and writing them up. Ash Hartwell’s feedback on the research design, especially the research questions, were invaluable in finding the focus of the study. James Theroux always asked the questions which would help me to articulate my ideas clearly.
This product would not have been composed as it is without Braulia Caban’s
tireless edits and comments. Braulia and her husband, Juan Caban, have always been
very loving, generous, inspirational and supportive to me and my family throughout our
stay in Amherst. My eternal appreciation goes to both of them.

I am most indebted to my wife Sujata and daughter Preeta for this academic
venture. They sacrificed many years for my degree and demonstrated unshakable
understanding and patience.
ABSTRACT

REACHING THE POOREST THROUGH MICROFINANCE: LEARNING FROM SAVING FOR CHANGE IN MALI

MAY 2009

MUKUL ACHARYA, B.A. & B.L, TRIBHUVAN UNIVERSITY

M.A. TRIBHUVAN UNIVERSITY

M.Ed., UNIVERSITY OF MASSACHUSETTS AMHERST

Ed.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by Professor David R. Evans

This study used secondary data to analyze the Saving for Change (SfC) program of Oxfam America in Mali. SfC uses a model of microfinance that is based on education and savings-led approach and self-help methodology. The program teaches the poorest women how to form and manage a group to handle savings and credit related needs. The group learns to systematically collect savings from its members; lend the money to its members with interest and keep a record of all transactions. SfC has created an oral recordkeeping system which is helpful for groups that have mostly or all illiterate women. The SfC women also learn about other social components such as malaria through their participation in the program. This study, however, focused only on the financial activities of the women.

The secondary data analyzed in this study were collected by Oxfam America in two rounds of surveys that used mixed methods instruments. Both surveys were conducted in October and November, one in 2005 and the other in 2006. Most of the data collected from the surveys were quantitative. They were collected for Oxfam America’s own purposes and only some of them were used for this study.
The study used three aspects of outreach—depth, scope and worth to the user—as the framework to explore the extent to which SfC had reached the poorest women. Three overarching questions were constructed, one to explore each of these aspects of outreach. They were: Were the women served by SfC poorer than other women who were not served? Did the SfC women utilize the program benefits? Did the utilization of the program benefits vary based on the women’s economic levels?

Each overarching question also had a set of main and specific questions. Some key economic indicators such as the women’s literacy and schooling at the individual level and the ratio of school age children in school, food security, assets and the ratio of income contributors at the household level, as well as select program benefits such as savings and loans were used for determining the main and specific questions. Various statistical tests including one-way ANOVA, paired samples t-tests and bivariate correlations were performed to answer those questions.

Most of the results of the statistical tests did not provide a clear answer whether or not SfC reached the poorest of the poor. Out of the four indicators, three showed that the women reached by SfC were as poor as the women in the control group. The SfC women were statistically significantly better off, as measured by household assets, compared to the other women in the area.

The results of the paired samples t-tests showed that the SfC women utilized the benefits offered by the program, and their utilization was higher in 2006 than in 2005. Except for a few instances, the women’s utilization of the program benefits did not appear to have been influenced by their economic levels. None of their saving activities were significantly affected by their household economic levels. Their willingness to take
loans also did not appear to be influenced by the difference in their household economic levels in a meaningful way.

Although mixed, these findings adequately rejected the notion that Oxfam America had failed to reach the poorest of the poor. However, the results did not show that the women reached by SfC were the poorest. Future studies and collection of additional data may provide more conclusive findings about the level of poverty of the women reached by the program and the extent to which the very poorest benefitted equally from the services.

Whether or not the results were statistically significant and all women were the poorest, the experiences gained by the women and the groups from their participation in SfC spoke directly to the core purpose of the program and to the economic benefits for the clients by any international standard. When their context was taken into consideration, poor women of one of the world’s poorest countries in the villages where there are very few or no opportunities became economically active in the SfC program. The level of engagement of the women was an important step forward toward reducing poverty. Regardless of their economic levels, those poor women saved a remarkable amount of money; borrowed money from the group; repaid loans with interest; and, most importantly, managed a financial system as a group to serve their financial needs.
# TABLE OF CONTENTS

ACKNOWLEDGMENTS ........................................................................................................... v

ABSTRACT .......................................................................................................................... vii

LIST OF TABLES ................................................................................................................ xiii

LIST OF FIGURES .............................................................................................................. xv

CHAPTER

I. INTRODUCTION ...................................................................................................... 1

Poverty and Microfinance .......................................................................................... 2
Saving for Change ...................................................................................................... 5
Mali ............................................................................................................................ 10

Poverty in Mali .................................................................................................... 10
SfC Program Areas .............................................................................................. 13

II. POVERTY, MICROFINANCE, AND OUTREACH .............................................. 20

Who Are the Poor? ..................................................................................................... 20
Microfinance and Its Delivery Systems .................................................................... 23
Outreach Challenges for MFIs ................................................................................ 28

Challenges in Reaching the Poorest .......................................................................... 33

Institutional Capacity .......................................................................................... 36
Financial Self-Sufficiency Rhetoric .......................................................................... 36
Costs ......................................................................................................................... 37

Meeting the Challenge for Reaching the Poorest ....................................................... 39

III. DESIGN OF STUDY ............................................................................................... 44

Background .............................................................................................................. 44

Reaching the Poorest ............................................................................................... 45
Economic Indicators .............................................................................................. 47

Household Assets ................................................................................................. 48
Children in School Ratio ......................................................................................... 49
Food Sufficiency ..................................................................................................... 49
V. CONCLUSION: THEMES, LESSONS AND RECOMMENDATIONS .......... 118

Summary of Findings ........................................................................................................ 118

Depth Aspect of SfC’s Outreach ........................................................................ 119
Analysis of Scope of SfC’s Outreach ................................................................. 121
Value of Benefits to the SfC Participants .......................................................... 123

Emerging Themes and Lessons Learned for Reaching the Poorest ............. 124

Poorest Save ........................................................................................................ 125
Poorest Repay Loans .................................................................................... 128
Poorest and Illiterate Can Manage a Financial System ......................... 132
Literacy for Microenterprise ........................................................................ 134

Implications and Recommendations ............................................................... 138

Future Study ........................................................................................................ 146

APPENDICES

A. MAP OF INCIDENCES OF POVERTY IN MALI .................................................. 149
B. THREE SURVEY QUESTIONNAIRES .............................................................. 150

BIBLIOGRAPHY ............................................................................................................ 172
**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Mali's Gross Domestic Product (GDP) and HDI</td>
<td>12</td>
</tr>
<tr>
<td>2: Basic Facts about Mali</td>
<td>13</td>
</tr>
<tr>
<td>3: Comparison of Selected Household Characteristics in Percentage</td>
<td>15</td>
</tr>
<tr>
<td>4: Reaching the Poorest In the Context of SfC in Mali</td>
<td>45</td>
</tr>
<tr>
<td>5: Household Assets</td>
<td>48</td>
</tr>
<tr>
<td>6: Characteristics of the Groups Used for External Comparisons</td>
<td>54</td>
</tr>
<tr>
<td>7: First Set of Comparisons: Overarching, Main and Specific Questions</td>
<td>55</td>
</tr>
<tr>
<td>8: Internal Comparisons: Program Benefits and Their Utilization by SfC Women</td>
<td>56</td>
</tr>
<tr>
<td>9: Second Set of Comparisons: Overarching, Main and Specific Questions</td>
<td>57</td>
</tr>
<tr>
<td>10: Third Set of Comparisons: Overarching, Main and Specific Questions</td>
<td>59</td>
</tr>
<tr>
<td>11: Survey Samples</td>
<td>60</td>
</tr>
<tr>
<td>12: Design for Comparing SfC Women's Poverty Levels with Other Women</td>
<td>62</td>
</tr>
<tr>
<td>13: Design for Exploring Utilization of Program Benefits by Economic Indicators</td>
<td>64</td>
</tr>
<tr>
<td>14: Variables for Comparing SfC Women with Non-SfC Women</td>
<td>68</td>
</tr>
<tr>
<td>15: Variables for Exploring Effect of Economic Factors on Program Benefits</td>
<td>69</td>
</tr>
<tr>
<td>16: Descriptive Statistics for Comparing SfC and Other Women Economically</td>
<td>71</td>
</tr>
<tr>
<td>17: Percentage of Schooling of Sampled Women by Group Association</td>
<td>72</td>
</tr>
<tr>
<td>18: Contrast Tests Between Original Groups for Children in School Ratio</td>
<td>74</td>
</tr>
<tr>
<td>19: Contrast Tests for Original and New Groups on Value of Household Assets</td>
<td>77</td>
</tr>
<tr>
<td>20: Results of Paired Samples t-Tests for 2005 and 2006</td>
<td>83</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Mali's HDI Rank Compared with the Poorest Country</td>
<td>11</td>
</tr>
<tr>
<td>2: SfC Program Locations in Mali</td>
<td>13</td>
</tr>
<tr>
<td>3: Local Government Structure in Mali</td>
<td>14</td>
</tr>
<tr>
<td>4: Comparison of Female Illiteracy (%)</td>
<td>17</td>
</tr>
<tr>
<td>5: Percentages of Households with More than 5KM Distance to Facilities</td>
<td>18</td>
</tr>
<tr>
<td>6: Percentage of Households on Wealth Index</td>
<td>19</td>
</tr>
<tr>
<td>7: Levels of Poverty</td>
<td>21</td>
</tr>
<tr>
<td>8: Classification of the Poor</td>
<td>22</td>
</tr>
<tr>
<td>9: Examples of Microfinance Approaches and Methodologies</td>
<td>24</td>
</tr>
<tr>
<td>10: Financial Service Providers and Their Clients</td>
<td>31</td>
</tr>
<tr>
<td>11: Microfinance Outreach and Levels of Poverty</td>
<td>35</td>
</tr>
<tr>
<td>12: Means Plotted for Children in School Ratio</td>
<td>75</td>
</tr>
<tr>
<td>13: Values (OXF) of Household Assets of the Women in New Cohort by Group Types</td>
<td>78</td>
</tr>
<tr>
<td>14: Values (OXF) of Household Assets of the Women in Original Cohort by Group Type</td>
<td>79</td>
</tr>
<tr>
<td>15: Number of Women by Weekly Savings Rate in XOF in 2006 and 2005</td>
<td>83</td>
</tr>
<tr>
<td>16: Number of Women by Highest Voluntary Saving (XOF) Deposit in 2006 and 2005</td>
<td>85</td>
</tr>
<tr>
<td>17: Number of Women by Average Group Loan Size in 2006 and 2005</td>
<td>87</td>
</tr>
<tr>
<td>18: Number of Women by Average Monthly Installment Amounts in 2006 and 2005</td>
<td>89</td>
</tr>
<tr>
<td>19: Total Weekly Savings in OXF by Household Earners’ Ratio</td>
<td>97</td>
</tr>
</tbody>
</table>
20: Highest Voluntary Savings by Household Earners’ Ratio ........................................ 100

21: Number of Group Loans by Household earners’ ratio ......................................... 104

22: Average Group Loan Size by Ratio of Income Contributors ................................. 106

23: Average Months to Repay Loan by Household earners’ ratio ................................ 109

24: Percentage of Total Loan Amount (XOF) Used by Borrowers for Productive Purposes by Economic Indicators and Their Levels ......................................................... 111

25: New Business by Household Earners’ Ratio ......................................................... 115
CHAPTER I

INTRODUCTION

This study was a result of the matched interest of the investigator and Oxfam America. Both entities wanted to learn about reaching the poorest of the poor on a large scale. While the investigator was searching for possible sites to carry out a study, Oxfam America, a United States based nonprofit organization, had been collecting data from its second round of surveys to learn how its Saving for Change (SfC) program was performing with regard to reaching the poorest. SfC had been launched recently and was still in its formative stage. One of the expectations from analyzing the data was that the results would help refine the SfC program by informing what was working in the field and what needed fine tuning. A goal of the SfC program is not only to train women’s groups in managing their savings and loans services but also to demonstrate that a low-cost microfinance program like SfC has the capacity to reach a large number of the poorest in a short period of time.

Within the broad goal of SfC, the purpose of this study was to explore SfC’s outreach—whether or not it reached the poorest in Mali. The study is presented in five chapters. This chapter provides some contexts for the study. There are three sections in the chapter: Poverty and Microfinance, Saving for Change, and Mali. These three sections briefly answer such questions as what was the study about, and why; where were the study sites and why they were selected.
**Poverty and Microfinance**

Eradicating extreme poverty and hunger is a Microcredit Summit Campaign (2006) goal as well as the United Nations’ Millennium Development Goal. As a system for providing financial services such as savings and credit to the poor, microfinance has emerged as a successful development strategy for reducing poverty (Littlefield, Morduch & Hashemi, 2003). It accounted for bringing 1% of Bangladeshis out of poverty every year in the 1990s (Khandker, 2005). Studies in India, Zimbabwe and Peru also revealed that microfinance programs helped both poor and extremely poor households improve their poverty conditions and protect from shocks (Snodgrass & Sebstadt, 2002). In the past few decades, many poor people were reached by microfinance programs all over the world. Within the eight years, from 1997 to 2005, the Microfinance Summit Campaign reported that about 401 million people benefitted from microfinance services (Harris, 2006, p. 2). According to Harris, the outreach increased by over 34% every year during that period. Microfinance has continued to expand every year beyond 2005 and more people have become part of it. In 2006, the number of people reached by microfinance was 665.16 million (Harris, 2007, p. 2). That was an increase of over 2 million people just within one year.

Despite the tremendous success, microfinance still seriously lags behind in reaching the poorest of the poor. They are the people who need microfinance services the most. Some MFIs did not reach out to them but focused only on the poor who are near the poverty line and are the richest of the poor (Navajas et al., 2000). Such MFIs’ inability to reach the poorest has allowed microfinance to be criticized as focused on the bankable poor (Bennett & Cuevas, 1996). Helms (2006, p. 21) presents reports from
several countries where microfinance programs did not target to reach the poorest. Park and Ren (2001) noted that the better off in the poor villages participated in the government-run microfinance programs in China which were given more subsidies than the non-governmental programs. Amin, Rai and Topa (2003) studied about a microfinance program in Northern Bangladesh and confirmed that the vulnerable were not included in the program. The issue was not only limited to targeting the poorest. The studies carried out by Perry (1995) in Senegal and Colman (2006) in Northern Thailand showed that the better off among the participants benefitted more than the poorest from their participation in the microfinance programs. The studies also revealed that the poorest were at a disadvantage amongst the participants even though the programs were designed and implemented to serve them.

Many believe that microfinance has drifted from its original mission of alleviating poverty by reaching the bottom half of the poor primarily because of the focus on financial sustainability (Wright & Dondo, 2001). Their claim is that microfinance focuses rather on the upper half of the poor people. The reason for the focus is arguably influenced by the belief that the poorest of the poor are in such a bad economic state that a microfinance program would not be able to help them without any handouts.

A typical microfinance program provides only financial services such as savings and credit to its clients. Since the poorest struggle everyday to make a living, they are unable to save. Microfinance programs usually offer credit for income generating activities only. Any resources the poorest people can access, including loans, would most likely be used for meeting their daily needs. If the loans are not used for a productive purpose, repaying the loans will be challenging for them especially when the poorest lack
resources to begin with. No institution or program would want to take the risk of lending money to a client who is less likely to pay it back regardless of how compelling the reason for defaulting could be.

The argument is that microfinance programs have increasingly preferred non-poor over the poorest as their clients for the sake of sustainability and protecting themselves from financial vulnerability. The present systems have been serving well to the needs of the vulnerable non-poor as well as the moderate poor. That is great. No one wants all microfinance programs to focus only on the poorest and see the vulnerable non-poor slip into poverty because of the lack of the availability of financial services to them. However, the time has also come for microfinance systems that are sustainable as well as able to reach the poorest. The poorest also need to be at the forefront and at the center of the microfinance delivery for alleviating poverty.

Saving for Change is a microfinance program which trains the poorest women to manage a group fund by collecting savings from its members and lending the money to meet their financial needs. The early outcomes showed that the program was able to train more women than targeted. In the context of a stiff challenge in reaching the poorest through microfinance, the early indications of Saving for Change have shown that it can be a model program in reaching the poorest. This study explores in detail how the program performed in Mali. In this study, data from Oxfam America’s Saving for Change (SfC) program in Mali were analyzed to learn whether or not the poorest of the poor were reached. The study compared the SfC participants at two levels. The first set of comparisons was conducted between groups, the SfC participants and non-participants or the control group. At the second level, two different sets of tests were performed to
explore whether there were any differences in the SfC participants’ access and utilization of the program benefits. One set of statistical tests was carried out to see whether or not the program had been beneficial to the SfC participants. The other set of tests analyzed whether their access and utilization of the program benefits were influenced by the women’s economic conditions.

**Saving for Change**

Launched simultaneously in Mali and Cambodia in April 2005, the aim of Saving for Change (SfC) was to help its participants organize and manage groups that collect savings from the members and lend the money to themselves at interest. The program in Mali was implemented in partnership with Freedom from Hunger through two local non-governmental organizations (NGOs)—Le TONUS and Conseil et Appui pour l’Education a la Base (CAEB). Funded by the Bill and Melinda Gates Foundation, SfC also had secondary goals of addressing malaria and food insecurity by educating the group members on the issues related to them. The primary focus was on creating a sustainable microfinance system by providing training and support to the group members so that they would not only be able to stand on their own feet but also spread their knowledge and skills by helping other women to replicate the program on their own.

The SfC model uses an educational approach to microfinance. It provides three months of intensive training to each group in the beginning. The focus of the training is on savings management, mobilization, and repayment mechanisms. Each group

---

1 Freedom from Hunger (FfH) is a California based nonprofit organization which focuses on addressing the global hunger issues through integrated education and development approach including microfinance and health. In Mali, FfH provides technical support to Oxfam America in training the group members in malaria prevention and treatment (Ashe, n/d, p.3). According to Ashe, more than a half of the program participants had reported having malaria in 2004.
establishes its own rules to collect savings from its members every week at an open meeting and lends out loans from the group fund to the selected members to meet their needs. The group determines how much interest to charge on its loans. Although the group would prefer to lend for starting a business or expanding existing economic activities, borrowers can request loans for any use. The need can be for any purpose such as buying goods to sell at the market, purchasing medicine for a sick child, procuring food, growing vegetables, or raising animals (Ashe, n/d, p.2).

After the training, SfC continues to support each group with progressively reduced frequency of monitoring visits until it becomes able to operate independently. Finally, the group graduates from the program. One of the expectations of the graduation is that the group’s members, in turn, voluntarily help create and train other groups in the village on their own. Such groups are called Spontaneous Groups in this study and they do not receive any direct support from the program. Within the first year and a half of the program or by when the surveys for this study started, about 118 Spontaneous groups had been formed in Mali (Ashe, 2006a, p.3).

All training and monitoring activities for the groups are carried out by the staff of the implementing partner NGOs, known as “Animators.” In Mali, Oxfam America assisted the two partner NGOs financially to cover costs for the staff as well as implementation of its SfC model. In addition, it also provided the NGOs with staff training, close supervision, monitoring and evaluation.

According to the Animator’s Guide (FfH & Oxfam America, 2008), the Animator is that staff that approaches a village for forming a SfC group. First the Animator informally meets with the community leaders and members to explain about SfC. Then
the Animator holds a “Promotional Meeting” for interested women and explains how the program works. Toward the end of the meeting the Animator asks the women if they want to join SfC.

The Animator’s Guide (FfH & Oxfam America, 2008) explains that the Animator’s next step is to organize a “Registration Meeting” when the women are ready and available. At the meeting, the Animator registers the interested women as members and schedules eight consecutive “Training Meetings.” Below is the summary of each Training Meeting:

- At the first Training Meeting, the members discuss the importance of rules in managing the group and responsibilities of the members and learn about savings rate, loans, repayment and interest on loans from the group fund.
- The second Training Meeting is organized for the election of the officers of the group’s Management Committee. The officers are President, Cashier, Key Holder and Cashbox Holder. The Management Committee also decides to get a cashbox and padlock with a key.
- The group gives itself a name and discusses its financial and social goals as facilitated by the Animator at the third Training Meeting.
- It is at the fourth Training Meeting that the group decides the mandatory weekly savings rate and establishes fines for failure to attend the meeting and save weekly.
- Collection of the mandatory weekly savings starts from the fifth Training Meeting. Before beginning the collection the group learns about oral record
keeping and the roles of Members/Helpers in remembering the attendance
records, savings, fines and transaction procedures.

- Establishing rules for lending is the purpose of the sixth Training Meeting. The
  members decide the rules as to how much to lend to whom for how long.
- The interest rate on loans and fines for delinquency are set at the seventh Training
  Meeting.
- Lending from the group fund starts at the eighth Training Meeting. The members
  also decide when to end the cycle and distribute the groups earning among
  themselves.

The suggested length for the meetings in the Animator’s Guide (FfH & Oxfam
America, 2008) is one to one and a half hour each. Since the poor women have very little
time to spare, keeping the meeting short is important. The provision in the Animator’s
Guide for of distributing the earnings of the group among the members based on their
share of savings at the end of the cycle motivates the members to save more. Seeing the
return on their savings helps to build confidence in the system. In Mali, the rate of return
is roughly 30% (J. Ashe, personal communication, April 25, 2009). The groups’ earnings
are made up with the interest on loans and fines for missing meetings and payments.
Each group decides the fines and, according to Ashe, they are anywhere within the range
of 10 to 30 Cents (US). The interest rate on loans also varies from group to group
because each group determines how much to charge when a member borrows from the
group fund. According to Ashe, the Malian groups charge 10% of the principle
regardless of how many months the loan is for. This practice is used primarily to keep
the calculations simple and manageable for the illiterate women. Some groups, however,
charge as much as 5% per month. At the end of the cycle, which is at the end of six months or one year in Mali, the members realize that the higher the interest rate and fines are, the more the return on their savings. The return is also higher if their savings is higher. The members can increase their share of savings by saving voluntary in addition to the mandatory savings that each member required to save weekly. Since the Malian groups use of the oral record keeping system, voluntary savings deposits can only be in the multiples of the group’s weekly savings rate to keep the calculations for distributing group’s earnings simple. For example, if the group’s mandatory savings rate is OXF50, the voluntary savings deposit can be the multiples of 50 only.

Oxfam America undertook two rounds of surveys to learn about the progress of the program interventions in Mali—the first in October/November of 2005 and the next around the same time in 2006. The surveys collected a lot of quantitative as well as some qualitative data. Since the program was in its formative stage, it was important for Oxfam America to investigate the program’s performance for making it even better. This was where the interest of both Oxfam America and the researcher converged. Both had the same belief with regard to the need of a microfinance model and strategy for reaching the poorest on a large scale. The urgency for reaching the poorest is too great and the ability and the potential of most microfinance models currently in use are not as great to address the urgency.

There is a sign of hope. In only three years from its start in Mali and Cambodia, while this study was being implemented, SfC had already been expanded to three other countries: Senegal, Burkina Faso and El Salvador. The numbers have increased significantly to 161,765 clients and 8,335 groups in these five countries (Oxfam America,

**Mali**

Mali is one of the Western African countries in the Sahara. It is a republic surrounded by Guinea, Senegal, Mauritania, Algeria, Niger, Burkina Faso, and the Côte d'Ivoire. It went through different stages of struggle and forms of governance until its independence from the French colony in 1960 when the name the Republic of Mali was officially established. Different types of government including military and single party ruled in Mali until 1992. The country has been politically stable since the current constitution was adopted.

The Mali program of SfC was chosen for this study for a number of reasons. Mali was the country where the model was first introduced. It was being implemented there in its second year when the surveys were conducted. Cambodia was another country but since Mali was poorer than Cambodia it was logical to choose Mali, as the focus of the study was on reaching the poorest.

**Poverty in Mali**

The Human Development Index of the United Nations Development Programme (UNDP, 2006) ranked Mali 175th out of 177 countries. According to the World Bank’s (2005) estimates, 72% of the Malian population lived under US$1 a day (see Appendix A for the incidences of poverty in Mali on the Malian map) whereas the percentage for Cambodia was only 34. An overwhelming majority, 92.6% of Malians, is poor (World Bank, 2005, pp. 70-71). According to the World Bank’s estimate, even with Mali’s own
national standard, almost 76% of the rural Malian population falls under the poverty line. The SfC program participants are all rural women.

Figure 1 shows how Mali has remained very close to the most poorest country in the world in the comparative Human Development Index (HDI). It was the 165th out of 174 countries in the year 2000 and is ranked 173rd among 177 countries in 2007/2008. Its lowest was in 2006 when it became the 175th out of 177 countries.

**Figure 1: Mali's HDI Rank Compared with the Poorest Country**

Although there were a few fluctuations, Mali’s HDI value (Table 1) had increased very slowly in the past few decades. That increase, however, did not seem to be enough to improve its ranking in the index in comparison to the index of other countries. The comparisons infer that despite Mali’s slow progress in its HDI value over these 18 years, it has not been competitive with any but a few countries in the world. Otherwise, its ranking would have been better.
Table 1 also shows that the growth in Mali’s GDP per-capita has been very low. The GDP per-capita measured in the US Dollar (US$) at Purchasing Power Parity (PPP) was increased by less than US$4 a year on average from 1960 to 1980. Modest changes were witnessed since then, particularly after 2000. However, Mali has continued to fall behind in poverty in comparison to other countries in the world. In the Human Poverty Index (HPI), Mali was ahead of seven other developing countries both in 2000 and in 2002 (UNDP, 2000, p.151; UNDP 2002, p. 159). It dropped to the second poorest country in the world in 2007/08. Mali was ranked 107th out of 108 developing countries (UNDP, 2007, p. 240).

Table 1: Mali’s Gross Domestic Product (GDP) and HDI²

<table>
<thead>
<tr>
<th>Year</th>
<th>Mali GDP (US$)</th>
<th>Mali HDI Value</th>
<th>Mali HDI Rank</th>
<th>Lowest Country HDI Rank</th>
<th>Year</th>
<th>Lowest Country GDP (US$)</th>
<th>Lowest Country HDI Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>217</td>
<td>0.083</td>
<td>N/A</td>
<td>N/A</td>
<td>1990</td>
<td>540</td>
<td>0.143</td>
</tr>
<tr>
<td>1970</td>
<td>240</td>
<td>0.102</td>
<td>N/A</td>
<td>N/A</td>
<td>2000</td>
<td>681</td>
<td>0.380</td>
</tr>
<tr>
<td>1980</td>
<td>288</td>
<td>0.146</td>
<td>N/A</td>
<td>N/A</td>
<td>Current (2007/08)</td>
<td>1033</td>
<td>0.380</td>
</tr>
</tbody>
</table>

Note: N/A = information Not Available

Mali’s poverty is also contributed and affected by its geography and topography. It is a landlocked country. About two-thirds of its land area is covered by sandy deserts and rugged mountains. Only 3.5% of the remaining one-third of arable land is in use as seen in Table 2. The use of land is very important since lives of the Malians depend on agriculture in the absence of industrialization and commerce. The country’s primary sources of income are cotton, livestock and gold (Government of Mali, 2002, p. 32). These products are vulnerable to the climatic conditions and international markets. Mali

²The information used in this table was retrieved from the United Nations Development Programme’s Human Development Reports: Global Reports for each year from 1990 through 2008 (UNDP, 2008).
has experienced more economic difficulty in recent years due to the adverse climate conditions which have affected all three income sources (World Bank, 2008b).

**Table 2: Basic Facts about Mali**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Year</th>
<th>Mali</th>
<th>Africa</th>
<th>Developing Countries</th>
<th>Developed Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land use (% of total arable)</td>
<td>2005</td>
<td>3.5</td>
<td>6.0</td>
<td>9.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Adult illiteracy (total %)</td>
<td>2006</td>
<td>81.0</td>
<td>43.3</td>
<td>26.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Adult illiteracy (female %)</td>
<td>2006</td>
<td>88.1</td>
<td>52.4</td>
<td>34.2</td>
<td>1.6</td>
</tr>
<tr>
<td>Life expectancy at birth (years)</td>
<td>2006</td>
<td>49.0</td>
<td>51.4</td>
<td>64.1</td>
<td>76.0</td>
</tr>
<tr>
<td>Female Life expectancy at birth (years)</td>
<td>2006</td>
<td>49.6</td>
<td>52.2</td>
<td>65.9</td>
<td>79.7</td>
</tr>
<tr>
<td>Population growth rate (%)</td>
<td>2006</td>
<td>2.9</td>
<td>2.1</td>
<td>1.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Population (total millions)</td>
<td>2006</td>
<td>13.9</td>
<td>924.3</td>
<td>5253.5</td>
<td>1211.3</td>
</tr>
</tbody>
</table>

Source: Adapted from African Development Fund, 2007, p. ix

**SfC Program Areas**

An overwhelming majority, 80%, of the poor Malians are concentrated in four of the eight regions of Mali—Koulikoro, Sikasso, Segao and Mopti (Government of Mali,

**Figure 2: SfC Program Locations in Mali**

Source: Savings for Change (Ashe, 2006, p. 2).
2002, p. 17). Koulikoro and Sikasso also have higher rate of morbidity and mortality compared to other regions of Mali (p. 52). SfC started its program in Koulikoro in April 2005 and expanded to Sikasso in 2006. Out of seven cercles of Koulikoro, only three were selected for the program in 2005—Banamba, Kolokani and Kati. The first expansion was concentrated in Sikasso’s Bougouni cercle which has 27 communes. Both Koulikoro and Sikasso regions are in the southwest part of Mali as can be seen in Figure 2.

With the poverty incidence of 59.5% as measured in the Malian standard, Koulikoro is one of the least poor regions in Mali (Government of Mali, 2002, p. 14). Less than a half of the villages in Koulikoro have literacy centers and far fewer of them have primary schools. The result is a low level of education of the population. The adult literacy rate is less than one-tenth and only 36.7% have a formal education. Like any other poor part of a developing country, Koulikoro also lags way behind in basic infrastructure such as schools, health centers and roads. One of the assets of Koulikoro is Kati’s famous cattle markets.

Figure 3: Local Government Structure in Mali
Table 3: Comparison of Selected Household Characteristics in Percentage

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Mali</th>
<th>Koulikoro</th>
<th>Sikasso</th>
<th>Bamako</th>
<th>Mopti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car/Truck</td>
<td>5.1</td>
<td>3</td>
<td>2.3</td>
<td>21.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Motorcycle/Scooter</td>
<td>34.5</td>
<td>27</td>
<td>48.8</td>
<td>53.7</td>
<td>31.4</td>
</tr>
<tr>
<td>Bicycle</td>
<td>45</td>
<td>64</td>
<td>82.4</td>
<td>26.2</td>
<td>49</td>
</tr>
<tr>
<td>Mobile Telephone</td>
<td>17.5</td>
<td>10.9</td>
<td>7.7</td>
<td>66.7</td>
<td>5.9</td>
</tr>
<tr>
<td>Telephone</td>
<td>5</td>
<td>2.8</td>
<td>1.7</td>
<td>23.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Electricity</td>
<td>17.7</td>
<td>7.8</td>
<td>11</td>
<td>74.1</td>
<td>7.8</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>5.1</td>
<td>2.1</td>
<td>1.4</td>
<td>27.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Television</td>
<td>25.1</td>
<td>24.1</td>
<td>24.3</td>
<td>72.5</td>
<td>12</td>
</tr>
<tr>
<td>Radio</td>
<td>73.5</td>
<td>79.9</td>
<td>79.3</td>
<td>86.9</td>
<td>67.9</td>
</tr>
</tbody>
</table>

Source: Measure DHS (2008)

According to the Malian standard, 65.8% of the population in Sikasso is poor which is higher than the Malian national average at 63.8% (Government of Mali, 2002, p. 14). It has a higher infant mortality rate than most of the other regions of Mali. Almost one third of the economically active population is under-employed (p. 15).

The Demographic Health Surveys of 2006 (Measure DHS, 2008) provides more insight to the conditions of Koulikoro and Sikasso regions as well as the rest of the regions in Mali. Table 3, Figure 4, Figure 5 and Figure 6 exhibit how the program regions fared when compared with Mali, Bamako and Mopti on selected socio-economic characteristics. The comparisons with Mali show where the regions fall in terms of the national average. Bamako and Mopti were chosen to see the contrast since they are respectively the least and most poor regions, according to the Poverty Reduction Strategy Paper of the Government of Mali (2002, p. 13). Bamako had the lowest and Mopti had the highest extent of poverty among all the regions of Mali.

Most of the household characteristics in Table 3 demonstrate that both Koulikoro and Sikasso were slightly below the national average. They were slightly better off than Mopti. Bamako appeared to be far ahead in all comparisons except for bicycles. It was ironic that the possession of bicycles seemed to be an indication of poverty rather than wealth, since all other regions had many more households with bicycles. In terms of the
other means of transportation, the number of households that had motorcycles or scooters in Sikasso was closer to the number of Bamako which had the highest percentage of households with two wheeled autos, 53.7%.

The radio is a popular electronic item in Mali. Over two-thirds of the Malian households across the board own a radio. Another electronic media item, television, is not so common to the Malian population. Only about a quarter or less households have a television. Bamako is the exception to that though. Nearly three quarters of the households in Bamako possess a television. The lack of access to electricity could be assumed as the reason for fewer households owning the television in the rest of the Malian regions and people had no choice but to opt to the radio for new and entertainment. However, electricity does not seem to be constraint to owning a television. The percentage of the households that own a television is nearly a double of the percentage of the households that have access to electricity. Bamako is again the only exception where the percentage of the households that have access to electricity is higher to the percentage of household that own a television.

Regarding the means of communication, less than ten percentage of the households in Koulikoro and Sikasso have cell phones. Nonetheless, the percentage of the households with a wireless phone is about three times as high than the households that have a regular landline phone. As shown in Table 3, the ratio of mobile and regular phone ownership in Koulikoro and Sikasso is comparable to the ratio of other regions and Mali.
Illiteracy is widespread in Mali. Female illiteracy is even higher. As demonstrated in Figure 4, both the Koulikoro and Sikasso regions have higher female illiteracy rates than the general female population of Mali. Perhaps these high female illiteracy rates explain why SfC had to introduce an oral record keeping system since the program’s members were exclusively women.

In addition to illiteracy, the lack of basic infrastructure and services as shown in Figure 5 is also a challenge in both Koulikoro and Sikasso. About ten percent of the households in both Koulikoro and Sikasso are farther than five kilometers (KMs) from school. Although the percentage is lower than the national average, it is still a large number. In the context where there is virtually no public transportation and the private means of transportation is almost none-existent, five kilometers is a long way for young children to walk to school.
Access to health and market facilities is worse than the access to school. Since both Koulikoro and Sikasso have the highest morbidity rates compared to other regions of Mali (Government of Mali, 2002, p. 52), the distance to healthcare facilities is a serious concern. Similarly, access to market can inform about the degree of economic activities in the area. The farther away the market, the less viable the place could be for economic activities. Since the distance to markets is over five kilometers away for about 40% of the households in the SfC programs regions, it could be assumed that the extent of economic engagement of the women of Koulikoro and Sikasso is limited.

The Demographic and Health Surveys (Measure DHS, 2008) also constructed a wealth index. The household items listed in Table 4 were some of the composites of the index (ORC Macro, 2006, p. 3). According to ORG Macro, access to safe drinking water, availability of toilet facilities, type of fuel used for cooking, land possession, number and kinds of livestock, use of a bank account by any of the household members, etc. were examples of some other properties included in the index.
Figure 6 shows that over two-thirds of the households in both Koulikoro and Sikasso are at the middle or below the middle category in the poverty index. The concentration of the poor and poorest in these two regions was higher than the average number of the poor and poorest in Mali. Mali has only 39% poor or poorest households whereas as defined by DHS the percentage is 50 for both Koulikoro and Sikasso (Measure DHS, 2008). In both regions, the number of households incrementally went up as the level of wealth went down.

Figure 6: Percentage of Households on Wealth Index

Source: Measure DHS (2008)

Chapter one has forwarded short profiles of the regions of Mali where the SfC program was started in the first year and were expanded to in the second year. Some basic information about Mali was also presented in the Chapter. A brief introduction of the SfC program also provided some context to this study. The remaining chapters are built around this basic information and introduction.
CHAPTER II

POVERTY, MICROFINANCE, AND OUTREACH

In light of the purpose of this study, this chapter discusses microfinance in the context of reaching the poorest. It looks at some relevant past studies and work done by experts as well as practitioners in the field of microfinance. The chapter is divided into three sections. Who Are the Poor? followed by Microfinance and Its Delivery Systems and Outreach Challenges for MFIs The third section, Outreach Challenges for MFIs, highlights some issues faced by microfinance in reaching the poorest. The section has two subsections—Challenges in Reaching the Poorest and Meeting the Challenge for Reaching the Poorest.

Who Are the Poor?

“At its simplest poverty refers to a basic lack of means of survival; the poor are those who, even in normal circumstances, are unable to feed and clothe properly and risk death as a consequence” (MacPherson & Silburn, 1998, p.1). This definition of poverty and poor provides the context to the plight of the people who live in absolute poverty. The extent of poverty varies even among the absolute poor. Some of them are in worse poverty conditions than the others (Foster, Greer & Thorbecke, 1984). The poor are not a homogeneous group of people (Matin & Hulme, 2003).

Finding a universal definition of poverty is not easy since it is multi faceted and manifests in a number of forms. However, many countries and experts have defined poverty with regard to two of its aspects: household economy and human development. According to the United Nations Development Programme (UNDP, 2000, p. 20), the first is related to income and expenditure at the household or family level and the second
refers to the basic human development capabilities. UNDP (2007, p. 355) uses three dimensions of human development for creating the human poverty index. They are: a long and healthy life, knowledge, and a decent standard of living. Literacy is the measure of knowledge that has been used for constructing the human poverty index for developing countries like Mali (see UNDP, 2007 for the indicators for other dimensions).

Another popular measure used for defining poverty is based on the per capita expenditure for meeting a minimum standard of nutrition and other basic necessities (World Bank, 1990, p. 26). Using the data of 1985 from some developing countries, the World Bank (1990, p. 28) created an index and defined the poor in a low-income developing country like Mali, whose per capita consumption was less than US$370. That definition effectively drew an absolute line to define the poor as those who live on below US$1 per day, at the 1985 purchasing power parity (PPP) rate. Recently though, US$2 has been used as the poverty-line (Helms, 2006, p. 1) which originally referred to the poverty line only for the middle-income developing countries such as those in Latin America and the Caribbean (Chen & Ravallion, 2007).

Mali falls towards the bottom in the poverty index based on both of these two methods of poverty measurement,—

human development and per-capita income and expenditure. Mali is the 3\textsuperscript{rd} poorest country in the human

\textbf{Figure 7: Levels of Poverty}

\begin{center}
\begin{tikzpicture}
\draw[very thick, ->] (0,0) -- (0,2) node [midway, fill=white] {Destitute poor} node [midway, fill=white] {Chronic poor} node [midway, fill=white] {Moderate poor} node [midway, fill=white] {Vulnerable\textsuperscript{3} Non-poor} node [midway, fill=white] {Non-poor} node [midway, fill=white] {Wealthy};
\draw[very thick, ->] (0,0) -- (2,0) node [midway, fill=white] {Poverty line (US$2/day)};
\end{tikzpicture}
\end{center}

Source: Adapted from Cohen & Burjorjee, 2003, p. 1.
development index (UNDP, 2006) and 72.3% Malians live below USD$1 per day (World Bank, 2005). Since 18.6% more Malians fall under US$2, over 90% of the Malians are at moderate or lower level of poverty (Matin & Hulme, 2003, p. 651; Snodgrass & Sebstad, 2002) as also demonstrated in Figure 7. The chance of reaching the poor by a microfinance program in Mali is almost nine in ten. Therefore, the discussions about reaching the poor in Mali needs to be focused on the levels of poverty among the poor rather than those who are above or below absolute poverty separated by the per-capita expenditure of US$2 because that discussion gives a better understanding of the depth of poverty in Mali’s context (Ledgerwood, 1999, p. 28).

Weiss and Montgomery (2005, p. 395) categorized the levels of the poor based on the depth of poverty conditions. Figure 8 was constructed to illustrate their classification of the poverty levels amongst the poor. Those vulnerable non-poor\(^3\) who happened to cross the poverty line due to shocks are the transitory poor and will be poor temporarily until their situation improves. Also known as the extreme poor, the chronic poor are divided into the destitute and non-destitute poor. The non-destitute poor lack only opportunities and resources. Just opportunities and resources are not enough for the destitute which includes both the core and non-core poor. Since they have been oppressed socially, culturally and structurally for a long time, it is not easy for

\(^3\) Vulnerability refers to the uncertainty to meet needs on a regular and assured basis. It might be the result of short-term and idiosyncratic risks or shocks. When the vulnerable people get exposed to the risks and shocks, they do not have the resources to manage on their own at that point of time (Kabeer, 2005, p. 7710).
them to get on their feet themselves. The destitute also need other assistance such as welfare or handouts. Based on how far down they are from the poverty line, the bottom half of the destitute make up the core poor. They are also identified as ultra poor (Halder & Mosley, 2004). The core or ultra poor have no asset base such as livestock, land. They inherit poverty. Other characteristics of such poverty may include the lack of a fixed source of income, loss of the main earner of the family, ill health conditions, and a woman headed household, particularly in rural parts of developing countries like Mali.

**Microfinance and Its Delivery Systems**

Microfinance refers to systems of providing financial as well as other services (Elahi & Rahman, 2006, p. 477) to the poor. Delivered by microfinance institutions (MFIs), savings and credit are the basic products and services offered to microfinance clients. Some MFIs provide additional financial services such as remittance and micro-insurance. Others also integrate social services such as literacy and advocacy into their delivery.

Different forms of financial services have been in existence throughout human history (Helms, 2006, p. 3). Until 1990, microfinance was known as microcredit because it primarily provided poverty lending to the poor (Robinson, 2001, p. 7). By adding more to its products and services, such as savings, micro-insurance and remittance and delivering those to many segments of the poor, microfinance became more inclusive (Littlefield, Helms & Porteous, 2006, p. 1). Because of the addition of multiple financial products and services and emergence of various delivery mechanisms, Rhyne (2001, p. 6) labels microfinance as the "financial system" for the low income population. Of all
aspects of financial services provided by evolving microfinance to meet the needs of the poor, Wright (2000, p.7) emphasizes quality and flexibility.

During the course of its evolution (see Helms, 2006, pp. 2-5, for details), microfinance developed different systems to meet the needs of the poor in different parts of the world. The needs were different partly because of the varied causes of poverty. Adjustments to address the different needs resulted in the emergence of diverse microfinance delivery systems. A microfinance delivery system is characterized by its approach, methodology and model as summarized in Figure 9. There are two major approaches, credit-led and savings-led (Paxton & Fruman, 1997, p. 1). The distinction between the two approaches is based on the service provider’s primary product, savings or credit. If the primary product of a microfinance institution (MFI) is loans, it uses the credit-led approach and provides loans to clients from its own fund or the money received from external sources. In the savings-led approach, the MFI collects savings from its members and mobilizes those savings by lending primarily to its members for meeting

**Figure 9: Examples of Microfinance Approaches and Methodologies**

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Methodologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit-led</td>
<td>Grameen Bank (External banker disburses loans to the individual client and collects repayments from them.)</td>
</tr>
<tr>
<td></td>
<td>Village Bank (External loans are managed by groups—known as the village banks.)</td>
</tr>
<tr>
<td>Savings-Led</td>
<td>Self-Help Group (The group collects savings and lends to the members based on the need.)</td>
</tr>
<tr>
<td></td>
<td>Revolving Savings &amp; Credit Association (Members save and take turns to take loans.)</td>
</tr>
</tbody>
</table>

their financial needs. There could be many members in a savings-led MFI who just save and never take any loans. On the other hand, all clients of all credit-led MFIs are expected to take loans.

Both approaches have different methodologies. They are distinguished based on their difference in managing how their product and services are delivered. The grameen bank and village bank methodologies, though both credit-led, provide their products and services to the clients differently. In the village bank methodology, all loans are managed by a group of clients, known as the village bank (Holt, 1994). Grameen Bank, which pioneered the grameen methodology, handles all transactions through its own staff (Thas & Getubig, 1993). Groups in the grameen methodology neither get to handle their group’s money nor do bookkeeping.

The self-help group methodology (Harper, 2002) is very different from both village bank and grameen bank methodologies. The difference is partly due to the approaches since the self-help group uses the savings-led approach. In the self-help group methodology, the group is an autonomous financial entity. The group receives only technical assistance from outside usually from a local non-governmental organization. Below are the minimum components of the technical assistance package (Murray & Rosenberg, 2006, pp. 8-9):

- Building social capital: Training on group formation, building social foundation, group consolidation, and leadership development are the initial components of technical assistance.

- Building financial capital: As the group becomes stronger and leadership starts emerging, the group also starts building its own fund primarily from members’
savings. Establishing rules for savings and managing the fund is the second phase of the technical assistance.

- Financial intermediation: The third component of the technical assistance includes mobilization of the group fund to make loans to its members to address their needs.

In some instances the package also includes two other types of assistance. One of them relates to connecting self-help groups with external finance such as development banks in India. The other encourages the groups to create a federation of self-help groups to promote intergroup lending and technical support to each other. Some self-help groups may employ all of these components. Varied uses of these additional components create different models of microfinance within the self-help methodologies.

“Microfinance ‘models’ usually refer to the products and services provided as well as the method in which they are provided” (Cornford, 2001, p. 6). For example, the grameen methodology has been adapted to many countries and contexts as different models. Although the core methodology or “the essential grameens” such as the focus on poor, financial services and institutional self-sufficiency remain the same (Gibbons, 1999, para 6), each grameen model defines who the poor are; what kind of financial services to offer and how to attain the institutional self-sufficiency based on its local conditions. The grameen models of Nepal and Bangladesh are different. Similarly, the self-help group methodology also has many models. Nepal’s WEP (Ashe & Parrot, 2002), Niger’s Mata Masu Dubara (Grant & Allen, 2002) and the Savings Fund of Mexico (Zapata, 2002) are some examples. Most of the self-help group models in India also access outside capital—from a formal or informal MFI or a commercial bank.
(Bansal, 2003) after they establish their financial system of lending and collecting repayments with interest. Oxfam America’s Saving for Change is a new addition to the models of the self-help group methodology.

Until recently, the potential of the self-help group methodology to reach the poorest had not been fully realized (Harper, 2002, p. 179). Today, it has become the developing world’s largest and fastest-growing (Siebel, 2005) microfinance methodology. Ashe (2002) attributes the surge of the self-help group methodology to its simple, inexpensive, empowering, and flexible methodology which made it easy to adapt into different contexts. In the self-help methodology, Ashe elaborates, each group of about 10-30 members sets its own savings rate. The group decides the interest rate, and loan size, frequency, terms and conditions. Since the members themselves own and manage all savings and loans, even the poor and rural women can understand what is happening to their money. Most importantly, according to Ashe (p. 128) the self-help group is an asset-based methodology which helps the poor people build up their “equity” with savings compared to a credit-led deficit methodology. Huq (2004) opines that the credit-led methodology pushes the poor in debt since everyone is required to take a loan.

Savings for Change is one of the models of the self-help methodology. It was developed to serve the “villagers [who] are too distant and too poor to be reached [by the traditional MFIs] profitably” (Ashe, 2006, p. 1). The challenge faced by the microfinance community is also reaching the same group of people, particularly the women. To empower and serve the rural women of developing countries effectively, the SfC model is designed to work even with the illiterate members. The group members may keep verbal records of financial transactions.
According to Oxfam America (2008), SfC is an alternative microfinance model, which self-replicates in a large scale and at a low cost, serving those who have been left behind or not reached by other models of microfinance. It intends to create a large number of groups rapidly all over the poorest regions of the world. The features such as money staying with the group, no administrative cost to the group, easy to replicate, simplified transaction and oral record keeping have great potential to reach poor women who normally do not get the opportunity to participate in a microfinance program. MFIs that use the SfC model could be successful in reaching the poorest who have been left out by other MFIs.

**Outreach Challenges for MFIs**

In the context of microfinance, outreach has been defined as “…the social value of the output of a microfinance organization” (Navajas et al, 2000, p. 336). Schreiner (2002, p.592) refers to the social values as “the social benefits of microfinance for the poor client.” In order to explain the benefits, all of them (Navajas et al, 2000 & Schreiner, 2002) use six aspects of the outreach—depth, worth to the users, cost to the users, breadth, length, and scope. Not all of these six aspects could be relevant to understanding outreach of all approaches, methodologies and models of microfinance. Conning (1999), for instance, suggests using only the depth and breadth for measuring outreach. With regard to the SfC model only three aspects are relevant. They are depth, worth to the user and scope.⁴

---

⁴ The other three, cost to the user, breadth and length, are more important for impact studies particularly for the methodologies under the credit-led approach since they tend to emphasize more on financial self-sufficiency and transaction costs. The cost to the user is how much the client pays for price costs and transaction costs (Schreiner, 2002). Transaction costs include all indirect costs to the client such as time, papers, opportunity
Schreiner (2000) defines depth as the society given value to the benefit received by a microfinance program participant. Society normally gives a higher value to the benefit when it favors the poorer than richer. Fernando (2003) refers depth to poverty in the context of microfinance since an MFI’s outreach is measured based on how far down in poverty it reaches. Outreach is positively appreciated by society when microfinance helps those people who are not reached by other financial systems.

Worth to the user is also related to the value given to the benefits of a microfinance program. The assessor of the worth of the benefit is not the society but the program participant herself (Schreiner, 2002, p. 592). Worth of a loan to one who really needs it would be much higher than to the other who does not need it. For example, as suggested by Schreiner, if a Malian woman needs only a $50 loan to buy a goat but the MFI’s minimum loan provision is $100, she has to accept the minimum loan even though she may have no productive use for the additional $50. In that case the worth of the extra $50 to the woman can be assumed to be minimal.

Because of the autonomy enjoyed by the SfC groups for customization of their product and services to meet the needs of its members, the worth of their benefits could be expected to be high. As an advantage of the self-help methodology, the autonomy gives a lot of flexibility to the members to make decisions about any loan or savings as they see fit based on the need of the borrower or saver. With such flexibility in deciding on a case by case basis, the groups should be able to optimize the user’s worth in the SfC model.

costs, etc., whereas the price costs always involve direct money such as interest on loans and different kinds of fees. How many clients are reached by an MFI is another way of saying breadth of outreach. Length of outreach refers to the time period for how long the clients have been served.
Measurement of worth is challenging since worth of a product or service could vary widely among microfinance clients. Many factors affect worth of a microfinance product or service. Schreiner (2002, p. 592) suggests that the amount, terms, repayment schedule, interest rate and purpose are some factors that influence worth of a loan to a borrower. Similarly, the compulsory deposit size and frequency, voluntary deposit provisions, interest or dividend rate and withdrawal conditions are examples of factors that contribute to variations in worth of savings services to a saver. Although return on investment of a loan is widely used as a proxy to determine worth of the loan to the borrower, Schreiner argues that return does not fully capture the net worth. To him, return from investment is “only a lower bound on worth.” The loan might have affected the borrower’s wellbeing in many other ways. In reference to this study, the proxy used for measuring worth to the user was what benefit did the member use and to what extent. The woman did not have to take the loan in order to be a member. She had to save every week, but the amount was determined by the members, that included herself, too. When a member utilized a benefit such as a loan, it was assumed that the extent of the use was the worth for her with regard to the benefit. Since the member had the choice of taking the loan or not, she much have taken that because she saw some worth in it.

Scope of outreach generally refers to the types of the products and services such as savings and loans, which are the benefits that the clients of a microfinance program receive. Schreiner (2002, p. 596) broadened the definition of scope by taking various factors into consideration. Loans, for instance, are a benefit but the factors such as loan terms and amounts could make each loan effectively and uniquely different. Each of such different loans contributes to the making of a variety of loan benefits offered by a
MFI. Many MFIs offer loans strictly for productive purposes only. The SfC model, although it emphasizes loans for income generating activities, leaves the decision of the purpose of the loans up to the group. When the groups decide to give out loans to meet the various needs of the borrowers, the scope of outreach also gets expanded.

Outreach to provide financial services to the people is done by different types of financial institutions. Based on their type, financial institutions tend to reach certain segments of the population. Generally, the bigger the operations of a financial institution the more it tends to focus on the people at the higher level on the wealth index. The size of the operations could also determine whether the institution caters to the needs of the people in the urban centers or the rural and remote areas.

Figure 10, created to visually illustrate the parallel between the financial service providers and the clients, summarizes the placement of the people on the wealth scale and from which type of institutions they are most likely to be served for meeting their financial needs. The people at the top on the wealth scale or non-poor are likely to receive their financial services from sophisticated financial institutions such as commercial banks. Microfinance institutions

<table>
<thead>
<tr>
<th>Financial Service Provider</th>
<th>Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial banks</td>
<td>Non-poor</td>
</tr>
<tr>
<td>Formal MFIs</td>
<td>Vulnerable non-poor</td>
</tr>
<tr>
<td>Semi-formal MFIs</td>
<td>Moderate poor</td>
</tr>
<tr>
<td>Informal MFIs</td>
<td>Poorest of the poor</td>
</tr>
</tbody>
</table>
(MFIs) serve the remaining people along the poverty levels. Better off clients are reached by more sophisticated MFIs.

There are three types of MFIs—formal, semi-formal and informal. The formal MFIs include all development banks and other financial institutions which are special-licensed and funded by the public’s money such as deposits, investor’s capital and commercial borrowings (World Bank, 2004, p. 3). In some instances, the formal MFI refers to an Alternative Financial Institution (AFI). Specially licensed MFIs, low-capital rural local banks, credit unions and financial cooperatives, state development and agriculture banks, and postal and non-postal saving banks are all examples of AFIs (Christen, Rosenberg & Jayadeva, 2004). Formal MFIs primarily serve vulnerable non-poor.

Semi-formal MFIs are similar to the formal MFIs since both are established with the objective of reaching a “double bottom line.”5 The only difference in the semiformal MFIs’ mission is to serve below the average among the poor (Christen, Rosenberg & Jayadeva, 2004, p. 11) or the poorest of the poor6 (Harris, 2002, p. 2). The informal MFIs’ mission is also to serve the poorest. The difference between the semiformal and informal MFIs lies in their structure, breadth and scope. Informal MFIs, as opposed to semiformal, are more decentralized and local. Their individual outreach is smaller. Financial products and services of the informal MFIs are limited to savings and credit products only. Due to these characteristics, informal MFIs have a lot of variations

5 The double bottom line means that these financial institutions not only have financial but also developmental objectives (See Christen, Rosenberg & Jayadeva, 2004, for details).

6 “The Microcredit Summit Campaign defines ‘poorest’ as the bottom half of those living below their nation’s poverty line” (Harris, 2002, p. 2).
making them suitable to local realities. The variations include saving and credit groups, self-help groups, self regulated non-governmental organization (NGO) run economic groups, and rotation of savings and credit organizations (World Bank, 2004, p. 3). SfC groups fall into this informal category.

Efforts of all three types of MFIs have made some strides in reaching a large number of the poorest people. Only 7.6 million poorest families had received some form of microfinance services by 1997 (Harris, 2006, p. 2). The number increased to over 81 million families by the end of 2005. However, the number of poorest yet to be reached is far greater than those already reached.

**Challenges in Reaching the Poorest**

The Microcredit Summit Campaign (2006, para 2) has set the goal of reaching 175 million poorest families by 2015. Some like Fernando (2004) see that as an ambitious goal. There is no doubt that reaching the poorest who are yet to be reached is going to be more challenging because they are more likely to be the "hardcore poor" (Matin & Hulme, 2003). Even should that ambitious goal of the Campaign be achieved, 100 million poorest families could still be left without any financial services past 2015 since the World Bank (2008a, p. 11) estimates that there are 1.4 billion poorest people in the world. That is 500 million poorest people who are less likely to be reached by any

---

7 The Microfinance Campaign Summit uses the family size of five persons for all of its estimates (Harris, 2007, p. 2).

8 This revised estimate increased the number of the poorest from the previous estimate in 2005. Chen and Ravallion (2008) provide the theoretical justification for the revision in light of the new data that became available recently, including from the International Comparison Program of 2005. With this revision, the new threshold for international comparison of extreme poverty is set at US$1.25 at the 2005 PPP which was US$1 until 2000 based on the 1985 USD PPP.
other financial systems besides microfinance should they need any financial services. Most of these poorest people live in developing countries where only about 20% of the population is served by banks and commercial financial institutions (Greuning, Gallardo & Randhawa, 1998, p. 1). That means, over 3.7 billion out of the 81% or 5.3 billion of the world’s population (Population Reference Bureau, 2006, p. 6) is left for MFIs to reach.

One could argue that it is not necessary for microfinance to reach all of the poorest. The causes of their poverty might not be financial and MFIs might not be able to address their non-financial needs. Why be concerned whether MFIs reach the poorest if they are not able to help with what the poorest really need anyway? The argument could sound persuasive especially in the context where MFIs are struggling to reach the poorest despite their objectives to reach them.

Yes, it is true that poverty is complex and microfinance might not be able to address all of the causes of poverty. The causes could be very broad, especially since “[p]overty is pronounced deprivation in well-being” (World Bank, 2001, p. 15). Deprivation could be caused by many things but UNDP (1997, p. 16) defines it from three perspectives: income, basic needs and capability. No single intervention, microfinance or something else, might be able to tackle all kinds of deprivation that cause poverty. However, microfinance can respond well to the core of their causes. An MFI might not be able to guarantee a steady source of income for the poorest, but it could, at least, temporarily supplement their income at lean times through its savings or credit provisions. Microfinance does not directly treat any illness of a sick poorest person, but it could provide access to financial resources necessary for seeking treatment. Not all
microfinance programs offer literacy training to enhance a woman’s capabilities but their product and services such as savings and credit might enable her to attend literacy classes. Financial services to the poorest provided by an MFI might not solve all of their problems but could reduce the negative impact of poverty or provide some relief. Therefore, it is important for microfinance to exert its efforts to reach as many of the poorest as possible.

Figure 11 shows a stark reality that the majority of the poorest households have not been reached by microfinance. After reviewing some reports and studies from several countries, Helms (2006, pp. 18-21) also reaffirmed Cohen and Burjorjee’s (2003) illustration (Figure 11) of the microfinance outreach. Microfinance serves the poor and the non-poor in the periphery of the poverty-line. Even the leading MFIs in countries where microfinance has been most successful, Bangladesh, Bolivia, the Philippines and Uganda, have reached only a negligible number of the poorest (Helms, 2006, p. 21). The challenge faced by microfinance in reaching the poorest is enormous. Without some serious modifications in how microfinance is done, all the poorest will not be reached any time soon. Institutional capacity, financial self-
sufficiency and reducing costs for services are some important areas to be considered for modification.

**Institutional Capacity**

The formal and semiformal MFIs have the intention to reach the poorest but they themselves do not have the capacity to grow that fast or they lack the appropriate methodology to reduce the number of poorest significantly by the end of 2015. Some observe that the main bottleneck of expanding the outreach of microfinance is the lack of institutional capacity of MFIs (Goodwin-Goren, 2005). The best case scenario in the world is from Bangladesh where MFIs have reached most of the poor families, 75% (Yunus, 2003, p. 2). The 52 formal and semi-formal Bangladeshi MFIs (The Mix, 2007) that reached them are the most successful MFIs and some have even become financially self-sufficient. Yet, it took over three decades to reach three quarters of the poor families in this pioneering and MFI saturated country. Should the same trend continue, it will take many more years for the MFIs to reach all of the poor families in Bangladesh even though it has the highest concentration of most successful MFIs. It is more difficult to reach the remaining poor since their poverty condition is usually worse than that of those already reached. Formal and semi-formal MFIs alone do not have the institutional capacity to provide for all of the poor because they are also expected to achieve financial self-sufficiency.

**Financial Self-Sufficiency Rhetoric**

Without being financially self-sufficient, MFIs will not be able to remain in business for long to serve the poor. This belief, another reason why the mainstream MFIs are unable to reach the poorest, is prevalent at all levels of the microfinance industry—
international development banks to small and local MFIs (Rahman, 2004, pp 37-38; Huq, 2004). The notion is that the MFIs need to become self-sufficient in order to be able to serve the poorest after development funding or grants dry up. Therefore, many mainstream (formal and semi-formal) MFIs have been vigorously striving to become financially self-sustainable. The Grameen Bank of Bangladesh, for example, is very proud that it has stopped receiving donor’s assistance since 1998 (Yunus, 2006, para 7-8) and has been generating enough revenue not only to cover its costs but also has been running in profit since then. The importance of being self-sufficient cannot be understated. However, it comes with a price. MFIs end up leaving the poorest behind and become a profitable business for themselves (Rahman, 2004). In the case of Bangladesh, about 12 million poorest people are still waiting to be reached by MFIs (World Bank, 2005; Yunus, 2003, p. 2). Those poorest may never see a brighter future if no one else is willing to take up the costs because the poorest themselves will never be able to pay for the costs of receiving services form MFIs.

**Costs**

Costs are the main reason why commercial banks do not reach the poorest. A vast majority of the poorest live in rural, dispersed and remote areas. Because of the risks and costs involved in reaching them, many commercial banks, even when required by law to invest in those communities, prefer to pay a penalty than to reach out to the poorest (Isern and Porteous, 2005, p. 2). Like commercial banks, the mainstream MFIs have also failed to reach the poorest primarily because of operational costs. In order to recover costs, MFIs need to reach a lot of clients; increase loan portfolios; maintain high repayment
rates and charge high interest on loans (Rahman, 2004, p.28). None of these can be practically achieved by serving the poorest particularly in remote and rural areas.

Although some argue that money is not a constraint for microfinance (Littlefield, 2006), the Director of Grameen Trust of Bangladesh, H. I. Latifee (2006, p. 10) opines, without more donor funding to cover the additional operating costs, the outreach to serve the poorest in remote and rural areas will be limited. More handouts will be needed specially to the mainstream MFIs because of their high operational costs (Ashe 2002, 129) due to their highly centralized and structured systems. Typical costs for serving a self-help group member falls anywhere between $5 to $30, depending on the country and the cost of other integrated programs. The cost for a mainstream MFI client could reach up to $300 especially in the early stages of implementation.

The higher operational costs are also a reason why traditional MFIs concentrate in the urban, semi-urban or densely populated clusters because the demand is higher there, particularly for credit (Fernando, 2004, p. 2, Allen 2007). People who live in remote and rural areas tend to be the poorest and they are less profitable clients for both formal and semiformal MFIs (Gonzalez & Rosenberg, 2006). That is one of the reasons why there are strong concentrations of MFIs in most densely populated countries such as Bangladesh, India and Indonesia. Even within a country, for example in Nepal, MFIs are concentrated in the Terai, the southern plains belt, and around urban centers of the mid-hills because of access to urban markets and higher density of clients. Obviously, where there are more people, more opportunities for economic activities exist. When there are more opportunities, demand for loans is also higher. Since the loan is the main product
that most mainstream MFIs sell to their clients, it makes perfect sense for them to concentrate in areas where there is high demand.

**Meeting the Challenge for Reaching the Poorest**

Challenges faced by MFIs to reach the poorest with their existing systems (Rutherford, 2004, p. 263) have been widely recognized. Some MFIs have also made efforts to work around those challenges. The Bangladesh Rural Advancement Committee (BRAC), a world’s leading MFI, created a supplementary model to reach the hardcore poor, which provided livelihood protection such as food aid and livelihood promotion like skills-training (Matin & Hulme, 2003). The poorest clients were brought into the fold of BRAC’s mainstream microfinance systems, only after they went through the Income Generation for Vulnerable Group Development (IGVGD) program. They were too poor to be part of the mainstream (formal or semi-formal) MFI’s clients initially.

To reach the poorest, many models of microfinance like IGVGD have emerged over the course of time to deal with challenges, such as those related to institutional incapacity, financial self-sufficiency and costs. Some models of the self-help methodology have drawn attention primarily because of the breadth of their outreach. They have reached a large number of clients in a short period of time in various countries in all three continents—Asia, Africa and South America. India’s self-help group movement is much bigger than the most famous Grameen Bank of Bangladesh (Wilson, 2002, p. 217). Nepal’s Women’s Empowerment Program (WEP) reached over a hundred thousand women within a year of operation (Ashe & Parrot, 2002, p. 138). The Savings Fund of Mexico served 350,000 (Zapata, 2002, p. 164). CARE’s Mata Masu Dubara is
one of the self-help models that provided financial intermediation to about 200,000 women of Niger (Grant & Allen, 2002, p. 190).

Innovations and the emergence of such models help in realizing the potential of microfinance to reduce the effects of the complex and multifaceted problem of poverty (Littlefield, Mordoch & Hashemi, 2003, p. 9). However, microfinance should pay close attention to the deficits it is currently facing while developing such a model. Many ideas and proposals for improvement have been discussed with the microfinance communities. Nagarajan and Meyers (2005, p. 17) suggest four considerations for reaching the poorest. One of the suggestions is that the models should also work for the poor with irregular and infrequent cashflow. Many existing models require the participants to contribute weekly savings or loan installment payments. That might not work for the women whose income does not meet that timeframe. Provisions of voluntary savings have become a popular strategy to deal with irregular and infrequent incomes. The concept behind the provision is to enable the participants to save voluntarily when they have income and withdraw the money to make their weekly payments as needed.

Another suggested consideration is transaction costs. The costs to serve a sparse population should be comparable to the costs to serve the urban clients (Nagarajan & Meyers, 2005, p. 17). This is very important specially for those MFIs whose primary product is credit. Their transaction costs tend to be much higher as mentioned in the Costs subsection above. Introducing new products and technologies that work for a highly segmented and small market niche is another suggestion by Nagarajan and Meyers. The lack of such products and technologies is another reason why MFIs are heavily concentrated in densely populated areas and urban centers. Finally, savings also
needs to be a primary service, not just loans. Hashemi (1997) found that many of the poorest did not participate in a microfinance program in Bangladesh because they would have to take loans. The women were afraid that they would not be able to repay the loans. Loan aversion is also a major factor as to why many women opted out of a microfinance program (Webb, Coates & Houser, 2002, p. 30, 43). Studies have found that the repayment rate of the poorest is lower despite their higher willingness to repay loans (Aubert, Janvry & Sadoulet, 2004, p. 2). They were not ready for loans.

Or, they are ready for loans but not for large loans which might make them default. The poorest generally need very small loans which are also referred as nano-loans (Rutherford, 2004, p. 264). Besides their irregular and unreliable incomes, the need for nano-loans makes the poorest very unattractive clients to MFIs even though they desperately need financial services. Similarly, the lack of appropriate loan products might have also contributed to their reluctance to participate in microfinance programs as suggested by Hashemi (1997). Some experts (Meyer & Nagarajan, 2006, p. 186) have argued for diverse financial products and technologies for reaching the poorest. A wide range of products and services would be important for reaching the poorest particularly since most of the poorest fall into the same economic threshold, their needs for financial services can be uniquely different, as suggested by Matin and Hulme (2003, p. 647). They argue that poverty is a common characteristic of the poorest but they are not a homogeneous group.

In addition to diverse savings and loan products, microfinance targeting to reach the poorest also needs to offer other services. Webb, Coates and Houser (2002, pp. 42-43) suggest adding interventions to address concerns regarding loan aversion, limited
understanding of program benefits, a less supportive husband and low self-confidence. They identified these issues as the reasons why the ultra poor benefited less from a BRAC program. In other words, financial products and services alone would not be enough to reach all the poorest. They also need other services.

Most of the focus of reaching the poorest still remains on the depth aspect of outreach. How the poorest continue to be marginalized while participating in a microfinance program also needs a closer look because that can easily send a turn off signal to the other poorest who are on the fence of joining microfinance. An impact study of thirteen microfinance institutions found that their services had benefitted the relatively better off more than the poorest (World Bank, 2000, p. 75). Other studies also suggested that relatively poorer participants benefit less even within the same program, especially around their credit engagements (Sulaiman et al., 2006). Even among the ultra poor households, those which scored less on the determinants of microcredit participation matrix had to wait longer for loans; had higher percentage of loan rejection; and felt discouraged to apply for a loan because of the low prospect of getting one (pp. 7-8). In other words, a microfinance program participant’s comparative economic condition also plays a role in determining what level of benefits she gets.

The challenges discussed in this chapter present an opportunity to microfinance experts and practitioners. As there are many types of poor, their needs are also different. Microfinance programs alone would not be able to meet all of those needs. Some fundamental changes in policy and structure are required in order to address the needs of most of the poor, if not all. However, each microfinance model’s contribution could make some difference at least in the lives of the people they reached. Most of the MFIs
have been successful in reaching the upper tier of the poor. SfC focuses on the bottom tier. The next three chapters will explore whether or not the SfC model has started making any contributions in reaching the poorest by microfinance.
CHAPTER III

DESIGN OF STUDY

This chapter explains how the study was designed and carried out. The Research Questions and Design section below cover the steps undertaken in detail. All research questions—overarching, main and specific are explained in the section in detail. The section also describes the methodology used in collecting data to answer the research questions. Scope and Limitation of the Study is the subsection that refers to cautions that needed to be observed in interpreting the findings of this study. Before getting to the research questions and designs, the Background section below defines the key concepts used in the chapter.

Background

Based on the discussions and issues raised concerning microfinance in reaching the bottom half of the poor in the Poverty, Microfinance, And Outreach chapter, the study was focused on exploring how SfC, a microfinance program that uses the self-help methodology, performed. The primary issue to be explored was reaching the poorest.

It is important to note that SfC, like most of the microfinance programs, is a group based model. In a group based model, women screen the members of the group themselves. SfC does not have a set of criteria as to who can participate in the program. The only requirements are the women’s willingness to save and to abide by the group’s decisions.

When the members of the program are selected by the groups, ensuring that the poorest are reached can be challenging. The Reaching the Poorest section below
explains the meaning of reaching the poorest in the context of this study. The set of indicators used to explore SfC’s outreach in the context of rural Mali is discussed in the section on Economic Indicators.

**Reaching the Poorest**

Reaching the poorest could be defined in many ways. By drawing from Navajas et. al (2000) and Schreiner’s (2001) work, this study used three aspects of microfinance outreach to explore whether SfC reached the better offs among the poor in Mali. The three aspects of outreach were: depth, worth to the user and scope as shown in Table 4.

In this study, depth referred to enrollment of women in the SfC program. Were the women enrolled because they were better off than the other poor women? How were their economic levels compared to the other women who had not participated in the program? The study explored differences between the SfC and other women in the program areas based on some key socio-economic indicators. The expectation was that SfC had not enrolled only or mostly the better offs among the poor women.

<table>
<thead>
<tr>
<th>Step</th>
<th>Aspect of outreach</th>
<th>Exploratory question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Depth</td>
<td>Who were enrolled in the program?</td>
</tr>
<tr>
<td>2</td>
<td>Worth to the user</td>
<td>Was the program worth participating to the women?</td>
</tr>
<tr>
<td>3</td>
<td>Scope</td>
<td>Did the program offer a variety of benefits to accommodate the needs of all participants including the poorest?</td>
</tr>
</tbody>
</table>

As mentioned under Saving for Change in the Introduction chapter, enrollment in SfC was done only through its groups. Each group screened its own members. In other words, the group used a self-selection method for screening members. Regardless of the method used, the likelihood of enrolling the poorest of the poor would be very high in any region of Mali since Mali is the 3rd poorest country in the world (UNDP, 2006). It was easy to assume that almost all of the SfC participants should also be poorest because
they were the rural women from Sikasso and Koulikoro regions. However, the chance of forming a group of the women at the upper end on the poverty line could also not be completely ignored, especially after learning that was what had happened in many instances as discussed in the previous chapters. Even in a poor village, there could be women of different economic status and the possibility of SfC groups recruiting the better offs among the poor was always there. Therefore, it was important to explore whether SfC also followed the same trend by enrolling the better offs among the poorest women in the program areas.

Enrollment was just the first step of exploring whether or not SfC had only reached the better offs among the poor. The next step used in the study was to analyze if the SfC women benefitted from the program. Was there any worth to the women’s participation in SfC? Did the women benefit from their participation in SfC? Were the program benefits offered by SfC utilized by the participants? If there was no benefit to the participants or if they did not utilize the benefits, their enrollment in the program would be meaningless. The ultimate goal of microfinance is to reduce poverty. If the poorest did not benefit from the program, it would not matter whether SfC groups had enrolled the better offs among the poor or the women of any other economic status. The assumption was that the program provided some financial services to its members, particularly to the poorest, and that the women utilized those services.

Even if the women benefited from the products and services provided by SfC, the benefits could have skewed towards the women with higher economic status. As discussed under Meeting the Challenge for Reaching the Poorest of Chapter 2 and found by Colman (2006) in his study of microfinance programs in Thailand where the wealthier
participants utilized the benefits from the program disproportionately, it was important to explore whether SfC groups’ products and services and their terms and conditions favored to the better off women. The product and services with the terms and conditions made up the program benefit or scope of SfC’s outreach. Were they inclusive to the needs of the bottom half of the women in the program? That was the third and last step of exploring SfC’s outreach.

Although each group established its own rules, the chance of high-profile members, those with higher socio-economic status, influencing the decision about the rules to their advantage was always there. As a result, the relatively poorer women could have been deprived from utilizing as many benefits as others because of their lower economic standing in the society.

Economic Indicators

For exploring the difference based on the level of poverty, a set of indicators had to be identified. Since people could be poor due to many reasons, the indicators had to be carefully selected. They needed to fit the context of rural Mali and the target group of the program, women. The indicators had to include characteristics such as lack of capability or functionality (Sen, 1987) as well as economic factors such as household assets because any combination of these could be helpful in informing the economic conditions of the women.

Considering these contexts and the availability of data, a set of indicators was adapted and expanded from the work of Zeller, Sharma, Henry and Lapenu (2002) for assessing the level of poverty of the surveyed women. The indicators were: household assets, children in school ratio, food sufficiency, schooling, and literacy. The first
three—assets, children in school ratio, and food sufficiency were the household proxies used to determine the participant’s level of poverty. The remaining two, schooling and literacy, were the woman’s own individual poverty determinants.

**Household Assets**

Using household assets is a common method of determining the economic status of a household. When the status needs to be compared with other households for assessing their level of economic condition, addressing the two questions is important. The questions are: what to include in the assets; and how to compare them?

Based on the local realities, conditions of the survey participants and availability of data in this study, assets refer to ownership of livestock and a combination of consumer durables and household items as listed in Table 5. A similar set of indicators was also used by Measure DHS (2007) for its Demographic and Health Surveys in Mali.

Measure DHS collects nationally representative information of most of the developing countries including in the category of wealth/socioeconomics, for creating an index of wealth. Indexing all these different kinds of household assets to a single unit of measurement is a good way for comparing the difference between households within the same culture or context. Filmer and Pritchett (1998) also used the assets index for robust results. Their assets index also included consumer durables such as bicycles, car and refrigerator, among others.

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Household items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Plow</td>
</tr>
<tr>
<td>Goat</td>
<td>Cart</td>
</tr>
<tr>
<td>Sheep</td>
<td>Bed</td>
</tr>
<tr>
<td></td>
<td>Chair</td>
</tr>
<tr>
<td></td>
<td>Bicycle</td>
</tr>
<tr>
<td></td>
<td>Television</td>
</tr>
<tr>
<td></td>
<td>Motorcycle</td>
</tr>
</tbody>
</table>

**Table 5: Household Assets**
An index of the household assets was created by adding up the values of the items listed in Table 5. The values used for analysis were average face values in the surveyed villages in 2006, the survey year, as estimated by the SfC staff working in those villages.

**Children in School Ratio**

Many factors influence children’s school attendance. The economic condition of the family is one of the most important factors because it is very closely associated with children’s education (Shapiro & Tambashe, 2001; Filner & Pritchett, 1999). In order to get an education, the school-age children must be in school. However, it is also the reality that the poorer the family is, the less likely the children will be in school (Orbeta, 2005 p. 14). Therefore, the ratio of how many of the total school going age children in the household, 6-12 year old, are in is a good proxy for measuring relative poverty of households. The ratio is called as the *children in school ratio* in the rest of the document.

However, since there was no baseline data available, a question could be raised for using the *children in school ratio* in this study. Could there have been any effect of the program interventions that influenced the school attendance of the 6-12 year old children in the SfC women’s household? No answer could be given to this particular question with certainty in the absence of baseline data. Because the program was still in its infancy at the time when the survey was conducted, it was assumed that the program intervention was less likely to have an effect on schooling of children in that early stage.

**Food Sufficiency**

Food sufficiency has been used interchangeably with food security, which is defined as “…access by all people at all times to enough food for an active, healthy life” (World Bank, 1986, p. 1). Unarguably food security is a major determinant of poverty,
particularly in the context of Mali where most of the people do not have enough to eat year round. According to the International Federation of Red Cross and Red Crescent Societies (2005, p. 2), 20% of the Mali’s population could have experienced lack of food or famine. Food security is also an indicator for measuring one of the United Nations’ Millennium Development Goals—eradicating extreme poverty and hunger. Updating its Master Plan, the Government of Mali (2002, p. 66) ranked food security as the top most challenge while prioritizing its national challenges for intervention to ensure sustainable rural development.

Food security can be examined in many ways. Indicators such as rainfall and agricultural production are often used to measure food security nationally or regionally. Staatz, Agostino and Sundberg’s (1990) study in southern Mali found that the indicators used to measure food security at the national and regional levels were not good predictors of food security at the household level. Self reporting by the participants as to how many months they had enough food for the previous year, as used in this study, should be more reliable to measure food security at the household level.

Food sufficiency of the SfC women could have been influenced by the program interventions either negatively or positively. The negative influence could be as a result, for instance, of sending more children to school. Children’s school attendance not only adds to the household expenses but also could lower the income by reducing the children’s labor for including the process of food production. Improved economic conditions as the result of the program interventions could be an example of the positive effect. Considering that the negative effects would keep the positives in check, neither one was factored in the analysis of food sufficiency.
**Household Earners’ Ratio**

Family size and composition are very important in determining the level of poverty of a household. White and Massets (2003) present evidence on how a poverty index created ignoring the family composition and size would be misleading. This study used the family size in a combination with the number of adult earners in the household. The number of earners was divided by the total household membership in order to get the ratio of the household earners which is used as *household earners’ ratio* in the rest of the document.

**Literacy and Schooling**

Schooling for the poor is a privilege. A comparison of women’s number of years of schooling is a valid proxy for determining the level of their household economy. Most of the poorest, especially the adults, never attend school and remain illiterate. "…poverty and illiteracy are commonly treated as synonymous terms" (Maddox. 2001, p. 137). The reason is that poverty exists wherever illiteracy prevails. Poverty is not just a problem in itself but a major cause of illiteracy or vice versa. Therefore, literacy is a factor that informs us about the women’s economic status.

These indicators were slightly revised during the course of implementation of the original plan because of the availability of data. The study had planned to use the secondary data collected by Oxfam America through its two extensive surveys carried out in 2005 and 2006. Research questions and the study design were formulated anticipating data based on the instruments for the surveys, which were designed in English by the people at Oxfam America Headquarters in the United States (US). Perhaps due to complexities involved around their implementation, the instruments were translated into
French and administered by a local contractor in Mali. The data were translated into English from French and entered in SPSS, a Statistical Package for Social Sciences, by another contractor in Mali, and forwarded to Oxfam America’s office in the US. At various stages of data management, transformation and analysis different from the expected data based on the original questionnaires in English were noticed. It appeared that the French versions of the questionnaires used for collecting data, were slightly modified from the English versions. The final research questions of this study also were adjusted based on the changed data sets.

**Research Questions and Design**

This section discusses all of the questions used in the study and the process used to answer those questions in detail. Some other information relevant to the implementation of the study such as Participants and Data Collection, Transformation and Analysis are also discussed in this section.

The purpose of the study was the foundation of the study—exploring whether or not SfC had reached only the better offs of the poor as done by many other microfinance programs. Using the aspects of outreach as the framework within the context defined by the exploratory questions for SfC in Table 4 (page 45) the three overarching questions were determined: Were the women reached by SfC better-offs among the poor? Did the SfC women utilize the program benefits? and Did the utilization of the program benefits vary based on the women’s economic levels? The last two questions examined SfC’s outreach internally using data pertaining exclusively to the SfC participants. The first question compared the SfC women with the other women who were not part of the SfC program as shown in Table 6 (page 54).
In order to be able to answer the three overarching questions, they had to be broken down to the level at which statistical tests could be performed. First, the main questions were constructed for each overarching question based on the types of groups, economic indicators discussed above and the broad categories of products and services that a microfinance program offers to its clients. In the study, savings, loans and microenterprise were the categories mostly used. Each main question branched out to more than two specific questions. The specific questions were formulated based on dependent variables. Each specific question was designed to statistically test one dependant variable such as the weekly savings rate or number of loans. Table 7, Table 9 and Table 10 list all three overarching questions and their respective main and specific questions.

**External Comparisons: Comparison of SfC and Non-SfC Women**

“Reaching the poorest,” the theme of the study automatically requires comparisons. The term, “poorest,” refers to its comparative relationships between two or more within the same unit such as one individual to another or other individuals or one household to another or other households. By using the data collected by Oxfam America, the external comparisons were conducted to explore how the SfC women fared with the women who were not program participants. To make the comparisons valid, the surveyed women were divided into different groups as demonstrated in Table 6.
Table 6: Characteristics of the Groups Used for External Comparisons

<table>
<thead>
<tr>
<th>Groups</th>
<th>By whom</th>
<th>For what</th>
<th>When</th>
<th>Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Cohort</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original SfC</td>
<td>SfC Program</td>
<td>Implementing the SfC program</td>
<td>2005</td>
<td>Kati, Koulikoro and Badamaba</td>
</tr>
<tr>
<td>Original Spontaneous</td>
<td>Participants</td>
<td>Self-replication of the SfC model</td>
<td>2005</td>
<td>Cercles of Koulikora Region where SfC program started in Phase I</td>
</tr>
<tr>
<td>Original Control</td>
<td>Survey</td>
<td>Comparisons only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Cohort</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New SfC</td>
<td>SfC Program</td>
<td>Implementing the SfC program</td>
<td>2006</td>
<td>Sikasso</td>
</tr>
<tr>
<td>New Spontaneous</td>
<td>Participants</td>
<td>Self-replication of the SfC model</td>
<td>2006</td>
<td>Region to where the SfC program expanded in Phase II</td>
</tr>
<tr>
<td>New Control</td>
<td>Survey</td>
<td>Comparisons only</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Only the groups within the same cohort were compared. The New SfC groups were compared only with their corresponding Spontaneous and Control groups, and the Original SfC groups compared only with their corresponding Spontaneous and Control groups. There were two rationales for designing to compare the sets of Original and New groups separately. Program locations were the first reason. Since the groups were located in two different geographical areas they could potentially have some socio-economic, geographical and other influence over different groups. In the absence of such data related to such factors that needed to be controlled, comparisons of the groups from distinctly different areas could raise a validity question. The length of time that the groups had been in the program was the other factor. The Original groups were at least one year old at the time of the survey whereas the New groups were only up to seven months into the program.
Table 7: First Set of Comparisons: Overarching, Main and Specific Questions

Overarching Question:

1. Were the women reached by SfC poorer than the other women?

Main and Specific Questions:

1.1 Did Saving for Change, Control and Spontaneous groups differ on schooling?
   1.1.1. Was there a difference between the three Original groups on schooling?
   1.1.2. Was there a difference between the three New groups on schooling?

1.2 Did Saving for Change, Control and Spontaneous groups differ on the children in school ratio?
   1.2.1. Was there a difference between the three Original groups on the children in school ratio?
   1.2.2. Was there a difference between the three New groups on the children in school ratio?

1.3 Did Saving for Change, Control and Spontaneous groups differ on food sufficiency?
   1.3.2. Was there a difference between the three Original groups on food sufficiency?
   1.3.3. Was there a difference between the three New groups on food sufficiency?

1.4 Did Saving for Change, Control and Spontaneous groups differ on household assets?
   1.4.2. Was there a difference between the three Original groups on household assets?
   1.4.3. Was there a difference between the three New groups on household assets?

The external comparisons were conducted between the SfC groups and the Spontaneous and Control groups, shown in Table 6. Table 12 (page 62) shows the design used for the comparisons. The SfC groups were the treatment groups in each cohort, Original or New. They were compared with both Spontaneous and Control groups to answer each specific question shown in Table 7. Since the Spontaneous groups were inspired by the SfC program they were semi control groups even though SfC did not provide any direct assistance to them. The Control groups were made up by the women who were not part of the SfC program, directly or indirectly.

Table 7 also demonstrates how the main and specific questions were framed. Each main question was based on one economic indicator discussed above in this chapter. The specific question under the main question explored the difference between the groups within each cohort.
Internal Comparisons: Program Benefits and Their Utilization

In addition to the external comparisons which were set to answer the first overarching question, the internal comparisons were important to be able to respond whether or not SfC reached the poorest of the poor. Unlike the external comparisons that contrasted the treatment groups from the control groups, the internal comparisons were conducted only among the SfC participants. The comparisons analyzed the program benefits and their utilization by the SfC members in two steps which explored two different aspects of outreach—worth to the SfC participants and scope or benefits of the SfC program. Table 8 shows these two comparisons more in detail.

Table 8: Internal Comparisons: Program Benefits and Their Utilization by SfC Women

<table>
<thead>
<tr>
<th>Criterion</th>
<th>First (worth to the participants)</th>
<th>Second (scope or benefits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme Purpose</td>
<td>Utilization of benefits over time</td>
<td>Effect of economic factors on utilized benefits</td>
</tr>
<tr>
<td></td>
<td>See whether the SfC participants increased the utilization of the program benefits in 2006 from 2005</td>
<td>See whether the SfC participants benefitted differently based on their economic levels</td>
</tr>
<tr>
<td>Participant</td>
<td>Only the women who were surveyed twice, both in 2005 and 2006</td>
<td>All participants who joined the program in 2005 and were surveyed in 2006 without any screening</td>
</tr>
<tr>
<td>Data source</td>
<td>2005 and 2006 surveys</td>
<td>2006 survey</td>
</tr>
</tbody>
</table>

Utilization of Program Benefits Over Time

The identification of differences between the Control and SfC groups helped understand who Oxfam America had reached but the exploration to whether the women had indeed benefited from the program was even more important. Reaching the poorest cannot be complete in a meaningful way unless the reached women benefitted from the program. In order to find out whether the women had indeed benefitted, the study explored their savings, loans and microenterprise startup activities.
Table 9: Second Set of Comparisons: Overarching, Main and Specific Questions

Overarching Question:

2. Did the SfC women utilize the program benefits?

Main and Specific Questions:

2.1 Did the participants increase their savings from 2005 to 2006?
   2.1.1. Did the weekly savings rate increase from 2005 to 2006?
   2.1.2. Did the highest voluntary savings deposit increase from 2005 to 2006?
   2.1.3. Did the participants improve on late savings payment from 2005 to 2006?

2.2 Did the participants’ loan activities increase from 2005 to 2006?
   2.2.1. Did the number of group loans increase from 2005 to 2006?
   2.2.2. Did the group loan size increase from 2005 to 2006?
   2.2.3. Did the group loan term increase from 2005 to 2006?
   2.2.4. Did the number of months to repay loans increase from 2005 to 2006?
   2.2.5. Did the monthly loan installment increase from 2005 to 2006?

2.3 Did the business startup increase from 2005 to 2006?

2.4 Did the participants improve on some non-financial indicators from 2005 to 2006?
   2.4.1. Did the participants’ food security improve from 2005 to 2006?
   2.4.2. Did the participants’ children in school ratio improve from 2005 to 2006?
   2.4.3. Did the participants’ own schooling improve from 2005 to 2006?

By using the data collected in October/November of both 2005 and 2006, statistical tests were performed to see if there were any changes in the participants’ major financial engagements over time. The tests were designed to answer the second overarching question as well as its main and specific questions shown in Table 9. The main questions were formulated based primarily on program benefits. The three major categories program benefits—savings, loans and microenterprise. However, the three categories needed to be broken down further to ten measurable variables for analyzing the data which are listed under the corresponding main question. In addition to program benefits a few economic indicators were also tested to see if the women had improved their conditions. The participants’ schooling and their household’s food safety and
children in school ratio were the economic indicators used to analyze their progress over time.

**Effect of Economic Factors on Benefits**

To bring the exploration full circle for fulfilling the purpose of the study, whether the poorest of the poor were at a disadvantage because of their poverty conditions, the utilization of the program benefits was also analyzed based on the women’s economic levels. As mentioned before, the better-off among the poor tend to benefit more from microfinance programs.

The third overarching question and its corresponding main and specific questions in Table 10 explored the distribution of the program benefits across poverty indicators and utilization of the program benefits. Participants’ literacy and their household assets, food sufficiency, children in school ratio and household earners’ ratio were the indicators used in this study. Although the women could have received many benefits from their participation in the SfC program, for the purpose of this study only four main benefits were identified—the number of microenterprise startups, savings group loans and loan use. The categories were further broken down to ten measurable variables for analyzing the data as can be seen in Table 13.

All of the participants whose data were analyzed to explore the influence of economic factors on their utilization of program benefits were with the program since 2005. Some of them were in New SfC groups at the time of the survey in 2006. The reason for their inclusion in the analysis was that they had been part of the program even though they changed their group association. Other New SfC members were not part of this analysis.
Table 10: Third Set of Comparisons: Overarching, Main and Specific Questions

Overarching Question:

3. Did the utilization of the program benefits vary based on the women’s economic levels?

Main and Specific Questions:

3.1 Did the participants’ saving vary based on their economic levels?

3.1.1. Did the economic indicators have any effect on the weekly savings rate?
3.1.2. Did the economic indicators have any effect on voluntary savings?

3.2 Did the participants’ loan activities vary based of their economic levels?

3.2.1. Did the economic indicators have any effect on how many loans they got?
3.2.2. Did the economic indicators have any effect on the loan size?
3.2.3. Did the economic indicators have any effect on for how long they kept the loan?
3.2.4. Did the economic indicators have any effect on the monthly repayment amount?
3.2.5. Did the monthly loan installment increase from 2005 to 2006?

3.3 Did the participants’ microenterprise activities vary based on their economic levels?

3.3.1. Did the economic indicators have any effect on the business startup?
3.3.2. Did the economic indicators have any effect on the use of loan money for consumption?
3.3.3. Did the economic indicators have any effect on the use of loan money for emergency?
3.3.4. Did the economic indicators have any effect on the use of loan money for production?

The next chapter answers all of these overarching, main and specific questions. Chapter Five also discusses the issues raised by the overarching questions based on the answers to the specific and main questions. The remainder of this chapter, however, provides context to the data and explains the design as to how the test results were carried out.

Participants

All participants of the study were women. Oxfam America used a random sampling method for collecting data from the women belonging to all three types of groups—SfC, Spontaneous and Control. First, all SfC program villages were divided into two categories—New and Original villages. The Original consisted of those villages where the program started in 2005. In the New villages, the program was rolled out in
The new villages were then divided into four sub-categories based on the size of the village and the distance to the nearest market using the following criteria:

- Relatively isolated small to medium villages
- Relatively isolated medium to large villages
- Relatively small to medium villages that are closer to market
- Relatively medium to large villages that are closer to market

**Table 11: Survey Samples**

<table>
<thead>
<tr>
<th></th>
<th>Saving for Change (SfC) Group</th>
<th>Spontaneous Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SfC05 New SfC Original SfC</td>
<td>New Original New Original</td>
<td>New Original</td>
</tr>
<tr>
<td>Village</td>
<td>25 4 25 4</td>
<td>4</td>
<td>25 4</td>
</tr>
<tr>
<td>Groups</td>
<td>25 4</td>
<td>25 4</td>
<td>N/A N/A</td>
</tr>
<tr>
<td>Participants</td>
<td>249 80</td>
<td>329 64</td>
<td>166 80</td>
</tr>
</tbody>
</table>

Note: N/A = Not applicable

Four villages were selected, one from each category. One SfC and one Spontaneous Group was randomly chosen from each of the four villages. All women who were members of those chosen groups were automatically included in the sample. The same criteria were also applied to select the villages for the Control Group. One village was chosen from each of the four categories. However, since the Control Group was created just for the purpose of the study, before choosing the Group, the women had to be identified. Twenty households were randomly selected from each of the four villages to match up the number of SfC group sample. The women within the same age bracket of the SfC program participants were then identified for the survey who ultimately became part of the Control Group. The breakdown of the number of villages, women and samples for each group is shown in Table 11.
There are three SfC groups. The 2005 groups were surveyed in 2005. They were surveyed again in 2006. These are labeled as the Original SfC groups in this study. The New SfC groups started in 2006 and the first time they were surveyed was in 2006.

Data Collection, Transformation and Analysis

The study used the secondary data because duplicating efforts for the sake of collecting primary data was deemed not only unnecessary, it could also do a disservice to the program participants who would have to provide the same information again within less than a year. The Data were collected at two different times, in October and November of 2005 and around the same time in 2006. Three different mixed survey questionnaires (see Appendix B) were used to collect the data. Using The Banking on the Poor Individual Survey questionnaire, 249 participants were interviewed in 2005. A similar but more comprehensive questionnaire was used in 2006 to collect data from the SfC group women. The instrument used for surveying the Spontaneous and Control group women was slightly different. No data was collected in 2005 for the Control or Spontaneous group. All three instruments were designed by using mixed methods with concurrent nested strategy (Creswel, 2003, p.218). Primarily quantitative and some qualitative data were collected by administering those survey questionnaires. A Malian research firm collected the data and entered the information into SPSS.

Collected for Oxfam America’s own purposes, the data were very extensive. Only some of the data were utilized for this study. Most of the data used were already coded and organized. Some data had to be transformed to be able to perform the tests to answer the research questions of this study. Creating a household wealth index, for instance, was necessary to determine the household assets of each woman. A household
assets index was created by adding all the values in the assets category for each woman. Oxfam America had analyzed some of the data from the 2005 survey by using a monetary value for each livestock or household item. The same value was also applied to transform all assets related variables to a single monetary unit in 2006 to create the index for this study.

To compare economic status of the SfC women with the women belonging to Spontaneous and Control groups, One-way ANOVA tests were performed separately for each cohort (see Table 6 on page 54) of the SfC groups and their corresponding Spontaneous and Control groups using the 2006 data set. The Original SfC groups were compared with the Original Spontaneous and Control groups and New SfC groups were compared with the New Spontaneous and Control groups based on the poverty indicators shown in Table 12.

Table 12: Design for Comparing SfC Women's Poverty Levels with Other Women

<table>
<thead>
<tr>
<th>Poverty Characteristics</th>
<th>SfC Group</th>
<th>Spontaneous Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household</td>
<td>Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Children in school ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food sufficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant's</td>
<td>Schooling (No. of years)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The procedure used for contrasting between groups was Fisher’s Least Significant Difference (Fisher LSD) when the degrees of freedom were 2 in the omnibus tests (Meier, 2006). Because of the violation of homogeneity of variance and unequal sample sizes, the Welch (1951) procedure had to be used. The contrast tests were performed to examine the difference between levels of poverty based on each independent variable. All tests were 2-tailed and were compared to 0.05 alpha level unless specified otherwise.
Out of 329 SfC participants surveyed, only 249 were selected for internal comparisons which analyzed their utilization of program benefits, and the effect of economic factors on the utilization of the benefits. As stated before, one of the criteria of their selection was that they had to be in the program at least for one year but no more than one and a half years. All selected participants were surveyed twice, around November of 2005 as well as 2006. The reasons for selecting the participants were: homogeneity, simplicity, accuracy and validity. Mixing participants who had been in the program for less than a year would make the analysis invalid.

Paired samples t-tests were conducted to explore utilization of the program benefits by the women. The pairs were made of the data collected in two different years, 2005 and 2006, for the same variable such as the weekly savings rate. In order to make the paired tests valid, only those cases of 2006 were included in the analysis which had also been surveyed in 2005. Correlations were also tested among the variables to see if there were any meaningful patterns prior to performing the t-tests. Eleven different variables were tested to explore whether the SfC women had made any progress over time, from 2005 to 2006. The variables were: food sufficiency, new business startup, the average monthly repayment installment, the average months to repay loans, the number of group loans, the group loans size, the highest voluntary savings, the late savings payment, weekly savings, children in school ratio and the women’s schooling.
Table 13: Design for Exploring Utilization of Program Benefits by Economic Indicators

<table>
<thead>
<tr>
<th>Program Benefits</th>
<th>Economic Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Participant’s Literacy</td>
</tr>
<tr>
<td></td>
<td>Household assets</td>
</tr>
<tr>
<td></td>
<td>Household earners’ ratio</td>
</tr>
<tr>
<td></td>
<td>Food sufficiency</td>
</tr>
<tr>
<td></td>
<td>Children in school ratio</td>
</tr>
<tr>
<td>Savings</td>
<td></td>
</tr>
<tr>
<td>Total Weekly Savings (Group &amp; Tontine)</td>
<td></td>
</tr>
<tr>
<td>Late Savings Payment</td>
<td></td>
</tr>
<tr>
<td>Highest voluntary savings</td>
<td></td>
</tr>
<tr>
<td>Group Loans</td>
<td></td>
</tr>
<tr>
<td>Group loan size</td>
<td></td>
</tr>
<tr>
<td>Number of group loans</td>
<td></td>
</tr>
<tr>
<td>Average months to repay loans</td>
<td></td>
</tr>
<tr>
<td>Monthly average repayment amount</td>
<td></td>
</tr>
<tr>
<td>Use of Group Loans</td>
<td></td>
</tr>
<tr>
<td>Use of loans for emergency</td>
<td></td>
</tr>
<tr>
<td>Use of loans for consumption</td>
<td></td>
</tr>
<tr>
<td>Productive use of loans</td>
<td></td>
</tr>
<tr>
<td>Micro Enterprise</td>
<td></td>
</tr>
<tr>
<td>Started a new business</td>
<td></td>
</tr>
</tbody>
</table>

The benefits were divided into four different categories to quantitatively test the influence of the economic factors on the SfC women’s utilization of program benefits. They were savings, group loans, use of the loans and microenterprise. Within savings, the weekly savings rate included the member’s savings with the group as well as with her tontine. Since weekly savings was mandatory, the group kept record of a member’s failure to save at the group meeting when it was due and deposited. The voluntary savings was a one-time deposit. Only the highest deposit was used for performing the tests. Loan related variables included the number of loans, average loan size, average repayment size and the average number of months to pay the loans.
The use of loans was categorized into three—productive, emergency and consumption. Productive use included investing in agriculture, vegetable gardening, purchasing animals, petty trading, prepared food, and food processing. Spending related to health and food for family was assigned under emergency. The remaining expenses such as for clothing for family members, school, celebrations, funerals, weddings, household items, house improvements, payment for other debts, giving money to husband or other relatives, came under consumption.

Table 13 shows the design used for the analysis. Two different sets of bivariate correlation tests were performed to see if they were significantly correlated within their set of variables. One of the sets was of the independent variables and the other consisted of the dependent variables. The economic indicators were the independent variables for this analysis where the dependent variables were the program benefits as can be seen in Table 13.

Omnibus tests were conducted to see if there were any effects of the economic factors on the utilization of the program benefits. Contrast tests were also performed to see the differences at different levels. Fisher’s LSD procedure was used for most of the contrast tests but the Shaffer or Modified Shaffer’s (1986) sequential procedure was used to control the family-wise error rate when the degrees of freedom were more than two. The procedure was applied particularly for comparing the SfC participants’ utilization of program benefits based on the levels of poverty.

**Scope and Limitation of the Study**

Efforts were made to make the proposed study valid in numerous ways including using a big sample size and recent and systematically collected data. Nonetheless, like
any other study, this also has some limitations which provide some opportunities for further investigation.

The study uses only the secondary data which were collected to fulfill many uses including the one investigated in this study—exploring to what extent the program reached the poorest. The study uses the data selectively, reporting only the responses which are relevant to the purpose of the study.

Conclusions and recommendations are made based on the findings of this study which were focused on one particular model of the self-help group methodology used in one country. The findings could be very useful for the similar contexts but may need further research or study in other contexts for their enrichment. Conclusions are drawn based in the context of Mali and may not always be fully applicable in other contexts.

At the time of the survey, Saving for Change had been in operation for less than two years. It is entirely possible that similar studies carried out in the future might produce very different results. The program could get more refined and improved with time.

Unlike many typical microfinance programs, Saving for Change also had other inherent social components. In Mali, the program was implemented in partnership with Freedom from Hunger. Freedom from Hunger, however, supported only the health education intervention of SfC. Malaria education and food security were two other components enjoyed by the Saving for Change participants as program benefits. One has to be careful in comparing the results of the Saving for Change program with a typical microfinance that does not provide any social interventions. However, from the program’s cost and human resources point of view, the comparison should be valid
because the educational interventions were also delivered by the same staff that trained
groups on financial matters. If Saving for Change can deliver more than just the financial
services at a competitive cost, the benefits of the program will, indeed, be appreciated.

Independence of the data was another limitation particularly around weekly
savings rate. Since the group decided how much each member would save weekly, the
member’s savings was greatly influenced by the group they were in and the group’s
decisions. This kind of limitations exist in many studies particularly in the field of
education when a group of people in a setting, school, class or geographical area are the
participants of the study.
CHAPTER IV
RESULTS

This chapter presents the results of the tests performed to answer all main questions mentioned in the Design Of Study chapter. The chapter begins with an introduction which gives an overview of what kind of tests were performed and how the chapter is structured to explain the test results in a sequential manner.

Introduction

Numerous statistical tests were performed using SPSS V.15 to answer all research questions—overarching, main and specific. Broadly, the tests could be divided into four sets, one-way ANOVA, contrast tests, bivariate correlation, and paired samples t-tests. Which one of these was used for which analysis has been explained under each of the following sections. The bivariate tests were run to check if there was any statistically significant correlation between alike variables only for internal comparisons which explored utilization of the program benefits. The one-way ANOVA and contrast tests were used for two comparisons shown in Table 14 and Table 15. The tables also show the dependent and independent variables with their levels used for the omnibus and contrast tests.

<table>
<thead>
<tr>
<th>Table 14: Variables for Comparing SfC Women with Non-SfC Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variable and Levels</td>
</tr>
<tr>
<td>Group type</td>
</tr>
<tr>
<td>✓ SfC</td>
</tr>
<tr>
<td>✓ Spontaneous</td>
</tr>
<tr>
<td>✓ Control</td>
</tr>
<tr>
<td>✓ Schooling</td>
</tr>
<tr>
<td>✓ Children in school ratio</td>
</tr>
<tr>
<td>✓ Food sufficiency</td>
</tr>
<tr>
<td>✓ Household assets</td>
</tr>
</tbody>
</table>
### Table 15: Variables for Exploring Effect of Economic Factors on Program Benefits

<table>
<thead>
<tr>
<th>Independent Variables and Levels</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literacy Class</td>
<td>✓ Total Weekly Savings</td>
</tr>
<tr>
<td></td>
<td>✓ Late Savings Payment</td>
</tr>
<tr>
<td></td>
<td>✓ Highest Voluntary Saving</td>
</tr>
<tr>
<td></td>
<td>✓ Average Group Loan Size</td>
</tr>
<tr>
<td></td>
<td>✓ Number of Loans Taken</td>
</tr>
<tr>
<td></td>
<td>✓ Average Months to repay Loans</td>
</tr>
<tr>
<td></td>
<td>✓ Average Monthly Repayment Amount</td>
</tr>
<tr>
<td>Children in School Ratio</td>
<td>✓ Use of Loans for Emergency</td>
</tr>
<tr>
<td></td>
<td>✓ Use of Loans for Consumption</td>
</tr>
<tr>
<td></td>
<td>✓ Use of Loans for Production</td>
</tr>
<tr>
<td></td>
<td>✓ Started New Business</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>First half percentile</td>
<td></td>
</tr>
<tr>
<td>Second half percentile</td>
<td></td>
</tr>
<tr>
<td>Household Earners’ Ratio:</td>
<td></td>
</tr>
<tr>
<td>First quartile</td>
<td></td>
</tr>
<tr>
<td>Second quartile</td>
<td></td>
</tr>
<tr>
<td>Third quartile</td>
<td></td>
</tr>
<tr>
<td>Fourth quartile</td>
<td></td>
</tr>
<tr>
<td>Food Sufficiency</td>
<td></td>
</tr>
<tr>
<td>First half percentile</td>
<td></td>
</tr>
<tr>
<td>Second half percentile</td>
<td></td>
</tr>
<tr>
<td>Household Assets</td>
<td></td>
</tr>
<tr>
<td>First quartile</td>
<td></td>
</tr>
<tr>
<td>Second quartile</td>
<td></td>
</tr>
<tr>
<td>Third quartile</td>
<td></td>
</tr>
<tr>
<td>Fourth quartile</td>
<td></td>
</tr>
</tbody>
</table>

One-way ANOVA was used to explore differences within the dependent variables due to the factor(s) of the independent variable. Because of the violation of homogeneity of variance and unequal sample sizes, the Welch (1938 & 1951) procedure was used for the omnibus tests. The contrast tests were performed to examine the contrast between different levels within the independent variable. Fisher’s Least Significant Difference (Fisher-LSD) was the procedure used for most of the contrast tests when the degrees of freedom were 2 (Meier, 2006). However, either the Shaffer or Modified Shaffer (1986) procedure was applied to control the familywise error rate when more than three groups were compared. Paired samples t-tests were used to explore the progress made by the SfC women from 2005 to 2006 in terms of utilizing the program benefits.
Unless it is stated otherwise, the alpha level for each test was at 0.05 and it was a two-tailed test.

Two different types of currency were used for analyses. All values of amounts were reported in XOF, the code for the Malian currency, Communaute Financiere Africaine franc, just like US$ denotes the United States Dollar, except for the household assets. The assets were converted into US dollars ($1=XOF525, based on the exchange rate in 2006).

The findings of all tests are explained in the following three sections of this chapter—How SfC Women Compared Economically With Non-SfC Women; Did the SfC Women Utilize the Program Benefits? and How Economic Factors Influenced Program Benefits. First, comparisons between the SfC group women with the Control or Spontaneous group women are presented using economic indicators such as schooling of the women as the heading. The results of the tests for program benefits are then organized under the categories of the benefits such as savings and microenterprise.

**How SfC Women Compared Economically With Non-SfC Women**

Comparisons of groups help understanding the difference between the women participating in the Saving for Change program and the other women in the village or other similar villages. Analyzing the data for some key poverty indicators such as schooling, the *children in school ratio*, food sufficiency and household assets, the study explored whether the women differed in a meaningful way. Although comparisons were performed for all three groups, the discussions in this section focus primarily between the women belonging to the Control and SfC groups. Table 16 provides an overview of
some general information used to explain the results of various statistical tests run to answer some specific questions.

### Table 16: Descriptive Statistics for Comparing SfC and Other Women Economically

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td><strong>Women’s Schooling</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spontaneous</td>
<td></td>
<td>147</td>
<td>.49</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>140</td>
<td>.44</td>
</tr>
<tr>
<td>SfC</td>
<td></td>
<td>223</td>
<td>.45</td>
</tr>
<tr>
<td><strong>Food Sufficiency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spontaneous</td>
<td></td>
<td>145</td>
<td>8.75</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>138</td>
<td>9.30</td>
</tr>
<tr>
<td>SfC</td>
<td></td>
<td>218</td>
<td>8.97</td>
</tr>
<tr>
<td><strong>HH Assets Value (OXF in 2006)</strong></td>
<td></td>
<td>140</td>
<td>2765.37 (Median = 1847.62)</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>103</td>
<td>1375.17 (Median = 880.95)</td>
</tr>
<tr>
<td>SfC</td>
<td></td>
<td>213</td>
<td>2657.50 (Median = 1714.29)</td>
</tr>
<tr>
<td><strong>Children in School Ratio</strong></td>
<td></td>
<td>147</td>
<td>.44</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>140</td>
<td>.29</td>
</tr>
<tr>
<td>SfC</td>
<td></td>
<td>223</td>
<td>.32</td>
</tr>
</tbody>
</table>

Note: N = Sample Size and SD = Standard Deviation

Schooling

Schooling is an indicator that relates people’s level of poverty. Poor women in developing countries like Mali are more affected by schooling than men. This is especially a strong indicator of poverty for this study since it uses snapshot data collected while the SfC women were receiving the intervention and the baseline or pre-intervention information was not available. Schooling of the adult women would not change much
within a couple of years into an economic development program and comparing it is a valid measurement of the women’s poverty status.

As expected, only a few (8.72%) of the surveyed women ever went to school. The percentage of the women that went to school did not vary significantly from group to group.

<table>
<thead>
<tr>
<th>Group Type</th>
<th>Schooling</th>
<th></th>
<th>No Schooling</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Original</td>
<td>New</td>
<td>Original</td>
<td>New</td>
</tr>
<tr>
<td>SfC</td>
<td>11.20%</td>
<td>7.50%</td>
<td>88.80%</td>
<td>92.50%</td>
</tr>
<tr>
<td>Spontaneous</td>
<td>11.60%</td>
<td>3.10%</td>
<td>88.40%</td>
<td>96.90%</td>
</tr>
<tr>
<td>Control</td>
<td>11.40%</td>
<td>7.50%</td>
<td>88.60%</td>
<td>92.50%</td>
</tr>
<tr>
<td>Total</td>
<td>11.40%</td>
<td>6.03%</td>
<td>88.60%</td>
<td>93.97%</td>
</tr>
</tbody>
</table>

It was not surprising to learn that a very low percentage of women had schooling. Most of the women were the poorest of the poor. Moreover, access to education in Mali was very limited. For the two regions where the SfC programs were implemented, Koulikoro and Sikasso, the girls’ school enrollment rate was less than 42% (Government of Mali, 2002, p. 17). When the girls’ enrollment rate was so low, it could be expected that the women’s schooling rate would be much lower. According to the Demographic and Health Survey (DHS) report, the percentage of the girls and women over 6 years without education was 79.4% for Koulikoro and 80.3% for Sikasso (Coulibaly et al., 2001, p. 19). The percentages of SfC groups’ women without education, 88.80% and 92.50%, were much higher in comparison to their respective region’s average. Compared to the women’s literacy rate of Koulikoro, Sikasso’s rate was lower in both DHS and SfC surveys since the New Groups were from Sikasso.
The results of the omnibus tests show that there was no significant difference ($F_{2, 301.219} = 0.035$, $p$-value = 0.966) among any of the original groups, SfC, Spontaneous and Control. The same tests were performed to see whether or not there was any difference among the women of the three new groups, SfC, Spontaneous and Control, also turned out similar ($F_{2, 144.737} = 1.183$, $p$-value = 0.309).

Since there was no statistically significant difference between groups on schooling, it can be concluded that schooling of the women was not much different whether or not they participated in a SfC group. An overwhelming majority of the women in those villages of Mali had no schooling. The few with schooling were almost evenly spread out among the SfC, Spontaneous and Control groups. Essentially, this finding supports the general assumption that all women in those villages were poor and there was not much difference among them with regard to poverty.

**Children in School Ratio**

School age children not attending school is an indicator of poverty in all contexts. In a wealthy society, measuring factors such as whether the children go to a private or public school could be more relevant for determining the level of wealth. For exploring the level of poverty of the rural Malian women, the children in school ratio is more appropriate. Sending children to school affects a family economically in two ways. One is the direct cost, including books and stationery. The cost for replacing their labor is another. Primarily, due to these two economic factors, the children do not get to go to school. Other non-economic factors, including distance to school, could also play a role in keeping children out of school. This section only explores how many of the 6-12 year old children of the surveyed women’s household were in school. If the distance was an
issue, it would be a problem for all the women compared in the study regardless of their economic condition since they come from the same geographical area. It also should be noted that some may have the resources to live away from home to go to school and others might not be able to afford it.

No statistically significant difference was found ($F_{2, 140.580} = 2.253, p$-value $= 0.109$) when all three New groups were compared—SfC, Spontaneous and Control. At least one of the three Original groups—SfC, Spontaneous and Control—had a higher children in school ratio. The Welch’s procedure for the Original groups resulted in statistically significantly ($F_{2, 302.484} = 4.323, p$-value $= 0.014$) difference.

Contrast tests not assuming equal variance were performed to find out which of the three Original groups differed statistically significantly. Only the Spontaneous group stood out. It was different from both Control and SfC groups. The Control and SfC groups did not differ much.

**Table 18: Contrast Tests Between Original Groups for Children in School Ratio**

<table>
<thead>
<tr>
<th>Contrasts</th>
<th>Difference in Means</th>
<th>Std. Error</th>
<th>t</th>
<th>$p$-value. (2-tailed)</th>
<th>Compared to ($\alpha$ level)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control versus Spontaneous</td>
<td>-.15</td>
<td>.05</td>
<td>-2.783</td>
<td>.006</td>
<td>0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>Spontaneous versus SfC</td>
<td>-.11</td>
<td>.05</td>
<td>-2.409</td>
<td>.017</td>
<td>0.05</td>
<td>Significant</td>
</tr>
<tr>
<td>Control versus SfC</td>
<td>-.03</td>
<td>.05</td>
<td>-.694</td>
<td>.488</td>
<td>0.05</td>
<td>Not Significant</td>
</tr>
</tbody>
</table>

The contrast tests, however, did not explain whether the differences were due to the higher or lower children in school ratio for the women belonging to the Spontaneous groups going to school. The means of the groups helped to understand the distinctions. As shown in Figure 12 below, the Spontaneous group women’s households had more children of the 6-12 year old in school in comparison to the women of the other two groups.
Exploring the difference between the Control and Spontaneous groups was useful for understanding the status of the school age children in the SfC program and neighboring villages. The lower means of the children in school ratio, less than 1, revealed that only some children were in school. The mean of the children in school ratio for the Original SfC group was only 0.3234, which shows that less than one third of the 6-12 year old children of the SfC women’s household were in school. The approximate percentage of the 6-12 year old children of the household of the women who were in the Control group was 29, which is not much different from the percentage for the SfC women’s household. Both groups had fewer percentages of 6-12 year old children in school compared to the 40% for the region of Koulikaro (Measure DHS,
2008), where the Original program was implemented. The regional percentage was almost as high as for the Original Spontaneous groups (43.78%), which was significantly different from the SfC and Control groups. These comparisons indicated that the SfC women were still among the poorest in the region even after a year of participation in the program.

**Food Sufficiency**

Food is one of the basic needs of people. Measuring if they had enough to eat was one of the ways to find out about poverty at the bottom level. All of the women belonging to the SfC and Spontaneous groups as well as the women who were not part of any of the groups were asked how many months they had enough food for their family the previous year. The information was analyzed clustering the women into the Original and New cohorts, each of which consisted of three different groups.

The results of the omnibus tests showed that none of the Original ($F_{2, 294.900} = 1.959, p$-value = 0.143) or New $F_{2, 134.285} = 1.177, p$-value = 0.311) groups were different in a meaningful way when compared for how many months they had enough food to eat. All groups had enough food for more or less the same number of months the previous year. Based on food security, all of the women were at the same level. Many of them did not seem to have enough to eat for as many as three months of a year which a quarter of a year.

---

9 The percentage was calculated using the raw data obtained from the Demographic and Health Surveys. The percentage was calculated using five variables of MLPR50 Data set: Region (HV025), Place of residence (HV026), Age of household members (HV105), member attended school during current school year (HV121) and School attendance status (HV129).
**Household Assets**

Assets are one of the indicators of poverty. In general, the more the value of the assets, the less poor the household is. However, a value of household assets might also be influenced by the size of the household. A large household may naturally have more assets but when those assets are divided by the number of members in the family, the value could be less than it may appear when aggregated. Due to the lack of data, this study considered covariates such as the household size only while interpreting the test results but not when running the test.

At least one of the groups—SfC, Spontaneous and Control was found to be significantly different in Original ($F_{2, 293.857} = 17.921, p\text{-value} = 0.000$) and New ($F_{2, 107.524} = 3.256, p\text{-value} = 0.047$) cohorts each. Not assuming equal variance, the contrast tests revealed that the high differences were not three-way but only two-way. In the Original cohort, the women of the SfC and Spontaneous groups had about the same value of the household assets. The value of the assets of the women not involved in SfC or Spontaneous groups differed highly as shown in Table 19.

### Table 19: Contrast Tests for Original and New Groups on Value of Household Assets

<table>
<thead>
<tr>
<th>Contrast</th>
<th>Difference in Means</th>
<th>Std. Error</th>
<th>t-score</th>
<th>df</th>
<th>p-value</th>
<th>Effect Size (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Control vs. Spontaneous</td>
<td>-1390.20</td>
<td>271.60</td>
<td>-5.119</td>
<td>226.20</td>
<td>.000</td>
<td>N/A</td>
</tr>
<tr>
<td>Control vs. SfC</td>
<td>-1282.33</td>
<td>290.31</td>
<td>-4.417</td>
<td>308.06</td>
<td>.000</td>
<td>0.41</td>
</tr>
<tr>
<td>Spontaneous vs. SfC</td>
<td>-107.87</td>
<td>338.01</td>
<td>-0.319</td>
<td>346.14</td>
<td>.75</td>
<td>N/A</td>
</tr>
<tr>
<td>New Control vs. Spontaneous</td>
<td>1697.39</td>
<td>971.06</td>
<td>1.748</td>
<td>66.02</td>
<td>.085</td>
<td>N/A</td>
</tr>
<tr>
<td>Control vs. SfC</td>
<td>1165.74</td>
<td>549.65</td>
<td>2.121</td>
<td>131.64</td>
<td>.036</td>
<td>0.35</td>
</tr>
<tr>
<td>Spontaneous vs. SfC</td>
<td>531.65</td>
<td>1018.55</td>
<td>0.522</td>
<td>78.01</td>
<td>.603</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: N/A = Not Applied: The effect size was not calculated for this study.

Among the three New groups, the statistically significant difference occurred only between the Control and SfC groups as displayed in Table 19. Not so much difference
was found when the Spontaneous group was contrasted with SfC and Control groups on the basis of the value of their household assets.

Figure 13: Values (O XF) of Household Assets of the Women in New Cohort by Group Types

The test results showed that both Original SfC and New SfC groups were statistically significantly different from their corresponding control groups. Looking at Cohen’s (1988) effect sizes, the differences were, however, low (d = 0.41 and 0.35). The reason could be due to the use of the mean for determining the differences between groups. When the effect size was calculated, the standard deviations were also taken into consideration. Table 16 shows that the deviations for the household assets were very large. Because of such large deviations the Cohen’s effect sizes of the differences were low despite the significant differences in the means. The box plots in Figure 13 and Figure 14 show the distribution of the household assets of the samples for the New
Cohort and Original Cohort respectively. In the New Cohorts (Figure 13), all three groups’ medians are closer to one another compared to the Original Cohort (Figure 14). Both New and Original Cohorts show are a many close outliers denoted by small circles (o) and far away outliers (*). These outliers were the reasons why the standard deviations were so large. Even though the standard deviations were large, and the Cohen’s effect sizes were low, it was also obvious from the test results and the box plot distributions that the women belonging to the SfC groups had more assets than the women who never participated in the SfC program.

**Figure 14: Values (O XF) of Household Assets of the Women in Original Cohort by Group Type**

After analyzing all the comparisons of the groups on the basis of the participants’ schooling, *children in school ratio*, food for the family the previous year and value of the household assets, it could not be concluded that there was any significant difference
between the SfC and Control groups. The results were mixed. Most of them revealed that the SfC participants were at about the same level of poverty as the women in the Control group. In some of the results the SfC women came out ahead of the others and vice versa. The argument that Oxfam America had targeted only the upper half of the poor based on their economic conditions could not be substantiated based on the above test results.

Although the comparisons were drawn in pairs between three different groups, the focus primarily was between two, SfC and Control groups. Contrasts between these two groups provided a better understanding about the level of poverty of the women associated with those groups since one of them was the treatment group and the other was not. The Spontaneous groups were quasi control groups because they were formed not only due to the inspiration received from the SfC group members, but the program had also encouraged its participants to replicate the program on their own. Therefore, the Spontaneous group could not be considered as an independent measure for comparison.

If schooling of the women were the only criterion of determining the upper and lower half of the poor, it could easily have rejected the notion that Oxfam America had indeed reached the bottom half of the poor because there was not much difference in schooling of the SfC and other women. Food sufficiency also did not vary among the families of the women regardless of their participation in SfC. The SfC women were neither better nor worse off compared to the other women in the village based on how many months they had enough food for their family.

It was the children in school ratio that gave mixed results. There was not much difference among the New groups. The statistically significant difference in the Original
groups was only with the Spontaneous groups that had a higher *children in school ratio* than any other women. The difference could mean that the Spontaneous groups’ women were better off than the other women or they who, regardless of their economic situations, became more aware of the importance of sending their children to school from their participation in the self replicated groups. In the absence of baseline data as to how many of their children were in school before joining the program, drawing a conclusion about a reason why more children were in school remained a challenge.

In both New and Original sets, the women of the SfC groups had statistically significantly more assets than the women of the corresponding Control group. Without knowing the household size it was not possible to conclude whether or not the women were indeed better off. A snapshot view of the data might have shown that the women of the SfC groups had the advantage of more assets available to their household. This study alone was not sufficient to conclude that they indeed had more wealth than the other women in the village.

After analyzing both Original and New groups for five different economic indicators, it was still not easy to declare outright conclusions as to whether the women belonging to the SfC groups were relatively better off than the women who were not associated with the program. In view of these mixed outcomes of the tests, the only firm conclusion that can be drawn is that there is not enough evidence to support the claim that Oxfam America had targeted only the upper half of the poor women in its program areas. Some indicators gave more importance to the SfC groups while others did not reveal much difference. This study did not conclusively reveal whether the SfC women were better off or worse off than the other women but it was evident from the test results that
they were not poorer than the rest. The analyses have some implications for Oxfam America and other microfinance programs. These will be discussed in the next chapter.

**Did the SfC Women Utilize the Program Benefits?**

The underlying belief for discussing outreach was that the participating women would have certain advantages in making some financial progress over time. Because of that belief, who was reached became important. If there was no sign of progress in the women utilizing the program benefits, then the exercise of exploring outreach would be of little value. Paired samples t-tests were conducted to determine if the women had made any progress in utilizing the program benefits during the period of 2005 to 2006. As explained in the Data Collection, Transformation and Analysis section of chapter three, the pairs were formed by the identical variables in both years such as the weekly savings rate of 2005 and weekly savings rate of 2006. Selected results are reported in Table 20.

The t-test results showed that the difference was not statistically significant for non-financial indicators such as food sufficiency ($t_{101}=0.832, \alpha=0.407$), the ratio *children in school ratio* ($t_{59}=0.735, \alpha=0.465$), and the number of years of the women’s schooling ($t_{102}=0.779, \alpha=0.438$). In other words, those factors did not cause any notable change in the women’s lives. Their schooling could not have been expected to change within a year of a program. Perhaps the time was not enough to indicate a significant difference for either their schooling of the *children in school ratio* or food sufficiency.
Changes were noticeable in major financial indicators. Both SfC participants’ weekly savings rate ($t_{102}=10.811, \alpha=0.000$) and highest amount saved voluntarily ($t_{102}=2.777, \alpha=0.007$) were significantly different in 2006 from 2005. The kinds of change that took place in their savings within a year were discernable. The weekly savings rate declined but the highest amount of voluntary savings went up.

**Figure 15: Number of Women by Weekly Savings Rate in XOF in 2006 and 2005**

In 2005, the weekly savings rate seemed to be spread out (SD=71.20) as can be seen in Figure 15. The variation of the savings rate was much more consolidated in 2006 (SD=31.72). Looking at the plotting of the savings rate in 2005 and 2006 in Figure 15, it appeared that all of the women lowered their savings rate in 2006 but the women with higher rates reduced with a larger margin. Knowing that their savings fund was going to

---

**Table 20: Results of Paired Samples t-Tests for 2005 and 2006**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 2005</th>
<th>Standard Deviation 2005</th>
<th>Mean 2006</th>
<th>Standard Deviation 2006</th>
<th>Paired tests t</th>
<th>df</th>
<th>Sig.</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Savings</td>
<td>152.09</td>
<td>71.20</td>
<td>81.99</td>
<td>31.72</td>
<td>-10.811</td>
<td>102</td>
<td>.000</td>
<td>-1.28</td>
</tr>
<tr>
<td>Voluntary Savings</td>
<td>243.93</td>
<td>741.91</td>
<td>857.28</td>
<td>2115.51</td>
<td>2.777</td>
<td>102</td>
<td>.007</td>
<td>0.39</td>
</tr>
<tr>
<td>Late Savings Payment</td>
<td>1.28</td>
<td>0.45</td>
<td>1.16</td>
<td>0.36</td>
<td>-2.310</td>
<td>102</td>
<td>.023</td>
<td>0.29</td>
</tr>
<tr>
<td>Group Loans</td>
<td>0.79</td>
<td>0.92</td>
<td>2.73</td>
<td>1.89</td>
<td>11.246</td>
<td>126</td>
<td>.000</td>
<td>1.35</td>
</tr>
<tr>
<td>Group Loan Size</td>
<td>1830.89</td>
<td>1944.12</td>
<td>4233.39</td>
<td>4085.48</td>
<td>5.903</td>
<td>85</td>
<td>.000</td>
<td>0.76</td>
</tr>
<tr>
<td>Months to repay a Loan</td>
<td>1.13</td>
<td>1.07</td>
<td>2.45</td>
<td>1.11</td>
<td>9.991</td>
<td>84</td>
<td>.000</td>
<td>1.22</td>
</tr>
<tr>
<td>Monthly Loan Installment</td>
<td>1825.18</td>
<td>1092.99</td>
<td>2057.05</td>
<td>1868.77</td>
<td>.908</td>
<td>52</td>
<td>.368</td>
<td>N/A</td>
</tr>
</tbody>
</table>

---

In 83
be made from their own savings only, the women could have felt the pressure of saving as much as possible every week in the first year of the program, 2005. In 2006, the urgency could have been shifted towards repaying loans and using the money at hand for generating income and modestly adjusting their savings rate. As a result, their weekly savings rate was reduced and less scattered as displayed in Figure 15. It was also possible that they were simply too ambitious in starting off with a much higher savings rate at the beginning, 2005, and that they soon realized that the amount saved every week was too much for them. Or, they could have seen their funds grow quickly, causing them to lose motivation.

An opposite trend was observed in the voluntary savings. Not only was the variation smaller in 2005 (SD=243.93) in comparison to 2006 (748.91), the range of the highest voluntary savings amount was also narrower. The reduced number of small deposits and flatter curve with some columns for higher deposits in 2006 than in 2005 in Figure 16 show the shift in the highest voluntary savings. What is also notable is the degree of change. Even though it was statistically significant the effect was minimal (d=0.39).
Figure 16: Number of Women by Highest Voluntary Saving (XOF) Deposit in 2006 and 2005

Note: The women who had not saved any voluntary savings were not included in plotting the above charts.

Although it was not obvious why the two kinds of savings went in opposite directions in 2006 from 2005, weekly savings rate going down and highest voluntary savings going up, it could be argued that the women had shifted more of their savings toward liquidity. Contrary to voluntary savings, weekly savings could not be withdrawn as easily as when needed. The members could withdraw the weekly savings only at the time of separation from the group whereas they could withdraw their voluntary savings at any time when the group was in session. The women might have deliberately decreased the weekly savings rate in order to put more money into voluntary savings so that they could access the money when they needed to repay their loans or make saving deposits during difficult times. This argument was also supported by some other tests. The results of the tests for late savings payment \( (t_{102}=2.310, \alpha=0.023) \) showed that the women had fewer late savings payments in 2006. They were significantly more on time in
making their mandatory weekly savings in the second year compared to the first. However, that alone did not seem to explain the full picture. The size of the change in favor of on-time weekly savings payment in 2006 was very small (d=0.29) whereas the magnitude of the same for the decrease in the weekly savings rate (d=1.28) was very high. Moreover, if the women had moved money from weekly savings to voluntary savings for liquidity purposes, then those two variables would have been highly correlated in 2006. Actually the bivariate correlation results in Table 21 showed that such relationship was almost non-existent (r_{217}=0.035).

The analysis based on the results for three indicators of savings alone was not sufficient to explain why the changes occurred. The increase in the highest voluntary savings amount and the drop in the late savings payment were not comparable to the degree of the cut in the weekly savings. To some extent, the loan situations help to explain the changes in savings.

Table 21: Correlations Between Program Benefits

<table>
<thead>
<tr>
<th></th>
<th>Weekly savings06</th>
<th>Highest voluntary savings06</th>
<th>Group loan size06</th>
<th>Months to repay loans06</th>
<th>#Group loans06</th>
<th>Monthly installment06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly savings06</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest voluntary savings06</td>
<td>.035</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group loan size06</td>
<td>.413</td>
<td>.254</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months to repay loans06</td>
<td>.108</td>
<td>.016</td>
<td>.200</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#Group loans06</td>
<td>.211</td>
<td>.040</td>
<td>.060</td>
<td>.185</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Monthly installment06</td>
<td>.352</td>
<td>.270</td>
<td>.817</td>
<td>.261</td>
<td>.079</td>
<td>1</td>
</tr>
</tbody>
</table>

It seemed as if the women had cut down on their savings rate in order to pay off their loans. The loans had increased both in size and frequency in 2006 from 2005. The number of loans taken from the group (t_{126}=11.246, \(\alpha=0.000\)) and average loan size (t_{85}=5.903, \(\alpha=0.000\)) were both statistically significant.
The women had taken and repaid multiple loans within a year between the two surveys. When they had to pay off the previous loan, in order to get a new one, the extremely high (d=1.35) effect on the increase in the number of loans was noteworthy. The number of loans was not the only factor that went up for the SfC women. They had also taken bigger loans in 2006 as plotted in Figure 17. The positive effect on the change of loan size from 2005 to 2006 was upper medium (d=0.76). Taking and paying back bigger loans are indications of a healthy financial status and practice of the women.

The extremely high changes, positive on the number of loans and negative on weekly savings rate, started making sense as to why the women had made adjustments in their savings. What seemed to be a cause and effect relationship became even more apparent when the weekly savings rate was found moderately correlated ($r_{218}=0.413$) with the loan size. The cut in the savings rate appeared to have made up for paying off the big loans.

However, when analyzing the results closely, the argument that the women had cut the savings rate in order to pay off their loans did not seem important in spite of the fact that more and larger loans were borrowed and paid back. The women had also taken
proportionately more time to repay the loans and the average monthly repayment was not much different than before. A statistically significant increase was found in the results of the tests performed for the loan terms ($t_{84}=9.991$, $\alpha=0.000$). The change in the loan terms seemed to have been caused by the size of the loans. In other words, the women took considerably more time to pay off their bigger loans. The mean number of months for the loans in 2005 was 1.13. It came to 2.45 in 2006. If the women had taken about the same or less time to repay bigger loans, their monthly repayment amount would have increased in a meaningful way in 2006. No such increase was found for the monthly repayment amount ($t_{52}=0.908$, $\alpha=0.368$). If the women had taken a cut in the weekly savings rate to repay their loans, then, their monthly repayment amount would have also gone up. The test results did not support that argument but the moderate correlation ($r_{217}=0.352$) between the monthly repayment amount and the weekly savings rate indicated that the higher savings rates coincided with the bigger installments. Those with higher savings rate also repaid larger monthly installment amounts. What was not clear from any of the tests was that those with higher rates were also the ones whose weekly savings remained higher even after everyone scaled down their weekly savings rate in 2006 and they also maintained to repay their loans in larger amounts every month.
The monthly installment amounts were also found to be highly correlated with the group loan size ($r_{217}=0.817$). That meant, the women who took bigger loans also made bigger installment payments. A moderate number of those women also had higher savings rate ($r_{218}=0.413$). Those women could have access to more resources, therefore, they were able to save more money weekly, which enabled them to have more money to repay their loans. These high and moderate correlations among three variables, savings rate, loan size and monthly installment indicate the health of the economic situation of the women and their financial practices. They borrowed and were able to repay larger amounts of loans with bigger installment payments. Many of them also saved more money. Their economic and financial status could be at or below the subsistence level but they seemed to be creditworthy and to have followed sound financial practices. If the women did not have the necessary resources, they would not have been able to pay off loans with bigger installments. Even if they had the resources, they could have defaulted by not following good financial practices such as paying off loans as soon as they could
in order to be eligible for more and bigger loans. The groups also deserved some credit
for making loans to the right people and observing good lending practices.

Another component of microfinance fundamental to the relationship of savings
and loans is business. From the discussions about loans above, it was very clear that the
SfC women had taken loans multiple times and paid them off in 2006. Did they use the
loans to start a new business? Based on the results of the tests for the number of new
businesses started by the women, the answer would be, “not many.” Actually, the
number of businesses started by the women in 2006 declined significantly ($t_{102}=2.934,$
$\alpha=0.004$). With the increased loan activities and fewer startups, the assumption would be
that they expanded their existing businesses. There was no data available to explore
whether that really happened. What was known was that the women did not use that
money for their financial obligations outside the SfC group such as weekly savings with a
tontine, a kind of savings scheme common in Mali ($t_{101}=0.739$, $\alpha=0.462$), saving in a
bank or credit union ($t_{102}=0.376$, $\alpha=0.707$), taking loans from a bank or credit union
($t_{101}=1.043$, $\alpha=0.299$) and borrowing from money lenders ($t_{102}=0.445$, $\alpha=0.657$). These
all remained virtually unchanged in 2006 from 2005. What happened to the loans after
all these tests remains unanswered. What did the women do with bigger and more
frequent loans?

Also notable was the lack of even a small correlation between the highest
voluntary savings and any other variables. With the assumption that the relatively better
off women could save more, take bigger loans and repay faster, one would expect to see a
medium to high correlation for the highest voluntary savings with the other savings and
loan indicators. The assumption was not supported by any of these test results. An
explanation of this scenario could be that those relatively better off women had been running businesses since before 2006 and preferred to use their extra resources for those businesses rather than voluntarily saving or paying off their installments sooner with larger payments.

When both years were analyzed, it appeared that both groups and the women had learned about managing credit and were benefitting from it. The women had been steadily saving, and their savings showed some correlations with loan indicators such as loan size and monthly payments. Those correlations demonstrated that the groups were smart in lending the money to the women who were able to pay them back. Apparently the groups identified the women who could repay their loans and also pay larger installments. The high turnover rate increased the groups’ cashflow enabling them to give out more and bigger loans to meet the needs of their members. At the same time, by awarding bigger loans to the women who had already paid off their previous loans, the groups educated the women to be credit-smart. The trends of taking more and bigger loans with a higher amount of repayment also demonstrated that the groups had increased their savings fund over time. Since the fund came from the money contributed only by the members, it could also be concluded that the members became financially better off as time went on. They had accrued more savings and could handle more and bigger loans. The high correlations of the loan size with the monthly installment demonstrated that the women also used their credit worthiness to their advantage.

Whether or not the results were statistically significant, all of the experiences of the women and the groups spoke directly to the core purpose of the program and to the economic benefits for the clients by any international standard. When their context is
taken into consideration, poor Malian women in the villages where there were very few or no opportunities to become economically active, the level of engagement of the women can be considered a very important step forward toward reducing poverty.

**How Economic Factors Influenced Program Benefits**

The previous section discussed some benefits obtained by the SfC women from their participation in the program. This section analyzes the differences in access to those program benefits based on their economic conditions as reported in the 2006 survey. The program offered many direct and indirect benefits. In this study, ten benefits were selected to represent three categories—savings, credit and microenterprise activities, which are the main focus of most microfinance programs. Many economic indicators could inform the variations in the utilization of the program benefits by participants. The participant’s literacy, *children in school ratio*, *household earners’ ratio*, estimated value of her total household assets and the number of months her family had enough food are the most relevant indicators for exploring the utilization of benefits by the program participants. One would assume that households higher on these indicators would have enjoyed comparatively more benefits from the program than the other households. The extent of the benefits received by a member could have been more than the ten analyzed here but the focus of the study is on the depth of each benefit. The test results of each one of those are presented below under the types of program benefits—savings, loans and microenterprise.

Based on the sample sizes, nature of data, and variations within each variable, the number of levels for the independent variables was determined to either two or four as
shown in Table 22. An attempt was made to make valid sample size equal at each level as much as possible.

Before exploring the differences in access to the program benefits, the results of correlation tests among the economic indicators were performed. A correlation does not necessarily mean that the variables have a cause-and-effect relationship. However, having a logical correlation between variables is also a possibility.

**Table 22: Independent Variables and Their Levels**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Levels</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literacy</td>
<td>Illiterate</td>
<td>Never attended school or literacy class</td>
</tr>
<tr>
<td></td>
<td>Literate</td>
<td>Attended literacy class or school</td>
</tr>
<tr>
<td>Children in School Ratio</td>
<td>First Half</td>
<td>No 6-12 age children in school</td>
</tr>
<tr>
<td></td>
<td>Second Half</td>
<td>Any percentage of 6-12 age children in school</td>
</tr>
<tr>
<td>Household Earners’ Ratio</td>
<td>1st Quartile</td>
<td>Less than or equal to 0.39</td>
</tr>
<tr>
<td></td>
<td>2nd Quartile</td>
<td>More than 0.39 but less than or equal to 0.50</td>
</tr>
<tr>
<td></td>
<td>3rd Quartile</td>
<td>More than 0.50 but less than or equal to 0.62</td>
</tr>
<tr>
<td></td>
<td>4th Quartile</td>
<td>More than 0.62</td>
</tr>
<tr>
<td>Food Sufficiency</td>
<td>First Half</td>
<td>Enough food for less than nine months</td>
</tr>
<tr>
<td></td>
<td>Second Half</td>
<td>Enough food for nine or more months</td>
</tr>
</tbody>
</table>

Among the independent variables, the estimated value of the Total Household Assets and Food Sufficiency were statistically significantly correlated with Pearson’s Correlation score 0.362. In a 2-tailed test the \( p \)-value (0.000) was significant even at 0.01 alpha level. Because of this small positive correlation, the household assets variable was excluded in performing the one-way ANOVA tests. The test results for food sufficiency was a good proxy in explaining how variations on the total household assets affected the distribution of program benefits among the participating women.
Table 23: Bivariate Pearson Correlations of Dependent Variables

<table>
<thead>
<tr>
<th></th>
<th>Average Group Loan Size</th>
<th>Average Monthly Repayment Amount</th>
<th>Use of Loans for Emergency</th>
<th>Use of Loans for Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Group Loan Size</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Monthly Repayment Amount</td>
<td>.817(**)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Loans for Emergency</td>
<td>.583**</td>
<td>.479**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Use of Loans for Consumption</td>
<td>.345**</td>
<td>-.317**</td>
<td>.168</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Out of nine pairs correlated all dependent variables in Table 15 but late savings payment and started new business, only three pairs had a meaningful correlation. The significantly correlated variables are listed in Table 23 with their Pearson Correlation coefficient scores, the $p$-values. One variable of each such correlated pair was eliminated for computing the one-way ANOVA tests for the purpose of this study.

The average group loan size had varying degrees of correlation with the other variables. They were large, medium and small positive correlation with the monthly repayment amount ($r_{217}=0.817$), use of loans for emergency ($r_{210} =0.479$) and use of loans for consumption ($r_{208} =0.317$) respectively. The relationships could be complex but any one of the four variables could explain about the other three because of their meaningful correlations. For this analysis, only the average group loan size was used to explain the effect of the poverty indicators out of the four significantly correlated program benefits. The other three, the average monthly repayment amount, use of loans for emergency and use of loans for consumption were omitted. However, all omitted viable have been referred to the correlation as needed to analyze the test results of other variables. For instance, the use of loans for emergency and consumption are often used to explain the
results of the use of loans for productive purposes. More analysis based on the remaining indicators after the omission and their effects on benefits are discussed below.

**Program Benefits: Savings**

Savings is one of the categories of the benefits provided generally by all savings-led microfinance programs. In absence of formal financial institutions, particularly in rural areas of developing countries, a group savings fund is a great service which helps the program participants not only save for the future, no matter how little that is, but also watch their money as it grows because they are the ones who manage the fund. The group savings fund was made up of two types of savings—mandatory and voluntary.

Table 24 provides some basic statistics about savings.

<table>
<thead>
<tr>
<th>Economic Indicators</th>
<th>Voluntary Savings</th>
<th>Mandatory Savings</th>
<th>Late Savings Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td><strong>Illiterate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>124</td>
<td>321.37</td>
<td>1166.68</td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>961.11</td>
<td>2178.22</td>
</tr>
<tr>
<td><strong>Children in School Ratio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Half</td>
<td>129</td>
<td>653.49</td>
<td>1811.94</td>
</tr>
<tr>
<td>Second Half</td>
<td>94</td>
<td>539.36</td>
<td>1586.14</td>
</tr>
<tr>
<td><strong>Household Earners’ Ratio</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Quartile</td>
<td>56</td>
<td>384.82</td>
<td>1095.69</td>
</tr>
<tr>
<td>Second Quartile</td>
<td>61</td>
<td>534.43</td>
<td>1613.42</td>
</tr>
<tr>
<td>Third Quartile</td>
<td>52</td>
<td>679.81</td>
<td>1859.06</td>
</tr>
<tr>
<td>Fourth Quartile</td>
<td>54</td>
<td>842.59</td>
<td>2172.24</td>
</tr>
<tr>
<td><strong>Food Sufficiency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Half</td>
<td>112</td>
<td>584.82</td>
<td>1622.70</td>
</tr>
<tr>
<td>Second Half</td>
<td>106</td>
<td>646.23</td>
<td>1853.70</td>
</tr>
</tbody>
</table>

Note: No. = Sample number
Mandatory Savings

Each SfC participant in Mali saved weekly. Since all members were required to save, the peer pressure coupled with a commitment to build assets for the future, weekly savings was one of the most appreciated benefits extended by SfC to them. The mandatory savings rate was the same for all members of a group. The amount could vary from one group to another. Each group decided the threshold of weekly savings based on the capacity of its members to deposit every week. Inability to deposit the amount in a timely manner could result in fines or even getting expelled from the group.

In addition to their mandatory SfC group savings some participants had also saved with their Tontine every week. The analyzed mandatory savings includes both weekly savings.

One might assume that the women with literacy, higher children in school ratio, household earners’ ratio or food for more months would have a higher rate of weekly savings. The test results were not supportive of these assumptions. Literacy (F₁, 196.289 = 0.118, p-value = 0.719), the children in school ratio (F₁, 194.491 = 0.22, p-value = 0.882), household earners’ ratio (F₁, 116.120 = 0.254, p-value = 0.858) and the number of months with enough food (F₁, 146.175 = 1.497, p-value = 0.223) did not appear to have affected the women’s weekly savings rates. The rates for all of the women were about the same regardless of variations in their economic conditions due to these factors.

Based on these test results, it can be concluded that none of the economic indicators—literacy, children in school ratio, household earners’ ratio and food sufficiency—actually helped in predicting that the economically better off participants had better access to the Saving for Change program benefits. In some ways, the lack of
A statistically significant difference could be interpreted as a fair practice particularly by the poorest since it could give them a feeling that they all were equal when it came to savings even though their social status were different. However, there were a couple of non-significant observations such as with the ratio of income. A higher household earners’ ratio could mean more earnings of the household and the participants of that household could have saved more money every week. That expectation did not turn out to be fully accurate. The fourth quartile dropped. This can also be observed in Figure 19.

**Figure 19: Total Weekly Savings in OXF by Household Earners’ Ratio**

One of the reasons why the indicators did not seem to have any effect on the weekly savings could be that the weekly savings rate was a flat rate for all members in a group. The rate is the highest common amount which can be afforded by all members. There could certainly be some women, particularly those who were a bit better off on the basis of the economic indicators, but they could not save more because the rate had to accommodate other women who had less money for saving. However, those women with more could have saved the extra money voluntarily.
**Late Savings Payment**

Although each member was required to deposit weekly savings, at times the members fail to do so on time. Each group decides how to handle such failure. A popular approach among groups is to fine the member for missing a deposit and accept the deposit with a penalty at a later meeting. Groups also put a cap on the number of times such missed payments are accepted before ejecting the member from the group. Since all SfC participants were striving to save as much as they could and repay their loans, the poorest were expected to have struggled to make their weekly savings on time.

None of the four indicators were a meaningful predictor of which women would more likely fail to pay their weekly savings on time. Literacy ($F_{1, 189.200} = 2.659$, $p$-value = 0.105), Food sufficiency ($F_{1, 215.965} = 0.127$, $p$-value = 0.223), the children in school ratio ($F_{1, 187.673} = 0.804$, $p$-value = 0.371), and the household earners’ ratio ($F_{1, 120.706} = 0.832$, $p$-value = 0.479) did not seem to have statistically significant effect on the women’s weekly savings payment routine. This was a good sign for the success of the program and the stability of the group because all members of each group seemed to have an economically homogeneous group. Or, if they were diverse, they could have helped each other out to make the payments on time.

**Voluntary Savings**

Voluntary savings is one of the services generally provided by many savings-led microfinance programs. The Saving for Change participants could also save extra money in their group fund, in addition to the weekly savings. That saving was completely voluntary. Unlike the mandatory savings, there was no penalty for not making voluntary savings. The amount could vary from member to member and from time to time. A
member could save more, for example, when she had a good harvest and not save during the down time she could even withdraw her voluntary savings.

In the lack of data for how much each member saved and withdrew each time, the analysis of voluntary savings was based on the highest amount the members had ever saved voluntarily in the group fund. It was only one deposit that was used for the analysis. The highest amount saved helped to make inferences about the women’s economic condition. Those women with extra cash at hand are more likely to make voluntary deposits.

With the assumption that literate participants had more resources to spare, tests were performed to find out if their voluntary savings was also higher. The results were positive. There was a statistically significant difference ($F_{1, 142.094} = 6.948$, $p$-value = 0.009) in voluntary savings between the participants with and without literacy. The difference was positively related to the literate participants’ side although Cohen’s (1988) effect size was low ($d = 3.8$).

The women who had a higher children in school ratio ($F_{1, 142.094}$ score 0.249, $p$-value = 0.618), food for more months ($F_{1, 208.694} = 0.67$, $p$-value = 0.794), and a higher household earners’ ratio ($F_{1, 116.135} = 0.832$ and $p$-value = 0.495) were also expected to save more voluntarily in their group. The omnibus test results suggested otherwise. None of these had any meaningful effect in the highest amount of savings. Though statistically insignificant, small differences in the means of the varied household earners’ ratio could be observed in Figure 20. Although insignificant statistically, the trend was linear increasing at about the same rate through the fourth quartile of the household
earners’ ratio. A higher household earners’ ratio seemed to have a small effect on how much more a woman saved voluntarily in the group.

**Figure 20: Highest Voluntary Savings by Household Earners’ Ratio**

Savings was one of the important benefits of the Saving for Change program. Almost all of the analyses of the results above showed that access to the benefit was not much different whether the women fell at the bottom or upper level on the economic indicators. The only exception was the literate women who save significantly more voluntarily compared to the women who had no literacy. Overall, based on savings, the women’s economic levels could not be concluded different in a meaningful way. They all appeared to be poorest.

**Program Benefits: Loans**

Many people in the low to middle income countries still lack financial services (Harper & Arora, 2005, p. 275). Loans are the most important of all financial services to the poorest (Armendariz de Aghion & Morduch, 2005, p. 15) because they do not have adequate resources to finance their needs and necessary projects. Loans are the most
common means of fulfilling the needs not met by their own resources. By becoming
involved in a program such as Saving for Change, the women would have built a safety
net in the group fund to which they can turn to when needed extra cash.

Table 25: Descriptive Statistics for Loans of Participants by Poverty Indicators

<table>
<thead>
<tr>
<th>Economic Indicators</th>
<th>Levels</th>
<th>Loans</th>
<th>Loan Size</th>
<th>Loan Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>Mean</td>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Literacy</td>
<td>Illiterate</td>
<td>124</td>
<td>3.05</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>Literate</td>
<td>99</td>
<td>3.29</td>
<td>1.58</td>
</tr>
<tr>
<td>children in school ratio</td>
<td>First Half</td>
<td>129</td>
<td>2.98</td>
<td>1.55</td>
</tr>
<tr>
<td></td>
<td>Second Half</td>
<td>94</td>
<td>3.39</td>
<td>1.34</td>
</tr>
<tr>
<td>Household Earners' Ratio</td>
<td>First Quartile</td>
<td>56</td>
<td>3.32</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Second Quartile</td>
<td>61</td>
<td>2.87</td>
<td>1.23</td>
</tr>
<tr>
<td></td>
<td>Third Quartile</td>
<td>52</td>
<td>3.69</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>Fourth Quartile</td>
<td>54</td>
<td>2.80</td>
<td>1.34</td>
</tr>
<tr>
<td>Food Sufficiency</td>
<td>First Half</td>
<td>112</td>
<td>3.01</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>Second Half</td>
<td>106</td>
<td>3.28</td>
<td>1.46</td>
</tr>
</tbody>
</table>

Note: No. = Number of samples

The need for extra cash for poor women is universal. The participants of SfC in
Mali were not an exception to that. They had taken and paid back loans many times
within the period of a little over a year. The results of some statistical tests in Table 25
shed some light on the difference, if there was any, in terms of the amount and number of
loans received and the time to repay the loans based on the economic level of the women.
The women may have taken many loans from other sources but the analysis was based on
the loans taken only from their SfC group fund.
**Number of Loans**

Borrowing is strongly encouraged by microfinance programs. Infusion of extra cash to the household income is believed to have a positive impact on improving the economic condition of the family. Because of the need for additional resources there is competition among the women to get loans from their group fund. When there is a high demand for loans from very limited sources such as the savings fund of the rural and poor women, it could also be expected that the relatively better off women would have more leverage in obtaining more loans. Microfinance programs do not require collateral for loans but the client’s savings are also taken into consideration when deciding about loans.

Based on literacy, there was not much difference on the number of loans taken by the program participants \( (F_{1,196.247} = 1.471, p\text{-value} = 0.227) \). The number of loans also was not skewed towards the women who had more food available for their family \( (F_{1,215.469} = 1.911, p\text{-value} = 0.168) \).

As expected, the number of loans taken from the group fund differed significantly on the basis of the *children in school ratio* \( (F_{1,214.735} = 4.441, p\text{-value} = 0.036) \). On average, the women who had no 6-12 year old children in school took out only 2.98 loans. The number of loans for the women who had any children of the age range in school was 3.39. The size of the difference, however, was low \( (d = 0.288) \).

The results of the tests for the differences in the number of loans taken by the women on the basis of the *household earners’ ratio* to the household income also turned out to be positive. The omnibus test showed that at least a quartile of the women took significantly different number of loans than the women belonging to another quartile \( (F_{3,119.001} = 4.128, p\text{-value} = 0.008) \). The test did not explain as to which quartile differed
from which quartile and to what extent. Contrast tests were performed to find out exactly which pairs of quartiles differed. Two pairs stood out with very high differences but one quartile was common in both pairs. The third quartile, which included 50 to 62 percent of household members earning income differed with the fourth quartile \((t_{97.166} = 3.024, p\text{-value} = 0.003)\) and second quartile \((t_{91.763} = 2.919, p\text{-value} = 0.004)\) in meaningful ways when used the Modified Shaffer’s (1986) Sequential Procedure. Cohen’s (1988) effect size for those differences were medium for difference \((d=0.592, d=0.567, \text{respectively})\). The other pairs tested were not significantly different.

The differences between the two pairs showed that the women benefitted at different degrees based on the percentage of the members contributing to their household income. However, the test results failed to show that they benefited according to their economic levels, the higher the household earners’ ratio the economically better off the women were. As exhibited in Figure 21, the fourth quartile benefitted the least from the loans. If the benefits were to be distributed along the economic levels, the women in the fourth quartile would have taken out the largest number of loans. Moreover, the slope of the number of loans in Figure 21 would also be linear. It is also clear from Figure 21 that the women in the first quartile had taken more loans than the women in the second and fourth quartiles even though those differences were not by a considerable margin.
Concluding the number of loans taken by the SfC participants based on their economic levels could not be completely successful due to the mixed results of the tests. The only economic indicator that fully backed the assumption was the *children in school ratio*. Even though the *household earners’ ratio* was significantly different in the omnibus test, the paired comparisons of its quartiles revealed that the differences were not based on the economic levels. They appeared to be at random without any consistent pattern. Neither literacy nor food sufficiency was a clear predictor of which women took more or less loans in a meaningful way.

**Group Loan Size**

Upon examining whether the upper tier women on the economic scale took bigger loans was also important for exploring whether the level of poverty played a role in the size of the loans received by the women. One of the reasons was that the economically better off women would be more creditworthy compared to the poorer women. They may also have had more savings, a factor considered by many microfinance programs when determining the size of the loan. Finally, the bigger loans could have been taken
simply due to their needs because they vary based on the level of the household economy. A slightly better off family might plan for a better roof, which would result in the need for more money. It is obvious that loans are normal sources of financing when money is needed.

Surely enough, the amount of money taken as loans was significantly different between the women who had and those who had not attended a literacy class ($F_{1,130.184} = 8.266$, $p$-value = 0.005). The means of the amount of the loans taken by the women with literacy and without literacy were 4856.14 and 3475.20 respectively. They show that the size of the loan taken by the women with literacy was much higher. The size of the difference, however was smaller ($d = 0.48$).

Despite the assumption that the higher household earners’ ratio might have taken larger loans, the analysis of the data showed that the amounts did not vary much ($F_{3,115.588} = 2.215$, $p$-value = 0.090). Having a higher children in school ratio, as a positive indicator of the economic health of the family, should have predicted that the women received bigger loans. The test results did not support that position. No significant effect of the children in school ratio was found on how much money a woman got as a loan from her group fund ($F_{1,155.237} = 0.226$, $p$-value = 0.635). Similarly, not much difference was observed in the size of loans made to the women based on how many months they had enough food ($F_{1,210.091} = 0.101$, $p$-value = 0.751).

Literacy was the only factor that stood out in influencing the amount of loans received by the participants. Literacy could be used as a predictor of getting bigger loans. The other factors, the children in school ratio, food sufficiency and household earners’ ratio were not as strong in making predictions. Their effects were not only
weak but also unreliable. For example, the women belonging to the third quartile in the scale of the *household earners’ ratio* received smaller loans than the women in the second quartile as seen in Figure 22.

**Figure 22: Average Group Loan Size by Ratio of Income Contributors**

![Graph showing average group loan size by ratio of income contributors]

**Loan Terms**

Another important aspect explored was the length of the loans—loan terms. The loan terms matter especially since the loan is taken from the group fund. Normally, the group fund is very small because it is made up of only the members’ savings. It almost never has sufficient money to meet the credit needs of all group members. When a woman takes out a loan for a longer term, the fund will have less money available for loans to other women. When members have to wait too long to get their turn to take loans, the effectiveness of group loans diminishes because the members may start looking for alternate sources to borrow money in order to meet their needs. They may not be able to defer their needs.

As it was mentioned before, other studies have shown that the influential members of the group end up getting loans for relatively longer terms. One of the factors
that contribute to becoming an influential member is the perceived economic status. The better off the economic status, the more influential the woman could be (Sulaiman et al, 2006). This subsection presents the results of the test of the loan terms based on the four economic indicators that show the women’s economic status.

Data were not available to check if the loan periods could have been extended to allow the borrower to pay off her installments with some penalty. Rewriting a loan to the borrower in the event she is unable to pay it off due to legitimate reasons, i.e. the death of the goat bought with the loan, is a normal practice within microfinance programs. Whether rewriting a loan ever occurred in the SfC groups and how that was managed, if that indeed happened, was unknown at the time of data analyses. In some cases, the loan terms could have also been extended rather than rewriting those loans. Such extensions could have been granted in extenuating circumstances to any borrower whether she was relatively better off or poorer woman.

Contrary to the prediction, literacy did not appear to have an effect on how long the women took out loans ($F_{1, 214.062} = 0.037$ and $p$-value = 0.847). Sending 6-12 year old children of the household to school did not seem to have mattered much as far as the loan terms were concerned. Women from a family that had no child between the age of 6-12 in school received loans for about the same number of months as the women who had any other percentage of 6-12 year old children in school ($F_{1, 210.091} = 0.101$, $p$-value = 0.751).

Whether the women had food for fewer or more months did not particularly influence the number of months it took them to pay off their group loans ($F_{1, 205.414} = 0.494$, $p$-value = 0.483). Those who had enough food for less than nine months in the past year paid back their loans on an average of 2.52 months whereas the women with
enough food for more than nine months made their final installment by an average of 2.63 months. At first, when just looked at the means, it appeared that the women with food for more months had loans for a longer them, even though the difference was marginal. That could not be concluded because of their respective standard deviations, 1.208 and 0.962. Sixty-eight percent of the women with food for less than nine months took out loans for 1.312 to 3.728 months whereas 1.668 to 3.592 was the range of the months for the same percentage of women with food for nine or more months.

On the basis of the *household earners’ ratio*, the length of the loans varied largely ($F_{3,117.020} = 3.571, p$-value $= 0.016$). The terms of the loans for some women were very different from other women.

The contrast tests performed using the modified Shaffer’s (1986) Sequential procedure demonstrated that the loan terms of only two out of six pairs of quartiles were different in meaningful ways based on the *household earners’ ratio*. The fourth quartile was common to both pairs. It differed in a meaningful way from the first ($t_{103.866} = 2.953, p$-value $= 0.004, \alpha_6 = 0.0083$) and third ($t_{88.209} = 2.651, p$-value $= 0.010, \alpha_3 = 0.0167$) quartiles. It seemed as if the fourth quartile kept the loan for the longest term as seen in Figure 23. The women belonging to the second quartile also received loans for longer terms than the women in the first and third quartiles but not for as long as the women in the fourth quartile. By looking at these three quartiles, except for the third, it appeared that the trend was linear, almost confirming the assumption that the higher the *household earners’ ratio*, the longer the loan terms were. The third quartile did not allow to arrive at that conclusion because the women of the quartile took out loans for fewer months than the women in the second and fourth quartiles.
No decisive conclusion could be drawn based on all of the four tests performed on the length of the group loans taken out by the women. Whether they were literate or not; had 6-12 year old children in school or not; and had enough food for more or less months, the number of months they had their group loans for did not differ in a meaningful way.

A couple of variations on the loan terms based on the *household earners’ ratio* were spotted. However, they were not helpful in predicting that the higher the *household earners’ ratio* the longer the loan terms would be or vice versa.

**Program Benefits: Microenterprise**

“Microfinance programs aim to alleviate poverty by strengthening the ability for economic development, income growth, and entrepreneurship in much of the developing world” (Underwood, 2007. p.2). Therefore, micro-entrepreneurial activities are very important for the success of any microfinance program. A microenterprise could be any undertaking of entrepreneurial activity. The SfC women could have engaged in many microenterprises. This study focused only on two aspects of the SfC women’s
entrepreneurial engagements. One aspect was related to the use of the loan money for production and the other explored whether the women started a new microenterprise. The first looked at specifically how much of the loan money was used for production. While analyzing the microenterprise startups, loans were not taken into consideration.

The definition of a microenterprise was also left up to the respondent as she understood it. An activity could have been reported as a microenterprise by a respondent while others would not consider it a business due to the lack of understanding of what they actually understood as a microenterprise.

**Productive Use of Loans**

Microfinance provides credit to its clients for any use. Generally, the focus is on the productive use for the simple and obvious reason that the loan money should be able to yield direct returns. When the investment generates revenue, the client is more likely be able to repay the loan with interest on time. Any other use of the loan might not generate any income and as a consequence the client could default on the repayment. Poor clients have very limited sources of income and if they do not make any money from the invested loan money, repaying the loan with interest from alternate sources could be impossible for them.

Generally, the borrower who has more resources at her disposal could be expected to use the loans for productive uses. They would be in a position to make a choice as to how they would want to use their loan money. In contrast, a poorer woman might not have any choice but to use the loan money to meet the basic and emergency needs knowing that the money would not generate any direct income. She would have to repay the loan with the income received from other sources.
Figure 24 shows that on average less than two percent of the total borrowed money was used for productive purposes defined in the Data Collection, Transformation and Analysis section of Chapter 0 as investment in agriculture, vegetable gardening, purchasing animals, petty trading, prepared food, and food processing. The negligible percentage can be inferred to the borrowers’ economic status. They should be so poor that they had to use almost all of the borrowed money to fulfill their needs rather than invest it for generating some revenue.

**Figure 24: Percentage of Total Loan Amount (XOF) Used by Borrowers for Productive Purposes by Economic Indicators and Their Levels**

<table>
<thead>
<tr>
<th>Literacy</th>
<th>Children in School Ratio (%)</th>
<th>Household Earners' Ratio (%)</th>
<th>Food Sufficiency</th>
<th>Percentage of Total Loan Amount Used for Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Literate</td>
<td>&gt; 0%</td>
<td>≤ 39%</td>
<td>&gt; 39 &amp; ≤ 50%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Illiterate</td>
<td>&gt; 39 &amp; &gt; 50%</td>
<td>&lt; &gt; 50 &amp; &gt; 62%</td>
<td>&gt; &gt; 62%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Literate</td>
<td>&gt; &gt; 62%</td>
<td>≤ &gt; 9 Months</td>
<td>&gt; &gt; 9 Months</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

Note: See Table 22 for definition of the levels.

How much of the borrowed money from the group fund was used for productive purposes by the SfC participants was analyzed using four economic indicators. Regardless of the percentage of the family members contributing to the household income ($F_{3, 110.768} = 0.816, p-value = 0.488$), whether the women were literate or not ($F_{1, 109.768} = 0.816, p-value = 0.488$),
what children in school ratio was (F_{1,98.258} = .726, \ p\text{-value} = 0.396) and how many women who had enough food for less than nine months and how many for nine or more months (F_{1, 103.172} = 2.591, \ p\text{-value} = 0.111), the amount of money invested in income generating activities did not vary significantly. The average amount used for productive purposes can be seen in Table 26.

None of the four indicators of economic status of the women participating in the Saving for Change program in Mali had clear influence over the amount of money they used for generating income. Although small, literacy had a negative effect which was the opposite of what was expected. As can be seen in Figure 24, illiterate women had used a higher percentage of the loan money for production. Similarly, a higher household earners’ ratio was also expected to have influenced a higher percentage of the loan amount for productive uses. Figure 24 shows that as the quartiles went up or the household earners’ ratio increased, the use of borrowed money for production decreased. The only exception to that trend could be seen between the first and second quartiles where the second quartile was higher than the first.

The other two indicators, the children in school ratio and enough food for the family the previous year did not have a meaningful effect on how much money was used for productive purposes. However, the insignificant differences were indicative to the assumption that economic levels mattered with regard to who used more of the borrowed money for generating income.

**Microenterprise Startups**

The success of a microfinance program is very much dependent on its clients starting a new or expanding their existing business. To bring the women and their family
out of the vicious cycle of poverty, they will have to be able to increase their income. Without starting a new business or expanding the existing one, no change in their earnings could be reasonably expected. That is why every microfinance program makes loans to the members because it wants them to invest the loans and make more money to enable them to get out of poverty. Otherwise, giving loans would just be like watering the sand, an ineffective and unsustainable activity.

**Table 26: Microenterprise Activities by Indicators**

<table>
<thead>
<tr>
<th>Economic Indicators</th>
<th>Levels</th>
<th>New Microenterprise Startup</th>
<th>Productive Use of Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sample Size</td>
<td>Mean</td>
</tr>
<tr>
<td>Literacy</td>
<td>Illiterate</td>
<td>129</td>
<td>1.67</td>
</tr>
<tr>
<td></td>
<td>Literate</td>
<td>94</td>
<td>1.63</td>
</tr>
<tr>
<td>Children in School Ratio</td>
<td>First Half</td>
<td>64</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Second Half</td>
<td>80</td>
<td>.34</td>
</tr>
<tr>
<td>Household Earners' Ratio</td>
<td>First Quartile</td>
<td>56</td>
<td>1.70</td>
</tr>
<tr>
<td></td>
<td>Second Quartile</td>
<td>61</td>
<td>1.66</td>
</tr>
<tr>
<td></td>
<td>Third Quartile</td>
<td>52</td>
<td>1.50</td>
</tr>
<tr>
<td></td>
<td>Fourth Quartile</td>
<td>54</td>
<td>1.76</td>
</tr>
<tr>
<td>Food Sufficiency</td>
<td>First Half</td>
<td>112</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>Second Half</td>
<td>106</td>
<td>1.70</td>
</tr>
</tbody>
</table>

Being in the program for over a year, most of the participants had at least taken out one loan. Starting a business would be a fair expectation from them. The four economic indicators were used to explore if any had any effect on the women starting a business. The indicators were literacy, school age children in school, percentage of the *household earners’ ratio*, and months with enough food for the family. The descriptive statistics in Table 26 give a general picture of the effects.

Literacy was expected to positively affect the women in starting a new business since it was one of the skills that would help them run a business in many ways. The test results did not fulfill the expectation in a meaningful way ($F_{1,204.394} = 1.838, p$-value = 0.177). There was no clear difference on starting a business between the women with
literacy and the illiterate ones. When the means and standard deviations of the illiterate and literate women were compared the women without literacy scored higher.

Whether the women’s household had 6-12 year old children in school or not, that did not make much effect on their decision to start a new business ($F_{1, 196.709} = 0.517$ and $p$-value = 0.473). As it can be observed from the descriptive statistics, the difference between women with 6-12 year old children in school and women who did not have school age children in school was very small. Even that small difference favored the women without children in school. Could that mean that the women who did not have 6-12 year old children in school had more time, which, in turn, enabled them to start a business or was it the “do or die” situation since without starting a business she did not have a way of improving her economic condition?

Food sufficiency was expected to have positively contributed to start a new business positively but the test results did not support that argument. There was no statistically significant difference between the women who had enough food for more or fewer months ($F_{1, 215.999} = 1.627$, $p$-value = 0.204). However, the women with enough food for more months (mean 1.70, SD 0.461) did score higher on the scale of starting a new business by a very small margin compared to the women who had enough food for only nine or less months (mean 1.62, SD 0.489).

Who started a new business and who did not was affected significantly based on the household earners’ ratio ($F_{3, 120.732} = 2.773$, $p$-value = 0.044). The omnibus test results showed that at least one of the four quartiles differed significantly with another quartile.
The contrast tests compared all possible pairs of the four quartiles using the modified Shaffer’s (1986) Sequential Procedure which revealed that only one out of six pairs was statistically significantly different on new business. The third and the fourth quartiles had the biggest difference ($t_{100.255} = 2.837$, $p$-value = 0.006, $\alpha_0 = 0.0083$). The other pairs had varied degrees of difference as observable in Figure 25, but none of those were statistically meaningful.

**Figure 25: New Business by Household Earners’ Ratio**

As observable in Figure 25, the first and second quartiles were close to each other even though the average number of businesses started by the women belonging to the second quartile with 39 to 49 percent members contributing to the household income dropped slightly. The decline was rather sharper from the second to the third quarter, ranged 50 to 62 percent contributing to the household income. The incline to the fourth quartile made it very different from the third quartile.

No logical conclusion could be established based on the results of the test based on the *household earners’ ratio* that the higher level means better for starting a new
business. There was at least one significant difference but that seemed to be just by chance.

After analyzing who started a new business and who did not based on all four economic indicators, it was obvious that there was no clear and straight answer as to whether or not these indicators had any influence. Only one out of four indictors, the household earners’ ratio, had in some ways significantly affected but the other three, literacy, food sufficiency and children in school ratio did not matter much. Even the household earners’ ratio appeared to have some unexplainable effect. Who starts a business is a very complex issue and perhaps, finding a definite answer to what influences that decision might not be possible by testing one snapshot set of data.

Conclusions

The purpose of performing all the statistical tests was to explore whether Oxfam America had reached the poorest of the poor women through its Saving for Change program in Mali; those women had benefitted from the program over time and those benefits were utilized by them in a fair manner regardless of their economic status. The analyses of the results showed that the women reached were the average women in the villages where the programs were implemented. They did not stand out as poorer or wealthier than the women who were not part of the program.

All savings, loans and microenterprise activities indicated clearly that the women had actively engaged in them. The women had saved regularly and also voluntarily. They had taken out loans multiple times and paid them off. A large number of them had also started their own business. They appeared to have been enjoying the benefit of the
program. The level of their financial engagement seemed to be remarkable considering the socio-economic conditions of rural Malian women.

Moreover, access to the benefits did not particularly seem to have been geared toward the women who had a better economic condition. Almost all benefits were equally accessed by most participants except for a couple of discrepancies which were not enough to suggest a difference in a meaningful way.
CHAPTER V

CONCLUSION: THEMES, LESSONS AND RECOMMENDATIONS

Most of the results of the statistical tests did not contradict the assumption that the SfC program had reached the poorest of the poor. Out of the four indicators, three showed that the women reached by SfC were as poor as the other women in the area who did not participate in the program. The participants seemed to have benefitted from the program since they had increasingly utilized many of the program benefits. Except for a few instances, the women’s access and utilization of the program benefits did not appear to have been influenced by their economic levels. Although mixed, these findings adequately rejected the notion that Oxfam America had not reached the poorest of the poor. However, there was still room for more improvement to unequivocally prove the claim that all of the women reached were the poorest and all benefitted equally from the program regardless of their economic levels.

The results generated certain themes and lessons. Some of the themes and lessons are discussed in this chapter. To a certain extent they confirm that the SfC model has the characteristics to become a successful model to reach the poorest and also suggest some improvement to fully realize its potential. In addition to the discussion, the chapter also presents some recommendations to Oxfam America and the microfinance community. Before getting to the themes, lessons and recommendations, the section below summarizes the results of the statistical tests.

Summary of Findings

In a nutshell, the mixed results were not sufficient to argue that SfC was not reaching the bottom half of the poor in Mali. Most of the results suggested that the
program had reached the poorest women. There were a few results which conflicted with that conclusion. Economic indicators such as the participant’s schooling and literacy, and the assets, children in school ratio, household earners’ ratio and food security at her household level, were used for the omnibus tests. Eleven different program benefits listed as the dependent variables in Table 15 were also analyzed, including those for the paired samples t-tests.

Three different sets of statistical tests were performed for this study. Each set of tests was designed to answer a main research question. The main questions were based on the three aspects of microfinance outreach: depth, scope, and worth or value to the user. The results are summarized under each of the aspects of outreach below.

**Depth Aspect of SfC’s Outreach**

Based on the results, an inference can be drawn with some level of certainty that SfC reached the women at the depth of poverty even though the results were somewhat mixed. Only one out of four indicators differentiated the SfC women from the other women in the area in a meaningful way. The 2006 survey results showed that the SfC women stood out better off compared to both Spontaneous or Control group women on the household assets indicator. Their household asset advantage over the women associated with other groups was obvious in both Original and New cohorts. There could be only two arguments to explain the advantage of the SfC women. One argument could be that the components used to create the household assets index were favorable to the SfC women. The other possibility is that the SfC women had built up their assets due to their participation in the program for over one and a half years.
None of the remaining three indicators used to explore depth of SfC’s outreach resulted in a meaningful difference particularly between the SfC and Control groups. Food security, schooling of the women and the children in school ratio did not show that the SfC groups were different from the other groups. The SfC groups’ only significant difference was with the Original Spontaneous groups on the children in school ratio. The children in school ratio of the Original Spontaneous group members stood out as statistically significantly higher than the children in school ratio of the women in the Original SfC and Original Control groups. Since the women of both Original SfC and Original Spontaneous groups were from the same villages, the difference between the two groups was very important. It inferred that SfC had selected poorer women who could not afford to send as many of their 6-12 year old children to school as the other women in the village. The difference could have been caused by the economic conditions rather than the issues related to distance to school. Should that have been the case, all 6-12 year old children in those villages would have been affected by the issue regardless of the women’s association with a SfC or Spontaneous group.

Schooling, food security, household assets and children in school ratio did not conclusively differentiate the SfC women to suggest that the SfC program had not reached and benefitted the poorest of the poor. Nor was there clear evidence to prove that it had indeed reached them. When the results fail to adequately prove one way or the other, it is important to revisit the context. Seven out of ten Malians live on less than US$1 per day (World Bank, 2005) and they fall in the category of the poorest. In the absence of clear evidence to prove otherwise, it was not difficult to state that all, if not most of the women reached by SfC in Mali were the poorest. The issue of the depth of
outreach should no longer be a question in the case of SfC as it had come up after studying five different microfinance programs (Navajas et al., 2000). The people reached by those programs were characterized as “the richest of the poor and the poorest of the rich” (p. 343).

Analysis of Scope of SfC’s Outreach

A few results revealed that the benefits of SfC had served relatively better off women in a significant way but the majority of the results did not support that assertion. The benefits utilized by the participants or the scope of SfC’s outreach could have been many since they had received several loans of varying amounts for different terms and for many purposes. Similarly the wide range in the weekly savings rate and a single voluntary deposit of any amount between XOF0 to XOF10,000 also diversified the scope of savings. Among these many scopes of SfC, only the major categories were used for analysis in this study. Eight of the categories were directly tested and three more were done indirectly because of their significant correlation with one of the directly analyzed benefits. The results were not conclusive in predicting the effect of the economic indicators on the utilization of the program benefits by the SfC participants. Most of them did not indicate a meaningful influence. All the statistically significant results are explained below along with some other important results.

Among the eight benefits, the number of group loans taken by the participants was the only benefit that differed statistically significantly by the measure of both the children in school ratio in school and the household earners’ ratio. More loans were taken out by the women with 6-12 year old children in school than by the women who had no 6-12 year old children in school. The effect of the household earners’ ratio on the
number of loans, however, could not be stated with a similar level of clarity. Only two out of six pairs were different in a meaningful way and the third quartile was common to both pairs. Because of the fact that only one quartile was different from the other two quartiles, it could not be concluded that the *household earners’ ratio* had a meaningful effect on the number of loans. The difference in the omnibus tests could not be explained logically.

Similar effects of the *household earners’ ratio* were also observed on the number of months to repay the group loans and starting an enterprise. Only two out of six pairs were significantly different for each benefit and one quartile was common to both of those pairs. The other quartiles did not appear to have the same degree of influence as to which of the women kept the loan for a longer period of time or started a microenterprise. In view of the difference noticed in only one pair, there was no pattern to suggest a clear conclusion.

As expected, the literate women deposited much higher voluntary savings than the illiterate women. Similarly, the literate members had also taken out larger loans. Since the average loan size of the women had high positive correlations with their use of loans for consumption, use of loans for emergency and average monthly repayment amount as shown in Table 23, it can be concluded that the literate women not only used more loan money for emergency and consumption but also repaid the loans in larger installments. The effect of all the other indicators on the utilization of the remaining benefits, weekly savings, late savings payment, group loan size, and the productive use of loans were found unpredictable. Among the indicators used to perform the tests, food security had no meaningful influence on any of the benefits. Since the tests were not run for the
household assets because of the significant correlation with food security, the effect of the household assets on any of the benefits could also be concluded as not significant. If the poorer women were benefitting less than the comparatively better off, then SfC would have to make some changes in their program so that all women would have fair access to program benefits regardless of the differences in their economic conditions.

**Value of Benefits to the SfC Participants**

Many of the benefits utilized by the SfC participants seemed to have some value or worth to them in a statistically significant way. When compared the utilization of the benefits in two consecutive years, it was increased in the second year in frequency, size or both. There were some benefits whose worth could not be conclusively determined. Below are some highlights of the test results.

The SfC participants seemed to have utilized both savings and loans benefits. They took out many more loans in the second year. The size of the loans also increased over time. However, it took them significantly longer to repay the loans and the monthly loan installment did not increase much. These contrasting trends in taking and repaying loans suggest that the volume of the outstanding loans was much higher in the second year. Since the group’s fund was the only source of those loans, the fund must have also grown with time. A small portion of the growth could have been attributed to the interest paid on loans and some fees or fines but most of the growth was due to savings. The highest amount of voluntary savings increased significantly. Women’s failure to deposit their mandatory weekly savings decreased noticeably. Although the women considerably decreased their weekly savings rate, with the improved on-time payments their weekly
savings should have steadily increased their total savings over time. Therefore, the services must have been of worth to the participants.

Starting a microenterprise was the only variable of whose worth appeared to be negative. Fewer women started a business in the second year. This could mean that the women had already started microenterprises prior to the second year and there was no need for them to start a new one. Since the data about how many of the women had been running microenterprises were not available, why the number of enterprise startups went down in the second year could not be answered with certainty.

**Emerging Themes and Lessons Learned for Reaching the Poorest**

Although many lessons can be learned from the findings of the data analysis, this section focuses in four major thematic areas: Poorest Save, Poorest Repay Loans, Poorest and Illiterate Can Manage a Financial System and Literacy for Microenterprise. These were the important themes that emerged from the findings which can also contribute to the ongoing discourse in the field of microfinance about reaching the poorest.

Reaching the poorest has been a challenge because of their complex situations. The poorest have very little income. Their main sources of income are primarily agriculture, livestock and selling labor. Almost all of them are illiterate and have never been to school. Most of the poorest live in areas which have very little market viability for economic activities. They have very limited opportunities to be enterprising. All of these socio-economic and physical conditions associated with the poorest segments of the population make them less attractive and viable for microfinance programs. Because of such difficult realities, microfinance programs assumed that the poorest could not be good clients. The assumptions are that the poorest cannot save and repay loans even
though they desperately need assistance to overcome their difficult situations. Their difficult situations and their illiteracy do not allow them to actively engage in a financial system and become entrepreneurial. However, the following themes and lessons challenge these assumptions and encourage microfinance programs to reach out to the poorest.

**Poorest Save**

Each member of the SfC group on average saved US$8.12 in 2006 which was 1.73% of the Malian per capita income.\(^{10}\) The saving was a significant percentage of income for the poorest women in the world. Their actual percentage of savings could be even higher since the estimate was based on the national per capita income of Mali for 2006, US$470 (State Department, 2008) which included the income of the wealthy Malians as well. Moreover, it was based on their net mandatory savings with the SfC group only. Their voluntary saving with the SfC group was not included in this estimate. Many of them also reported saving at a bank or credit union.

The United States’ personal savings rate for 2006 was 0.7% (BEA, 2008). Although this personal savings rate might not be directly comparable with the SfC participants’ savings in their group because the bases of their calculations are very different, the percentages indicate that the SfC participants’ savings rate is impressive. They challenged the notion that the poorest cannot save. The poorest might not be able to save a lot but the SfC participants showed that they can save regularly. They also found a safe place to save (Otero, 2003, p. 26) and many of the poorest who live in rural

\(^{10}\) The savings was an estimate calculated based on the average weekly savings of the SfC participants for 2006 by weeks in a year. Dividing by the 2006 exchange rate, the amount was converted into US dollars.
areas are deprived of such service. Since they themselves were the trustees of the group fund and the money would always remain with them and that factor might have encouraged them to deposit their hard earned money in the group.

The importance of savings for the poor and the poorest alike was realized in the early 1990s. It was the introduction of savings provisions along with credit that changed the paradigm in the world of microcredit and it became to be known as microfinance (Armendariz de Aghion & Morduch, 2005, p. 14). Although most of the microcredit programs converted into microfinance programs by adding savings to the list of their services, many microfinance programs still give very low priority to savings. That is a reason why Nagatajan and Meyers (2005, p. 19) emphasized after their study of various types of microfinance programs from different countries, including one from Mali, that credit does not address all the financial needs of the poorest. They need many other services. Savings is one of the two services suggested by Nagarajan and Meyers.

Credit only or credit first approaches have been well promoted for the poorest in the field of microfinance with the core belief that the poorest do not have resources to save. Rutherford (1998) gives a counter argument citing evidence and observation over twelve years in both urban and rural Bangladesh. He believes that savings is the mechanism to get the poorest out of debt. When the poor do not have savings, they will have to dip into their future savings at times of need by taking loans with the promise that they will repay the loans with interest. If they had not taken the loan, they would not have had to pay the interest. The interest ranges anywhere between 20%-32% (p. 9). That amount could have been part of their savings. Since they have to pay interest, their savings could be lost or largely reduced.
With their weekly savings the SfC women might not need to dip into their future savings. However, their perception toward savings was not as great as toward loans. In the same surveys from which the data were used for this study, the SfC participants were also asked what they liked most about their group. Loans were the most popular response. That was great. However, one needs to understand that loans would not be available to them had they not saved in the first place. Without the groups fund there would be no money to lend to any of them. Although fines and interest could have a small share in it, it was the pooled savings deposited by the members every week that made up the group fund. Therefore, savings were the core of all SfC’s activities. Everything else happened on the periphery of the saving activity.

The importance of SfC women’s savings cannot be overstated. Perhaps their savings were the “most promising contribution” (Diop, Hillenkamp & Servet, 2007, p.37) by SfC. It helps to protect them from vulnerability. The poor are prone to shocks because of their income patterns. Their incomes are small and irregular; and also fluctuate a lot. In absence of savings, they become vulnerable and even a small shock can have a devastating effect on their lives. The impressive savings of the SfC participants built up steadily by saving every week, though at a lower rate but with improved on-time deposits, and also by saving voluntarily in larger amounts seemed to have created a financial safety net for them. This savings-led approach is an equity building provision which can have far reaching social, economic and psychological impact on their lives. No matter how much they save, if they continue to save regularly, their savings portfolio can contribute to the overall improvement in their quality of life.
Although there was no significant difference among the women for savings based on the economic indicators used for this study except for the effect of literacy on the highest voluntary savings, it might be worth exploring the behaviors by the categories of the poor as discussed under Who Are the Poor? in Chapter 2. Due to the lack of information this study could not analyze the savings with certainty from the lens of the categories of the poor—ultra or hard-core, destitute, chronic and transitory. However, taking the context and the test results into consideration, most of the SfC women could be put in chronic or destitute categories. Nearly one quarter of them could also be assumed to be the hard-core poor because they had about one-third or less members contributing to the household income.

**Poorest Repay Loans**

The most important aspect of a loan is repaying it on time. That was exactly what the SfC participants seem to have done in Mali. They repaid their loans on time in a smart way. While they borrowed larger loans, they took longer to repay them. The SfC women did not seem to have been intimidated by loans. Many of the poorest people think that loans are not good for them. If they take loans, they say that they would never be able to repay them and would end up inundated in debt forever (Halder & Mosley, 2004, p. 401; Webb, Coates & Houser, 2002, p. 30). The SfC women did not appear to have perceived that kind of fear of loans. An overwhelming majority (88%) of the SfC group member had taken at least one loan. The median loan number was 2.83. Moreover, they had taken increasingly larger loans more frequently. With that level of engagement in loan activities, it was safe to infer that the participants were benefitting from the loan services made available to them by the program.
The loan activities of the SfC women were unique particularly because many of them were very poor, ultra-poor as referred by those who studied similar microfinance programs in Bangladesh, but the Bangladeshi ultra-poor did not want to take loans (Hashemi, 1997; Matin & Hulme, 2003). As much as the poorest need financial help, they also tend to have a higher loan aversion rate (Webb, Coates & Houser, 2002). They are acutely aware that they have limited sources of income and that these would not be sufficient to repay the loan. Moreover, they might also have had some bad experience with credit in the past.

Several factors could have dissipated the fear of taking loans and motivated the SfC members to pay the loans back. Unlike many microfinance programs such as Grameen Bank, the SfC participants own the money in their group fund and they manage it themselves. For this reason, all the women as a group could have become extra careful and vigilant while making a loan and monitoring repayments. They could not afford to be relaxed or lenient since their own money would be at stake should something go wrong with repayments. When a borrower failed to repay a loan, everyone else in the group would have to make a sacrifice. No one would like to bear the burden of sacrifice caused by someone else’s default, particularly the poorest women in the world.

Interest on loans could also have been a factor for paying them back. The interest rate could have attracted many to get loans. Set by the group itself, the rate could have been reasonable and affordable to them compared to the market rate. Hesitation to take near market interest rates on loans is a reason why the poorest exclude themselves from participating in microfinance programs (Weiss & Montgomery, 2005 pp. 395-396; Datta, 2004, pp. 69-70). Even if the rate was comparable to the market rate, it still could have
been appealing to them since their own group keeps the interest to itself, unlike in the models of the credit-led approach where interest goes to the MFI. The SfC women knew that the interest paid on loans from their group would help to build up their group’s equity. Since each member owned a portion of the group fund, she knew that any interest earned from loans was going to increase her share of the dividend. That was an extra incentive for all the women to make sure that each loan got repaid. To the borrower, she also knew that at least some of the interest she paid would return to her because of her share in the group fund. Had she taken the loan from a bank, she most likely could never expect to get back any portion of the interest she paid on her loan.

Another factor could be the size and term of the loan because flexible disbursement and repayment plans help to reach the rural and poorest women (Nagarajan & Meyers, 2005, p. 19). The flexibility could have encouraged them to take a less intimidating loan (Mosley & Hulme, 1998, p. 787) of a smaller size and for a shorter term. The average size of the SfC group loan was little less than what a member’s estimated total worth of her one year’s savings with the group. The estimated one year’s savings was US$8.12 and the average group loan size was US$8.06. This way, both the group and borrower, seemed to have handled loans safely. Moreover, the loans were also taken for a short term. The mean length of the loan term was 2.55 months. At that rate, a member could have taken up to four different loans of about US$8 in a year. If she had to take the worth of all four loans, US$32, at one time, the borrower perhaps, would have never taken any loan because of loan aversion. This is exactly what had happened in Bangladesh, and BRAC created a different program for the poorest women with a lower loan amount (Hashemi, 2001) because the minimum size of a loan of its regular program
was much more than the borrowers could handle. It was also understandable why the MFI set the minimum amount one could borrow. If they had to handle many small loans their administrative costs would increase drastically. The SfC groups did not have to worry much about administrative costs because all officers were volunteers and their overhead costs were minimal.

The flexibility in the purpose of the loan could have also played a role as to why most of the SfC women engaged in loan activities. From the meaningful correlations of the women’s average group loan size and with their use of loans for consumption and emergency shown in Table 23, it was obvious that most of the money was used for emergency or consumption. Any microfinance program would prefer to see the loans used for productive purposes. SfC was not an exception to that. The hope is that when the borrowers invest for generating revenue, they would more likely be able to repay the loans. It seemed as if the SfC groups were not rigid with regard to the purpose of loans. They could have been realistic because the members themselves needed all kinds of loans. The “protection loans,” which allow the borrower to deal with their immediate needs, appeared to have been given more importance than to the “promotional loans,” which are used for investment (Weiss & Montgomery, 2005, pp. 395-396).

By being able to give out loans for longer terms even when the loan size increased, the SfC groups were in an advantageous position with regard to repayment management. A longer loan term meant smaller repayments. The smaller the repayments, the easier the repayment should have been. When the borrowers were able to repay without any delinquency, not only did the groups get their money back, it also improved the financial health of their fund. Healthy group funds allowed the groups to
make more and larger loans for longer terms. That kind of flexibility is more beneficial, in particular to the poorest, who normally are financially strapped.

Although the borrowers might have had the opportunity to pay back their loans in smaller installments, they did not seem to have slacked. The high correlation between the average monthly installment and the loan size \((r_{217} = 0.817)\) suggested that the borrowers proportionately increased the amount of monthly repayment as the size of the loan went up. As a result, the loan term was not proportionately extended even when the size of the loan was increased. The negligible correlation between loan term and loan size \((r_{217} = 0.200)\) also reinforced that finding. If the borrowers had taken proportionately more time to pay a large loan due to its size, their loan term and loan size would have resulted in a higher degree of correlation. The SfC women’s repayment in relatively larger installments and shorter terms, even when the loan amounts were increased, suggests that the poorest women are also able to repay their loans.

**Poorest and Illiterate Can Manage a Financial System**

Many illiterate and poor women have run their household and other kinds of social institutions such as the users’ group for a long time. However, full ownership and management of a financial system by a group of illiterate women is not common. None of the SfC groups had more than one or two literate members, yet they managed their groups well. The credit goes primarily to SfC’s innovation. The groups were also trained to keep oral records. From the data, it could be assumed that the office holders adequately managed their groups. They established rules; collected savings; gave out loans and ensured repayments. These tasks were challenging even to the educated, but the illiterate women seemed to have managed the financial system well.
Many MFIs hire educated staff and train them to perform similar management functions. One of the differences between the SfC and the big MFIs, which use educated and trained staff such as Grameen Bank, is the handling of external loans. In a Grameen model, its staff, the Center Manager, comes to the meeting with the money to lend to the members and collects all the payments (Dowlla & Barua, 2006, pp. 19 & 77-78). The women of the groups are passive participants as far as the financial system management is concerned. In the case of the SfC groups, the women were in front and center for every single decision to manage their group and any transactions that occurred involving the group’s money.

Perhaps the SfC women of Mali managing a financial system was not a big deal. As Professor R. Narasimhan (2004) suggests, these women are not really illiterate. They only lack the “script literacy” (p. 38). To him, “Literacy is not an all-or-none phenomenon. Individuals, as well as societies, are more or less literate” (p. 37). He presents the cases of rich oral literacy and tacit literacy practiced in India for centuries. Thousands of verses of the Vedas (sacred Hindu scripture) have been passed on to generations without any script. No textbook was ever used to teach and learn performance arts specially for playing Tabala (a kind of drum). Women and children have been acquiring craft skills such as Kolam (folk arts used to decorate the front porch and courtyard particularly in Southern India) painting without any manual. All this teaching and learning and transfer of knowledge and skills happened without the use of the script literacy. Similarly, the rural poor, men and women alike, manage all aspects of their lives at all levels, individual, family, and community without text literacy for generations. Managing a microfinance group is very doable for them. Once they got the
concept of what they needed to do, they were able to do it with little support and
guidance. The SfC training must have provided them the concept and mechanics to
manage the groups well.

However, it does not mean that there is no value to script literacy. As remarkably
well as the oral record system worked for the Malian groups, it is very important to
encourage the women to acquire literacy skills. The operations of their group and
microenterprises are at the very basic level. Soon they may realize that their literacy and
numeracy skills are not adequate to manage the larger and more sophisticated financial
operations.

**Literacy for Microenterprise**

The relationship between literacy and microenterprise did not turn out as expected. Literacy did not seem to have a meaningful effect on the women who started a new microenterprise nor did it have such influence over the use of loan money for productive purposes. Since the literacy rate has been used as one of the indicators of knowledge to construct both the human development and human poverty indices (UNDP, 2007, p. 357) it was assumed that the women with more knowledge would be prone to start a microenterprise.

No prior studies directly linking micro-entrepreneurship and microenterprise startup with literacy were found. The closest studies were those which looked at the relationship between education and entrepreneurship but they also do not provide a clear link between them. Some studies have suggested that the lower the education the more likely people are to start a new enterprise. Pickles and O’Farrell (1986, p. 438) found that in Ireland people with basic education and up to high school dropouts were most
entrepreneurial. As the education level increased, people became significantly less entrepreneurial. The decline could have been due to the availability of employment opportunities for the educated. Clercq and Arenius (2003) learned from their study in Finland and Belgium that people with secondary or higher education were half likely to start a new business than the people with primary education. Perhaps, as Storey (1982, p. 107) suggested about education with regard to entrepreneurship, literacy is also an important but not a sufficient factor for starting a new microenterprise. Further studies might provide insight in this relationship.

Although the test results in this study showed that literacy did not have a clear influence over startups, it could also not be conclusively interpreted that literacy had no effect on starting microenterprises. The tests were based only on the new startups data for the second year. Any microenterprises started in the first year or prior to that were not captured by the analysis. Some literate participants might not have started a new microenterprise in the second year because they already were managing an existing one. They might have not needed to start a new microenterprise.

However, if the literate participants had existing microenterprises and that was the reason why they did not start a new one, they should have utilized more loan money for productive uses. The utilization could have been interpreted as using the loan money to expand their existing microenterprises. The lack of significant effect of literacy on the use of loan money for productive purposes did not allow the researcher to make that connection. Literacy’s meaningfully positive effect on the loan size, where the loan size had medium and small correlations with the use of loans for emergency and consumption respectively, was not helpful in making a case for literacy either. The positive effect and
correlations suggested that the literate women had taken out significantly larger loans for emergency or consumption, not for starting a microenterprise or for productive purposes.

Could the literate women have used their loan money such as for sending their 6-12 year old children to school instead of starting a new microenterprise? The literate women borrowed significantly larger amounts of loan than the illiterate women. The meaningful correlation between the average loan size and the use of loan for consumption in Table 23 indicates that a significant amount of the loan money was spent on consumption. These two test results suggest that the literate women had taken significantly larger loans and much of that was spent on consumption. Since there was no such meaningful correlation between the average loan size and the use of loan money for productive purposes, it could be concluded that more of the loan money was used for consumption than for microenterprises. Could it be possible that the loans taken by the literate women were not enough to start a microenterprise despite the fact they were larger than the loans borrowed by the illiterate women? Weiss and Montgomery (2005, p. 405) suggest that the small loans are primarily used for consumption. Expenses for schooling of their 6-12 year old children were one of the components of consumption (Nourse, 2001, p. 65). Many studies have shown that microfinance has a positive impact on children’s schooling (Maldonodo & Gonzalez-Vega, 2008, p. 2450; Khandker, 1998, p. 49, 54; Holvoet, 2004). It would make perfect sense if the literate women had borrowed money to send their 6-12 year old children to school. Not knowing how much of the consumption spending was for schooling prevents any further analysis from this set of data. In addition to schooling, expenses such as for clothing, weddings and household
item were also included in the consumption category. The women could have spent the loan money on any of those consumption components.

Although these findings were not conclusive to prove a clear and straightforward relationship between literacy and microenterprise, Windham (1999, p. 342) suggests not to rush to draw a conclusion when it comes to literacy’s contributions, particularly to the economic activities. He argues that their relationships are “complex” and “reciprocal” at both individual and societal levels. The lack of clarity in the definition of literacy is also a problem for studying relationships between literacy and economic activities. Windham points out that even the people who are labeled as illiterate by definition may have a sufficient level of literacy to undertake an economic activity.

It is also important to have the discussions of the test results of this study in the context of the socio-economic conditions of the rural Malian women. On one hand, having taken a literacy class could also be a powerful symbol of status where 88.1% of women are illiterate (African Development Fund, 2007, p. ix). Any activity that is within the reach of only a few, such as attending a literacy class or school for the rural Malian women, will likely be perceived as prestigious. In some ways, attendance in a literacy class could mean that the literate women were better off and able to spare some time and resources for their own development. It is difficult for the poor to spend time and resources on something like literacy which may not give them an immediate and tangible return while they are struggling to earn their daily meals. The opportunity cost of taking a literacy class could be unaffordable for them.

On the other hand, literacy might not have mattered much because the struggles of the rural and poor women are similar regardless of their literacy status. As Chen and
Snodgrass (2001, p. 187) found from their study of a microfinance program in India, it was difficult for the borrowers to start enterprises because of the market and socio-cultural constraints due to their being women in a rural area and their competing basic survival priorities as the crux of their poverty. The challenges imposed by these realities could have been too difficult for literacy alone to help the women overcome them. In order for literacy to have an advantage in starting a microenterprise, other factors such as road access might also need to create a conducive environment.

The usefulness of literacy for microenterprise activities could have been somewhat undermined by these findings but caution needs to be observed from rejecting the need of literacy for the poor women to tackle their poverty. Poverty could have been caused by many other factors and the remedy might not rest upon an economic activity such as engagement in income generation alone. Literacy could be instrumental in addressing other causes of poverty even after it is established that it has no effect on starting microenterprises. That is a reason why SfC should continue encouraging its members to participate in literacy classes even though SfC does not offer them.

**Implications and Recommendations**

The goal of reaching the poorest has been a priority in the field of microfinance. It is good that because of this crusade primarily led by the Microcredit Summit Campaign the poorest are finally at the forefront of microfinance. To Helms (2006, p. 18), whether microfinance reaches the poorest or not is essentially a moral rather than an operational debate. Many microfinance programs receive subsidies and public funds because of their mission to reach the poorest. In reality, they do not go deep enough in reaching them (CGAP, 2000). The failure of those programs is a moral one because they take the
resources intended for the poorest but instead they use them mostly for the poor and not-so-poor. Microfinance has an obligation to reach the poorest but it cannot overlook the poor. The poor could be slightly better off than the poorest, nonetheless, they are still vulnerable. Should something go wrong, even slightly, they could also become ultra poor. The chance of that happening is very high. Turning the poor away from a microfinance program could mean effectively telling them the following:

According to our survey, you are not-so-poor; go away and have a serious crisis in your household and come back to us when you are really one of the poorest of the poor, ideally destitute, then we will serve you. (Wright & Dondo, 2001, p. 63)

SfC in Mali did not seem to have to be concerned with this scenario that it had to exclude any women. The test results suggested that the women who participated in the program were as poor as the unreached women in the area. SfC might have helped itself by choosing to implement the program in the villages where the poorest of the poor in the world reside. The World Bank (1998, p. 52) also suggests targeting the poorest villages as the strategy to reach the poorest than excluding some women of the poor village because of their slightly better socio economic status.

In addition to targeted program locations, the SfC’s model also seemed to have some cost advantages to reach the poorest. Since the SfC groups manage themselves without being dependent upon outside money, except for the initial training and regular monitoring until they graduate, their sustainability might not be jeopardized by costs. The self-replication feature of SfC, which encourages the graduating groups and their members to promote the model, might bring the cost virtually to nothing. When there is no or very little recurring cost, capital for lending comes from the members’ savings and
the trained members serve voluntarily, the group should be able to become financially self-sufficient.

It seemed that SfC has all the basic financial and institutional components to become a successful microfinance model developed or is being developed. Groups were functioning. With both voluntary and mandatory provisions, the basic savings needs of the members were addressed. Members had been saving regularly. On-time compulsory savings deposits had improved over time. The amount of the voluntary savings had increased. Members had taken more loans. They had paid off earlier loans and borrowed another one. The loan size had also increased. Loan terms were extended. An increased loan size with extended terms meant that the group had more money available for lending. These are indications of success for the program, groups and the participants. Since the women were able to save regularly and repay their loans, it could be assumed that they were also benefitting from the financial services rendered to them and therefore improving their quality of life.

However, caution should be observed in drawing a conclusion one way or another because all of these test results and themes were based on the data from the first one and a half years of the SfC program in Mali. Only a few groups had graduated during the period. The graduated groups’ performance was yet to be seen. What role was played by the staff, especially the Animator, in getting the groups that far and how the groups would carry out their business without any outside support needs further study. The recommendations discussed in this sub-section are centered on how SfC can establish itself as a successful model of microfinance for reaching the poorest. They are not to imply that SfC has already reached that point.
The test results and emerging themes suggest that SfC has the potential to reach the poorest of the poor in a sustainable way. The women reached by the program were not better off than the other women in their villages. Their economic levels did not seem to have affected much of their access to the program benefits such as savings and loans. Utilization of most of the benefits appeared to have been increased over time. However, there are some areas to which SfC could pay some attention.

The participants seem to have improved on-time deposit of their weekly mandatory savings. However, there are still two aspects that could be monitored to make the weekly savings fully successful. One is continuation to improve the on-time deposit. The second is progressive increase in the weekly savings rate. There was a sharp decline in the rate in the second year. Finding out the reason why that happened and how to avoid that from recurring might be a good programmatic feedback for SfC. SfC needs to ensure that there were no negative effect of any kind for such a dramatic change in the savings rate. It was hoped that the change was not caused by less motivation in the program or belief in savings with the group. If the adjustment was made to reflect the realistic capacity to save, which was set high in the beginning of the program because of their over excitement, the reduced rate would be beneficial to them. SfC would want to empower the groups to make their own informed decisions but also provide enough safeguards to prevent them from stumbling so hard that they can never get back on their feet. Observing a balance in autonomy and in the structure would be advisable.

Most of the participants had taken at least one loan. Only a few had not taken any loans. Nonetheless, finding out why those participants had not taken loans might help ensure that loan decisions were made fairly and that those who did not take any loan was
by their choice. Many women do not want or need to take loans for a variety of reasons including loan aversion and social status. They only want to save and that is all right. Those women could be like investors who provide capital to other women who need capital. Not everyone can be an entrepreneur and utilize the resources they have by themselves. Some might lend to other entrepreneurial women who might better utilize the resources. When Warren Buffet handed billions of dollars to Bill Gates for charity work, he said, “I’ve got some people who can give it away better than I can” (Peters, 2006, para. 17). Mr. Buffet is a good investor. His “better than I can” referred to Mr. Gates’ qualities as an entrepreneur and a manager of a foundation. Mr. Buffet thought that Mr. Gates would use his money better than himself. Similarly, the women who only save but do not take any loans, could be smart investors like Mr. Buffet.

Many microfinance programs require every single member to borrow. Some even limit such borrowing only to activities that generate income. The rationale behind that requirement is understandable. It will be easier for the borrower to repay the loan if it is used for production. However, the needs of the poorest are different from the people at other economic levels and flexibility around loan purposes would better serve them (Wright & Dondo, 2001, p. 65). That could be a reason why some of the SfC participants had taken up to seven loans. The loan provisions were appropriate to their needs.

From the number of loans taken by the SfC participants it was assumed that their loan repayments were going well. They could not have taken a new loan without paying off the previous one. The information about their repayment was not available for this study. Although that could be retrieved from the group’s records for future studies, collecting the information about delinquency, default and so forth about repayment
directly from the participants might be a better idea to capture the participants’ understanding in terms of their as well as their group’s performance. Participants’ perceptions are very important, particularly in the case of SfC. SfC promotes self-replication and allows oral recordkeeping. When the majority of the participants and the potential participants are illiterate, their perceptions overwrite what the records in the book are. The members’ participation in promoting the replication and potential participants’ decision as to whether or not become involved in a new group can be influenced by their perceptions.

The only time the higher children in school ratio had a positive effect was on the number of loans taken by the participants. Could it be possible that the women needed more money to support their 6-12 year old children’s education or to offset the children’s opportunity cost? The question could not be answered from the available data. A follow up study, perhaps a qualitative one, might shed some light on the reasons why the women with 6-12 year old children in school took out more loans.

An educational approach to microfinance as demonstrated by the SfC program in Mali has great potential in impacting on its participants’ financial as well as other aspects of their lives. Although it did not offer any direct literacy per say, it encouraged its participants by emphasizing its use for managing their finances at both group and individual levels. Whether the SfC program is going to create demand for literacy for its participants is yet to be seen. Often literacy class participants are less motivated when there is no direct and tangible benefit to successfully complete their literacy training. As the group’s fund increases and women’s individual savings and loan volumes also increase, they may have to adopt a more sophisticated recordkeeping system. The oral
system might not be adequate. The need for literacy skills might become a matter of urgency. It might be wise to make the women aware of this need and help them to prepare themselves.

Less than two years’ data were analyzed in this study in order to explore whether the participants had made any progress. The results indicated that they had benefitted from the program in various ways. However, the two years’ data were not sufficient to determine whether the participants had indeed benefitted from the program. An impact study would be highly recommended. The study could also look into the impact of the program on various aspects in the lives of the participants such as economic, social, health and education, and at different levels such as the individual, household and community.

Such impact study might also shed light on many more aspects of the program. Sustainability of the groups, specially after their graduation, is an example. The purpose of SfC was to make the groups self-sustained after graduation. Do they not need the next level of intervention? Nagaraja and Meyers (2005, p. X) suggest that providing self-help such as the SfC groups with external sources of financing to keep up with the rising financial needs of the groups’ members is important. Wright and Dondo (2001, p. 64) pin down the success of such groups to their systems “systems and products.” How effectively they manage to generate their resources and mobilize those to fulfill the needs of their members, determines their sustainability and the SfC model’s prospect.

The impact study might find that groups needed support even after their graduation. However, the support does not necessarily have to come exclusively from Oxfam America. It might be able to find partners to deliver what the groups need as
Freedom for Hunger had done in providing health education to the groups. Such partnership could free-up Oxfam America’s resources which can be used to reach more groups (Nagarajan & Meyers, 2005, p. 19).

This study did not look at the programmatic and institutional aspects of SfC in Mali. It assumed that Oxfam America’s partnership with the two Malian NGOs as well as Freedom from Hunger worked out well. Assumptions were also made that the Animators were motivated; adequately trained and assigned to the manageable number of groups and members. These assumptions could be checked by the impact study.

Exploring the relationship between the SfC and Spontaneous groups was not within the scope of this study. However, it is important to look at how they co-exist in the same village. SfC needs to be particularly vigilant as to whether the SfC is going to be seen as the genuine and the Spontaneous as the inferior quality group. Such tension could undermine the self-replication efforts and the differentiation could further stratify the poorest women by virtually creating different classes. Since SfC not only encourages its graduate groups to replicate the program on its own, it might also need to monitor how those groups are trained. It may also have to provide a framework on how both types of groups can work together and support each other.

SfC in Mali seemed to have reached the poorest of the poor by using a self-selection method as the result of which the Spontaneous groups were formed. It was easier in Mali for SfC to choose the program participants because of its extreme poverty. As it starts expanding to other areas and countries particularly where the people of mixed socio-economic status reside, the same method might not work as well. Sometimes the members of the group themselves exclude the poorest considering them either socially or
economically too risky to be included in the program. Exclusion is one of the major effects of poverty experienced worldwide (Narayan, Chambers, Shah & Presch, 2000). Hulme and Mosley (1996, p. 130) cite incidents of the poorest being excluded in the self-selection procedure of microfinance programs in Sri Lanka, Bangladesh and Malawi. SfC would be wise to make sure that its process does not encourage this effect. BRAC’s experience to reach the poorest could be very useful. Mali could also become saturated by microfinance programs yet leave the poorest out in the shadows as in Bangladesh, Bolivia and Uganda (Helms, 2006, p. 13). In that situation, BRAC built a baseline data set and used it to target the poorest separately through its ‘Challenging the Frontier of Poverty Reduction/Targeting the Ultra Poor’ program (Matin, 2005) following certain criteria while other could participate in BRAC’s mainstream program.

**Future Study**

One of the findings of this study which needs immediate attention for improving SfC’s impact is the amount of money used for productive purposes. Less than 2% of the borrowed money was used for income generating activities. It is likely that the amount borrowed was not enough to start any microenterprise since the average loan size was only US$7.83. The small loan size could also be a reason for a very few new microenterprise startups. Whatever the reason, it is imperative for a microfinance program to find out why most of the women did not use any of the loan money for productive purposes and even those who used it, the portion of the loan investment was negligible. It is important to generate additional revenue for the poorest women in order to be able to get out of poverty at some point in the future.
Further exploration of the relationships between literacy and poor women’s economic activities will contribute to the study of microfinance and microenterprise development. In the case of SfC, it is not directly involved in providing literacy to its participants. However, the questions remain unanswered, even after this study, can poor women really improve their economic conditions without literacy? Even if they can, could literacy be more effective in getting them out of poverty? As Windham (1999) suggested the relationship between economic performance and literacy is very complex and needs careful study before arriving at a conclusion.

Although this study did not explore the effect of the women’s participation in SfC on their children’s education, an observation was made that the women with 6-12 year old children in school had taken out more loans than the women with 6-12 year old children not in school. Further studies could focus on the issue and ascertain whether the observation was just by chance or a consistent pattern.

Twelve percent of the women never borrowed while some took as many as seven loans. Not borrowing is not a problem. However, further studies to profile those women might be helpful particularly for a savings-led microfinance program. To find out why they did not take out loans would also be useful especially to ensure whether those non-borrowers indeed had a choice to take a loan. The reasons might have been due to the fact that the group loan terms and sizes were not suited to the women.

The SfC women significantly improved the on-time weekly saving deposits with their group from 2005 to 2006. Also noticed was the fact that the groups had significantly reduced the weekly savings rate from 2005 to 2006. Could it be possible
that the savings rate was still too high for some women who could not deposit their compulsory weekly savings even in 2006?

From utilization of the savings and loan services by the SfC members, it appeared that the program was beneficial to those women. Further exploration in two areas might be helpful for sustainability of the groups and cost-effectiveness of the program. Will the groups need any further support after they graduate? If they do, what kind of support would they need and how could those be built in to the program so that the groups will become sustainable? Similarly, for the cost-effectiveness of the program, it can be compared with similar savings led programs.

A comparative study of the pairs of Spontaneous groups and their respective Original groups (or mother groups that promoted the Spontaneous groups) could shed some light in regard to replication. Self replication is a good idea. However, if done without a proper foundation, it could result in failure. Failure might give the women on the fence negative publicity of the program, and effectively end the prospect of scaling up replication.
MAP OF INCIDENCES OF POVERTY IN MALI

THREE SURVEY QUESTIONNAIRES

SAVING FOR CHANGE INDIVIDUAL SURVEY (2006)

For Saving for Change Group Members

Name of interviewer: ____________________ Date: ___________ Number: _____
Name of supervisor: ___________ Date questionnaire reviewed: __________

Name of group: _______________________
Name of village: __________________________

Interviewed in previous study: YES/NO

If yes and not present: Why is she not here? Still member of group but not present/ Left the group but lives in the village/ Does not live in this village/ Sick/ Died/ don’t know

Explain that we are doing this study to find out what has happened to members of SfC groups since they joined and that her responses will not be shared with anyone but be combined with the answers of other women like her.

Personal Information:

1. What is your name: __________
2. How many years of schooling have you completed? __________
3. Have you taken literacy classes? YES/NO
4. If yes: For how long? _____ Specify number of months/years
5. If yes: Have you started a literacy class since joining the group
6. Do you listen to the radio or television? Often/ rarely/never
7. How many live in your household?

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Number contributing to family income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult married men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult married women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried boys 12 or older</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried girls 12 or older</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Are you: Married/ Single/ Separated/ Divorced/ Widowed

9. Who is the head of the household – the principal decision maker? Yourself/ your husband / another male / another female/ shared between husband and wife

10. What is your relationship to the head of household? (If wife, ask whether first, second, third.) ____________________

11. How many children do you have? _________
12. How many children do you have between 6-12 years of age?

<table>
<thead>
<tr>
<th>Children</th>
<th>Number</th>
<th>How many in school now?</th>
<th>How many in school before joined group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys 6-12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls 6-12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. If more or less children 6-12 in school explain why:

_____________________________________________________________________
_____________________________________________________________________

14. How old are you? _______

Participation in Saving for Change:
15. Did you join the group when it first started? YES/NO
16. Are you a group officer now? YES/NO
17. If Yes: What office do you hold? CIRCLE: Honorary president/ President / Secretary/ Treasurer / Other

Saving:
18. How much do you save each week? ____
19. Do you owe a savings payment to the group? YES/NO
20. Do you save voluntarily? ______
21. If yes: What is the largest amount you saved voluntarily: ______

Payout:
22. Did receive a payout from your group at the end of the cycle?
23. YES/NO How much did you receive? _________
24. If yes: How did you use your pay out? Do not read list check categories that mentions. Then ask how used most of her money. Then ask how much for each checked category.

<table>
<thead>
<tr>
<th>USE OF MONEY</th>
<th>YES</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/ gardening/ purchasing animals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petty Trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared food – (millet cakes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process agriculture – (shay butter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food for family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothing for family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celebrations/ funerals/weddings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid other debts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gave to someone husband or other relative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

25. Do you save at a:

<table>
<thead>
<tr>
<th></th>
<th>Now</th>
<th>Current amount</th>
<th>Before group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank or credit union</td>
<td>YES/NO</td>
<td></td>
<td>YES/NO</td>
</tr>
<tr>
<td>At home (<em>explain</em>)</td>
<td>YES/NO</td>
<td>/~~~~~~~~~~~</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Have a friend or relative keep your money</td>
<td>YES/NO</td>
<td>/~~~~~~~~~~~</td>
<td>YES/NO</td>
</tr>
</tbody>
</table>

**Borrowing from Group:**

26. Have you taken out a loan from the group? YES/NO

27. If yes: How much was your most recent loan?

Then ask for the loan before that until the first loan.

<table>
<thead>
<tr>
<th>Loan</th>
<th>Loan amount</th>
<th>Months to repay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current/last loan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
28. How did you use your last loan? Do not read list. Keep asking “anything else”
Check uses of the loan in the list below add others if necessary.
Then ask how much she used most of the money. Then go through each checked box
and ask how much she spent from the loan.

<table>
<thead>
<tr>
<th>USE OF MONEY</th>
<th>YES</th>
<th>Amount spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/ gardening/ purchasing animals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petty Trading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepared food – (rice cakes)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process agriculture – (shay butter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food for family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothing for family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health (medicines)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celebrations/ funerals/weddings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household improvements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid other debts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gave to someone husband or other relative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. Do you own a loan payment to the group? ______

Other Borrowing:
30. Have you taken out a loan from these sources (MARK YES/NO):

<table>
<thead>
<tr>
<th>Loan Source</th>
<th>Since joining group</th>
<th>How much</th>
<th>Before joining group</th>
<th>How much</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFI/Credit Union</td>
<td>YES/NO</td>
<td></td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Money lender</td>
<td>YES/NO</td>
<td></td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Receive peanut or rice seeds to be repaid in more seeds after harvest</td>
<td>YES/NO</td>
<td></td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td></td>
<td>YES/NO</td>
<td></td>
</tr>
</tbody>
</table>
Changes in group membership/leadership:
Other than this group do you belong to any other groups or organizations? YES NO If yes fill out the table:

<table>
<thead>
<tr>
<th>Type of group for example “credit union” not the name of the group</th>
<th>Since joining group</th>
<th>Before joining group</th>
<th>Officer since joining group</th>
<th>Officer before joining group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tontine</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional village women’s association</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SfC group association</td>
<td>YES/NO</td>
<td>/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Other examples: NGO project for health, committee for the school/ a government program,*

32. If in tontine now: How much do you contribute? _______ Circle: Week/ Fortnight/ Month
Sources of income:
33. Do you receive income from the following activities?:

<table>
<thead>
<tr>
<th>Activity</th>
<th>SINCE JOINING GROUP</th>
<th>IN THE YEAR BEFORE JOINING THE GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid farm labor</td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Number of weeks-</td>
<td></td>
<td>More/less/same # of weeks</td>
</tr>
<tr>
<td>Selling animals (that belong to the woman)</td>
<td>#goats/sheep sold last year</td>
<td>goats/sheep sold last year</td>
</tr>
<tr>
<td># cows sold last year</td>
<td># cows sold last year</td>
<td></td>
</tr>
<tr>
<td># chickens sold last year</td>
<td># chickens sold last year</td>
<td></td>
</tr>
<tr>
<td>Selling garden produce at market</td>
<td>During peak season, typical amount earned in one week</td>
<td>During peak season, typical amount earned in one week</td>
</tr>
<tr>
<td>Petty Trading</td>
<td>Typical amount earned in one week</td>
<td>Typical amount earned in one week</td>
</tr>
<tr>
<td>Fire wood/charcoal selling</td>
<td>Typical amount earned in one week</td>
<td>More/less/same</td>
</tr>
<tr>
<td>Salaried employment</td>
<td>Monthly salary</td>
<td></td>
</tr>
<tr>
<td>Check if she does not earn own money</td>
<td>/////////////////////</td>
<td>/////////////////////</td>
</tr>
</tbody>
</table>

34. FILL IN THIS TABLE

<table>
<thead>
<tr>
<th>Do you grow?</th>
<th># of sacks harvested since joining group (kilos per sack)</th>
<th># of sacks harvested before joining group (kilos per sack)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanuts</td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Vegetable 1</td>
<td>(specify______)</td>
<td></td>
</tr>
<tr>
<td>Vegetable 2</td>
<td>(specify______)</td>
<td></td>
</tr>
<tr>
<td>Vegetable 3</td>
<td>(specify______)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
35. Have you started a new business since you joined your group? YES/ NO
36. If YES, What business did you start? ________
37. Does anyone from your family living outside the village send money or provide any other help? YES/NO
38. Do they live in *Mali* or in *Another Country*? (Circle which)

**Assets:**
39. Do you own? Then ask for household

<table>
<thead>
<tr>
<th>Item</th>
<th>Number you own now</th>
<th>Number you owned before joining group</th>
<th>Number all household owns now including member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle for plowing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Cattle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chickens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donkey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horse</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

40. Does someone living in your household own:

<table>
<thead>
<tr>
<th>Item</th>
<th>Number all household owns now (including member)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plow</td>
<td></td>
</tr>
<tr>
<td>Cart</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
</tr>
<tr>
<td>Motorcycle</td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td></td>
</tr>
<tr>
<td>Chairs</td>
<td></td>
</tr>
<tr>
<td>Bed</td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
</tr>
<tr>
<td>Cell phone</td>
<td></td>
</tr>
</tbody>
</table>

42. Does your house have: *A metal roof/ cement block walls / a door that closes*

43. In the past year what were the months where you and your children had enough to eat? For each month below, did you have Plenty to eat, Some to eat, or Not enough to eat (Fill in the appropriate month with (P, S or N)

|-----|-----|-----|-----|-----|------|------|------|-------|------|------|------|

44. During the hardest time (specify month), how many meals per day did you eat? Month___________ meals per day __________

45. (If less than 3) How many weeks did this last?
Malaria and bed nets:
46. Have you received training on how to prevent malaria? YES/NO

47. If yes: From who: Animator/ A villager/ An other NGO or government program:
Indicate Source: _______________________

48. What causes malaria? Do not read: Bite from an infected mosquito/ Bite from an infected mosquito and traditional explanation / Traditional explanation only / Don’t know). Indicate reason: _______________________

49. What is the best way to avoid malaria? Do not read: Sleeping under an insecticide impregnated bed net/ Some other response/ Don’t know Indicate reason: _______________________

50. Did you own An insecticide impregnated bed net before you joined the group? YES/NO

51. Did you acquire an insecticide impregnated bed net since you joined the group? YES/NO
52. If has a net: Who slept under a net last night? Husband/Wife/Children/none

53. Have you explained what you learned about malaria prevention and treatment to someone else in the village? YES/NO

What likes most and least about the group:
54. Don’t read list but check off what she mentions: What do you like about the group? [make sure to record everything she says - what is not in the list should be written in the other category]

<table>
<thead>
<tr>
<th>Categories</th>
<th>Yes</th>
<th>Most important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good place to save</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can turn to the group if I have a problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What I have learned about malaria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The solidarity between members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The increased respect I have in my family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased income generating activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t need to travel so much to look for money, food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
55. What do you like least about the group? Read the list

<table>
<thead>
<tr>
<th>Categories:</th>
<th>Problem</th>
<th>Not a problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Takes up too much of my time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. My husband does not approve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Most loans go to the same people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I don’t know how much I have saved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I am not sure my savings are safe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Too many disputes in the group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I don’t understand the records</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. When I need a loan there is no money</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Loans are too small</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. All loans for same amount/same number of months</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spontaneous Replication:
56. Have you talked about the group to someone else in the village? YES/ NO
57. Have you trained a new group? YES/NO
58. If yes: How many groups did you train? _______
59. If yes: In this village/ another village
60. If yes: Did you receive any payment in money or grain or animals or labor to train the group? YES/NO

Other Activities:
61. Since you joined the group have you joined any other NGO or government program? YES/NO
62. If yes: Specify: ____________________
63. Did you vote in the last election? ____________________
Social Capital:
64. To what groups or organizations, networks, or associations do you belong? These could be formally organized groups or just groups of people who get together regularly to do an activity or talk about things. (Use the categories to help prompt)

<table>
<thead>
<tr>
<th>Type of organization</th>
<th>YES/NO</th>
<th>How actively do you participate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer association or cooperative (farmer/fishing)</td>
<td></td>
<td>1 = leader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = very active</td>
</tr>
<tr>
<td>Other productive group (artisan, etc.)</td>
<td></td>
<td>3 = somewhat active</td>
</tr>
<tr>
<td>Women's group that is not a productive group (village women’s committee)</td>
<td></td>
<td>4 = not very active</td>
</tr>
<tr>
<td>Professional association (teacher, hair coiffeurs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age-set group (youth club, clubs of people born within 5 years of each other)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education association (teacher-parent association, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health association (clinic association, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

65. Does your husband have many relatives in this village? (Yes/no)

66. If yes, how many (doors open to him)? (determine the local translation for how many household heads are related to him)

Self-Perception of Impact from Savings for Change

67. If you think about how your life was before you joined the savings for change group, would you say that today it is: better /worse/ about the same?

68. If better or worse: How has your life changed? Write down exactly what she says.

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
69. Compared to before you joined the group do you think your husband gives *A little more/A lot more/The Same/or Less* role in making important decisions that affect the household?

Write down exactly what she says  
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

THANK YOU VERY MUCH FOR YOUR TIME
SAVING FOR CHANGE CONTROL GROUP (2006)
Name of interviewer: ____________________ Date: ___________ Number: _____
Name of supervisor: ___________ Date questionnaire reviewed: __________
Name of group: _______________________
Name of village: __________________________

Explain that we are doing this study to find out about women in the village and that her responses will be combined with the answers of other women like here.

Personal Information:
1. What is your name: __________
2. How many years of schooling have you completed? __________
3. Have you taken literacy classes? YES/NO
4. If yes: For how long? _______ Specify number of months/ years
5. If yes: Have you started a literacy class since joining the group
6. Do you listen to the radio or television? Often/ rarely /never
7. How many live in your household?

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Number contributing to family income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult married men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult married women</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Are you: Married/ Single/ Separated/ Divorced/ Widowed

9. Who is the head of the household – the principal decision maker? Yourself / your husband / another male / another female / shared between husband and wife

10. What is your relationship to the head of household? (If wife, ask whether first, second, third. ).) __________

11. How many children do you have? _________

12. How many children do you have between 6-12 years of age?

<table>
<thead>
<tr>
<th>Children</th>
<th>Number</th>
<th>How many in school now?</th>
<th>How many in school last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys 6-12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls 6-12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. If more or less children 6-12 in school explain why:

________________________________________________________________________
________________________________________________________________________

________________________________________________________________________
14. How old are you? ________

15. Do you save at a:

<table>
<thead>
<tr>
<th></th>
<th>Now</th>
<th>Current amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank or credit union</td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>At home (explain)</td>
<td>YES/NO</td>
<td>11/11/11</td>
</tr>
<tr>
<td>Have a friend or relative keep your money</td>
<td>YES/NO</td>
<td>11/11/11</td>
</tr>
</tbody>
</table>

Other Borrowing:

16. Have you taken out a loan from these sources (MARK YES/NO):

<table>
<thead>
<tr>
<th>Loan Source</th>
<th>Over the past year</th>
<th>How much</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFI/Credit Union</td>
<td>YES/NO</td>
<td></td>
</tr>
<tr>
<td>Money lender</td>
<td>YES/NO</td>
<td>11/11/11</td>
</tr>
<tr>
<td>Receive peanut or rice seeds to be repaid in more seeds after harvest</td>
<td>YES/NO</td>
<td>11/11/11</td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>11/11/11</td>
</tr>
</tbody>
</table>

Group membership/leadership:

17. Do you belong to any groups or organizations? YES NO If yes fill out the table:

<table>
<thead>
<tr>
<th>Type of group for example “credit union” not the name of the group</th>
<th>YES/NO</th>
<th>Are you a group officer YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tontine</td>
<td>YES/NO</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Traditional village women’s association</td>
<td>YES/NO</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
</tr>
<tr>
<td>Other:</td>
<td>YES/NO</td>
<td>YES/NO</td>
</tr>
</tbody>
</table>

Other Examples: NGO project for health project, committee for the school/committee/government program,

18. If in tontine now: How much do you contribute?  Circle: Week/Fortnight/ Month

Sources of income:

19. Over the past year have you received income from the following sources?

<table>
<thead>
<tr>
<th>Activity</th>
<th>YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid farm labor</td>
<td></td>
</tr>
<tr>
<td>Number of weeks-__________</td>
<td></td>
</tr>
<tr>
<td>Selling animals (that belong to the woman)</td>
<td></td>
</tr>
<tr>
<td>#goats/sheep sold last year ____</td>
<td></td>
</tr>
<tr>
<td># cows sold last year ________</td>
<td></td>
</tr>
<tr>
<td># chickens sold last year _______</td>
<td></td>
</tr>
<tr>
<td>Selling garden produce at market</td>
<td></td>
</tr>
<tr>
<td>During peak season, typical amount earned in one week______</td>
<td></td>
</tr>
<tr>
<td>Petty Trading</td>
<td></td>
</tr>
<tr>
<td>Typical amount earned in one week____</td>
<td></td>
</tr>
<tr>
<td>Fire wood/ charcoal selling</td>
<td></td>
</tr>
<tr>
<td>Typical amount earned in one week____</td>
<td></td>
</tr>
<tr>
<td>Salaried employment</td>
<td></td>
</tr>
<tr>
<td>Monthly salary</td>
<td></td>
</tr>
<tr>
<td>Check if she does not earn own money</td>
<td></td>
</tr>
</tbody>
</table>
20. Fill in the chart:

<table>
<thead>
<tr>
<th></th>
<th>Do you grow?</th>
<th># of sacks harvested this year</th>
<th># of sacks harvested last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanuts</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable 1 (specify__)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable 2 (specify__)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable 3 (specify__)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. Have you started a new business this year? YES/NO

22. If YES, What business did you start? ________

23. Does anyone from your family living outside the village send money or provide any other help? YES/NO

24. Do they live in Mali or in Another Country? (Circle which)

Assets:

25. Do you own? Then ask for household

<table>
<thead>
<tr>
<th>Item</th>
<th>Number you own now</th>
<th>Number you owned a year ago</th>
<th>Number all household owns now including member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle for plowing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Cattle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chickens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donkey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horse</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. Does someone living in your household own:

<table>
<thead>
<tr>
<th>Item</th>
<th>Number all household owns now including member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plow</td>
<td></td>
</tr>
<tr>
<td>Cart</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
</tr>
<tr>
<td>Motorcycle</td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td></td>
</tr>
<tr>
<td>Chairs</td>
<td></td>
</tr>
<tr>
<td>Bed</td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
</tr>
<tr>
<td>Cell phone</td>
<td></td>
</tr>
</tbody>
</table>

27. Does your house have: A metal roof/ cement block walls / a door that closes
28. In the past year what were the months where you and your children had enough to eat? For each month below, did you have Plenty to eat, Some to eat, or Not enough to eat (Fill in the appropriate month with (P, S or N)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. During the hardest time (specify month), how many meals per day did you eat?
Month_____________ meals per day __________

30. (If less than 3) How many weeks did this last?

Malaria and bed nets:

31. Have you received training on how to prevent malaria? YES/NO
32. If yes: From who: A villager/ A NGO or government program: Indicate Source: _______________________

33. What causes malaria? Do not read: Bite from an infected mosquito/ Bite from an infected mosquito and traditional explanation / Traditional explanation only / Don’t know). Indicate reason: _______________________________________

34. What is the best way to avoid malaria? Do not read: Sleeping under an insecticide impregnated bed net/ Some other response/ Don’t know Indicate reason: _______________________

35. Did you acquire an insecticide impregnated bed net this year? YES/NO
36. Did you own an insecticide impregnated bed net last year? YES/NO
37. If has a net: Who slept under a net last night? Husband/Wife/Children/none
38. Have you explained what you learned about malaria prevention and treatment to someone else in the village? YES/NO

Other Activities:

39. Over the past year have you joined any other NGO or government program? YES/NO
40. If yes: Specify: _______________________
41. Did you vote in the last election? _______________________

164
Social Capital:
42. To what groups or organizations, networks, or associations do you belong? These could be formally organized groups or just groups of people who get together regularly to do an activity or talk about things. (Use the categories to help prompt)

<table>
<thead>
<tr>
<th>Type of organization</th>
<th>YES/NO</th>
<th>How actively do you participate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer association or cooperative (farmer/fishing)</td>
<td></td>
<td>1 = leader</td>
</tr>
<tr>
<td>Other productive group (artisan, etc.)</td>
<td></td>
<td>2 = very active</td>
</tr>
<tr>
<td>Women's group that is not a productive group (village women's committee)</td>
<td></td>
<td>3 = somewhat active</td>
</tr>
<tr>
<td>Professional association (teacher, hair coiffeurs)</td>
<td></td>
<td>4 = not very active</td>
</tr>
<tr>
<td>Age-set group (youth club, clubs of people born within 5 years of each other)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education association (teacher-parent association, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health association (clinic association, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

43. Does your husband have many relatives in this village? (Yes/no)
44. If yes, how many (doors open to him)? (determine the local translation for how many household heads are related to him).
Saving for Change:
45. Have you heard about the Saving for Change groups in this village? YES/ NO
46. Do you know women who are members of these groups? YES/ NO
47. What is your understanding of how these groups work?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

48. Would you be interested in joining a SfC group? YES/NO
49. If yes: Why haven’t you joined? Write down exactly what the woman says encouraging her to provide as many details as she can.
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

50. If no: Why not? Write down exactly what the woman says encouraging her to provide as many details as she can.
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Self Perception:
51. If you think about your life over the past year would you say that today it is: better /worse/ about the same?

52. If better or worse: How has your life changed? Write down exactly what she says.
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

53. Compared to last year do you think your husband gives A little more/ A lot more/ The Same/or Less role in making important decisions that affect the household?

Write down exactly what she says ____________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

THANK YOU VERY MUCH FOR YOUR TIME
BANKING ON THE POOR INDIVIDUAL SURVEY
September 9, 2005

Number of interview: __________
Number of group: ____________
Date: _______________ Name of interviewer: ____________________
Name of group member: __________________________________
Name of village: __________________________
1. Name of group: ______________________________
2. Name of district where group is located: _________________
3. Name of animator: ______________________________
4. Partner Name: Tonus / CAEB
5. Functioning school in village or nearby so children can walk to school: Yes/No
6. Distance from principal local market: __________
7. Village income seen as above average/average/poor by animator
8. Weekly savings amount of group: ________________
9. Credit union or microfinance institution provides loans to women in this village.
   Yes/No Name of institution: _____________________________

Note to interviewer: FILL IN THE ABOVE INFORMATION BEFORE STARTING THE INTERVIEW. CIRCLE THE CORRECT RESPONSE

Personal Information:
10. Did you join the group when it first started? Yes/No
11. IF NOT: When did you join the group? __________
12. Are you a group officer? Yes/No
13. IF YES: What office do you hold? Do not read the list. Circle Response: president/vice president/secretary/treasurer/other (if second secretary/treasurer, mark as secretary/treasurer)
14. How old are you? __________
15. How many years of schooling have you completed? __________
16. Can you read? Yes/No
   IF YES INDICATE HOW WELL SHE CAN READ CIRCLE RESPONSE: Great difficulty/some difficulty/reads easily/cannot read
INSERT THREE LINES IN SIMPLE BAMBARA

17. How many children do you have? __________
18. How many children from 5 to 12 years old: (fill out the table)

<table>
<thead>
<tr>
<th>Number school age</th>
<th>In school now</th>
<th>In school before joining group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. If more are going to school since she joined ask Why? Any other reason? Do not read the list. (Check all the reasons and add new reasons in the “other” rows)
There is a school in the village now
B The teachers are better
C I have more money and can pay for fees and uniforms
D I took out a loan from the group for school
Other

**Saving:**
20. Have you ever missed a savings payment? Yes/No
21. IF YES: More than once? Yes/No
22. Have you saved voluntarily? Yes/No
23. IF YES: What was the most that you saved voluntarily? _____
24. Are you a member of a Tontine?
   | Belongs to tontine now | Yes/No |
   | Before joining group   | Yes/No |

25. IF PART TONTINE NOW:
   How much do you contribute? _____ CIRCLE: week/fortnight/month
26. Do you save at a:
   | Bank or credit union   | Now | Before joining Group |
   | At home/ (explain)     | Yes/No | Yes/No |

**Borrowing:**
27. Have you taken out a loan from the group? Yes/No
28. IF YES FILL OUT THE TABLE:

<table>
<thead>
<tr>
<th>Loan</th>
<th>Loan amount</th>
<th>Months to repay</th>
<th>Missed Any Payments?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
29. What were all the ways you used your loan? Do not read list. Keep asking “anything else.” Check uses of the loan in the list below add others if necessary. Then ask how she used most of the money.

<table>
<thead>
<tr>
<th>LOAN USE</th>
<th>Yes</th>
<th>1st</th>
<th></th>
<th>Yes</th>
<th>1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Pay workers</td>
<td></td>
<td></td>
<td>i)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Animals</td>
<td></td>
<td></td>
<td>j)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Agriculture (seeds/fertilizers)</td>
<td></td>
<td></td>
<td>k)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Agric. Equip (plow/cart, etc.)</td>
<td></td>
<td></td>
<td>l)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Transport (bicycle/cycle.)</td>
<td></td>
<td></td>
<td>m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Goods to sell</td>
<td></td>
<td></td>
<td>n)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Business equipment</td>
<td></td>
<td></td>
<td>o)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Repay debts</td>
<td></td>
<td></td>
<td>p)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Food to feed family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Clothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>k) Medical care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>l) Household items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m) House construction/repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n) School fees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o) Gave money to husband/someone else</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p) Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. Have you ever missed a loan payment? Yes/No
31. IF YES: More than one? Yes/No
32. Have you ever taken a loan from (name of credit union/MFI) Yes/No
33. IF YES: Do you have a loan from (name of organization) now? Yes/No
34. Have you taken a loan from a moneylender since you joined the group? Yes/No
35. Did you take a loan from a moneylender in the year before you joined? Yes/No

Changes in group membership/leadership:
36. Other than this group do you belong to any other groups or organizations? (Indicate name and what position (if any) holds as a group officer)

<table>
<thead>
<tr>
<th>Group type</th>
<th>Officer Now</th>
<th>Before Joining group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pres/V. pres /Sec./Treas./other</td>
<td>Pres/V. pres /Sec./Treas./other</td>
</tr>
<tr>
<td></td>
<td>Pres/V. pres /Sec./Treas./other</td>
<td>Pres/V. pres /Sec./Treas./other</td>
</tr>
<tr>
<td></td>
<td>Pres/V. pres /Sec./Treas./other</td>
<td>Pres/V. pres /Sec./Treas./other</td>
</tr>
</tbody>
</table>

Sources of income:
37. What do you do to earn money for you and your children? (be specific – if agriculture, what crops, if commerce, what is sold, if employment what job they have)

37a. Since you joined group have you started a new economic activity? Yes/No
38. IF HAS AN INCOME GENERATING ACTIVITY: Since you joined the group are you earning more/the same/less from your economic activity?
39. IF MORE OR LESS: Explain how and why:

40. Do you or someone in your family own”

<table>
<thead>
<tr>
<th>Item</th>
<th>Number Now</th>
<th>Number before joining group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goats/Sheep</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
41. Do you or someone in your family own:

<table>
<thead>
<tr>
<th>Item</th>
<th>Now</th>
<th>Before joining group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plow</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Cart</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Bicycle</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Television</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Chairs</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Bed</td>
<td>Yes/No</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

42. Since you joined the group how many months did you and your children have enough food to eat? ______________

43. Last year, how many months did you and your children have enough food to eat? ______________

43a. IF MORE OR LESS HUNGRY MONTHS SINCE JOINING GROUP: Why?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

**Bed Nets:**
44. Did you buy a mosquito net since you joined the group? Yes/No
45. IF NO Do you have plans to buy one? Yes/No (Mark yes if she has a specific date or plan to buy mosquito net)
46. Did you use a mosquito net before you joined the group? Yes/No

**What likes most and least about the group:**
47. What do you like most about the group? (Read the list and indicate 1st choice. Then read the list again without the first choice and indicate 2nd choice. Read the list a third time without the 1st and 2nd choices and indicate 3rd choice.)

<table>
<thead>
<tr>
<th>Categories</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Safe place to save</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I can turn to the group if I have a problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. What I have learned about malaria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The solidarity between members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The increased respect I have in my family</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
48. What do you like least about the group? *(Read the list and ask if any of these are problems. If says “Yes” to any indicate how this is a problem. If cannot give an explanation or if explanation contradicts that this is a problem mark “No”)*

<table>
<thead>
<tr>
<th>Categories:</th>
<th>Yes</th>
<th>No</th>
<th>1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Takes up too much of my time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Loans are too small</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Most loans go to the same people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I don’t know how much I have saved</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I am not sure my savings are safe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Too many disputes in the group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I don’t understand the records</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. When I need a loan there is no money</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

49. Has anyone from the village asked you about the group? Yes/No
What did you tell them? ____________________________________________
_________________________________________________________________
_________________________________________________________________

50. Have you helped train a new group? Yes/ No How did you do that? _______
_________________________________________________________________
_________________________________________________________________

THANK YOU VERY MUCH FOR YOUR TIME
BIBLIOGRAPHY


Welch, B. (1938). The significance of the difference between two means when the population variances are unequal. *Biometrika 29*, 350-362.


