



Evaluation Study

Reference Number: SST: REG 2007-19
Special Evaluation Study
September 2007

Effect of Microfinance Operations on Poor Rural Households and the Status of Women

Operations Evaluation Department

Asian Development Bank

CURRENCY EQUIVALENTS

(14 August 2007)

Currency Unit	Per Currency Unit in \$	\$1.00
pesos (P)	0.0219	45.675
sum (SUM)	0.0008	1,269.080
taka (Tk)	0.0145	68.853

ABBREVIATIONS

ADB	–	Asian Development Bank
APIS	–	Annual Poverty Indicators Survey
ASKS	–	Annanna Samaj Kailan Samity (Unparalleled Social Welfare Association)
BBS	–	Bangladesh Bureau of Statistics
DMC	–	developing member country
GDP	–	gross domestic product
HH	–	household
MFI	–	microfinance institution
NGO	–	non government organization
NSO	–	National Statistics Office
OED	–	Operations Evaluation Department
TMSS	–	Thengamara Mahila Sabuj Sanga (Thengamara Women's Green Organization)
SCU	–	savings and credit union

NOTES

- (i) In this report, "\$" refers to US dollars.

Key Words

adb, asian development bank, microfinance, microcredit, microenterprise, gender, rural, women, bangladesh, philippines, uzbekistan, ultra poor, microfinance institutions, rigorous impact assessment, impact evaluation, enterprising poor

Director General
Director

B. Murray, Operations Evaluation Department (OED)
R. K. Leonard, Operations Evaluation Division 1, OED

Team leader

T. Kondo, Senior Evaluation Specialist, Operations Evaluation
Division 1, OED

Team members

C. Infantado, Portfolio Evaluation Officer, Operations Evaluation
Division 1, OED
A. Alba, Operations Evaluation Assistant, Operations Evaluation
Division 1, OED

Operations Evaluation Department, SS-82

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The guidelines formally adopted by the Operations Evaluation Department (OED) on avoiding conflict of interest in its independent evaluations were observed in the preparation of this report. C. Dingcong, A. Orbeta, Jr., and E. Capones were the consultants. F. Gerardo assisted in the surveys. N. Biggar and D. Levine were the external reviewers of the report. To the knowledge of the management of OED, there were no conflicts of interest of the persons preparing, reviewing, or approving this report.

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EXECUTIVE SUMMARY

The main objective of this special evaluation study was to assess the extent to which selected Asian Development Bank (ADB) microfinance projects have reduced the poverty of rural poor households and improved the socioeconomic status of women in developing member countries. Bangladesh, Philippines, and Uzbekistan were selected for the study, representing three of the five operational regions of ADB. The projects selected for in-depth review were: (i) the Rural Microenterprise Finance Project in the Philippines; (ii) Participatory Livestock Development Project in Bangladesh; (iii) Second Participatory Livestock Development Project in Bangladesh; (iv) Rural Livelihood Project in Bangladesh; and (v) the Small and Microfinance Development Project in Uzbekistan.

The study used quantitative tools to measure the impact of microfinance on rural households for the Rural Microenterprise Finance Project in the Philippines. A carefully designed nationwide survey was conducted covering 2,274 households in 116 *barangays* (villages) and 28 microfinance institutions. Smaller sample surveys—intended to generate the socioeconomic profile of target groups reached by ADB microfinance projects rather than measure impact quantitatively—were undertaken in Bangladesh and Uzbekistan.

Qualitative tools to gather information on intra-household dynamics were used to assess the effects of microfinance on the status of women. A total of 27 focus group discussions were undertaken in three countries. Over 200 female microfinance clients participated in these discussions. Sample surveys covered 566 women microfinance clients in the Philippines and 200 in Bangladesh. These surveys were designed to complement and validate the focus group discussions.

The impact study in the Philippines used a quasi-experimental design that required treatment and comparison areas for each of the 28 microfinance institutions. These areas were geographically different from each other. Two types of household respondents were covered by the surveys: (i) households that received microcredit loans, and (ii) households that did not receive microcredit loans but qualified to join the program. Econometric estimation techniques were used to estimate the impact of microfinance on the beneficiaries. Controls were applied to address biases known to be associated with microfinance impact assessments.

The average loan size was about P5,500. The results of the econometric estimates show that the availability of microcredit loans had positive and mildly significant impacts (significance level of 10%) on the per capita income of the beneficiaries. The income of those that received microcredit loans increased by P5,222 per year compared with those that did not receive a loan. In terms of aggregate impact, this translates to P8.6 billion for the total of 1.6 million women clients reached with microcredit. Consistent mildly positive impacts were also found for per capita total expenditures and per capita food expenditures. However, the impact on per capita income and expenditures was found to be regressive (i.e., the impact was negative on households with per capita incomes of less than P34,428, and become positive only for households with per capita incomes above P56,200). This result is similar to other studies on the provision of microcredit in Bangladesh, India, Indonesia, Sri Lanka, and northeastern Thailand. The finding suggests that targeting microfinance on the poorest households may not be the most appropriate way to help them escape poverty. The projects selected by the poorest households to finance with microcredit loans did not generate sufficient profit to increase household income.

The Rural Microenterprise Finance Project helped to reduce the dependence of participating households on other loans such as informal moneylenders and more expensive loans from financial institutions. In addition, the proportion of participating households with savings accounts increased, as did the amounts in these savings accounts. All these improved the consumption smoothing capabilities of participating households.

The Philippine microcredit program had a significant impact on the number of microenterprises and the number of persons employed in them, reflecting that the program was designed to cater to the entrepreneurial poor.

In terms of outreach, the Rural Microenterprise Finance Project was able to reach poor households, but not in significant numbers. Based on the Philippine official poverty line, the household survey found that only 10% of the respondents were classified as poor and 4% as subsistence poor. This is an important finding since the project was originally designed to reach the ultra poor. There is a need to reexamine (i) the targeting approach and mechanisms used by the microfinance institutions, and (ii) whether microfinance institutions have incentives to reach poor households given their concerns about loan repayment and their financial sustainability.

In Bangladesh, the households participating in the Second Participatory Livestock Development Project (average monthly income of Tk3,762) tend to be poorer than those in the Rural Livelihood Project (average monthly income of Tk5,430). The Rural Livelihood Project beneficiaries tended to be better off than the poor. In Uzbekistan, the clients of the Savings and Credit Unions, the main vehicles to be used to reach poor households, tend to be the low-income rather than the poor population.

The outreach of the five projects studied ranges from low-income to poor households. The beneficiaries do not include a large number from the hard-core or ultra poor—despite three of the five projects being designed to focus on serving the hard-core poor. Their actual outreach does not match their envisioned target group. This practical finding on targeting, and the regressive impact found in the Philippine project which is also reported in other studies, raise the issue of whether ADB should continue to support microfinance projects designed to target the poorest of the poor or the ultra poor.

The results of the focus group discussions in the three countries indicate that the microfinance projects had positive effects on the status of women, particularly in the household. The following changes were observed: (i) greater role in household generation of cash, (ii) greater involvement in making major expenditure decisions and generating cash savings, (iii) ability to generate more income on their own and greater role in business decision making, (iv) acquisition of more skills and expanding their network of friends and support system, and (v) increased acquisition of assets. These observations were supported by the results of the sample surveys in Philippines and Bangladesh of women that participated in microfinance programs. These surveys showed an increased role of women in accessing finance; managing their businesses; and improved relationships between husbands and wives, joint decision making, and sharing of household responsibilities.

The five projects, to a large extent, mainstreamed improving the status of women in their design and implementation. The designs specified measurable indicators and targets for the participation of women and activities to develop their entrepreneurial skills. The role of women in their respective societies was also analyzed to identify gender issues. The evaluation findings suggest that project design can be improved further by including more gender disaggregated targets and indicators in the project framework, and by providing explicit discussion of the

participation of women in the design and implementation process. Impacts could be strengthened if the quality of client subprojects, particularly among the poorer clients, were improved to generate higher profits—thus increasing household incomes. The entrepreneurial capacity and skills of the poor need to be developed further to increase their abilities to undertake and manage income generating activities.

To improve the quality of impact evaluations, microfinance projects could budget for baseline as well as post-intervention data collection that would include not only treatment households but also control households. Given the costs of such surveys, they should not be routinely included in all microfinance projects but only in carefully selected projects. ADB should include plans for rigorous impact evaluation in the design of these selected projects.

Drawing on the evaluation findings, microfinance projects need to be more focused and deliberate in targeting poor households. In this regard, projects need to (i) clearly define the target group; (ii) identify the barriers to their program participation; and (iii) include interventions and/or mechanisms to remove these barriers. Further, ADB should consider building staff capacity in microfinance through systematic training; and use internationally accepted guidelines and principles in formulating the design of its microfinance projects.

I. INTRODUCTION

1. In 1988, the Asian Development Bank (ADB) approved its first microfinance project.¹ Since then, interest in microfinance has grown both in ADB and in the development community. By the end of 2006, ADB had approved 34 microfinance projects and 20 projects with microfinance components. These projects involved \$1,012 million in loans and \$6 million in grants and took place in 16 developing member countries (DMCs). Of the 32 microfinance projects, 17 (53%) were approved from 2000 to 2006. These projects accounted for 61% (\$552.8 million) of ADB's total lending for microcredit (Appendix 1).

2. In 2000, ADB's Microfinance Development Strategy was approved by the Board of Directors.² The strategy was formulated to support the development of high quality, sustainable microfinance services to poor and low-income households and their microenterprises. The goal was to ensure permanent access to institutional financial services for these target groups. The strategy, therefore, focused on (i) creating a policy environment conducive to microfinance, (ii) developing financial infrastructure, (iii) building viable institutions, (iv) supporting pro-poor innovations, and (iv) supporting social intermediation.

3. Since the release of the strategy, projects with greater focus on microfinance and on women have been initiated, and some projects that were then ongoing have already reached completion. This evaluation is to review the results of these projects, particularly in relation to their development goals of reducing poverty among rural poor households and in effecting change in the socioeconomic status of women.

II. OBJECTIVES AND SCOPE

A. Objectives

4. The main objective of this evaluation was to assess, based on the experience of ADB-supported projects, the extent to which access to microfinance has reduced the poverty of rural poor households and improved the socioeconomic status of poor women. The specific objectives were to:

- (i) determine how effective the microfinance projects were in reducing rural poverty and in improving the status of poor women;
- (ii) determine the extent to which microfinance projects mainstreamed improvement of the status of women in project design and implementation; and
- (iii) draw lessons that can be used to improve the design of future microfinance projects and the future direction of ADB's microfinance operations.

B. Scope

5. The scope of the evaluation included two elements: (i) the use of a comparison group to define a counterfactual outcome and application of econometric techniques to estimate the impact of microfinance on rural households;³ and (ii) the use of qualitative tools, specifically

¹ ADB. 1988. *NGO Microcredit*. Manila (Loan No. 940-PHI (SF), for \$8.0 million, approved on 22 December).

² ADB. 2000. *Finance for the Poor: Microfinance Development Strategy*. Manila.

³ Stimulated by the views of the Center for Global Development, the subject of impact evaluation has recently become a "hot topic" in the development community. The lack of reliable impact evaluations of many donor supported social development programs has resulted in an "evaluation gap" and, consequently the missing body of knowledge needed to guide future policy design. In part, this study helps to meet the need of the Operations Evaluation Department (OED) for increasing the proportion of rigorous impact evaluations within ADB.

participatory focus group discussions and sample surveys of participating women in selected microfinance programs, to assess the effects of microfinance on the socioeconomic status of women.

6. After undertaking a broad literature review (Appendix 2), microfinance projects were visited in three countries (i.e., Philippines, Bangladesh, and Uzbekistan) to determine the outcomes at the field level. The Philippines was selected as an example of a long-established Southeast Asian country with extensive experience in microfinance. Bangladesh was chosen as an example of a South Asian country that has a long history with ADB, which includes projects that support microfinance activities. Uzbekistan was selected as an example of an economy in transition in Central Asia. Together, these countries represent a range of policy and institutional environments in which ADB supports microfinance projects.

7. In the Philippines, the Rural Microenterprise Finance Project was examined for the evaluation.⁴ In Bangladesh, three projects were selected: (i) the Participatory Livestock Development Project; (ii) the Second Participatory Livestock Development Project;⁵ and (iii) the ongoing Rural Livelihood Project.⁶ In Uzbekistan, the Small and Microfinance Development Project⁷ was visited by the evaluation team.

8. In view of the costs, time, and lengthy process involved in conducting impact surveys, only the Philippine project was selected for the rigorous impact assessment at the household and/or client level. Although this kind of quantitative impact assessment was undertaken in only one country, sample surveys were used to develop a socioeconomic profile of rural poor households in three countries. Data gathered from these surveys were used to determine if projects were effective in reaching the intended target groups.

9. The study focused on the effectiveness of selected ADB microfinance projects in reaching rural poor households and women; and the effects on the beneficiaries. The objectives of the evaluation in relation to ADB's microfinance operations are in Appendix 3. The efficiency, cost-effectiveness, and sustainability of microfinance programs—although important concerns—were not covered in detail in this study.

III. DESCRIPTION OF SELECTED PROJECTS

A. Philippines

10. **Rural Microenterprise Finance Project.** In 1996, ADB approved a \$20 million loan for the Rural Microenterprise Finance Project. The Project aimed to support efforts of the Government of the Philippines to strengthen rural financial institutions by assisting organizations that employed the *Grameen* Bank Approach in providing credit to the poor.⁸ The objective of the Project was to reduce poverty, create employment opportunities, and enhance the incomes of

⁴ ADB. 1996. *Rural Microenterprise Project*. Manila (Loan 1435-PHI, for \$20 million, approved on 23 April), for which project performance evaluation report was completed by OED in July 2006.

⁵ ADB. 2003. *Second Participatory Livestock Development Project*. Manila (Loan 2070-BAN, for \$7.50 million for the microfinance component, approved on 19 December).

⁶ ADB. 1997. *Participatory Livestock Development Project*. Manila (Loan 1524-BAN(SF), for \$19.7 million, approved 19 June; and ADB. 1998. *Rural Livelihood Project*. Manila (Loan 1634-BAN, for \$42.26 million, approved on 29 September).

⁷ ADB. 2002. *Rural Livelihood Project*. Manila (Loan 1963-BAN, for \$20 million, approved on 9 December).

⁸ The *Grameen* Bank Approach is a group-based lending methodology developed by the Grameen Bank of Bangladesh to serve rural, landless women who need financing for income-generating activities. It has been widely adopted in Asia, and in other contexts.

the poorest of the rural poor (the ultra poor)—the bottom 30% of the rural population as measured by income.

11. The Project provided two credit lines to help meet the incremental financial requirements for a nationwide expansion of the *Grameen Bank Approach*. First, the investment loan component, which supported the incremental investment requirements of institutions known as *Grameen Bank Approach replicators*⁹ for relending to self-help group members. Second, the institutional loan component, which supported institutional development and strengthening of the participating institutions.

12. The Project ended in December 2002. The project completion report rated the Project “highly successful”. The project performance evaluation report rated the Project “successful” because the investment and institutional components met their goals. The Project brought microfinance into the mainstream of the financial system. With the participation of rural banks, cooperative rural banks, cooperatives, thrift banks, and non government organizations (NGOs), the Project demonstrated that the *Grameen Bank Approach* can be replicated nationwide.

B. Bangladesh

1. Participatory Livestock Development Project

13. The \$19.7 million loan for the Participatory Livestock Development Project was approved in June 1997. The Project was designed to complement the efforts of the Government of Bangladesh to increase the incomes of poor women and smallholder farmers, enhance the status of women, and reduce poverty among targeted beneficiaries. The Project targeted poor, landless, marginal households, with an emphasis on households headed by women, engaged in smallholder livestock enterprises. Most of the 364,000 beneficiaries were women. The Project aimed to cover 18% of poor households in 89 *upazilas*¹⁰ in over 17 districts in northwestern and north-central Bangladesh.

14. The Project provided microcredit and related technical services to livestock enterprises suitable for poor households through NGOs, and built the capacity of the Department of Livestock Services, NGOs, and rural communities to plan and manage livestock development activities.

15. The project completion report rated the Project “successful” because it was highly relevant, effective, efficient, and produced achievements that will likely be sustainable. It concluded that the Project achieved its poverty reduction goal, was able to reach the poor population in the project areas, and helped beneficiaries increase their incomes by an average of 42%.

2. Second Participatory Livestock Development Project

16. The follow-on Project included \$7.5 million for the microfinance component and was approved in December 2003.

⁹ The RRP of the Project refers to organizations that employ the *Grameen Bank Approach* as “*Grameen Bank Replicators*.”

¹⁰ An *upazila* is the next administrative unit under a district, previously known as *thana*.

17. The Project sought to (i) improve community capabilities to develop and manage income-generating activities through a technical and social development training program; (ii) provide microfinance and technical supporting services for livestock enterprise development, including assistance to the ultra poor through a pilot program of asset development and training; (iii) build the capacity of the Department of Livestock Services; and (iv) support the implementing and management agencies. The project area covered 157 subdistricts in 20 districts; 68 of these subdistricts and 3 districts received assistance under the first Participatory Livestock Development Project.

18. The goal of the Project was to reduce rural poverty in 20 districts of northwest Bangladesh by increasing income-generating activities and employment from livestock-related enterprises for the rural poor, particularly landless households and households headed by women. The Project was designed to build the individual and community capability to manage production enterprises. It will provide microfinance for a range of income-generating activities including livestock enterprises, small businesses, and marketing initiatives; and will support the development of livestock input supply services and employment opportunities in the private sector. The Project targeted the ultra poor.

3. Rural Livelihood Project

19. In 1998, ADB approved a \$42.26 million loan to support the poverty reduction efforts of the Government of Bangladesh by creating sustainable farm and nonfarm employment. A corollary objective of the Project was to transform successful cooperatives of the completed Rural Poor Cooperative Project¹¹ into sustainable microfinance institutions (known as District Bittaheen Banks). The Project had four components: (i) the formation of landless poor societies and provision of microfinance services to society members, (ii) project management, (iii) support of the Rural Poor Cooperative Project, and (iv) support of a pilot District Bittaheen Bank.

20. The Project aimed to provide support for more than 500,000 members to start microenterprises and income-generating activities. Of these, 246,000 would be new members and the rest would be existing Rural Poor Cooperative Project participants. The project area covered 152 *thanas* (subdistricts), of which 70 *thanas* were underdeveloped with a large proportion of their populations living in poverty. The remaining 82 *thanas* comprise Rural Poor Cooperative Project areas that require modest amounts of further support until they become self-sustainable.

C. Uzbekistan

21. **Small and Microfinance Development Project.** The \$20 million loan approved in 2002 for the Small and Microfinance Development Project seeks to create a viable and sustainable institutional framework for the effective delivery of financial services, particularly to poor, low-income households, and small and microenterprises. The project promotes: (i) the development of an operationally sustainable system of savings and credit unions to deliver microfinance services through efficient intermediation in an enabling policy, regulatory, and supervisory framework; and (ii) enhanced institutional capacity of commercial banks for efficient financial intermediation through outreach in the delivery of financial services to households, and to micro and small enterprises. A \$400,000 advisory technical assistance (ADTA) grant was provided to

¹¹ ADB. 1992. *Rural Poor Cooperative Project*. Manila (Loan No. 1213-BAN(SF), for \$30 million, approved on 17 December).

strengthen the institutional capacity of the Central Bank of Uzbekistan for prudential regulation and supervision of savings and credit unions.

22. The Project has three major elements: (i) development of an effective regulatory and institutional framework; (ii) providing financial support for setting up an institutionally and financially sustainable network of 20 savings and credit unions in accordance with the Law on Credit Unions, 2002; and (iii) providing a credit line to commercial banks to enable them to relend to household, microenterprises, and savings and credit unions. These mutually reinforcing three elements are designed to develop an effective and well-funded financial system that mobilizes savings and provides the poor with financial support to establish opportunities for income generation. The Project is expected to be completed in 2010.

IV. LITERATURE REVIEW OF STUDIES ASSESSING THE IMPACT OF MICROFINANCE

23. A literature review of studies conducted in the last 10 years on the impact of microfinance using “rigorous”¹² methodologies was undertaken to: (i) provide a context for the evaluation, and (ii) help to develop the approach and methodology used for this evaluation. The reviews found disagreements and debates in the literature results. Much of the disagreement resulted from the different degrees to which the various studies have controlled for problems that are now acknowledged to affect impact assessments—nonrandom program participation, nonrandom program placement, and nonrandom dropouts (Armendariz de Aghion and Morduch 2005).¹³

24. Weiss, Montgomery and Kurmanalieva (2003) reviewed the evidence of the microfinance impact on poverty in Asia and subsequently Weiss and Montgomery (2005) provided an update including studies using Latin American data. They reviewed only more “rigorous studies” and did not cover studies using qualitative or participatory approaches. Weiss and Montgomery (2005) summarized their review by saying that

the conclusion from the early literature, that whilst microfinance clearly may have had positive impacts on poverty it is unlikely to be a simple panacea for reaching the core poor, remains broadly valid. Reaching the core poor is difficult and some of the reasons that made them difficult to reach with conventional financial instruments mean that they may also be high risk and therefore unattractive microfinance clients.

25. Meyer (2002) reached a similar conclusion. Surveying available evidence for Asian countries, he concluded that while access to microcredit seems to have an overall positive effect on income and education, results differ substantially across countries and programs both in magnitude and statistical significance and robustness.

26. Because income and expenditure are the basic measures of household welfare, rigorous microfinance impact evaluations almost always cover changes in these variables. While some studies show positive impacts, other studies could not establish significant impacts. Hulme and Mosley (1996), for instance, concluded that growth in incomes of borrowers always exceeds

¹² Rigorous impact studies refer to studies employing quantitative methods of analysis and do not include those using qualitative and participatory approaches (cf Weiss, Montgomery and Kurmanalieva, 2003). In addition, these studies control for known biases in microfinance impact evaluation such as sample selection and non-random placement.

¹³ These issues are discussed in more technical detail in Appendix 4. The list of studies covered by the review and other references used in this study are provided in Appendix 5.

that of the control group.¹⁴ They also found that the positive impacts on income are larger for better-off borrowers.

27. Among the most cited results on the impact of microfinance on income are those reported in Khandker (1998) and Khandker (2003). Using data from a 1991/1992 survey covering Grameen Bank and Bangladesh Rural Advancement Committee microfinance programs, with appropriate controls for sample selection and nonrandom program placement, it was found that a Tk100 loan to a female borrower would result in a net consumption increase of Tk18¹⁵ compared with Tk11 for male borrowers. In subsequent estimates, using panel data that included a re-survey of previous respondents in 1998/1999, there was a slightly lower impact (a Tk10.5 increase in consumption). In the earlier survey, 5% of the participants were able to escape poverty annually. In the second survey, the corresponding impact was an 8.5% reduction in moderate poverty and an 18% reduction in extreme poverty. Evidence was also found of positive spillovers on nonprogram participants in the villages.

28. Using data from Bangladesh, Zeller et al. (2001) estimated the impact of microfinance on household income microfinance by comparing eligible households in the Association for Social Advancement and Bangladesh Rural Advancement Committee¹⁶ villages with eligible households in the Rangpur Dinajpur Rural Service village. They found different impact estimates depending on the season. The estimated annual average impact was Tk37 per Tk100 credit available. They noted the substantial difference between their estimate and that of Pitt and Khandker (1998) and explained that their “measures were not only the effect of actual borrowing, but also the effect of access to credit, that is, the ability to borrow sometime in the future even if the household in the current period chooses not to borrow.” These indirect benefits would include “reduced cost of consumption smoothing, such as decrease in distress sale and an increase risk-bearing capacity favoring more profitable production and investment portfolios.”

29. In contrast to these earlier mentioned studies, Coleman (1999) found no significant impact of access to microcredit on improving household wealth using a sample of households from northeastern Thailand. However, when the sample was broken down into general beneficiaries and committee members, Coleman (2006) found that the insignificance was limited to general beneficiaries and that a positive impact was found among committee members who received access to financing.¹⁷ Estimates in Montgomery (2005) using data from Pakistan found a mild significant impact on per capita food expenditure in the months after the beneficiary first borrowed.¹⁸ However, access to microcredit did not have a significant impact on nonfood expenditure.

30. R. Bebczuk and F. Haimovich (2007) used household survey data on poor households from a number of Latin American countries to undertake their analysis. They found that credit

¹⁴ The control group consists of potential borrowers who are qualified but did not participate in the microfinance program.

¹⁵ Morduch (1999) questioned the validity of the identifying instrument—land owned—because examination of the data showed a significant number of program participants that do not meet the eligibility requirement. Re-estimation using the cleaner data found either nonexistent or very small impacts. Pitt (1999), however, argued that Morduch (1999) used the wrong method and found that the earlier study underestimates the true impact.

¹⁶ Association for Social Advancement and Bangladesh Rural Advancement Committee are large NGOs in Bangladesh.

¹⁷ The microfinance methodology used is village banking, wherein officers/leaders of community managed village banks are referred to as committee members.

¹⁸ This variable was months since the household first borrowed. This is not the same as the Coleman (1999) treatment variable which is months since the program was available in the village.

increased labor income in a statistically and economically significant manner. Access to credit increased the hourly labor income of poor individuals compared with a similar population without access to credit by 4.8 times (Bolivia at 10% level of significance), 12.5 times (Guatemala at 1% level of significance), and 4.5 times (Haiti at 5% level of significance). The impact was sensitive to the size of the loan. They found that, in Guatemala, a 10% increase over the average amount of credit translates into an increase in hourly labor income of 4.7 times to the average income of credit borrowers and 6.2 times for those without access to credit.

31. The rigorous impact studies of microcredit conducted in the past 10 years show mixed results regarding impact on income and expenditure. Some studies show a significant, positive impact on beneficiaries while others show no significant impact. This evaluation study undertook a rigorous estimation of the impact of microcredit in the Philippines and compares the results with other similar studies. Appendix 2 reviews the literature on the five primary areas of concern regarding indicators of the impact of microfinance: (i) income, expenditure, and savings; (ii) other financial transactions; (iii) enterprises and employment; (iv) household assets; and (v) human capital investments.¹⁹ The impact evaluation undertaken for this study used these variables to assess the degree to which microfinance improved the well-being of the beneficiaries.

V. FRAMEWORK FOR ASSESSING IMPACT ON HOUSEHOLDS

32. The key problem is defining a valid counterfactual outcome against which the treatment group can be compared.²⁰ The gold standard in impact evaluation is the randomized experiment where treatment and control groups are randomly determined at the beginning of the project. This is rarely possible—the study evaluated a completed project (the Rural Microenterprise Finance Project), so it could not employ a randomized experiment.

33. Another desirable way of drawing out a counterfactual design requires the use of baseline data. However, this study did not have the benefit of baseline data.²¹ It was, therefore, not possible to carry out a “before and after” impact evaluation design as this kind of data was absent. These limitations on methodology are common in the field of evaluation since rigorous impact evaluations are often not built into a project at the design phase. Evaluation is often given more attention at the end of a project. Because of these factors, this evaluation, like many others, used a one-time survey to collect information on the beneficiaries and control group.

34. The study used a quasi-experimental design that required treatment and comparison areas for each selected microfinance institution. Specifically, a comparison *barangay* was identified for each *barangay* selected.²² Treatment *barangays* are those where the microcredit lending was going on for some time. The comparison *barangays*, on the other hand, are expansion areas where program clients were identified and organized into groups but no loans had been made to them. Treatment and comparison *barangays* are geographically different but have households that are similar in socioeconomic characteristics.

¹⁹ While the review focused on the impact of microfinance on poor households, the depth of outreach was also covered. Only studies that employed “rigorous” methodologies were included in the review. Qualitative studies were not covered.

²⁰ Counterfactual is the situation that would have prevailed had the intervention not occurred.

²¹ The only chance of a baseline data was the one generated by focused study in Aklan done in 1999 around the beginning of program implementation. Unfortunately, the subject MFI—the Rural Bank of Aklan—had ceased operations a few years back.

²² A *barangay* is a village. It is the smallest political unit in the Philippines.

35. Two types of household respondents in *barangays* were covered by the survey: (i) participating households, and (ii) nonparticipating households that qualified to join the program but did not. An equivalent number for both types of respondents was interviewed in the treatment and comparison *barangays*. An innovation introduced in the study was the inclusion in the participating households group of a number of former clients consisting of successful graduates and problem households. This feature of the methodology was designed to address the attrition/dropout problem in using new clients as the comparison group (Karlan, 2001).

36. The difference-in-difference strategy was used to structure the analysis, i.e., differences in outcomes of participating and nonparticipating households in both treatment and control areas were generated. The regression framework took into account differences in household and community characteristics. The regression equation used to estimate the impact covered the three known sources of bias in evaluating the impact of microfinance: (i) selection bias, (ii) nonrandom program placement, and (iii) dropout bias.

37. The traditional issues of fungibility of money, substitution, additionality²³, and diversion are implicitly dealt with in the quasi-experimental design. This is because client (both existing and new) and nonparticipating households are chosen randomly which means that theoretically they have the same characteristics except for the treatment effects. Thus, whatever the fungibility, substitution, additionality, and diversion that can be expected to happen in treatment group are also expected to happen in the comparison group. The difference-in-difference methodology, therefore, cancels them out

38. Appendix 4 provides a detailed technical discussion of the framework used to assess the impact of microfinance on households.

VI. METHODOLOGY

A. Quantitative Tools

39. The survey undertaken for the evaluation covered two types of areas. In the existing or treatment or areas, existing clients considered for the survey were those who had been with the program for at least 3 years or had availed of loans for at least five loan cycles. This group was selected to capture the impact of the subject project, the implementation of which was completed in 2002. In the comparison or expansion areas, prospective program clients had been identified and organized into groups but no loans had yet been provided. New centers in a treatment area did not qualify as an expansion area.

40. The sampling scheme considered the three island groups in the Philippines (i.e., Luzon, Visayas, and Mindanao) and the type of microfinance institutions (cooperative banks/rural banks, cooperatives, and NGOs) as stratification variables²⁴ (Appendix 6). Based on existing program records, it was determined that the most practical primary sampling unit was the *barangay*. Based on the desired error of estimate, a total sample of 2,200 households was sufficient for the study. For each *barangay*, a sample of 10 client and 10 nonparticipating households was deemed selected. At this sampling rate per *barangay*, about 110 *barangays* (55 treatment *barangays* and 55 comparison *barangays*) were required.

²³ Usually measured by the enterprises that would have been undertaken without the microfinance program and those that had been undertaken with the microfinance program.

²⁴ Economics and Research Department provided assistance to OED at the initial stage of the study, particularly in designing the sampling method and overall estimation framework.

41. The number of treatment *barangays* for each island and for each microfinance institution was selected randomly proportional to the number of client households served, i.e., the sampling proportional to size. For every treatment *barangay* selected, the finance institution identified a corresponding suitable expansion area. The existing and new client households were drawn randomly from the list prepared by the microfinance institution or from the center roster of members. The nonparticipating households were drawn randomly from the qualified nonparticipating households identified by the field personnel of the financial institution, center²⁵ or *barangay* leaders. The sampling design and procedure is discussed in Appendix 7.

42. The household survey questionnaire was adopted from the Annual Poverty Indicators Survey questionnaire of the National Statistics Office by adding questions on loan accounts, enterprises, and gender-related matters.²⁶ This approach allowed the results on income and expenditures to be comparable to those generated to establish official poverty statistics.²⁷ The other instruments used were the *Barangay* Profile Questionnaire and the Microfinance Institution Profile questionnaire. These instruments were pretested in August 2006.²⁸ The actual field surveys were conducted from 3 October 2006 to 25 January 2007.²⁹ The actual survey covered 2,276 households in 116 *barangays* and 28 microfinance institutions. A statistical compendium of impact survey data is provided as supplementary appendix to this study.

43. The data was processed and used to estimate the impact of microfinance on households using econometric techniques and procedures. Appendix 8 explains the technical details of the estimation procedures used.

44. Sample surveys were also conducted in Bangladesh and Uzbekistan but were designed to only generate information on the socioeconomic profile of target groups reached by ADB microfinance projects, and not to measure impact quantitatively. To some extent, the surveys also looked into on how participation in the program has helped to improve the lives of respondents. A total of 200 sample respondents were drawn from the Rural Livelihood Project and Participatory Livestock Development Project. Five districts were covered by the survey for the Rural Livelihood Project and four districts for the Participatory Livestock Development Project³⁰ (Appendix 9). In Uzbekistan, the sample survey covered 84 respondents from credit unions, microfinance NGOs, and the Microcredit Bank³¹ in two regions³² (Appendix 9).

²⁵ A center consists of a group of program participants that meet weekly in specified *barangays* for purposes of loan processing, disbursement, collection, and monitoring.

²⁶ Nigel Biggar of Grameen Foundation USA participated as external reviewer of the methodology and household questionnaire used in the study.

²⁷ The official poverty statistics are generated from the Family Income and Expenditure Survey, which is conducted by the National Statistics Office every 3 years. The Annual Poverty Indicators Survey is a complementary survey that is done almost every year whenever the Family Income and Expenditure Survey is not done to provide more frequent poverty indicators.

²⁸ The pretest was conducted with the Cooperative Rural Bank of Bulacan.

²⁹ No field surveys were conducted for 2 weeks during the month of December 2006 because of the Christmas holidays and also during the first week of January 2007.

³⁰ These surveys were conducted on 3–20 November 2006.

³¹ Microcredit Bank is a government-owned bank established on 5 May 2006. It is primarily tasked to deliver microfinance services to rural poor households.

³² The field survey was conducted from 23 November to 15 December 2006.

B. Qualitative Tools

45. Information on intra-household relations is mainly qualitative and collected primarily through the use of qualitative tools. The information focused on decision making in the household, sharing of resources, and asset acquisition. A series of participatory focus group discussions were conducted with selected beneficiaries to assess how and to what extent participation in the microfinance program changed the status of women.³³ Three tools were used to determine (i) the asset acquisition and ownership of client participants before and after joining the microfinance program; (ii) the intra-household dynamics in terms of cash generation, spending, and receipt; and (iii) the intra-household dynamics in terms of making expenditures and savings for expenditure (Appendix 10). These tools were used during workshops wherein clients participated in a self-learning process. A total of 203 women microfinance clients participated in 27 focus group discussions in three countries. The size of the workshop groups ranged from 5 to 10 participants (Appendix 10). Men were not included in these focus group discussions because women constituted almost 100% of the project beneficiaries. Hence, the number of men is not significant enough for analysis.

VII. FINDINGS OF THE STUDY

A. Outreach of Microfinance Projects

1. Philippines

46. When the Rural Microenterprise Finance Project was completed at the end of 2002, 618,906 clients had been reached, of which 97% were women. In June 2006, when the survey design was being formulated, the records of the People's Credit and Finance Corporation showed that the program had served 1.6 million borrowers.

47. The average loan size of sample borrowers was \$106 or about 7% of per capita gross domestic product (GDP). Microfinance borrowers from NGOs had lower average loan sizes (\$68); those borrowing from cooperatives had a higher average loan size (\$106). Borrowers from banks were in the middle range (\$84). These figures suggest that NGOs tend to reach deeper in outreach than regulated institutions such as banks and cooperatives.

48. The survey results show that existing respondent clients have, on average, been in the program for 75 months (about 6 years and 3 months). They have, on average, cumulatively borrowed P70,000 in loans and are on their 7th loan cycle. Of the exiting clients, 9% are problem clients while 2% are graduates (Table 1).

49. Table 1 shows the demographic characteristics of the households. Appendix 11 provides the significance level of the values for the variables in different types of households. The respondents are 44 years old on average. The vast majority of the beneficiaries were female. While 15% of the "reference persons"³⁴ were female, 92% of the respondents were female. Less than 1% of the respondents had no education, 31% had some elementary education, 46% had some secondary education, and 23% had tertiary education.

³³ The focus group discussions are good at understanding the dynamics within the household but do not establish quantitative causation. The survey results are considered more reliable for establishing the quantitative relationship of variables.

³⁴ The reference person is the person in the household with whom all relationships with other household members are referenced—commonly known as the household head.

The respondents had lived in the *barangay* for about 19 years and the average size of their house was 63 square meters.

50. Table 2 shows the basic household welfare indicators. Per capita income was about P46,000 and expenditure per annum was about P33,000. Per capita savings was about P13,000 for definition 1 (income-expenditures) and P16,000 for definition 2 (income-expenditures+education+health+durable furniture).³⁵ Food expenditure per capita was about P13,000 or 39% of total expenditures.

Table 1: Demographic Characteristics of Respondents

Variable	Existing Clients	New Clients	Nonparticipating	Total
Age of reference person	47	43	44	44
Female reference person (%)	14.6	12.7	16.9	15.3
Less than elementary reference person (%)	0.8	0.9	0.6	0.7
Elementary reference person (%)	33.7	29.3	31.0	31.2
Secondary reference person (%)	44.2	48.4	44.7	45.5
Tertiary reference person (%)	21.4	21.4	23.6	22.5
Years in <i>barangay</i> (village)	21	18	18	19
House size (m ²)	76	59	59	63
Female (respondent)	0.953	0.905	0.918	0.923
Existing (%)	89.1			
Graduate (%)	2.1			
Problem (%)	8.8			

m² = square meter.

Source: Operations Evaluation Mission.

³⁵ Definition 2 recognizes that the benefits of expenditures on education, health, and durable furniture extend beyond the current reference period.

Table 2: Basic Welfare Indicators of Respondents

Variable	Existing Clients	New Clients	Nonparticipating	Total
Per capita income (P)	51,000	43,737	44,403	45,759
Per capita expenditure (P)	36,153	30,674	33,118	33,195
Per capita savings 1 (P)	14,847	13,064	11,285	12,564
Per capita savings 2 (P)	18,425	15,454	14,358	15,580
Per capita food expenditure (P)	13,708	12,540	13,130	13,113
Poor (%)	6.0	9.3	11.5	9.7
Subsistence poor (%)	2.5	3.2	4.8	3.9
Hunger incidence (%)	2.3	1.9	2.3	2.2
Reduced food incidence (%)	11.3	11.0	11.5	11.3

Note: 2006 Philippines (Rural) Poverty threshold = ₱13,659; food threshold = ₱9,445 (National Statistical Coordination Board).

Per capita savings 1 = income – expenditures

Per capita savings 2 = income – expenditures + education + health + durable furniture

Source: Operations Evaluation Mission.

51. Using the official 2006 poverty threshold,³⁶ only 10% of respondents would be classified as poor and 4% as subsistence poor.³⁷ This is somewhat surprising since the program was designed to reach poor households. Hunger incidence was found in 2% of the respondents while 11% experienced a reduction in food consumption in the last 3 months.

52. Given the intention of the program to serve poor households, the natural question to ask is “Did the program reach its intended target?” To answer this question, the distribution of the difference between the respondents’ per capita income and the official poverty threshold was plotted. As such, a value of zero means the household is on the poverty line, a negative value means the household is below the poverty line, and a positive value means the household is above the poverty line. Figures 1–3 illustrate the deviation of per capita income from the poverty threshold for existing clients, new clients, and nonparticipating households. The figures indicate that while a large proportion of the respondents are around the poverty threshold, more are on the nonpoor side (i.e., at the right side of the poverty threshold) than the poor side.

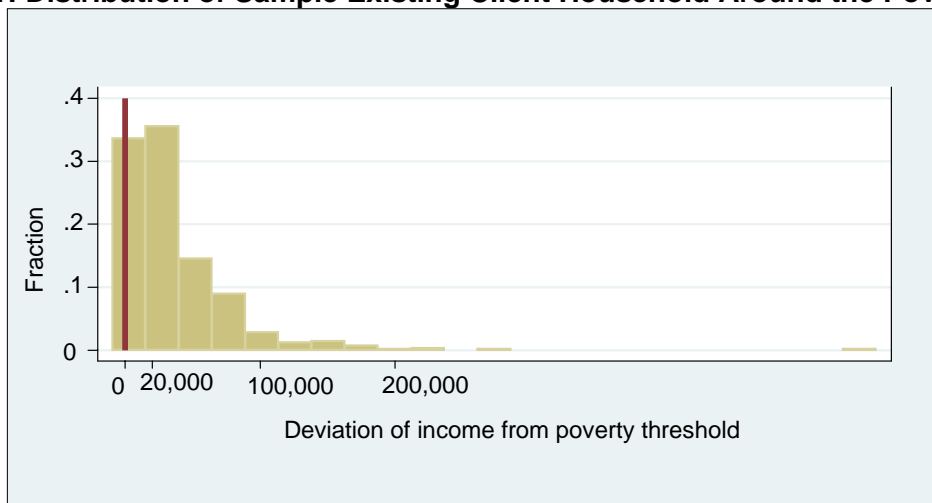
53. While a considerable proportion of the existing clients are around the poverty threshold, a larger proportion is on the nonpoor side (Figure 1). This suggests that the people were poorer when they entered the program than at the time of the survey. However, examination of the profile of new clients shows that the distribution is essentially the same (Figure 2). The nonparticipating households—the households that are considered by people in the community to qualify for the program—also have similar characteristics, i.e., most of them are not poor (Figure 3). The existing and new program clients were supposed to have been screened using means-testing procedures. The results suggest that, if these procedures were applied strictly, they did not correctly identify the poor clients using the official definition. Since nonparticipating households are households referred to by either program field personnel, center leaders, or *barangay* leaders as those who qualify for the program, these stakeholders in the field are identifying potential clients that are not in the intended target group of the program. In spite of the means-testing instruments used to identify the intended clients, program stakeholders in the field are not identifying the intended beneficiaries—the poor—as the qualified clients of the program. This indicates that the stakeholders believe that those

³⁶ The national poverty threshold for rural areas is estimated to be P13,659 while the food threshold is P9,445, as published in the National Statistics Coordination Board website. Available: <http://www.census.gov.ph>

³⁷ Defined as those below the food threshold.

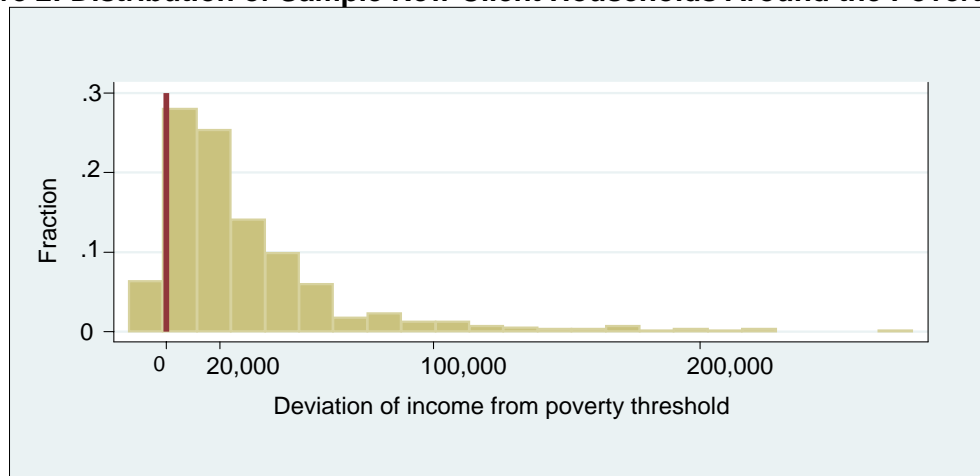
considered officially poor may not be the desired clients of the microfinance programs. Factors other than poverty appear to be driving their decisions.

Figure 1: Distribution of Sample Existing Client Household Around the Poverty Line



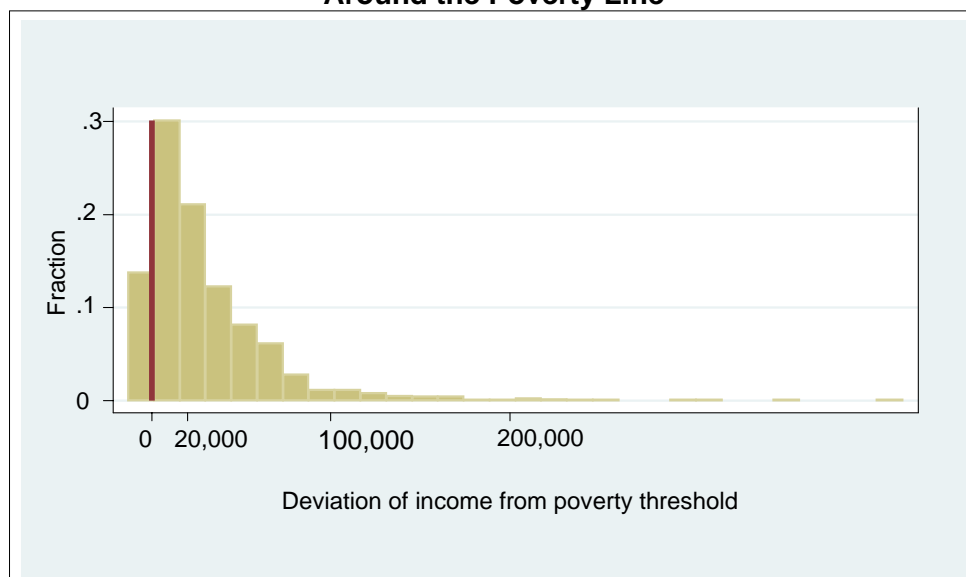
Note: Zero in x-axis represents the threshold
Source: Operations Evaluation Mission.

Figure 2: Distribution of Sample New Client Households Around the Poverty Line



Note: Zero in x-axis represents the threshold
Source: Operations Evaluation Mission.

Figure 3: Distribution of Sample Qualified Non-Participating Households Around the Poverty Line



Note: Zero in x-axis represents the threshold
Source: Operations Evaluation Mission.

54. In essence, the survey results indicated that the majority of the existing clients, new clients, and nonparticipating households deemed to be qualified for the program were not poor according to the official definition of poverty. This is in contrast to the other studies, which found that most of the microfinance program clients were poor. Khandker (2003), for instance, found that 90% of the microfinance program participants in Bangladesh in the 1991/1992 survey and 70% in the 1998/1999 survey were poor. Montgomery (2005) found that 70% of the microfinance clients of Khushhali Bank in Pakistan are poor. Given these findings, there may be a need to reexamine the targeting approach of the microfinance implementers in the Philippines.

2. Bangladesh

55. As of 31 December 2006, the total number of member borrowers in the Rural Livelihood Project was 507,958, of which 85% were women. In the Second Participatory Livestock Development Project, the total number of members was 408,276, of which 100% were women (Appendix 12).

56. The survey of Bangladesh beneficiaries was designed to generate the socioeconomic profile of the target groups reached by ADB microfinance rather than measure impact. The survey was also designed to assess how participation in the program helped to improve the lives of respondents. A total of 200 respondents were covered in the Bangladesh survey (Appendix 9).

57. The Rural Livelihood Project started in 1998, and most of the respondents (56%) from this project had participated in the microfinance program for at least 6 years and had borrowed an average of 4.73 times. In the Participatory Livestock Development Project, most of the respondents (89%) had been with the program for 1–3 years, and had borrowed twice on

average. The Second Participatory Livestock Development Project started in 2004 and most of the respondents were clients of that project rather than its predecessor.

58. Results of the survey indicate that the beneficiaries have somewhat better socioeconomic status than the national poverty benchmarks of the Bangladesh Bureau of Statistics.³⁸ The respondents had generally better characteristics than the poor in Bangladesh in terms of monthly income, education, and housing characteristics (Table 3). Field interviews conducted during the evaluation after participation from the microfinance program found that the better status of beneficiaries observed was not necessarily attributable to the project. The absence of baseline data and a comparison control group do not allow for clear attribution of positive results to project participation. Nonetheless, the results provide an indication of the socioeconomic characteristics of project participants and the depth of outreach of these projects.

Table 3: Comparison of Poverty Indicators from Surveys

Indicators	BBS Poverty Monitoring Survey	RLP Sample Survey	PLDP Sample Survey
House roof	80% use CI sheet/ bamboo/wood	73% use CI sheet/ bamboo/wood	79% use CI sheet/ bamboo/wood
House walls	71% use CI sheet/ bamboo/wood	65% use CI sheet/ bamboo/wood	75% use CI sheet/ bamboo/wood
Average no. of rooms	1.56	2.6	2.2
Average floor space	19.98 sq. m	37.17 sq. m	22.14 sq. m
Average family size	4.9	4.9	4.2
Electricity in HHs	22% with electricity	66%	60%
Education of HH head	47% no education	23% no education	42% no education
Average HH monthly income	\$59 ^a	\$79	\$54

BBS = Bangladesh Bureau of Statistics, CI = corrugated iron, HH = household, No. = number, PLDP = Participatory Livestock Development Project, RLP = Rural Livelihood Project, sq. m = square meter.

^a Adjusted for inflation (2006 prices).

Source: Bangladesh Bureau of Statistics. 2004. *Poverty Monitoring Survey*. Dhaka.

59. In terms of housing characteristics, respondents participating in the Participatory Livestock Development Project tend to be closer to national benchmarks than Rural Livelihood Project beneficiaries. In terms of family size, survey respondents are near the national average. In terms of access to electricity, respondents were better off than the poor reported. There were some differences in the education of the household heads. Only 24% of the respondents involved in the Rural Livelihood Project reported no education of the household head, compared with 40%–50% for the other two groups. The average household monthly income for Participatory Livestock Development Project respondents was below the average earned by the poor in Bangladesh. Participants in the other project had monthly household incomes that were higher than national average for the poor (\$59). Based on the above comparisons, respondents from the Participatory Livestock Development Project tend to be poorer than those from the Rural Livelihood Project and have characteristics that are generally consistent with the benchmarks for the poor. This may reflect the use of landless households headed by women as a criterion for participation in that project.

60. In terms of loan size, the average outstanding loan sizes were \$147 for the Rural Livelihood Project and \$141 for the Participatory Livestock Development Project, or about 35%

³⁸ Bangladesh Bureau of Statistics. 2004. *Poverty Monitoring Survey*. Dhaka. The survey had 7,500 household respondents. The national poverty threshold used in Bangladesh is 2,122 calories per capita per day energy intake in accordance with Food and Agriculture Organization standards for a healthy diet in South Asian Countries.

of per capita GDP. These figures provide an indication that these projects to some extent reached poor households.³⁹ The initial loan amount received by the beneficiaries averaged \$45, indicating that they were likely to be poor borrowers when they started with the program.

3. Uzbekistan

61. In 2000, a project preparatory TA (PPTA) was undertaken by ADB to develop a legal framework to govern savings and credit unions and to design a project. Prior to this PPTA, there were no interventions in rural finance and credit unions. In 2001, a small-scale technical assistance was formulated to pilot test three credit unions. Both technical assistance projects were major successes and led to the drafting and promulgation of the workable Law on Credit Unions in April 2002. ADB galvanized the development of savings and credit unions. The sector has expanded and a number of donors have entered the field.

62. The microfinance component of the ADB Small and Microfinance Development Project in Uzbekistan targets members of savings and credit unions through the use of subordinated debt. When the operation evaluation missions were fielded, no disbursements had been made, so it was not possible to assess how participants, particularly women and rural poor households, have benefited from microfinance.

63. Nonetheless, data were gathered from the field to assess the broad socioeconomic characteristics of borrowers that have participated in microfinance programs. This may provide baseline data for future evaluation work. The survey covered 84 respondents from savings and credit unions, microfinance NGOs, and the Microcredit Bank in two regions (Appendix 9). It was conducted from 23 November to 15 December 2006.

64. The average loan size among NGO clients was only \$109 or 16% of per capita GDP. This was less than one tenth of the average loan size for savings and credit union members (\$1,375). This indicates that, unlike the NGOs, savings and credit unions are likely to be reaching the upper spectrum of the low-income population rather than the poor. Services of microfinance NGOs were found to be more accessible to poorer households because of the absence of collateral requirements and greater focus on reaching poor households. The savings and credit unions, on the other hand, are regulated institutions and must comply with existing laws and regulations to ensure financial sustainability and solvency. As a result, they tend to focus on the more economically active group of the low-income population.

65. Poverty in Uzbekistan is largely a rural phenomenon. The proportion of the population living below the poverty line is about 27.5%, and 70.0% of the poor lives in rural areas. However, microfinance providers operate mainly in the capital cities of regions (districts) and have limited outreach to the villages where the rural poor live. Credit unions have yet to establish their presence in these rural villages. Uzbekistan's financial sector remains small and underdeveloped, with limited capacity to provide financial support to microenterprises and poor households. The outreach of microfinance institutions in Uzbekistan is modest. As of the end December 2006, 10 registered NGOs had an estimated total outreach of 35,000, while 32 licensed credit unions had an estimated 50,000 total membership.

66. The survey of a sample microfinance borrower found that most of the respondents (81%) own land, which was typically acquired through inheritance. Other than land and housing assets,

³⁹ International practice suggests that the average loan size needs to be less than 50% of per capita GDP to ensure that low-income households are reached.

the average assets of microfinance borrowers amounted to a little over \$3,000. About half of the borrowers own cars. Most of the households own livestock and poultry and have electricity in their homes. All respondents had a television set and jewelry. In terms of assets, the Uzbek microfinance borrowers had a relatively stronger asset base than borrowers in Bangladesh and the Philippines.

B. Impact of Microfinance

1. Impact of Microfinance in the Philippines

67. The impact of the Philippine microfinance program on households was estimated using the impact assessment methodology described in Appendix 8. Several outcome variables were considered in the study: (i) basic household welfare measures such as per capita income, per capita expenditures, per capita savings, and food expenditures; (ii) other financial transactions such as other loans, personal savings, and stocks;⁴⁰ (iii) household enterprises and employment; (iv) household assets such as land, farm equipment, livestock and poultry, and household appliances; and (e) human capital investments such as education and health.⁴¹

a. Impact on Income, Expenditures, Savings, and Food Expenditure

68. The primary measures of household welfare are per capita income, total expenditure, food expenditures, and savings. Table 4 shows the impact of microfinance loans on per capita income, per capita expenditures, on two definitions of per capita savings, and per capita food expenditures. There was a mildly⁴² statistically significant (significance level of 10%) positive impact on per capita income.

69. The analysis indicated that the program increased income by P5,222 for those who received microfinance loans. Based on this per capita estimate, the aggregate impact of the program on income was P8.6 billion for the total of 1.6 million clients reached with microcredit⁴³ (Appendix 14, Table A14.1).

70. Translating the per capita impact into impact per loan to allow comparisons with other estimates requires some additional calculations. On average, households borrowed a total of P70,000 in several loans during a 6-year period or about P11,000 per year. This means that on average every P100 loan income increased by P47. Several caveats are needed when considering this estimate. First, the coefficient on which this estimate is based is only significant at the 10% level, implying that factors other than access to microfinance also contribute to changes in incomes.⁴⁴ Second, the treatment variable on which this estimate is based on loan availability rather than loan amount.⁴⁵ The review of the impact studies suggested that this

⁴⁰ This refers to savings accounts held by the respondent financial institutions and is different from the savings (flow) variables, which are measured as the difference in income and expenditures.

⁴¹ Detailed impact estimation results on these outcome variables are shown in Appendix 13.

⁴² Level of significance refers to the odds that a particular result happens by chance. Thus, a 1% level of significance means the odds are 1 in 100 that the result happened by chance. The levels of significance were tested at the 1% (highly significant), 5% (significant), and 10% (moderately significant) levels.

⁴³ Mean impact at 90% confidence interval of P0.02 billion to P17.19 billion. The survey used proportional probability sampling which means that each observation is self-weighting.

⁴⁴ Confidence intervals were calculated to have a better idea of the precision of this estimate. The standard error of the estimated coefficient (5,222) is 3,617 which means that the 90% confidence interval of the estimate is P12 to P10,432 or an impact estimate ranging from P0.10 to P95 per P100 loan. Thus, previous estimates are well within this 90% confidence band—implying that this estimate is not statistically different from the earlier estimates.

⁴⁵ It should be noted that the amount of the loan was insignificant as a determinant of income.

estimate is on the high side. Using 1990/1991 data from Bangladesh, Khandker (1998) estimated Tk18 per Tk100 of loan impact. In addition, a lower estimate of Tk10.5 per Tk100 of loan was obtained using 1998/1999 data (Khandker 2003). In contrast, estimates by Zeller et al (2001), also using data from Bangladesh, showed Tk37 per Tk100 credit available. Zeller et al. (2001) argued that the higher estimate was because the variable used is availability of credit rather than loan amount as in Khandker (1998, 2003). They argued that availability of credit captured other impacts besides actual loan, such as reduced costs of consumption smoothing. Similar to Zeller, et al. (2001), the impact estimate in this study is also based on the availability of credit. Thus, their justification also applies here.

71. Per capita expenditure was also positively affected by access to microcredit (Table 4). This was estimated at about P4,136. Using the same calculation employed earlier, this means a P38 increase in per capita consumption for every P100 in loans borrowed. In terms of aggregate impact to the total of 1.6 million clients reached with microcredit, the impact on household expenditures was P6.8 million;⁴⁶ for food expenditures, it was P2.2 billion⁴⁷ (Appendix 14, Table 14.1).

72. Savings, in its two definitions,⁴⁸ was not significantly affected even at the 10% level of confidence by access to microcredit. This is not difficult to understand since both income and consumption increased. Per capita expenditure food was also positively affected. This was P1,333 higher for those receiving a loan compared with those who did not, or about P12 per every P100 of loan.

Table 4: Impact on Per Capita Income, Expenditures, Savings, Food Expenditures

Outcome Variables	Estimated Coefficient	Significance Level
Per capita income	5,222	0.099
Per capita expenditures	4,136	0.077
Per capita savings 1 ^a		NS
Per capita savings 2 ^b		NS
Per capita food expenditure	1,333	0.072

NS = not significant.

^a Income-Expenditure.

^b Income-Expenditure+Education+Health+Durable Furniture

Source: Operations Evaluation Mission.

73. The analysis confirms many earlier results for other exogenous variables. For instance, the impact on per capita income, per capita expenditure, and per capita food expenditure declines with age but the rate of decline slows down (as reflected by the positive coefficient for the age square variables). Another important result is that per capita income, per capita expenditure, savings, and per capita food expenditure is positively affected when the gender of the reference person (or head) of the household is female. This confirms some of the results reported in the literature. In terms of education, the effect was significantly different from those without education only when the reference person has a college education. Impact was only found for per capita income and per capita expenditure. The years the person lived in the village did not affect any of the dependent variables significantly. Household size, on the other hand, had a positive impact on per capita income, per capita expenditure, and per capita food expenditure.

⁴⁶ At the mean with 90% confidence interval of 0.5 billion to 13.2 billion.

⁴⁷ At the mean with 90% confidence interval of 0.2 billion and 4.2 billion.

⁴⁸ One definition is income minus expenditures. The second definition adds back expenditures on education, health, and durable furniture because these are not expected to be consumed in one period (Bautista and Lamberte, 1990).

74. Since only the loan availability/access treatment variable had a statistically significant impact on the primary measures of welfare, (e.g., per capita income and expenditure), subsequent discussions in this report are limited to this variable.

b. Impact on Other Loans and Personal Savings

75. Besides household income and expenditures, the impact of access to microfinance on the other financial transactions of the household was also examined. Other loans and savings are among households' important financial transactions. The savings referred to here are accounts maintained in the program microfinance institution and other financial institutions. Thus, these savings can be considered a stock rather than as a flow.

76. About one fourth of the respondents secured other loans, not related to the microfinance program during the last 2 years (Appendix 14, Table A14.2). About 20% of existing clients have availed of such loans while a higher proportion (26%) of new clients and nonparticipating households had nonprogram loans. The amount of these other loans, however, is higher for existing clients (P20,000) than new clients (P9,000) and nonparticipating households (P15,000). In terms of the number of loans contracted, existing clients have a higher number (1.6) compared with new (1.2) and nonparticipating households (1.2). The skills and experience gained securing, managing, and repaying microfinance loans presumably helped the beneficiaries to gain access to other sources of finance.

77. The impact on nonprogram loans was also estimated (Appendix 14, Table A14.3). The analysis showed that the availability of microcredit loans significantly, albeit mildly (significance level 6%), reduced the use of nonprogram loans (based on the proportion availing of nonprogram loans). The respondents reduced their dependence on higher priced loans (such as informal moneylenders). Compared with nonprogram respondents, loans other than from the microfinance program contracted in the last 2 years were reduced by about 5%.⁴⁹ In terms of loan amount and the number of other loans contracted, however, the impact was statistically insignificant.

78. In terms of personal savings, the impact of the program was positive and highly significant statistically (significance less than 1%) both in terms of having a personal savings account and on the amount of savings (Appendix 14, Table A14.4). Compared with those who were not program clients, 23% more of the program beneficiaries had maintained a savings account. In terms of the amount of savings, those with savings of under P5,000 is lower by 12%, those with P5,000–P10,000 in savings is higher by 4%, and those with P10,000 or more is higher by 9% compared with those who did not have access to microcredit. One explanation of the increase in savings is that savings are a compulsory component of the program. Increases in loan amount were contingent on the amount of savings that existing program clients maintain with the cooperating microfinance institution. When beneficiaries drew down the money in their savings accounts, the amount of loan was correspondingly decreased.

⁴⁹ This estimate was developed using a nonlinear probit model, so the coefficient does not provide the marginal effects on the probability of contracting other types of loans if the beneficiary secured a micro-credit loan.

c. Impact on the Number of Enterprises and Employment

79. Another important impact of microfinance relates to the enterprises of the respondent households. The survey asked participants about the enterprises and employment in these enterprises.

80. About 93% of the client respondents had household enterprises, higher than the new clients (87%) and nonparticipating households (78%) (Table 5). Among household with enterprises, the average number is 1.8. About 2.4 people were employed in each enterprise. For existing clients, there were 2.1 enterprises per household employing about 3 individuals. For new clients, the corresponding figures were 1.8 enterprises employing 2.4 individuals; for nonparticipating households, 1.6 enterprises employing 2.2 individuals. These figures suggest that microcredit helps to develop the entrepreneurial activities of the beneficiaries which, in turn, create jobs and income-earning opportunities.

81. Since substitutions can happen between program clients' enterprise and those of other household members, the analysis focused only on the total number of enterprises and total employment. The estimates show that the impact of the program on both the number of enterprise as well as the number of employed persons in these enterprises is positive and highly significant. Table 6 shows that (i) compared with nonprogram households, the number of enterprise households with program clients is 20% higher;⁵⁰ and (ii) the participating households employed 17% more people than nonprogram clients.

82. The strong positive impact on employment points to possible second-generation impacts. Although the survey did not ask for information on employees in the enterprises, it is not unreasonable to expect that the economic status of these employees may be lower than the program clients. Hence, considering this second-generation impact will likely improve the depth of outreach of the program on poor households.

Table 5: Household Enterprises and Employment

Variable	Existing Clients	New Clients	Nonparticipating	Total
With household enterprise (%)	92.6	87.1	77.8	83.6
Among those with household enterprise:				
Total number of enterprises	2.07	1.82	1.63	1.79
Employed family members	2.31	1.68	1.64	1.82
Employed nonfamily members	0.63	0.68	0.55	0.61
Total employed	2.95	2.36	2.19	2.43

Source: Operations Evaluation Mission.

Table 6: Impact on Enterprises and Employment

Variable	Incidence Rate	Significance Level
Total number of enterprises	1.20	0.009
Total number of employees	1.17	0.006

Source: Operations Evaluation Mission.

⁵⁰ Since this is a Poisson regression, the incidence rate is exponential (coefficient). Poisson Regression fits a model for the number of occurrences (counts) of an event using a Poisson distribution function. Exp() is a function given in the column labeled as incidence rate.

83. In terms of aggregate impact, the program has supported a total of 305,000 enterprises,⁵¹ which the program employed a total of 705,000 people (Appendix 14, Table A14.1).⁵² The aggregate impact on enterprises and employment are based on the total of 1.6 million clients reached with microfinance services.

d. Impact on Assets

84. The evaluation was designed to test the hypothesis that microfinance affects the acquisition of household assets. The respondent households were asked questions about the current value of their assets. The standard question asked was “If someone wants to buy a particular asset you own, how much would the price be?” The assets included land, equipment, livestock, poultry, and household amenities.

85. About 20% of the respondents had land assets with an average current value of P557,000, 15% own farm equipment with an average current value of P55,000, 53% had livestock and poultry assets with an average value of P46,000, and almost everyone (97%) had some household appliances with average value of P73,000 (Table 7). The estimations did not show a significant impact of the microfinance program on any of the four classes of household assets. This reflects the mild impact of the program on increasing household income.

Table 7: Household Assets

Variable	Existing Clients	New Clients	Nonparticipating	Total
With agricultural and commercial land (%)	19.8	23.1	18.4	19.9
<i>Among those with agricultural and commercial land:</i>				
Agricultural and commercial land, current value (P)	468,338.0	580,559.0	586,068.0	557,332.0
With farm equipment (%)	11.7	19.4	14.6	15.1
<i>Among those with farm equipment:</i>				
Farm equipment, current value (P)	27,588.0	110,645.0	28,775.0	55,365.0
With livestock and poultry (%)	58.6	56.5	48.1	52.7
<i>Among those with livestock and poultry:</i>				
Livestock and poultry, current value (P)	20,419.0	83,484.0	38,153.0	46,028.0
With household appliances (%)	98.1	96.8	96.6	97.0
<i>Among those with household appliances:</i>				
Household appliances, current value	59,547.0	121,606.0	55,470.0	73,311.0

Source: Operations Evaluation Mission.

e. Impact on Human Capital Investments (Education and Health)

86. Changes in income or expenditure do not necessarily translate into increased investments in human capital. The impact of access to microfinance on education and health variables was analyzed. The education variables examined were school attendance as a proportion of school-age children in the household (aged 6–12 years, 13–16 years, and 17–24 years) and the education expenditure per attending schoolchild. For health, the variables were the proportion of household members who were ill or injured, the proportion of those ill or injured who sought medical treatment, the proportion of children aged 0–5 years who were fully immunized, and per capita health expenditures.

⁵¹ At the mean with 95% confidence interval of 78,000 and 533,000.

⁵² At the mean with 95% confidence interval of 452,000 and 956,000.

87. About 95% of children aged 6–12 years, 87% of children aged 13–16 years, and 31% of children aged 17–24 years were attending school (Appendix 14, Table 14.6). The annual average expenditure per school age attending school was P7,239.

88. The proportion of households reporting members as either sick or injured in the 6 months preceding the survey was about 9% (Appendix 14, Table 14.7). About 23% of the households had ill/injured members, of which 69% sought treatment. About two thirds (69%) of the children aged 0–5 years were fully immunized, and the average per capita expenditure for health was about P740.

89. There was no significant difference in the education and health variables between the households that had access to microcredit and those that did not. These results are similar to those reported by Coleman (1999) for education and Montgomery (2005) for health. However, the literature review also found other articles that reported significant positive impacts on these variables.

f. Impact on Incidence of Hunger and Reduction in Food Consumption

90. The incidence of hunger and reduction in food consumption in the last 3 months were also studied to determine whether the provision of microcredit had an impact on these dimensions of poverty. The results show that hunger incidence was about 2% in the respondent population and that there was a reduction in food consumption in 11% of the respondent households (Appendix A14, Table 14.8). A probit model was used to estimate the impact on the incidence of hunger and reduction in food consumption. The analysis did not show a significant difference between those who received microcredit loans and those who did not. The incidence of hunger in the survey population was too low for the program to have any significant impact.

g. Impact by Different Socioeconomic Groups

91. The evaluation of the Philippine program was also designed to test whether the impact of access to microcredit differed across socioeconomic groups. While the poor/nonpoor distinction is useful, a better picture is given by dividing the sample households into per capita income⁵³ quartiles. There are a couple of ways of estimating the impact on different subgroups. One is estimating a separate equation for each subgroup. Another is to jointly estimate the impact in a single equation using the interaction of subgroup and treatment variables, i.e., the coefficient of the interaction between the availability treatment variable and corresponding quartile dummy variables to measure the impact for cash quartile. Orr (1997) argues that the latter approach has two advantages: (i) it usually provides more power because it uses the full sample to estimate the coefficients; and (ii) it allows one to test whether there are statistically significant differences in impact among the subgroups taken as a set (rather than between pairs of subgroups). Given these considerations, the joint estimation method was adopted for this evaluation. The survey respondents were divided into four quartiles, i.e., those (i) with annual per capita incomes less than P21,480; (ii) from P21,481 to P34,428; (iii) from P34,429 to P56,167; and (iv) over P56,167. For comparative purposes, the poverty line

⁵³ It can be argued that income may not be an appropriate socioeconomic indicator because it is affected by the treatment variable. David Levine of the University of California, Berkeley, in his review of the draft pointed this out. Hence the equations were re-estimated using educational attainment, a generally pre-treatment socioeconomic indicator, instead. Three education groups, namely: (a) at most elementary graduate, (b) secondary, and (c) at least tertiary, were used. The result is qualitatively similar to the one using income. The impact is still regressive. Those with lower educational attainment have (negative or lower but) generally insignificant impact and those with higher educational attainment have larger positive and significant impact.

in the Philippines is equivalent to an annual per capita income of P14,405 and the average rural household income is P13,659.⁵⁴

92. The coefficients of the interaction terms and the corresponding significance levels are shown in Table 8. The program had a regressive impact. A significant positive impact was evident only for the households in the top quartile while there was a negative impact on the poorer households. For instance, per capita income for the participating households in the poorest quartile was P23,000 lower than the nonparticipating households. However, the impact for the top quartile was positive and resulted in a P45,000 increase in annual income compared with the nonparticipating households in the same income group. The results were similar for the per capita expenditure, savings, and food expenditure. The impact on savings is significant for all except the third quartile in contrast to the insignificant impact for the whole sample.

Table 8: Impact on Household Outcome by Per Capita Income

Quartile	Per Capita Income		Per Capita Expenditure		Per Capita Savings 1		Per Capita Savings 2		Per Capita Food Expenditure	
	Coeff.	Sig. Lev.	Coeff.	Sig. Lev.	Coeff.	Sig. Lev.	Coeff.	Sig. Lev.	Coeff.	Sig. Lev.
1	(23,214.0)	0.000	(9,459.7)	0.007	(13,754.2)	0.000	(14,567.2)	0.000	(3,476.9)	0.002
2	(13,903.1)	0.001	(6,752.6)	0.034	7,150.6	0.006	(7,680.6)	0.005	(1,408.5)	0.164
3	(1,212.2)	0.764	1,849.6	0.548	3,061.8	0.228	(3,010.6)	0.251	1,382.1	0.159
4	45,113.7	0.000	23,915.6	0.000	21,198.1	0.000	23,928.6	0.000	6,659.9	0.000

Coeff. = Coefficients, Sig. Lev. = Signature Level

Source: Operations Evaluation Mission.

93. There are several reasons explaining why the impact on the lower income households is lower (or negative). These include: (i) the problem clients are concentrated among the poorer households; (ii) the average size of loans may be smaller for poorer households; (iii) there may be a preponderance of diversion of loan proceeds from production to consumption; and (iv) if there is no diversion, the projects of poorer households may be less productive. In this study, there is empirical evidence only for (i) and (ii).

94. The average loan size for poorer households is smaller (Table 9). This may prevent them for venturing into more productive activities that would require more capital. In Table 10, there are more clients problem clients among the bottom three quartiles. However, this may also reflect sound banking decisions based on credit risk assessments. While the average proportion of problems in the sample is about 2%, the bottom three quartiles have each a little over 2% that are problem clients while the highest per capita income quartile group had only less than 1% as problem clients.

Table 9: Distribution of Average Loan Size by Per Capita Income Quartile

Quartile	Mean Cumulative Loans (P'000)	Total Number of Cycles	Average Loan Size (P'000)
Lowest	45.031	6.1	7.392
Lower middle	57.540	6.9	8.280
Upper middle	64.290	7.1	9.087
Highest	99.168	8.2	12.166
Total	69.923	7.2	9.721

Source: Operations Evaluation Mission.

⁵⁴ Estimates as of 7 March 2006 from the National Statistics Coordination Board website. Available: <http://www.nscb.gov.ph>

Table 10: Distribution of Type of Clients by Per Capita Income Quartile (%)

Quartile	Existing	Graduates	Problem	New	Nonparticipating	Total
Lowest	15.0	0.6	2.4	27.0	55.1	100
Lower Middle	18.4	0.5	2.7	26.3	52.1	100
Upper Middle	21.3	0.5	2.2	27.5	48.5	100
Highest	27.5	0.4	0.9	21.6	49.6	100
Total	20.6	0.5	2.0	25.6	51.3	100

Source: Operations Evaluation Mission

95. The regressive relationship provides further evidence that microfinance projects should not be designed to target the ultra poor. Additional debt may make their lives worse, not better. Coleman (2006), using data from Thailand, qualified the earlier “no significant impact on consumption” result in Coleman (1999) with a positive impact for the center leaders, which are also the more well-off segment of the membership. The insignificant impact on poorer members was confirmed. On the other hand, Hulme and Mosley (1996)—using data from Indonesia, India, Bangladesh, and Sri Lanka—found a positive impact on income on average but like Coleman (2006) also found a larger impact for the better-off members. Thus, the regressive result of this study is not inconsistent with some of the findings reported in the literature. This indicates that among poorer borrowers, the potential benefits of microcredit loans are not sufficient to encourage the ultra poor to invest in productive activities that can generate the income necessary to repay the loans and earn them some profit. Rather, the short-term priorities often result in decisions to use the funds for consumption and daily necessities.

2. Effects on Rural Poor Households in Bangladesh and Uzbekistan

96. Almost all of the survey respondents in Bangladesh reported that their incomes rose after participation in the program. They stated that the microfinancing by the program enabled them to expand their microenterprises and start new businesses. Further, ownership of assets changed positively after participation in the program for about 90% of the beneficiaries.

97. Most of the Bangladesh respondents did not experience hunger in their households. Only 3 of the 200 respondents reported that they have taken less food the last 3 months. In terms of food quantity, three quarters reported that they had more food after participation in the program. The purchase of clothing and health services also increased, although the improvements were generally more evident for participants in the Participatory Livestock Development Project than the Rural Livelihood Project.⁵⁵

98. In Uzbekistan, 85% of the sample microfinance clients that participated in non-ADB supported projects responded that their incomes increased after joining the program. Expansion of existing enterprises and sales increases were the main reasons cited for the income increases. About 71% reported that the quantity of food intake increased after receiving a loan.

⁵⁵ For participants in the Participatory Livestock Development Project, 70% of participants reported increased expenditure on clothing and 62% reported increased expenditure on health care during emergencies. The corresponding figures for participants in the Rural Livelihood Projects were 52% (clothing) and 53% (health care).

C. Effects on the Status of Women

99. To determine the effects of microfinance on the status of women focus groups discussions were conducted in three countries, and sample surveys of women microfinance clients were undertaken in Bangladesh and Philippines. The conceptual framework used for analyzing the effects of microfinance on the status of women is given in Appendix 15.

1. Focus Group Discussions

100. Focus group discussions were conducted in all of the three countries to gather information on intra-household relations, which mainly are qualitative in nature (Appendix 9 gives details of the tools used). All participants in the focus group discussions were women. The discussions revolved around: (i) the effect of the program on the asset acquisition and ownership of the client women; (ii) the involvement of client women in the household generation, receipt, and spending of cash; and (iii) the responsibility of women for making expenditure and saving decisions.

a. Asset Acquisition and Ownership

101. In the Philippines, the results using tool 1 (asset acquisition and ownership) showed that the number of physical assets of the sample beneficiaries increased after they joined the microfinance program.⁵⁶ Participants reported that they were able to acquire more productive assets (e.g., sewing machines, tricycles, motorcycles) and more household appliances (e.g., colored televisions, DVD players, karaoke machines).

b. Asset Acquisition and Ownership

102. In terms of financial assets, the respondents reported that more capital was invested in their businesses and saving increased. The women in the focus groups also said that they have gained more self-confidence in managing their business and sense of fulfillment increased as they were now able to help provide for the needs of their children. Others said that they could now make decisions on their own as they had their own business and were less dependent on their husbands for income. The women also said that they had learned how to deal with other people, improved their public relations, and established a support group that they could rely on when they had problems. Most of them said that their husbands had become partners in their business and this resulted in a better and closer relationship.

c. Asset Acquisition and Ownership

103. In Bangladesh, the female microfinance clients of the Participatory Livestock Development Project said that, after participating in the Project, the number of their assets increased. Ownership of these assets (e.g., household furniture and appliances, cows, and rickshaws) also changed, either into joint or single women ownership. Houses were improved from bamboo material to corrugated iron, which indicates improved living conditions. Similar responses were made for the Rural Livelihood Project in terms of housing. However, participants in that project did not report much of a change in the acquisition of productive assets. There were, however, significant changes in purchases of household furniture, TVs, electric fans, and clothing. Prior to gaining access to microcredit, women borrowed rice, flour, and wheat from neighbors and did not have any savings. After participation

⁵⁶ Because of the qualitative nature of the information, it cannot be firmly established if this increase is due to the net impact of the program.

in the microfinance program these women were able to save either in group savings schemes, pension schemes, or in their homes. With their improved technical knowledge and skills, they were able to contribute to family income.

104. In the Participatory Livestock Development Project, women also had no savings at the pre-project stage but after receiving microfinance, everyone had savings either in the group savings scheme, in banks or in their houses. Beneficiaries reported improved technical knowledge and skills about livestock management. Knowledge on personal hygiene, children's education, and nutrition also improved, resulting in positive benefits for their families.

105. In Uzbekistan, the asset acquisition and ownership tool indicated an increase in physical asset ownership after the women joined the microfinance program. They were able to purchase appliances, livestock, improve the business premises, and repair their houses. Prior to participation, these women relied on their husband's salary. After receiving microcredit, they were able to augment household income through their businesses. However, this business income was reported to be unstable. Increased knowledge and self-confidence in doing business, and increased experience in dealing with people were among the benefits reported by these women.

2. Household Cash Analysis

106. Tool 2 (household generation, receipt, and spending of cash) was used for the five focus groups in the Philippines. The results show that husbands were the major cash generators for the household before the women joined the microfinance program. However, a number of the respondents said that both men and women helped to generate household income, particularly for those involved in the buy and sell business. A few participants responded that the women generated most of the cash for the household.

107. Focus groups in the Philippines reported that either all or most of the cash of households was received by women. None of the focus groups reported that receipt of household cash was solely or mostly done by men. More than half of the women participating in the focus groups said that cash was mostly controlled by women while almost a third said that it was done jointly by men and women.

108. After joining the microfinance program, more women were involved in generating household cash or income. However, there was no change in the role of women with regard to the receipt of cash and control over the use of cash. According to the women in the focus groups, these tasks were mostly done by women. Usually, the wife manages the household expenditures and does the budgeting because she knows the household needs and the prices of goods and commodities. However, most women inform their husbands where the money goes. Respondents stressed the need to have complete trust and confidence in a husband-wife relationship.

109. The Philippine participants said that, after joining the program, they are able to meet their daily needs and have some savings at the same time. They are able to send their children to school and provide more nutritious food to the family. Moreover, access to microcredit helped improve the relationships in the family, especially between husbands and wives. This was in part because they were now able to better provide for the needs of their families. The families also had some funds for entertainment and relaxation. There were fewer fights about money. Husbands were generally proud of their wives' capability in managing a business and showed concern about their wives' business ventures.

110. According to the focus group participants, the microfinance program enabled them to have a larger network of friends and acquaintances and to gain business-related knowledge and skills, such as preparing simple income statements and financial reports. They also said that their personality had improved and that they gained self-confidence.

111. In Bangladesh, participation in the Participatory Livestock Development Project was reported to have helped the women start or sustain income-generating activities. Significant changes were observed in the receipt of and control over cash. In most cases, women controlled the cash receipts either solely or mostly, except in two cases where it was shared by both husband and wife. Division of labor for income generation was more defined between husband and wife. Rickshaw pulling and repair were done mainly by men, whereas other income-generating activities such as poultry and goat rearing were done mainly by women. The same was observed in the focus group discussions among participants of the Rural Livelihood Project. Significant improvements were reported in the control of women in the use of cash, which was previously under the control of men. However, in one focus group, some women said that they would like their husbands to take more responsibility in decision making because of the tendency of husbands to depend on them for family expenditures.

112. The results in Uzbekistan showed that in most cases the generation of cash or income was done jointly by men and women, with women usually more involved in the buy and sell business. The receipt of cash was mostly done by women. In terms of control over the use of cash prior to participation in the microfinance program, the majority of the women had control. About a third said that it was jointly by men and women. After participation in the microfinance program, women's control over cash increased.

3. Expenditures and Savings Analysis

113. Four focus groups in the Philippines used tool 3 (expenditures and savings analysis) to determine whether joining the microfinance program has changed the role of women in terms of making expenditures and saving decisions. The women participating in the discussions said that, before joining the program, the men generally had primary responsibility for deciding about household expenditures and savings, and women had secondary responsibility for decisions related to business financing and food expenditures. Prior to gaining access to microcredit, women were primarily dependent on their husbands' incomes or salaries. After joining the program, the women began to have greater responsibility for household expenditure decisions. They were also able to help their husbands in meeting the family's expenditure needs and to save for future needs. While providing funds for college education was the primary responsibility of men, the savings of women were now contributing to help meet these costs and to meet other expenditures such as hospitalization, medicines, additional working capital, and housing construction.

114. The women in the groups also reported that their husbands now recognize their wives' potential as businesswomen and became proud of their wives for their business achievements. Husbands were also involved in their businesses. The lives of the women became better as they were able to manage the family budget better and did not borrow funds from informal sources or relatives.

115. In Bangladesh, the women reported that, after joining the microfinance program, their incomes increased as did their involvement in household decision making. Women were more

involved in expenditure decision making for education, household consumption, health, food, entertainment, and purchasing of furniture. An increased ability to save was also reported.

116. In Uzbekistan, information was also collected during the focus group discussions to assess whether joining the microfinance program changed the role of women in terms of making expenditures and saving for decisions. Prior to participation, women had secondary roles in making these decisions. After gaining access to microcredit, most of these women took on greater responsibilities as they contributed more to financing household needs such education, health, and food.

4. Survey Results on Women Status

117. Sample surveys of women that participated in ADB microfinance projects in the Philippines and Bangladesh focused mainly on the status of women with regard to decision making, sharing of resources, and socioeconomic standing. No similar survey was conducted in Uzbekistan since no disbursements for the microfinance component of the Small and Microfinance Development Project had been made at the time the fieldwork was undertaken.

a. Philippines

118. The Philippine survey covered 566 women who participated in the Rural Microenterprise Finance Project (see Appendix 16 for sample survey results). Half of the respondents said that the husband and wife jointly decided to take out a loan. Around 18% said that the wife was the primary decision maker and only 3.5% said that it was their husbands who decided to borrow. Similarly, the decision on how to use the loans was generally largely made by both husband and wife equally (48%). A fifth of the respondents said that it was mostly the wife's decision and 15% said it was only the wife who decided how to use the loan. Only 2.8% of the women reported that their husbands were the primary decision maker on the wife's microcredit loan.

119. The largest proportion of respondents (42%) said both the husband and wife equally decided what to buy for the business. Another 20% said this was mostly the wife's decision and a further 16% said that it was decided by the wife only. Only 2–4% of the women reported that their husbands made the decision.

120. Similar patterns emerged related to the sale of products and use of profits from their business. About 40% said that these were joint decisions. However, the wives generally had a greater role in the decision making as "mostly wife" and "wife only" were answered by more than 40% of the respondents. Decisions related to the day-to-day work were largely made by the wife. Only 23% reported that such decisions were made equally by both husband and wife.

121. The survey results showed that 59% of the respondents had their own money after joining the program to buy things like food and clothing. Around 25% still had to get the money occasionally from their husband or someone else in the household to buy these things. Access to microcredit helped to provide financial independence for women.

122. In terms of time allocation, 38% of the respondents felt nothing had changed while 29% reported spending more time on business and less time on household chores. About one fifth were spending more time on both business and household chores. Only 6% reported spending more time on family and leisure. In many cases, running a microenterprise creates time management pressures for women.

123. In terms of physical mobility, 45% said that nothing had changed but 46% reported more freedom to move. Half (54%) felt more empowered. However, 41% reported that they needed to acquire business skills. This suggests that training and transfer of knowledge in this area might help to improve the development results achieved by, and sustainability of, microcredit programs.

124. Most of the respondents (55%) said that their role in performing household chores is now shared, to some extent, by their husband. However, the care of children and the elderly remain, largely the responsibility of women. Over half (59%) said that they use their income to help finance family needs and 48% reported that they have a greater say within the family when it comes to economic and other decisions. However, 22% of the women disagreed that they had a greater say within the family on such decisions even after gaining access to microcredit. Half of the respondents disagreed with the statement that they had less control, compared with their husband, of factors of production (e.g., land, labor, credit, training, marketing facilities) and other services and benefits. However, more than a quarter agree that they have less control than their husbands over such matters. The results suggest that access to microcredit can help to empower women in these areas but the impact of microcredit may be overridden by other factors in some families.

125. More than half of the respondents (52%) agreed that they are now more active and visible as a leader and as a member of their community organizations; 21% strongly agreed with this statement. Similarly, 61% of the women agreed that they now have greater self-confidence in managing a business enterprise and that they now understand that the division of work between husbands and wives should be fair and acceptable to both sides and should not involve the domination of one over the other. Around 63% of the respondents now understand that their role may differ from that of their husband and that the way they relate with each other can be changed. Around 16% strongly agree with this sentiment while only 5% disagreed.

126. In analyzing the status of women, the survey did not find significant differences among the clients of the banks, NGOs, and cooperatives. However, a greater percentage of NGO clients said that they had more assets than before compared with the women who borrowed from banks and cooperatives. A greater percentage of NGO and cooperative clients said they had more physical mobility after receiving the microcredit than did those who borrowed from banks.

127. Based on the survey results, it can be concluded that the women who gained access to microfinance in the Philippines were empowered in the areas of: (i) deciding whether to borrow, (ii) deciding how to use the loan proceeds, and (iii) managing their business. While most made the decisions jointly with their husbands, a large proportion was the dominant decision maker; the husbands made the decision in only a very small percentage (1–3%) of cases.

128. While the majority of respondents reported that their condition was the same as before borrowing, about one third said that there is improvement in terms of material things. Other indicators of improvements in the status of women were that most microcredit borrowers said that they now have: (i) more physical mobility, (ii) more self-confidence in managing a business enterprise, (iii) a greater say in decision making, (iv) the ability to use their income to finance family needs, (v) more visibility as leaders and as members of community organizations, and (vi) a better understanding of their role versus that of their husbands. Despite these positive developments, the burden of caring for children and the elderly still falls disproportionately on women.

b. Bangladesh

129. In Bangladesh, a random sample of 200 women microfinance clients was drawn for the survey. The survey results show that decisions to take and how to use the loans were jointly made with the husband/son (67% of the Rural Livelihood Project and 56% of the Participatory Livestock Development Project respondents). The “wife only decides” was reported by fewer than 5% of respondents. Husbands were the dominant decision maker when it came to decisions related to buying and selling items, (64% for the Rural Livelihood Project and 80% for the Participatory Livestock Development Project). Women made decisions to buy in only 10% of the Rural Livelihood Project cases and only 2% of the Participatory Livestock Development Project cases.

130. The Bangladeshi women felt that they had greater control over money matters after participating in the microcredit program (78% for the Rural Livelihood Project and 66% for the Participatory Livestock Development Project). While almost half of the Rural Livelihood Project respondents (47%) said that they received money for food and clothing from their husbands or from someone in the household, the Participatory Livestock Development Project respondents reported that they usually had their own money to buy what they needed.

131. In spite of their participation in the projects, 52% of the women in the livestock project and 69% in the Rural Livelihood Project did not have the capacity to send some of their children to school. However, about 70% of the women felt that they were more empowered because of participation in the project; about 20% reported that their situation was the same as before. Ownership of assets increased for the large majority (about 90%) of the women who received microcredit loans. This was reflected in greater self-confidence in managing microenterprises (about 60% of the respondents). However, 15% of respondents strongly disagreed with the statement that they have greater confidence in managing a business enterprise after participation in the project.

D. Project Design and Implementation

1. Targeting Poor Households

132. Of the five projects reviewed in the study, three were designed to target the poorest of the poor or hard-core poor specifically ⁵⁷ (Appendix 17). However, in practice, this segment of the poor population did not constitute a significant share of the project beneficiaries. Cost-efficiency and institutional financial sustainability objectives were overriding concerns of the participating microfinance institutions. Thus, they targeted those that had greater repayment capacity. This target group was the economically active poor and those with incomes near or around the poverty threshold, rather than the hard-core poor. Lending to the hard core was considered by financial institutions to be very risky, because of the likelihood that loan proceeds would be used to finance pressing basic needs, i.e., consumption, rather than investments in income-generating microenterprises. This would result in unacceptable default rates. There is, therefore, a gap between the objectives of these projects when they were approved and actual results in terms of targeting. ADB’s overarching objective is poverty reduction, so it is understandable that poverty reduction is stressed, perhaps overstressed, in documents presented to the Board. However, to be successful and sustainable, microcredit needs to be run

⁵⁷ Of these three ultra poor-focused projects, one was approved after the release of the ADB Microfinance Development Strategy. The strategy targets the “poor and low-income households and their microenterprise”—not exclusively the hard-core or ultra poor.

as a business. Loans need to be repaid. The lesson from these microcredit projects is that microcredit may not be the most suitable instrument to reach the poorest of the poor. Perhaps a social safety net is needed to help the truly destitute.⁵⁸

133. In most instances, poverty alleviation is one of the principal missions of microfinance institutions. However, this does not necessarily translate into serving the poorest of the poor. The institutions covered by the Philippine survey do not specifically target the “very poor” clients. In fact, most of these microfinance institutions require potential clients to have existing businesses to be eligible for the program.⁵⁹ The same pattern was also observed in Bangladesh. Unless there is a strong ADB-imposed eligibility criterion that enforces targeting the poorest of the poor, there is no guarantee that they will be reached by ADB-supported microfinance services. This type of conditionality should be avoided in ADB loan documents, as it is inconsistent with the financial business models of the institutions. Their survival and sustainability depends on their ability to identify and manage risks related to loan repayment.

134. In the Philippine project, the original project design targeted the ultra poor—the bottom 30% of the rural population. However, the specific income level and socioeconomic characteristics of this target group at the start of the project were not clearly defined. Given the difficulty in estimating incomes in rural areas, the participation of the bottom 30% of the rural population was not assured. The project eventually shifted its focus to the enterprising poor, i.e., those that had demonstrated their capacity to manage a microenterprise. This was a sound decision and demonstrates a practical lesson that should be reflected in the design of future ADB-supported microfinance projects.

135. In Uzbekistan, poor rural households have difficulty setting up a savings and credit union because they cannot afford the required minimum capital which takes time to build through membership.⁶⁰ Hence, these credit unions are not able to reach the poorest of the poor. Existing laws and regulations are designed to ensure the financial solvency and sustainability of the credit unions. Complying with these regulations has implications for the goal of the Uzbek microcredit project of reaching poor, low-income households with financial services. It will be difficult to reach these poor households if the credit unions are used as the only vehicle for delivering microfinance services. The outreach to poor rural households will remain very limited if microfinance providers operate mainly in cities or town centers and not in the villages. Without the appropriate incentives for these microfinance providers to branch out to the villages, outreach to rural areas is likely to remain very limited.

136. The type of institution used to deliver the microfinance also has some influence on the depth of outreach (Appendix 20). Microfinance NGOs, because of their institutional mission, tend to reach those households living below the poverty line as well as the economically active low-income population. Regulated institutions such as banks and credit cooperatives engaged in microfinance tend to reach micro-entrepreneurs and the economically active higher segment of the low-income population. This pattern was evident in the Philippine project. The loan sizes of participating banks and cooperatives were relatively higher than those of the NGOs. In Uzbekistan, there was even a sharper contrast between NGO and credit union clients, as the loan sizes of the credit union clients were significantly higher than NGO clients (Appendix 19).

⁵⁸ ADB. 2006. *Special Evaluation Study on Pathways Out of Rural Poverty and Effectiveness of Targeting*. Manila. A similar conclusion was arrived at by this study which concluded that, for poverty intervention to be effective for the destitute poor, welfare programs should be designed to take care of them in the long term.

⁵⁹ Sample profiles of Philippine microfinance institutions indicate that the main clients are the micro-entrepreneurs.

⁶⁰ Regulation No. 1151 sets the minimum (cash) statutory fund for credit unions established in Tashkent at \$20,000 and at \$10,000 outside Tashkent.

137. Microfinance institutions in the three countries tend to have a broader agenda to provide financial services to poor communities or specific groups such as women micro-entrepreneurs, who would not otherwise have access to financial services. Access to these financial services by the non-destitute poor or near poor provides for them opportunities to finance productive activities that will allow income growth and increase their consumption. These are the types of clients that such institutions usually serve. The poorest of the poor are only a very limited proportion of the microcredit clients as they have limited capacity to repay loans, given both the low and irregular nature of their income. Where group lending is used, the very poor may be excluded by other members of the group, because they are viewed as a bad credit risk that will jeopardize the group as a whole. Further, loan officers of microfinance institutions may exclude the very poor from borrowing, also on the grounds of high repayment risk. All of these factors tend to work together to exclude the ultra poor from these microfinance programs.

2. Mainstreaming the Status of Women in Project Design

138. ADB's Microfinance Development Strategy recognizes the role of microfinance to assist poor women and the positive impact of microfinance on women's empowerment. ADB's microfinance projects have generally shown a distinct bias toward reaching women in poor households and enhancing women's access financial services. The strategy specifically cites the need to invest in skills training for women and to monitor the extent to which project services reach the poor, the poorest of the poor, and women to improve project administration.

139. The guidelines used for assessing mainstreaming the status of women in project design are presented in Appendix 18. Documents show that the projects in the Philippines, Bangladesh, and Uzbekistan were explicit in their objective of improving the status of women, particularly of reducing poverty and increasing employment. They contain measurable indicators and targets on women and activities that would develop women's entrepreneurial skills. The documents include an analysis of the role of women in their respective societies that identifies gender issues in their respective countries.

140. While these projects were able to mainstream improving the status of women in project design and implementation, the design of such projects could be enhanced by: (i) presenting the targets/verifiable indicators in the program framework and other indicators used in the documents by gender, e.g., (a) the target of the number of field and management staff to be trained, (b) the data on the distribution of entrepreneurs by sectors by business activity, and (c) the data on borrowing purposes and savings; and (ii) providing more explicit discussion on the participation of women in project design and implementation (e.g., how women's inputs were considered). Of the five projects reviewed, only the Second Participatory Livestock Development Project in Bangladesh and the Small and Microfinance Development Project in Uzbekistan explicitly reported that women or women's groups participated in discussion during project design and implementation. The document for the Philippines project made no mention of women's participation. However, based on an interview with a representative from the executing agency, the People's Credit and Finance Corporation, consultations were done with target beneficiaries during the project preparation stage. This should be mentioned in the project document to highlight the participatory processes used during project formulation.

141. One of the strengths of the Philippine project was its recognition of the strong work ethics of rural poor women as one of the factors that would temper the risk of individual business failures. It provides a good analysis of women's role in microenterprises, their needs to improve productivity and income, their characteristics, and the policy environment to enable women to go into enterprise development.

142. Of the five projects, the Second Participatory Livestock Development Project in Bangladesh can be considered the project in which gender concerns were fully integrated into all stages of the project cycle. The project framework explicitly shows that the project's objective is to enhance the status of women and increase income-generating activities and employment from livestock-related enterprises. The project is explicit in its performance target of reaching 462,000 women to be trained and provided with microfinance. It also states that a gender specialist will be used to ensure gender concerns are addressed in implementing all project components. Moreover, baseline studies were to be undertaken to identify the specific needs of women, strategies and mechanisms for addressing such needs in the operation of each project component, and their monitoring. The project is explicit in its desired impact on women (i.e., increasing women's employment opportunities) and has a separate section on gender and development issues that presents at length how the project will address women's poverty, lack of negotiating skills, and little or no real participation in decision making. A gender specialist in the NGOs will formulate specific strategies to address gender issues in the Project.

143. The Bangladesh livestock project has a gender action plan that specifies the various measures to address the gender issues in all project components. Noteworthy are the following activities to be undertaken: (i) development and implementation of pro-poor and women-friendly community extension and methodologies, (ii) formulation and implementation of gender-sensitive schedules to facilitate women's participation in training, (iii) pursuance of gender-sensitive service delivery mechanism and capacity development for addressing gender issues, and (iv) generation of gender-disaggregated monitoring reports.

144. A project management unit was tasked to oversee, supervise, and monitor the effective implementation of the project's gender action plan at all levels. Quarterly, annual monitoring and evaluation, midterm, and project completion reports are to be prepared.

145. A review of available project completion reports and performance evaluation reports reveals a good analysis of how the projects were able to promote the economic interests of women and enhance women borrowers' self-worth and dignity. However, the evaluations can be enhanced if the analysis on outreach, employment creation, income generation, savings generated, collection rate, repayment rate, field staff trained in Grameen Bank Approach concepts and skills, and managerial staff exposed to other similar programs are presented by gender. A more in-depth analysis of the impact of the projects on gender relations, family/community relations, women's feeling of self-worth, and other indicators that go beyond income, savings, and welfare status could be undertaken.

146. The review of the five projects highlights the fact that the presence of a gender specialist in project design and implementation helps to ensure that improvement in the status of women is well integrated in all project components. It also results in better gender analysis in the document which becomes the initial basis for identification of activities to be undertaken under the project. The extent of incorporating gender concerns in the project design and implementation varied, depending on whether the project team included a gender specialist/consultant or not.

147. The program framework should contain specific objective and measurable indicators and targets on women. Similarly, the section on benefit monitoring and evaluation and midterm review should contain information/data by gender to determine the differential gender impact. It would also be useful to have a gender action plan to specify the various measures to address

the gender issues; and to assign a person or a unit to oversee, supervise, and monitor the implementation of the gender action plan.

148. On the whole, the five microfinance projects were, to a large extent, able to mainstream improving the status of women in project design and implementation. The monitoring and evaluation frameworks, however, should include more gender-disaggregated data to allow an analysis of the impact of the projects on men and women. The monitoring indicators should not only consider income, savings, and welfare indicators but also indicators that measure gender relations, family/community relations, and women's feeling of self-worth, as well as indicators on the negative and positive effects of microfinance projects (such as in relation to incidence of violence in the household, etc.) Future studies, and monitoring and evaluation frameworks, should also seek to obtain information from both men and women through appropriate research techniques.

VIII. LESSONS AND RECOMMENDATIONS

A. Lessons

149. The characteristics and mandate of participating microfinance institutions have important bearings on targeting poor households. The institutional orientation of the institution or NGO needs to match the development goal in project designs. Financial institutions that are highly regulated such as the savings and credit unions in Uzbekistan tend to have limited outreach to the poorer segments of the low-income population.

150. Planning to reach large numbers of the ultra poor with microfinance alone may not be a realistic objective. Special programs may be needed to provide the ultra poor with a range of services, covering training, health provision, and more general social development for the disadvantaged, as well as grants of assets or credits. Well-established institutions in Bangladesh such as the Bangladesh Rural Advancement Committee and the Association of Social Advancement have begun these types of social programs. For example, the Income Generation for Vulnerable Groups program of the Bangladesh Rural Advancement Committee combines measures of livelihood protection (food aid) with livelihood promotion (skills training and microcredit). Microcredit is provided as part of a package approach.⁶¹ The survey results illustrate the limits of microfinance for the poorest of the poor. More scrutiny of project designs is needed for microfinance projects that purport to be targeted at the ultra poor.

151. The absence of baseline data is a serious issue for undertaking an impact evaluation. For the case of the Philippine project, the study used a "synthetic" comparison group consisting of people with similar characteristics to beneficiaries living in similar areas. For this method to yield valid results, one must assume that the comparison group is identical to the treatment group, except for the treatment (i.e., receipt of microcredit) after imposing some controls for known biases in microfinance impact evaluation. Since the two groups are made up of different people, this is always open to question. When baseline data is available, this assumption is not required because the before and after groups are identical. Thus, the superiority of baseline data over a "synthetic" comparison group is clear. To improve the quality of impact evaluations, selected microfinance projects should budget for baseline as well as post-intervention data collection, which would include not only treatment households but also control households.

⁶¹ However, survey evidence shows that many target households were not reached although the program was more successful than more conventional microcredit schemes. See Matin, I. and D. Hulme. 2003. Programs for the Poorest: Learning from the IGVDG Program in Bangladesh. *World Development*, vol. 31, pp. 647–665.

Given the cost of such surveys, they should not be routinely included in all microcredit projects. However, ADB should plan for rigorous impact evaluations.

152. The lessons learned from implementing the impact evaluation in the Philippines are provided in Appendix 21.

153. The lessons from ADB's experience in mainstreaming the status of women in the design of microfinance projects include the following: (i) it is useful to include a gender action plan in the design of microfinance projects, which may include features to increase women's participation in, and access to, benefits of the microfinance projects (e.g., targets, specific activities, monitoring and evaluation indicators, budget allocations); and (ii) involve gender specialists in project design, implementation, monitoring, and evaluation to help ensure better integration of gender/women's concerns in the project components.

B. Recommendations

154. The Microfinance Strategy is due for review in 2008. The review should draw on the findings of this report and the following points should feed into the review.

155. **More Focused and Deliberate Approach in Targeting.** Targeting efforts must (i) clearly define the target group, (ii) identify the barriers to their program participation, and (iii) include interventions and/or mechanisms to remove these barriers. For the ultra poor, other approaches will be needed to address their needs. This might include livelihood protection combined with social programs such as health and other social development inputs. While such programs may help the ultra poor to "graduate" to credit-taking capability later, microfinance does not appear to be the most appropriate instrument to help them.

156. **Use Internationally Accepted Guidelines and Principles for the Design of Microfinance Projects.** In October 2006, the Consultative Group to Assist the Poor released the guidelines for funders of microfinance.⁶² These consensus guidelines draw on 30 years of lessons learned, translated into practical, operational guidelines for funding agencies.⁶³ ADB could use these guidelines in formulating the design of its microfinance projects. The study identified the limits of using microfinance to help the poorest of the poor, which points out the need for more scrutiny of project designs and funds used in the name of improving access to microcredit for them. These guidelines could serve as the basis for supporting microfinance projects.

157. **Build Staff Technical Capacity in Microfinance.** ADB needs to build the staff technical capacity in microfinance through systematic training. In this regard, a training program may be developed that would enhance staff capacity in designing, implementing, monitoring and evaluating microfinance projects. This program may include training on social performance management to help improve the social impact of microfinance, and how to use the Consultative Group to Assist the Poor guidelines in the design of ADB-supported microfinance projects.

158. **Include Plans for Rigorous Impact Evaluations during the Formulation of Selected Microfinance Projects.** Ideally, such an evaluation needs a baseline survey and at least one follow-up survey during or after the project life. Projects need to plan for these surveys.

⁶² Consultative Group to Assist the Poor. October 2006. *Good Practice Guidelines for Funders of Microfinance*. 2nd edition, Washington, DC., USA.

⁶³ ADB provided inputs in the formulation of these guidelines.

To improve the quality of ADB impact evaluations for microfinance projects, some projects provide budgets for baseline as well as post-intervention data collection covering both treatment and control households. Given the costs involved, rigorous impact evaluations should be undertaken only for a small number of carefully selected microfinance projects, not for all projects.

ADB MICROFINANCE PORTFOLIO

Table A1.1: Loans and Grants that Provide Support for Microfinance Activities, 1990–2006

A. Microfinance Projects					
	Loan/ Grant No.	Date Approved	DMC	Project Title	Amount ^a (\$ million)
1.	940	22 Dec 1988	Philippines	NGO Microcredit	8.00
2.	1037	4 Oct 1990	Nepal	Third Small Farmers Development Project	30.00
3.	1066	13 Dec 1990	Bangladesh	Rural Training	16.30
4.	1067	13 Dec 1990	Bangladesh	Rural Women Employment Creation	8.00
5.	1137	28 Nov 1991	Philippines	Second NGO Microcredit	30.00
6.	1213	17 Dec 1992	Bangladesh	Rural Poor Cooperatives	30.00
7.	1237	24 Jun 1993	Nepal	Microcredit for Women	5.00
8.	1290	16 Dec 1993	Mongolia	Employment Generation	3.00
9.	1327	25 Oct 1994	Indonesia	Microcredit Project	25.70
10.	1435	23 Apr 1996	Philippines	Rural Microenterprise Finance	20.00
11.	1524	19 Jun 1997	Bangladesh	Participatory Livestock Development	19.70
12.	1529	21 Aug 1997	Kyrgyz Republic	Rural Financial Institutions Project	11.52
13.	1583	25 Nov 1997	Indonesia	Rural Income Generation	78.60
14.	1634	29 Sep 1998	Bangladesh	Rural Livelihood Project	42.26
15.	1650	8 Dec 1998	Nepal	Rural Microfinance	18.66
16.	1741	27 Apr 2000	Cambodia	Rural Credit and Savings ^b	5.00
17.	1768	19 Oct 2000	Papua New Guinea	Microfinance and Employment	9.60
18.	8186	6 Dec 2000	Timor Leste	Microfinance Project	4.00 ^c
19.	1802	12 Dec 2000	Viet Nam	Rural Enterprise Finance ^d	42.00
20.	1805 1806	13 Dec 2000	Pakistan	Microfinance Sector Development Program (Program and Project Loans)	150.00
21.	1848	25 Oct 2001	Mongolia	Rural Finance	8.70
22.	1963	9 Dec 2002	Uzbekistan	Small and Microfinance Development	20.00
23.	2000 2001	26 Jun 2003	Tajikistan	Microfinance Systems Development Program (Program and Project Loans)	8.00
24.	2040	11 Dec 2003	Sri Lanka	Rural Finance Sector Development Program (Program Loan)	50.00
25.	2041	11 Dec 2003	Sri Lanka	Rural Finance Sector Development Program (Credit Line)	10.00
26.	2042	11 Dec 2003	Sri Lanka	Rural Finance Sector Development Program (Project Loan)	10.00
27.	2063	18 Dec 2003	Philippines	Development of Poor Urban Communities Sector	20.00
28.	7198	5 May 2004	Regional	Shorecap International Fund	2.50

A. Microfinance Projects					
	Loan/ Grant No.	Date Approved	DMC	Project Title	Amount^a (\$ million)
29.	2199	22 Nov 2005	Philippines	Microfinance Development Program	150.00
30.	9079	28 Nov 2005	Indonesia	Assistance for Restoration of Microenterprise and Microfinance in Aceh	2.00 ^c
31.	2230	7 Feb 2006	Pakistan	Rural Enterprise Modernization Project	5.00
32.	2268	26 Oct 2006	Nepal	Rural Finance Sector Development Cluster Program I	56.00
Subtotal (A)					899.54
B. Projects With Microfinance Components					
1.	1128	26 Nov 1991	Sri Lanka	Southern Province Rural Development	6.40
2.	1179	24 Sep 1992	Pakistan	NWFP Barani Area Development	7.90
3.	1201	1 Dec 1992	Sri Lanka	Fisheries Sector Program	4.00
4.	1457	12 Sep 1996	Viet Nam	Rural Credit	2.00
5.	1531	4 Sep 1997	Pakistan	Dera Ghazi Khan Development	2.75
6.	1583	25 Nov 1997	Indonesia	Rural Income Generation	20.40
7.	1605	27 Jan 1998	Indonesia	Central Sulawesi Integrated Area Development and Conservation	0.98
8.	1609	26 Feb 1998	Nepal	Community Groundwater Irrigation Sector	12.98
9.	1672	18 Apr 1999	Pakistan	Malakand Rural Development Project	5.28
10.	1765 1766	19 Oct 2000	Indonesia	Community Empowerment for Rural Development Project	15.00
11.	1771	26 Oct 2000	Bangladesh	Chittagong Hills Tracts Rural Development Project	1.60
12.	1782	21 Nov 2000	Bangladesh	Northwest Crop Diversification	5.20
13.	1787	28 Nov 2000	Pakistan	NWFP Barani Area Development (Phase II)	1.90
14.	1862	27 Nov 2001	Cambodia	Northwestern Rural Development	3.56
15.	1987 1988	20 Dec 2002	Pakistan	Rural Finance Sector Development	15.00
16.	1990	20 Dec 2002	Viet Nam	Housing Finance	5.00
17.	1994	28 Jan 2003	Lao PDR	Small Towns Development Sector	1.30
18.	2070	19 Dec 2003	Bangladesh	Second Participatory Livestock Development	7.50
Subtotal (B)					118.75
Total					1,018.29

DMC = developing member country, Lao PDR = Lao People's Democratic Republic, NGO = nongovernment organization, No. = number, NWFP = North-West Frontier Province.

^a Amount approved for microfinance component. Excludes technical assistance projects.

^b Approved loan amount was \$20 million. In March 2003, the loan amount was reduced to \$5 million.

^c Grant.

^d Total loan amount of this is \$80 million.

Source: Operations Evaluation Mission.

Table A1.2: List of Ongoing Microfinance Loans and Grants
(as of December 2006)

	Loan/ Grant No.	Date of Approval	Country	Project Title	Loan Amount (\$ million)	Microfinance Component (\$ million)	Source of Funds
A. Microfinance Projects							
1	1529	21 Aug 1997	Kyrgyz Republic	Rural Financial Institutions Project	11.52		ADF
2	1634	29 Sep 1998	Bangladesh	Rural Livelihood Project	42.26		ADF
3	1650	8 Dec 1998	Nepal	Rural Microfinance	18.66		ADF
4	1741	27 Apr 2000	Cambodia	Rural Credit and Savings ^b	5.00		ADF
5	1768	19 Oct 2000	Papua New Guinea	Microfinance and Employment	9.60		ADF
6	8186	6 Dec 2000	Timor Leste	Microfinance Project	4.00 ^c		TFET
7	1802	12 Dec 2000	Viet Nam	Rural Enterprise Finance ^d	42.00		ADF
8	1805 1806	13 Dec 2000	Pakistan	Microfinance Sector Development Program (Program and Project Loans)	150.00		ADF
9	1848	25 Oct 2001	Mongolia	Rural Finance	8.70		ADF
10	1963	9 Dec 2002	Uzbekistan	Small and Microfinance Development	20.00		OCR
11	2000 2001	26 Jun 2003	Tajikistan	Microfinance Systems Development Program (Program and Project Loans)	8.00		ADF
12	2040	11 Dec 2003	Sri Lanka	Rural Finance Sector Development Program (Program Loan)	50.00		OCR
	2041	11 Dec 2003	Sri Lanka	Rural Finance Sector Development Program (Credit Line)	10.00		OCR
	2042	11 Dec 2003	Sri Lanka	Rural Finance Sector Development Program (Project Loan)	10.00		ADF
13	2063	18 Dec 2003	Philippines	Development of Poor Urban Communities Sector	20.00		OCR
14	7198	5 May 2004	Regional	Shorecap International Fund	2.50		Equity Invest- ment OCR
15	2199	22 Nov 2005	Philippines	Microfinance Development Program	150.00		OCR
16	9079	28 Nov 2005	Indonesia	Assistance for Restoration of Microenterprise and Microfinance in Aceh	2.00 ^c		JFPR

	Loan/ Grant No.	Date of Approval	Country	Project Title	Loan Amount (\$ million)	Microfinance Component (\$ million)	Source of Funds
17	2230	7 Feb 2006	Pakistan	Rural Enterprise Modernization Project	5.00		ADF
18	2268	26 Oct 2006	Nepal	Rural Finance Sector Development Cluster Program I	56.00		ADF
				Subtotal ADF	366.74		
				Subtotal JFPR	2.00		
				Subtotal OCR	250.00		
				Subtotal TFET	4.00		
				Subtotal Equity Investment	2.50		
				Subtotal (A)	625.24		
B. Projects With Microfinance Components							
19	1531	4 Sep 1997	Pakistan	Dera Ghazi Khan Development	36.00	2.75	ADF
20	1583	25 Nov 1997	Indonesia	Rural Income Generation	78.60	20.40	OCR
21	1605	27 Jan 1998	Indonesia	Central Sulawest Integrated Area Development and Conservation	32.00	0.98	OCR
22	1609	26 Feb 1998	Nepal	Community Groundwater Irrigation Sector	28.79	12.98	ADF
23	1672	18 Apr 1999	Pakistan	Malakand Rural Development Project	40.52	5.28	ADF
24	1765 1766	19 Oct 2000	Indonesia	Community Empowerment for Rural Development Project	115.00	15.00	OCR
25	1771	26 Oct 2000	Bangladesh	Chittagong Hills Tracts Rural Development Project	30.00	1.60	ADF
26	1782	21 Nov 2000	Bangladesh	Northwest Crop Diversification	46.30	5.20	ADF
27	1787	28 Nov 2000	Pakistan	NWFP Barani Area Development (Phase II)	52.00	1.90	ADF
28	1862	27 Nov 2001	Cambodia	Northwestern Rural Development	27.20	3.56	ADF
29	1987 1988	20 Dec 2002	Pakistan	Rural Finance Sector Development	250.00	15.00	OCR
30	1990	20 Dec 2002	Viet Nam	Housing Finance	30.00	5.00	ADF
31	1994	28 Jan 2003	Lao PDR	Small Towns Development Sector	16.00	1.30	ADF
32	2070	19 Dec 2003	Bangladesh	Second Participatory Livestock Development	20.00	7.50	ADF

Loan/ Grant No.	Date of Approval	Country	Project Title	Loan Amount (\$ million)	Microfinance Component (\$ million)	Source of Funds
			Subtotal ADF		47.07	
			Subtotal OCR		51.38	
			Subtotal (B)		98.45	
			Total ADF		413.81	
			Total JFPR		2.00	
			Total OCR		301.38	
			Total TFET		4.00	
			Total Equity Investment		2.50	
			Total Microfinance Portfolio		723.69	

ADF = Asian Development Fund, JFPR = Japan Fund for Poverty Reduction, Lao PDR = Lao People's Democratic Republic, No. = number, NWFP = North-West Frontier Province, OCR = ordinary capital resources, TFET = Trust Fund for East Timor.

^a This list includes all loans approved and have become effective as of 26 September 2004, the grant of \$4.00 million for Timor Leste, and \$2.00 for Aceh, Indonesia. The list, however, does not cover technical assistance projects.

^b Approved loan amount was \$20.00 million. In March 2003, the loan amount was reduced to \$5.00 million.

^c Grant.

^d Total loan amount of this is \$80.00 million.

^e Total loan amount of this is \$30.50 million.

Source: Operations Evaluation Mission.

REVIEW OF LITERATURE

1. Microfinance affects household welfare in many areas. The evaluation focused on five primary areas: (i) income, expenditure, and savings; (ii) other financial transactions; (iii) household enterprise and employment; (iv) household assets; and (v) human capital investments. The review is organized around these areas. Since microfinance in general, and the project being evaluated in particular, focuses on the impact on poor households, the review also covers the outreach of microfinance on poor households. The review is focused on studies that employ “rigorous” methodologies and does not cover qualitative studies (see Appendix 5 for list of studies and references used for the study).

2. A couple of reviews of studies dealing with the impact of microfinance have been conducted recently. These reviews highlight the disagreement in the results. Much of the disagreement emanates from the different degrees with which earlier studies have controlled for problems that are now acknowledged to significantly affect impact assessments—nonrandom program participation, nonrandom program placement, and nonrandom dropout (Armendariz de Aghion and Morduch 2005).

3. Weiss, Montgomery, and Kurmanalieva (2003) reviewed the evidence of the microfinance impact on poverty in Asia and subsequently Weiss and Montgomery (2005) provides an update including studies using Latin American data. They reviewed only more “rigorous studies” and have not covered studies using qualitative or participatory approaches. Weiss and Montgomery (2005) summarized their review by saying that

“the conclusion from the early literature, that whilst microfinance clearly may have had positive impacts on poverty it is unlikely to be a simple panacea for reaching the core poor, remains broadly valid. Reaching the core poor is difficult and some of the reasons that made them difficult to reach with conventional financial instruments mean that they may also be high risk and therefore unattractive microfinance clients.”

4. A similar conclusion was also arrived at by an earlier review in Meyer (2002). Surveying available evidence for Asian countries, he concluded that while there seems to be an overall positive effect on income and education, results differ substantially across countries and programs both in magnitude as well as statistical significance and robustness.

5. **Outreach.** Data on outreach appears to have mixed results. Microfinance programs in South Asia appear to be reaching their intended target. On the other hand, data from Latin America are not reaching their intended target as much as in South Asia. Khandker (1998) and Khandker (2003), for instance, affirm that the microfinance program in Bangladesh is hitting the intended targets. The overall head count ratio for moderate poverty is 0.83 in the 1991/1992 survey and 0.66 in 1998/1999. For program participants, however, this is 0.90 in the 1991/1992 survey and 0.70 in the 1998/1999 survey. The overall head count ratio for extreme poverty is 0.45 in the 1991/1992 survey and 0.33 in the 1998/1999 survey. For program participants, however, this is 0.52 in the 1991/1992 survey and 0.34 in the 1998/1999 survey. Thus, poverty incidence is definitely higher among program participants.

6. Another survey done among Pakistani households in Montgomery (2005) reveals that the microfinance program of Khushhali Bank is hitting the intended target. The paper reports that more than 70% of the clients are below the official poverty line and 20% of the core pore—defined as the bottom quintile based on the monthly per capita food expenditure.

7. Amin et al (2003) qualify this laudable outreach for the poor by adding the dimension of vulnerability. Using panel data from two Bangladeshi villages, they find that while microfinance programs (Grameen Bank, Bangladesh Rural Advancement Committee, and Association for Social Advancement) were able to reach the poor, they were less successful in reaching the group most prone to destitution—the vulnerable poor.¹ It was reported that the proportion of microcredit members below the poverty line is 79% in one village and 74% in the other village and these are significantly higher than the poverty incidence of nonmembers, and higher than the national average poverty incidence of 47%. In terms of vulnerability, however, the study was not able to establish firmly that there is a significant difference in the vulnerability of members compared with nonmembers. The authors' explanation why microcredit program is less successful in reaching the vulnerable is that perhaps the forces that make poor households vulnerable may also make them greater risks, rendering them less attractive for microcredit providers.

8. Turning to Latin American data, the story on outreach appears to be different. Bebczuk and Haimovich (2007), using survey data on households from several Latin American countries, revealed modest outreach to poor households. Only about 9% of the poor, on average, have received credit in the 11 household surveys in seven countries² that has household data. The outreach to the poor ranges from as low as 1.3% in Mexico to as high as 24.4% in Peru.

9. **Income/Expenditure and Savings.** Since income and expenditure are the basic measures of household welfare, it is not surprising that microfinance impact studies almost always cover this issue in evaluation studies. The survey finds that while the results show positive impacts, there are studies that could not establish significant impact. Hulme and Mosley (1996), for instance, concluded that growth in incomes of borrowers always exceeds that of the control group. It was also found that the positive impact on income is larger for better-off borrowers.

10. Among the most cited impact of microfinance on income are the results in Khandker (1998) and the sequel in Khandker (2003). Using data from the 1991/1992 survey covering the Grameen Bank and Bangladesh Rural Advancement Committee microfinance programs and with appropriate controls for sample selection and nonrandom program placement, it was found that a Tk100 loan to a female borrower would result into a net consumption increase of Tk18³ (and Tk11 for male borrowers). Subsequent estimates, using panel data that includes a resurvey of previous respondents in 1998/1999, showed a slightly lower impact of a Tk10.5 increase in consumption for every Tk100 loan. In the earlier survey, it was shown that 5% of the participants were able to pull themselves out of poverty annually. In the next survey round, the impact was an 8.5% reduction in moderate poverty and an 18% reduction in extreme poverty. Evidence on positive spillovers on nonprogram participants in the villages was also found.

11. Using data from Bangladesh, Zeller et al (2001) computed the impact of microfinance on household income by comparing eligible households in the Association for Social Advancement and Bangladesh Rural Advancement Committee villages with eligible households in the Rangpur Dinajpur Rural Service villages. They found different impact estimates depending on

¹ Defined as households that are unable to smooth consumption in the face of idiosyncratic income fluctuations.

² Bolivia, Guatemala, Haiti, Mexico, Nicaragua, Paraguay, and Peru.

³ Morduch (1999) questioned the validity of the identifying instrument—land owned—because examination of the data shows significant program participants that do not meet the eligibility requirement. Re-estimation using the cleaner data finds either a nonexistent or very small impact. Pitt (1999), however, argued that Morduch (1999) used the wrong method and finds that the earlier study underestimates the true impact.

the season. Their computed annual average impact is Tk37 per Tk100 credit available. They noted the substantial difference between their estimate and that of Pitt and Khandker (1998) and explained that their “measures not only the effect of actual borrowing, but also the effect of access to credit, that is, the ability to borrow sometime in the future even if the household in the current period chooses not to borrow.” These indirect benefits would include “reduced cost of consumption smoothing, such as decrease in distress sale and an increase in risk-bearing capacity favoring more profitable production and investment portfolios.”

12. In contrast to earlier-mentioned studies, Coleman (1999) finds no significant impact on household wealth using total sample of household from northeastern Thailand. However, when broken down into rank-and-file and committee members, Coleman (2006) finds that the insignificance is limited only to rank-and-file members and that a positive impact is found among committee members (none on rank-and-file members).

13. Estimates in Montgomery (2005) using data from Pakistan revealed mild significance on per capita food expenditure in the months since first borrowed treatment variable⁴ and no significant impact on nonfood expenditure.

14. Bebczuk, R. and F. Haimovich (2007) using household survey data on poor households from a number of Latin American countries find that credit, using either a dummy with value one if the worker got a loan over the last 12 months or loan amount, boosts labor income in a statistically and economically significant manner. They found that access to credit would increase the hourly labor income of poor individuals currently without credit by 4.8 (Bolivia at 10% level of significance), 12.5 (Guatemala at 1%), and 4.5 (Haiti at 5%) times. Using amount of loan, they found that in Guatemala a 10% increase from the average amount of credit translates into an increase in hourly labor income of 4.7 times with respect to the average income of credit borrowers and 6.2 times for those without credit.

15. **Other Loans and Savings.** Microfinance programs are expected to profoundly affect allied financial transactions such as borrowing from nonprogram sources as well as maintaining savings accounts. Again, studies show considerable variations in outcomes. Coleman (1999), for instance, finds no impact on savings and a positive impact on high interest debt and on women lending out with interest but finds no significant impact on savings (cash, bank deposits, etc.). Disaggregating the data into poorer rank-and-file members and richer committee members revealed that the impact on household savings is positive for committee members and not significant for rank-and-file members, women’s high interest debt is no longer significant, and household lending out having a significant positive impact only for committee members. Using data from different areas in the same country (Thailand), Kaboski and Townsend (2002) found that membership in informal financial institutions (production credit group, women’s group, rice banks, buffalo banks) reduced the probability that households become customers of moneylenders.

16. **Enterprise and Employment.** One of the primary uses of microfinance loans is to finance household enterprise. In turn, this is expected to affect the employment of both household and non-household members in these enterprises. Coleman (1999) did not find an

⁴ Note that this variable used is months since household first borrowed. This is not the same as the Coleman (1999) treatment variable, which is months since the program is available to the village. Like the two other treatment variables in the study (total loans and number of loan cycles), the ignorability of treatment assumption may not hold in this case. If ignorability of treatment cannot be assumed to hold, then Wooldridge (2002) recommends instrumental variables estimation. Ignorability means that, conditional on all the other explanatory variables, the treatment variable is exogenous or independent relative to the outcome variable.

impact on household production and employment when the whole sample was used. When the sample was disaggregated into rank-and-file and committee members, significant positive impact were found with the committee member (Coleman 2006). Montgomery (2005), on the other hand, finds a significant positive impact on microenterprise sales and profits among urban households and among very poor borrowers in agriculture. No significant impact was found in animal raising sales and profits.

17. **Assets.** Prolonged participation in a microfinance program is expected to affect not only short-term flows but perhaps longer-term stock of assets of households. Again, we find different results ranging from positive to insignificant impact. Estimates in Pitt and Khandker (1998), for instance, show that credit program participation by women increased the value of their non-land assets holdings, while male participation does not. For women at the mean, every Tk100 of increased credit from Bangladesh Rural Advancement Committee increases the value of their non-land assets by Tk15, Bangladesh Rural Development Board's RD-12 program by Tk29, and Grameen Bank by Tk27. Using data from Thailand, Kaboski and Townsend (2002) corroborate Pitt and Khandker (1998) results and found that memberships in production credit groups and women's groups have a positive impact on asset growth. Coleman (1999), on the other hand, finds no significant impact on physical assets when estimated using the whole sample. However, when separate estimation was done between rank-and-file members and committee members, several physical assets such as household non-land assets and household productive assets were found to increase among committee members (Coleman, 2006).

18. **Education.** The impact of microfinance on human capital investments is another area studies have looked at. Coleman (1999) finds that overall there is insignificant impact on education expenses. However, revisiting the data, Coleman (2006) finds the insignificant impact is confined to rank-and-file members but positive for committee members, particularly for boys.

19. Montgomery (2005) finds a mixed effect on education. She finds that the impact on expenditure on education per child was significant using the total amount of loans and number of loan cycles treatment variables. In addition, it was found that the impact on the very poor (defined as the bottom quintile based on monthly per capita food expenditure) is larger than the rest of the households. On more direct measures, while there appears to be a negative impact on probability of school attendance on average, this appears to be positive in the case of the core poor. There is no significant impact on days of absent from school.

20. R. Bebczuk and F. Haimovich (2007) used probit regression⁵ to model the probability of attending primary school for children aged 6–12 years and secondary school for children aged 13–17 years. They found that access to credit improves primary school attainment in five out of 11 household surveys and three out of 11 household surveys for secondary school attainment using both the ability to get credit and the amount of credit obtained. Credit was found to improve the probability of staying at school in Bolivia, Guatemala, Haiti, Mexico, and Nicaragua. For all households, the rise in probability for primary school ranges from 1.7% in Mexico (2.3% in Bolivia) to 9.2% in Nicaragua. For poor households, the rise in probability is even higher from a minimum of 4.3% in Paraguay to 10.6% in Nicaragua.

21. Pitt and Khandker (1998) examined the effects of credit program participation on the school enrollment status of boys and girls aged 5–17 years. They found a very strong and statistically significant effect on both girls' and boys' enrollment, and that the impact on boys is even bigger. A 1% increase in Grameen Bank credit to females is predicted to increase the

⁵ Probit regression fits a model for binary outcomes using a normal distribution function.

probability of girls' enrollment by 1.86 percentage points measured at the mean. For boys, a 1% increase in Grameen bank credit to women increases the probability of school enrollment by 2.4 percentage points and a 1% increase in Grameen bank credit to men increases the probability of school enrollment by 2.8 percentage points. An even higher impact on boys' enrollment of 3.1 percentage points was found in credit to women from the Bangladesh Rural Development Board. This difference in the impact between girls and boys was explained by the authors as caused by the higher substitutability between women's and girls' time compared with boys' time in both market and home production.

22. Maldonado (2005) found a negative and statistically significant relationship between the education gap⁶ and length of membership in a microfinance program in two mainly rural villages in Bolivia. However, this was not true for the urban village sample. In particular, children of older clients (with more than 2 years of membership) have, on average after controlling for other things, children with almost 1 year less of education gap compared to new clients. The author argues that the insignificance in the urban sample may indicate the higher opportunity cost of education in urban areas.

23. **Health.** Using data from rural Bangladesh, Pitt et al (2001) find that credit provided to women has a large and statistically significant impact on two of three measures of the health of both boy and girl children. Credit provided to men has no statistically significant impact. A 10% increase in credit to females increases the arm circumference of their daughters by 6.3% although it has a somewhat smaller effect on the arm circumference of sons. Female credit is estimated to have large, positive, and statistically significant impact on the height-for-age of boys and girls. There is no statistically significant impact on the body mass index.

24. Montgomery (2005) using data from Pakistan, finds that the expenditure on health per capita was not found to be significantly affected by any of the treatment variables. On more direct health indicators, a more consistent positive impact was found. There is positive impact on the probability of seeking medical treatment when a child is ill, with no special impact on the core poor. There is similar impact on treatment by a trained professional. There is no significant impact on the taking on taking oral rehydration salt/solution to treat diarrhea.

25. Coleman (1999) found a significant but negative impact on household medical expenses, and men's health care using the total sample. After disaggregating the data into rank-and-file and committee members, both medical expense items are no longer significant.

⁶ Defined as the difference between expected education attainment—education when child entered at the right time and never quit—and actual education attainment.

ADB'S MICROFINANCE OPERATIONS AND THE OBJECTIVES OF THE SPECIAL EVALUATION STUDY

1. The basic framework of the Asian Development Bank (ADB) for supporting microfinance activities in developing member countries is embodied in its Microfinance Development Strategy of 2000.¹ With the goal of ensuring poor households with permanent access to financial services, the strategy focuses on:

- (i) creating a policy environment conducive to microfinance;
- (ii) developing financial infrastructure;
- (iii) building viable institutions;
- (iv) supporting pro-poor innovations; and
- (v) supporting social intermediation.

2. There are two important concerns regarding ADB's microfinance operations in relation to the objectives of the evaluation. First, the extent to which ADB microfinance projects have mainstreamed improving the status of women in project design. Improving the status of women is one of ADB's five strategic development themes. In this regard, microfinance activities are among the specific avenues for furthering the gender and development objectives of ADB operations. Hence, project design and framework have to be examined to determine if improving status of women has indeed been incorporated in microfinance projects. Second, it is important to determine the effectiveness of microfinance projects in reaching rural poor households and women as target groups. Specific questions that need to be answered are: Did projects reach large numbers of rural poor households and women as intended? Were there limitations in reaching these target groups? The review of ADB's microfinance operations in three countries covered by the study basically focuses on these two important concerns: (i) the extent projects to which have mainstreamed improving the status of women in project design, and (ii) effectiveness in reaching rural poor households and women as target groups.

¹ ADB. 2000. *Finance for the Poor: Microfinance Development Strategy*. Manila (approved by the Board of Directors in May 2000).

FRAMEWORK FOR ASSESSING IMPACT ON HOUSEHOLDS

1. The key problem in evaluation is finding a valid counterfactual outcome against which the treatment group is compared. The gold standard in impact evaluation is a randomized experiment where treatment and control groups are randomly determined. Since the study was evaluating a completed project, i.e., the Rural Microenterprise Finance Project, it did not employ a randomized experiment.
2. Another desirable design of a counterfactual outcome uses baseline data. This study did not have the benefit of a baseline data.¹ It was not possible to carry out a “before and after” impact evaluation design because of the absence of this kind of data. Hence, the evaluation used a one-time survey.
3. The study used a quasi-experimental design originally implemented in Coleman (1999). The design is succinctly depicted in Table A4.1. For each “treatment” *barangay* (village) selected, a different “comparison” *barangay* was identified.² The importance of having a different *barangay* rather than say a new center in the same *barangay*, had been explained in Coleman (1999). The treatment *barangays* are those where the Grameen Bank Approach Replicators³ program, particularly lending, have been going on for some time. The comparison *barangays*, on the other hand, are expansion areas where program clients have been identified and organized into groups but no loans have yet been released to them. In both the treatment and comparison *barangays*, an equivalent number of qualified but nonparticipating households were interviewed. The innovation introduced in the study that was not present in the Coleman (1999) design was the inclusion in the existing client households group of an appropriate number of former clients consisting of graduates and problem households. This was designed to address the attrition/dropout problem in using new clients as the comparison group (Karlan, 2001).

Table A4.1: Evaluation Strategy: Type of Household Respondent

Type of Households (HH)	“Treatment” (Existing) Area	“Comparison” (Expansion) Area
Participating HH	(A1) Existing clients (A2) Former clients (graduates; problem clients)	(C) New clients
Nonparticipating HH	(B) Qualified nonparticipating	(D) Qualified nonparticipating

Source: Operations Evaluation Mission.

4. From Table A4.1, the impact is given by the expression:
 - (1) $\text{Impact} = (A-B)-(C-D)$.
5. This is also known in the literature as the difference-in-difference method. To see how the difference-in-difference method generates a clean measure of impact, the cells in

¹ The only chance of a baseline data was the one generated by focused study in Aklan done in 1999 around the beginning of program implementation. Unfortunately, the subject microfinance institution—the Rural Bank of Aklan—had ceased operations a few years back.

² A *barangay* is a village. It is the smallest political unit in the Philippines.

³ Microfinance institutions that employ and replicate the Grameen Bank methodology are referred to in the Rural Microenterprise Finance Project as Grameen Bank Replicators.

Table A4.1 can be filled by the factors that determine outcomes for each of the different household clients. This is shown in Table A4.2.⁴

Table A4.2: Evaluation Strategy: Factors Determining Outcomes

Type of households (HH)	“Treatment” (Existing) Area	“Comparison” (Expansion) Area
Participating HH	(A) <ul style="list-style-type: none"> • Observable characteristics • Unobservable characteristics affecting participation • Area attributes (T) • Microfinance program 	(C) <ul style="list-style-type: none"> • Observable characteristics • Unobservable characteristics affecting participation • Area attributes (C)
Nonparticipating HH	(B) <ul style="list-style-type: none"> • Observable characteristics • Area attributes (T) 	(D) <ul style="list-style-type: none"> • Observable characteristics • Area attributes (C)

Source: Operations Evaluation Mission.

6. The new clients will not have the impact of the microfinance program because, even if they have already been identified as qualified clients, they have not received loans yet. Nonparticipating households will neither have the effect of unobservable characteristics affecting participation nor the impact of the microfinance program because they have not participated in the program.

7. The process of elimination will give the explanation for why the difference-in-difference method will give the needed estimate of the impact of the microfinance program. The expression (A-B) will give the net effects of unobserved characteristics affecting participation plus the microfinance impact. Incidentally, this also highlights the effect of not controlling for nonrandom program participation or sample selection bias. The expression (C-D), on the other hand, will give the net effect of the unobserved characteristics affecting participation. Thus, (A-B)-(C-D) will yield the net effect of the microfinance program. It is noteworthy that if we do not enumerate nonparticipating households and compare, say, existing and new clients, (A-C) will give us the effect of the microfinance program plus the difference between the treatment area and comparison area effects which need not be identical particularly if program placement is not random. Finally, if the treatment group does not include the appropriate number of former clients (graduates and problem), the impact of both the observable characteristics and the unobservable characteristics will be different for the existing and new clients as well. This is called the attrition/dropout bias.

8. The difference-in-difference strategy was therefore used to estimate the impact of participation in a microfinance program. First, this was done by comparing the difference in outcomes of participating and nonparticipating households in both treatment and comparison *barangays*. The treatment villages are villages where lending operations have commenced. The eligible households were limited to those that were with the programs for at least 3 years or have gone through five lending cycles. Control villages, on the other hand, are villages where eligible households had been identified and where participating households have also been identified but no loans have yet been released.

⁴ The identified factors are adopted from Armendariz de Aghion and Morduch (2005).

9. The difference-in-difference strategy described above is better implemented in a regression framework. The advantage of using the regression framework is that it can account for differences in household and community characteristics which can happen even with a well-designed sampling scheme. Specifically, the following equation was estimated:

$$(2) \quad Y_{ij} = \beta_1 X_{ij} + \beta_2 V_j + \beta_3 M_{ij} + \beta_4 T_{ij} + \varepsilon_{ij}^5$$

where:

Y_{ij} = household outcome of interest

X_{ij} = household characteristics

V_j = village characteristics or village fixed-effects

M_{ij} = membership dummy; 1 if participant in existing and expansion areas, 0 otherwise

T_{ij} = treatment variable; 1 (or >0) if participant in existing areas, 0 otherwise

Equation (2) above can be written as: $Y_{ij} = F(\beta_1 X_{ij} + \beta_2 V_j + \beta_3 M_{ij} + \beta_4 T_{ij} + \varepsilon_{ij})$. $F(\)$ can be linear for continuous variables and nonlinear for dependent variables that are discrete, truncated, count, and proportions. Appropriate estimation procedures were used for each type of dependent variable.

10. This expression in equation (2) is identical to the formulation in Coleman (1999) and Montgomery (2005) who had employed an identical evaluation strategy. As mentioned earlier, the only innovation added was in the composition of the treatment households that included an appropriate proportion of dropouts in the treatment households to address the attrition bias identified by Karlan (2001). As argued in Coleman (1999), the coefficient of T_{ij} measures the impact of microfinance operations on household outcomes Y_{ij} .

11. The treatment variable can be expressed in different measures of program participation. For example, (i) have availed of microfinance services, (ii) number of months since first loan release for the barangay (village), (iii) total amount of loans, and (iv) number of loans cycles the household has borrowed. Coleman (1999) used (ii). He argues that (ii) is a more precise measure of program availability than say (i).

12. This specification covers the three known sources of bias in evaluating the impact of microfinance services using new members as a comparison group. Control for nonrandom program participation or sample selection is provided by using membership dummy M (Coleman, 1999). The literature (e.g., Coleman [1999] and Armendariz de Aghion and Morduch [2005]) has amply shown that not controlling for sample selection results in biased estimates of the impact of microfinance services. Nonrandom program placement, on the other hand, is controlled by village characteristics V_j or fixed effects estimation (Khandker, 1998). Finally, dropout bias is controlled for by including in the treatment group an appropriate number of randomly selected households that had dropped out of the program (both for reasons of graduation and problems with repayments) as recommended in Karlan (2001).

⁵ Another way of presenting this is $Y_{ij} = \beta_1 X_{ij} + \beta_2 V_j + \beta_3 M_{ij} + \beta_4 M_{ij} * T_{ij} + \varepsilon_{ij}$, where T_{ij} = treatment variable; 1 (or >0) for treatment areas (cf. de Aghion and Morduch, 2005)

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**SAMPLING SCHEME FOR THE PHILIPPINE
RURAL MICROENTERPRISE FINANCE PROJECT IMPACT SURVEY**

The three islands treated as separate grouping of sampling areas

Island Group
(Luzon, Visayas, Mindanao)



Treatment *barangays* (villages) by type of microfinance Institutions are randomly selected with probability proportional to the number of clients served; For each treatment *barangay* selected a suitable comparison (expansion) *barangay* is identified

Barangays (villages) served by type of Grameen Bank Approach Replicators

- Rural/Cooperative Bank
- Cooperative
- nongovernment organization



Existing client households selected randomly from list provided by microfinance institutions; nonparticipating households selected from list of households recommended by microfinance field personnel, center, and *barangay* leaders

Households

- Treatment (existing) areas
 - Existing clients
 - Former clients (graduates, problem)
 - Eligible nonparticipating
- Comparison (expansion) areas
 - New clients
 - Eligible nonparticipating

SAMPLING DESIGN AND PROCEDURE

1. The impact survey for the study requires two types of areas. First, treatment or existing areas—defined as areas where the program, particularly lending, has been ongoing for some time. In particular, existing clients considered for the survey are those who have been with the program for at least 3 years or have availed of loans for at least five loan cycles. This is designed to capture the impact of the subject project, the Rural Microenterprise Finance Project, which was completed in 2002. Second, expansion areas—defined as areas where prospective program clients have been identified and organized into groups but no loans have yet been released to them. A suitable expansion area should be one that is different from an existing area. In particular, a new center in a treatment area does not qualify as an expansion area.
2. The sampling design utilized the implementation structure of the Rural Microenterprise Finance Project. Participating microfinance institutions (MFIs) were asked to submit regular reports to the Executing Agency, the People's Credit and Finance Corporation. The records of the Executing Agency provided the number of clients actually served by each microfinance institution at the *barangay* (village) level. No firm and comprehensive records on expansion areas were available. While most of the participating MFIs have claimed to have expansion areas, a random check with a few of them revealed that some did not have the expansion areas required by the survey. The sampling then used the list of existing *barangays* which served as the sampling frame.
3. The sampling scheme considered the three island groups (Luzon, Visayas, Mindanao) and the type of MFI (cooperative banks/rural banks, cooperatives, and nongovernment organizations [NGOs]) as stratification variables (Appendix 6). Based on existing program records, it was determined that the most practical primary sampling unit is the *barangay* and that a total sample of 2,200 households was sufficient for the study. For each *barangay*, a sample of 10 client and 10 nonparticipating households was deemed sufficient. At this sampling rate per *barangay*, about 110 *barangays* or 55 treatment (existing) *barangays* and 55 corresponding comparison (expansion) *barangays* will be required.
4. The number of *barangays* for each island and for each MFI is selected randomly in proportion to the number of client households served—or sampling proportional to size. For every treatment *barangay* selected, the MFI is asked to identify a suitable corresponding expansion area. The eligibility of a particular treatment *barangay* for inclusion in the survey is contingent on the MFI being able to identify a suitable corresponding expansion *barangay*. When the MFI cannot identify an expansion *barangay*, the MFI is replaced with a new one of the same type with the required expansion area. The existing and new client households are drawn randomly from the list prepared by the MFI or from the center roster of members. The nonparticipating households are drawn randomly from the qualified nonparticipating households identified by MFI field personnel, center, or *barangay* leaders.
5. Dropouts were selected from the households identified by the MFI field office. Just as there was no existing list of eligible households, the MFI did not have the list of dropout clients. The MFI only kept records of its existing clients.¹

¹ The study did not have the complete lists of dropouts and eligible non-participating households because these were not maintained by the MFI, center or *barangay* leaders. As was noted by one of the external reviewers, David Levine of the University of California, this is a limitation of the study.

6. The allocation of the treatment (and corresponding expansion) *barangays* by island group and by MFI type is given in Table A7.1.

7. Three survey instruments are used in the study: (i) the household survey questionnaire, adopted from the Annual Poverty Indicators Survey questionnaire conducted by the National Statistics Office, supplemented with detailed questions on loan accounts, enterprises, and gender-related matters; (ii) the *Barangay Profile Questionnaire*; and (iii) the MFI Profile questionnaire. These instruments were pretested on 9 August 2006.² The actual field surveys were conducted from 3 October 2006 to 25 January 2007.³

8. The actual survey covered 2,276 households in 116 *barangays* and 28 MFIs. Table A7.1 shows the distribution of households surveyed by island group and by MFI type.

Table A7.1: Sampling Allocation by Island, By Type of Microfinance Institution

Island Group	Total No. of Borrowers	%	Treatment <i>Barangays</i> ⁴
A. Luzon			
Banks	485,984	61	18
Cooperatives	70,461	9	2
NGOs	240,749	30	8
Subtotal (A)	797,194	48	28
B. Visayas			
Banks	67,125	16	2
Cooperatives	69,046	16	2
NGOs	282,952	68	9
Subtotal (B)	419,123	26	13
C. Mindanao			
Banks	331,097	77	10
Cooperatives	41,331	10	2
NGOs	59,307	14	2
Subtotal (C)	431,735	26	14
Subtotal (Banks)	884,206	154	30
Subtotal (Cooperatives)	180,838	35	6
Subtotal (NGOs)	583,008	112	19
Total	1,648,052	100	55

NGO = nongovernment organization, No. = number.

Sources: Operations Evaluation Mission; People's Credit and Finance Corporation.

² The pretest was conducted with the Cooperative Rural Bank of Bulacan as a participating MFI.

³ No field surveys were conducted for 2 weeks during the month of December 2006 because of the Christmas holidays and also during the first week of January 2007.

⁴ *Barangays* are villages. They are the smallest political unit in the Philippines.

ESTIMATION PROCEDURE FOR DETERMINING IMPACT OF MICROFINANCE

1. The estimation methodology considers the nature of the dependent variable and the treatment variable. It follows the estimation procedures described in Wooldridge (2002) for estimating the average treatment effects. Before discussing the estimation procedures, it is useful to discuss the nature of the treatment variables and the outcome variables considered in the study.

2. **Treatment Variables.** Four possible treatment variables can be used to assess the impact of microfinance on household welfare: (i) availed program loan (1 = yes, 0 = otherwise); (ii) number of months the program is available to the *barangay* (village), based on first release of loans in the *barangay*; (iii) amount of loans (cumulative total amount of loans) availed of; and (iv) number of loan cycles. The length of exposure to the program is expected to have an impact. Therefore, treatment variables (ii)-(iv) are deemed to represent program availability better (Coleman, 1999). However, these treatment variables have different implications for estimation. For instance, perhaps only the first two satisfy the ignorability of treatment¹ condition for treatment variables (Rosenbaum and Rubin [1983], Wooldridge [2002]). Treatment variables (iii) and (iv) would fail the ignorability condition and would thus require instrumental variable estimation (Wooldridge [2002]).

3. **Outcome Variables.** Several outcome variables are considered in the study: (i) basic household welfare measures such as per capita income, per capita expenditures, per capita savings, and food expenditures; (ii) other financial transactions such as other loans and personal savings stocks;² (iii) household enterprises and employment; (iv) household assets such as land, farm equipment, livestock and poultry, and household appliances; and (v) human capital investments such as education and health. Some of these variables are continuous such as per capita income, expenditure, savings, food expenditure, health expenditure per capita, and education expenditure per attending child. Others are binary such as having a savings account and availing of other loans. Others are truncated such as value of household assets and other loans. Others are count variables such as the number of other loans, number of enterprises, and the number employed in those enterprises. Finally, others are proportional such as the proportion of school-age children attending school or the proportion of those who are sick to have sought treatment. Each of these dependent variables requires different estimation methodologies.

4. The general estimation methodology can be labeled the control function approach. This approach uses other independent variables as elements of some control function in addition to the treatment variable. The functional form of the control function depends on whether the outcome of interest can be modeled linearly or not. For outcomes that can be modeled linearly ($y = x\beta$) such as continuous variables, the elements of the control function include other independent variables, such as household characteristics, and the interaction of the treatment variable and the demeaned values of the other independent variables. For outcomes that require nonlinear models ($y = F(x\beta)$) such as probit³ for binary outcomes, tobit⁴

¹ Originally attributed to Rosenbaum and Rubin (2003). This is defined as conditional on observable characteristics; the treatment and outcome variables are independent. Practically, it means that the treatment variable must not be under the control of or exogenous to the respondent. Or in simple terms it means that, conditional on all the other explanatory variables, the treatment variable is exogenous or independent relative to the outcome variable.

² This refers to savings accounts held by the respondent in the program microfinance institution or other microfinance institutions and is different from the savings (flow) variables which are measured as the difference in income and expenditures.

³ Probit regression fits a model for binary outcomes using a normal distribution.

⁴ Tobit regression fits a model for non-negative or truncated outcomes.

for truncated outcomes, or poisson⁵ for count outcomes, Wooldridge (2002) recommends that the propensity score method (Rosenbaum and Rubin, 1983) is more appropriate. Under this method, the propensity score, which is the predicted value of the regression of the treatment variable on the other independent variables, and the product of the demeaned values of the estimated propensity score and the treatment variable are the elements in the control function. In both specifications, the average treatment effect is given by the coefficient of the treatment variable. The correction for sample selection is taken care of by the inclusion of a membership dummy among the explanatory variables. To take care of nonrandom program placement, fixed effects estimation is used.⁶ However, in general, fixed effects estimation will result in inconsistent estimates when a nonlinear model is estimated (Wooldridge, 2002). Thus, for these models, random effects estimation was used. Admittedly, random effects estimation is more restrictive than fixed effects because it imposes a structure on the village effects. However, this is considered better than the inconsistent estimates from fixed effects estimation with nonlinear models. The nature of the treatment variable also determines the estimation procedure. When the ignorability of treatment cannot be assumed (such as those for treatment variables (iii) and (iv) instrumental variables estimation is used (Wooldridge, 2002). For lack of better instruments, we will use treatment variable⁷ (ii) as instruments for all estimations using (iii) and (iv).⁸ The validity of the treatment variable (ii) as an instrument emanates from the fact that whatever loans existing clients are able to get as well the number of loans cycles are all dependent on the number of months the program is available in the area. In addition, this variable is determined by the microfinance institution and not within the control of the households.

5. Other Independent Variables. The other independent variables used in the control functions are similar to those used in existing literature (e.g., Coleman [1999], Montgomery [2005]). These include household characteristics such as age of the reference person (household head) or respondent; education of the reference person;⁹ number of years in the *barangay*, and house size. Age is expected to be a factor because it is well known that age earning profile is not flat. Education, of course, is a known determinant of both earning capacity and productivity in nonmarket (home) production. The number of years in the *barangay* is a proxy for social capital. House size is a proxy for household wealth.¹⁰ This is used because, among the household asset in the data, this is presumed to be the least volatile.

6 For education and health equations, the variables indicating availability of relevant facilities are also added as explanatory variables.

⁵ Poisson regression fits a model for the number of occurrences (counts) of an event using a Poisson distribution function.

⁶ *Barangay* variables could have been used, but we experienced significant refusals from the *Barangay* Profile Survey, which would significantly reduce the number of observations if used.

⁷ Other candidate variables would be *barangay* characteristics. While we have an accompanying *barangay* profile questionnaire, we experienced a significant number of refusals of *barangay* officials to fill out the *barangay* profile questionnaire (11 out of 116). This would mean removal about 220 household respondents if the *barangay* profile data is used.

⁸ David Levine in his review of the draft report pointed out that using treatment (ii) as instrument for treatments (iii) and (iv) is not very different from using treatment (ii) directly. However, this did not have any impact on the discussions because these treatment variables turned out to be statistically insignificant and hence not used in subsequent discussions.

⁹ Coleman (1999) prefers to use the highest educational attainment in the household.

¹⁰ The ideal wealth variable would be household assets predating the availability of the program. This was not available from the data set because of recall problems. Coleman (1999), for instance, used the value of assets acquired 5 years ago.

**COVERAGE OF SAMPLE HOUSEHOLD SURVEYS
IN BANGLADESH AND UZBEKISTAN**

I. Bangladesh

1. Data collection period: 3 November 2006 to 20 November 2006
2. Number of districts: 8
3. Number of *upazilas* (sub-districts): 9
4. Number of nongovernment organizations (NGOs)/organizations: 4
5. Number of cooperatives/groups interviewed: 36
6. Number of respondents: 200 (Rural Livelihood Project 100 + Participatory Livestock Development Project 100)
7. Name of the district/*upazila* by project: Table A9.1

Table A9.1: Areas Covered by Survey

RLP		PLDP	
District	<i>Upazila</i> (Subdistrict)	District	<i>Upazila</i>
Munsiganj	Serajdikhan	Rajshahi	Mohonpur
Chittagong	Satkania	Rangpur	Mithapukur
Jhanaidhah	Jhanaidhah Sadar	Pabna	Pabna Sadar
Chapai Nawbabganj	Chapai Nawbabganj Sadar	Netrokona	Mohonganj
Pabna	Sujanagar		

PLDP = Participatory Livestock Development Project, RLP = Rural Livelihood Project.
Source: Operations Evaluation Mission.

8. NGOs/organizations covered by the survey:
 - a. Rural Livelihood Project, Bangladesh Rural Development Board
 - b. Thengamara Women's Green Organization (TMSS)
 - c. People's Oriented Program Implementation
 - d. Unparalleled Social Welfare Association (ASKS)
9. *Upazila* number of respondent interviews: Tables A9.2 and A9.3

Table A9.2: Number of Respondents from RLP

District	Upazila (sub-district)	No. of Interviews
Munsiganj	Serajdikhan	20
Chittagong	Satkania	19
Jhanaidhah	Jhanaidhah Sadar	21
Chapai Nawbabganj	Chapai Nawbabganj Sadar	20
Pabna	Sujanagar	20

No. = number, RLP = Rural Livelihood Project.
Source: Operations Evaluation Mission.

Table A9.3: Number of Respondents from PLDP

District	Upazila		No. of Interviews
	(sub-district)	NGO Name	
Rajshahi	Mohonpur	TMSS	25
Rangpur	Mithapukur	TMSS	27
Pabna	Pabna Sadar	ASKS	24
Netrokona	Mohonganj	POPI	24

ASKS = Annanna Samaj Kallan Samity (Unparalleled Social Welfare Association),
NGO = nongovernment organization, No. = number, PLDP = Participatory Livestock
Development Project, POPI = People's Oriented Program Implementation, TMSS =
Thengamara Mahila Sabuj Sanga (Thengamara Women's Green Organization).
Source: Operations Evaluation Mission.

II. Uzbekistan

A sample household survey was conducted with 84 respondents from credit unions, microfinance-NGOs, and microcredit bank clients in Namangan region and Tashkent region of Uzbekistan. Respondents were selected mainly from Namangan city, where microfinance has been operating the longest. In Namangan, two credit unions (Marvel and Tayanch), two microfinance-NGOs (Fergana Valley Regional Microfinance Project and Barokot), and microcredit bank management and clients were interviewed. In Tashkent region, management and clients of Baraka credit unions were interviewed. Survey data was collected from 23 November 2006 to 15 December 2006.

QUALITATIVE TOOLS USED

1. Qualitative tools were used in assessing the socioeconomic effects of microfinance on women. A series of focus group discussions with client members of selected microfinance institutions was conducted to assess how and to what extent women have been empowered by their participation in the microfinance program. The participatory appraisal and self-learning tools used were as follows:

- **Time Series of Asset Acquisition and Ownership.** This was used to compare women's ownership of key assets before and after joining the program.
- **Household Generation, Receipt, and Spending Cash Analysis.** This was used to determine which sources of income are generated, received and spent by men, by women, and by both and why.
- **Expenditure and Saving to Meet Expenditure Analysis.** This was used to determine which sources of income are generated, received, and spent by men, by women, and by both and why.

2. These tools were implemented in a workshop format wherein clients actively participated in a self-learning process. The size of these workshop groups ranged from 5 to 10 participants. Focus group discussions/workshops for each tool in each country were undertaken. Table A7 details the number of discussions conducted in each country.

Table A7: Number of Focus Group Discussions Conducted
(by country)

Country	Focus Group Discussions Conducted	No. of Participants
Philippines	4 workshops per tool x 3 tools = 12	88
Bangladesh	3 workshops per tool x 3 tools = 9	72
Uzbekistan	2 workshops per tool x 3 tools = 6	43
Total	27	203

FGD = focus group discussion.

Source: Operations Evaluation Mission.

**DESCRIPTIVE STATISTICS AND SIGNIFICANCE LEVEL
BETWEEN HOUSEHOLDS**

Variables	Existing Clients	New Clients	Nonparticipating	Total
Age of Reference Person ^a	47	43	44	44
		<i>0.000</i>	<i>0.000</i>	
Female Reference Person	0.146	0.127	0.169	0.153
		<i>1.000</i>	<i>0.707</i>	
Less than Elementary Reference Person	0.008	0.009	0.006	0.007
		<i>1.000</i>	<i>1.000</i>	
Elementary Reference Person	0.337	0.293	0.310	0.312
		<i>0.396</i>	<i>0.882</i>	
Secondary Reference Person	0.442	0.484	0.447	0.455
		<i>0.514</i>	<i>1.000</i>	
Tertiary Reference Person	0.214	0.214	0.236	0.225
		<i>1.000</i>	<i>0.959</i>	
Years In <i>Barangay</i>	21	18	18	19
		<i>0.000</i>	<i>0.000</i>	
House Size (m ²)	76	59	59	63
		<i>0.000</i>	<i>0.000</i>	
Female, respondent ^b	0.953	0.905	0.918	0.923
		<i>0.009</i>	<i>0.041</i>	
Per Capita Income	51,000	43,737	44,403	45,759
		<i>0.009</i>	<i>0.006</i>	
Per Capita Expenditure	36,153	30,674	33,118	33,195
		<i>0.006</i>	<i>0.151</i>	
Per Capita Savings 1	14,847	13,064	11,285	12,564
		<i>0.634</i>	<i>0.013</i>	
Per Capita Savings 2	18,425	15,454	14,358	15,580
		<i>0.139</i>	<i>0.005</i>	
Per Capita Food Expenditures	13,708	12,540	13,130	13,113
		<i>0.112</i>	<i>0.714</i>	
Poor ^c	0.060	0.093	0.115	0.097
		<i>0.199</i>	<i>0.001</i>	
Subsistence Poor ^d	0.025	0.032	0.048	0.039
		<i>1.000</i>	<i>0.075</i>	
Hunger Incidence	0.023	0.019	0.023	0.022
		<i>1.000</i>	<i>1.000</i>	
Reduced Food Incidence	0.113	0.110	0.115	0.113
		<i>1.000</i>	<i>1.000</i>	

Variables	Existing Clients	New Clients	Nonparticipating	Total
With Household Enterprise	0.926	0.871 0.042	0.778 0.000	0.836
<i>Among those with Household Enterprises:</i>				
Total Number of Enterprises	2.07	1.82 0.000	1.63 0.000	1.79
Employed Family Members	2.31	1.68 0.000	1.64 0.000	1.82
Employed Nonfamily Members	0.63	0.68 1.000	0.55 1.000	0.61
Total Employed	2.95	2.36 0.045	2.19 0.001	2.43
Non-GBA Loans Availed of	0.201	0.258 0.094	0.265 0.094	0.248
<i>Among Those With Non-GBA Loans:</i>				
Amount of Other Loans ('000)	20.335	8.776 0.094	14.995 0.160	14.328
Number of Other Loans	1.648	1.179 0.000	1.206 0.000	1.280
Have Personal Savings Account	0.859	0.657 0.000	0.528 0.000	0.637
<i>Among those with Personal Savings:</i>				
Personal savings P1–P5,000	0.653	0.794 0.000	0.658 1.000	0.697
Personal Savings P5,000–P10,000	0.181	0.128 0.203	0.147 0.589	0.149
Personal Savings P10,000+	0.166	0.078 0.008	0.196 0.806	0.154
With Agriculture and Commercial Land	0.198	0.231 0.557	0.184 1.000	0.199
<i>Among those with Agricultural and Commercial Land:</i>				
Agricultural and Commercial Land (Current Value)	468,338	580,559 1.000	586,068 1.000	557,332
With Farm Equipment	0.117	0.194 0.001	0.146 0.381	0.151
<i>Among those with Farm Equipment:</i>				
Farm Equipment (Current Value)	27,588	110,645 1.000	28,775 1.000	55,365
With Livestock and Poultry	0.586	0.565 1.000	0.481 0.000	0.527
<i>Among those with Livestock and Poultry:</i>				
Livestock and Poultry (Current Value)	20,419	83,484 0.688	38,153 1.000	46,028

Variables	Existing Clients	New Clients	Nonparticipating	Total
With Household Appliances	0.981	0.968 <i>0.720</i>	0.966 <i>0.312</i>	0.970
<i>Among those with Household Appliances:</i>				
Household Appliances (Cur. Value)	59,547	121,606 <i>0.763</i>	55,470 <i>1.000</i>	73,311
With Children 6–12 Years Old	0.502	0.576 <i>0.046</i>	0.486 <i>1.000</i>	0.512
<i>Among those with Children aged 6–12:</i>				
Proportion Attending School, 6–12	0.970	0.944 <i>0.329</i>	0.943 <i>0.192</i>	0.950
With Children 13–16 Years Old	0.416	0.393 <i>1.000</i>	0.335 <i>0.005</i>	0.369
<i>Among those with Children 13–16:</i>				
Proportion Attending School, 13–16	0.881	0.869 <i>1.000</i>	0.867 <i>1.000</i>	0.871
With Children 17–24 Years Old	0.490	0.426 <i>0.099</i>	0.406 <i>0.004</i>	0.430
<i>Among those with Children 17–24:</i>				
Proportion Attending School, 17–24	0.344	0.306 <i>0.939</i>	0.297 <i>0.455</i>	0.312
Education Expenditure per School Age Child	5,931	4,615 <i>0.193</i>	5,392 <i>1.000</i>	5,312
Education Expenditure per Attending Child	8,241	6,300 <i>0.057</i>	7,268 <i>0.564</i>	7,239
Proportion of Members Ill/Injured	0.097	0.101 <i>1.000</i>	0.082 <i>0.556</i>	0.090
With Illness/Injured Members	0.255	0.269 <i>1.000</i>	0.197 <i>0.027</i>	0.229
<i>Among those Ill/Injured Members:</i>				
Proportion who Seek Treatment	0.700	0.696 <i>1.000</i>	0.670 <i>1.000</i>	0.686
With Children 0–5 Years Old	0.323	0.444 <i>0.000</i>	0.412 <i>0.002</i>	0.399
<i>Among those with Children 0–5 Years Old:</i>				
Proportion Fully Immunized	0.717	0.719 <i>1.000</i>	0.663 <i>0.532</i>	0.689
Per Capita Medical Expenditure	645	560 <i>1.000</i>	872 <i>0.559</i>	740
Months Since First Loan	75.2			
Total Amount of Loans ('000)	69.923			
Number of Loan Cycles	7.2			
Existing (%)	89.1			

Variables	Existing Clients	New Clients	Nonparticipating	Total
Graduate (%)	2.1			
Problem (%)	8.8			
Number	514	568	1139	2,221

GBA = Grameen Bank approach, m² = square meter, NSCB = National Statistics Coordination Board.
 Note: Numbers in italics are the significance level of (oneway) test of difference of means vs values found in the existing clients column.

^a Reference person is the responsible person in the household with whom relation with other members of the household are defined.

^b Dummy variable which is 1 when the respondent is female and 0 otherwise.

^c Below official per capita income threshold; for rural areas, P13,659 per person per annum in 2006 (NSCB)

^d Below official per capita food threshold; for rural areas, P9,445 per person per annum in 2006 (NSCB)

Source: Operations Evaluation Mission.

OUTREACH OF SELECTED ADB MICROFINANCE PROJECTS
As of end-December 2006

Project	Country	Member- Borrowers	% Women
RMFP	Philippines	618,906 End of Project — As December 2002	97%
		1,648,052 As of June 2006	
RLP	Bangladesh	507,958	85%
PLDP	Bangladesh	408,276	100%
SMDP	Uzbekistan (no disbursements for the microfinance component)	50,000 SCU members in 32 SCUs nationwide (targeted group)	44%

PLDP = Participatory Livestock Development Project, RLP = Rural Livelihood Project, RMFP = Rural Microenterprise Finance Project, SCU = Savings and Credit Union, SMDP = Small and Microfinance Development Project.

Source: Operations Evaluation Mission.

IMPACT ESTIMATION RESULTS

**Table A13.1: Impact on Per Capita Income
Estimation: Fixed-Effects Regression**

Variables	Treatment Variable							
	Availed Loan (1=Yes)		Months program available		Total Loans ('000)		No. of loan Cycles	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Member	(9.89)	-	1,087.43	0.51	749.49	0.33	804.41	0.35
Availed loan	5,221.98	1.65						
Age, ref. person	(898.72)	(1.92)	(795.13)	(1.72)	(820.93)	(1.80)	(799.90)	(1.73)
Age sq., ref. person	13.93	2.72	12.84	2.55	12.69	2.55	12.79	2.53
Female, ref. person	15,180.70	5.58	16,775.15	6.32	15,959.82	6.09	16,711.22	6.25
Elem, ref. person	9,488.92	0.80	9,428.64	0.79	4,567.34	0.39	10,509.13	0.89
Secondary, ref. person	15,328.07	1.29	16,412.28	1.38	9,984.43	0.85	16,762.23	1.42
Tertiary, ref. person	27,422.61	2.29	27,261.75	2.28	20,929.58	1.77	28,313.50	2.38
Years in village	57.27	0.76	75.16	1.02	(19.42)	(0.27)	21.11	0.29
House size	78.60	4.39	71.34	4.24	62.13	3.86	75.55	4.51
Availed loan*(demeaned\la age)	757.41	0.61						
Availed loan*(demeaned\la age sq)	(7.62)	(0.58)						
Availed loan*(demeaned\la female rp)	3,797.82	0.65						
Availed loan*(demeaned\la elem rp)	(27,335.59)	(1.11)						
Availed loan*(demeaned\la sec rp)	(16,851.55)	(0.68)						
Availed loan*(demeaned\la col rp)	(28,631.67)	(1.15)						
Availed loan*(demeaned\la years in vill.)	(91.43)	(0.62)						
Availed loan*(demeaned\la house size)	(39.15)	(1.46)						
Months program available			38.98	1.01				
Mos prog avail*(demeaned\la age)			2.21	0.14				
Mos prog avail*(demeaned\la age sq)			(0.01)	(0.06)				
Mos prog avail*(demeaned\la female rp)			(35.85)	(0.54)				
Mos prog avail*(demeaned\la elem rp)			(310.79)	(1.07)				
Mos prog avail*(demeaned\la sec rp)			(220.76)	(0.76)				
Mos prog avail*(demeaned\la col rp)			(319.36)	(1.09)				
Mos prog avail*(demeaned\la years in vill.)			(2.33)	(1.30)				
Mos prog avail*(demeaned\la house size)			(0.32)	(1.02)				
Total loans availed ('000)					20.25	0.38		
Total loans av.*(demeaned\la age)					11.48	0.77		
Total loans av.*(demeaned\la age sq)					(0.07)	(0.46)		
Total loans av.*(demeaned\la female rp)					11.06	0.16		
Total loans av.*(demeaned\la elem rp)					(159.88)	(0.32)		
Total loans av.*(demeaned\la sec rp)					38.64	0.08		
Total loans av.*(demeaned\la col rp)					(38.99)	(0.08)		
Total loans av.*(demeaned\la years in vill.)					3.52	2.01		
Total loans av.*(demeaned\la house size)					(0.04)	(0.22)		
Number of loan cycles							425.83	0.85
No. of loan cycles*(demeaned\la age)							25.23	0.17
No. of loan cycles*(demeaned\la age sq.)							(0.03)	(0.02)
No. of loan cycles*(demeaned\la femal rp)							(442.53)	(0.61)
No. of loan cycles*(demeaned\la elem rp)							(4,821.63)	(1.27)
No. of loan cycles*(demeaned\la sec rp)							(3,395.11)	(0.90)
No. of loan cycles*(demeaned\la col rp)							(4,762.92)	(1.25)
No. of loan cycles*(demeaned\la years in vill.)							5.02	0.27
No. of loan cycles*(demeaned\la house size)							(4.00)	(1.58)
Constant	30,650.25	1.97	27,756.76	1.79	37,483.58	2.45	28,099.96	1.83
<i>Model Statistics</i>								
Sample	2,018		2,013		2,013		2,013	
F on Ho: u _i =0	3.649		3.620		3.540		3.586	
Overall R-square	0.099		0.098		0.114		0.103	

\la=var-mean(var), () = negative, av = availed, coeff. = coefficient, col rp = college reference person (reference person attended some college), elem, elementary, F on Ho = F-value on the Ho (Null-hypothesis - under fixed effects u_i=0 means all fixed effects coefficients [u_i] are all zero), ref. = reference, rp = reference person, sq = square, vill. = village.

Source: Operations Evaluation Mission.

**Table A13.2: Impact on Per Capita Expenditures
Estimation: Fixed-Effects Regression**

Variables	Treatment Variable							
	Availed Loan (1=Yes)		Months program available		Total Loans ('000)		No. of loan Cycles	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Member	(2,245.97)	(1.37)	(1,392.94)	(0.89)	(1,656.46)	(0.99)	(1,604.32)	(0.95)
Availed loan	4,135.51	1.77						
Age, ref. person	(599.17)	(1.73)	(571.02)	(1.67)	(547.01)	(1.62)	(587.04)	(1.72)
Age sq., ref. person	8.75	2.31	8.65	2.32	8.32	2.26	8.82	2.36
Female, ref. person	8,709.82	4.34	9,790.94	4.99	8,781.84	4.51	9,552.95	4.83
Elem, ref. person	5,809.69	0.66	6,000.83	0.68	2,723.40	0.31	6,304.99	0.72
Secondary, ref. person	9,608.48	1.09	10,542.87	1.20	7,145.72	0.82	10,700.61	1.23
Tertiary, ref. person	19,907.30	2.25	19,893.05	2.25	15,989.76	1.82	19,962.39	2.27
Years in village	49.74	0.89	55.49	1.02	(4.20)	(0.08)	24.74	0.46
House size	79.15	5.99	73.49	5.91	61.85	5.18	76.51	6.18
Availed loan*(demeaned\ age)	453.59	0.50						
Availed loan*(demeaned\ age sq)	(4.04)	(0.42)						
Availed loan*(demeaned\ female rp)	5,071.44	1.18						
Availed loan*(demeaned\ elem rp)	(14,956.79)	(0.82)						
Availed loan*(demeaned\ sec rp)	(9,469.61)	(0.52)						
Availed loan*(demeaned\ col rp)	(22,679.89)	(1.23)						
Availed loan*(demeaned\ years in vill.)	(73.88)	(0.68)						
Availed loan*(demeaned\ house size)	(57.10)	(2.88)						
Months program available			31.34	1.10				
Mos prog avail*(demeaned\ age)			3.71	0.31				
Mos prog avail*(demeaned\ age sq)			(0.04)	(0.29)				
Mos prog avail*(demeaned\ female rp)			12.24	0.25				
Mos prog avail*(demeaned\ elem rp)			(170.34)	(0.79)				
Mos prog avail*(demeaned\ sec rp)			(132.93)	(0.62)				
Mos prog avail*(demeaned\ col rp)			(261.81)	(1.20)				
Mos prog avail*(demeaned\ years in vill.)			(1.47)	(1.11)				
Mos prog avail*(demeaned\ house size)			(0.61)	(2.62)				
Total loans availed ('000)					28.79	0.72		
Total loans av.*(demeaned\ age)					7.52	0.68		
Total loans av.*(demeaned\ age sq)					(0.07)	(0.58)		
Total loans av.*(demeaned\ female rp)					82.87	1.59		
Total loans av.*(demeaned\ elem rp)					(122.18)	(0.33)		
Total loans av.*(demeaned\ sec rp)					(75.32)	(0.20)		
Total loans av.*(demeaned\ col rp)					(146.74)	(0.39)		
Total loans av.*(demeaned\ years in vill.)					2.36	1.81		
Total loans av.*(demeaned\ house size)					(0.14)	(1.00)		
Number of loan cycles							371.66	1.01
No. of loan cycles*(demeaned\ age)							52.92	0.48
No. of loan cycles*(demeaned\ age sq.)							(0.51)	(0.44)
No. of loan cycles*(demeaned\ femal rp)							203.62	0.38
No. of loan cycles*(demeaned\ elem rp)							(2,604.32)	(0.93)
No. of loan cycles*(demeaned\ sec rp)							(2,104.61)	(0.75)
No. of loan cycles*(demeaned\ col rp)							(3,335.44)	(1.18)
No. of loan cycles*(demeaned\ years in vill.)							2.05	0.15
No. of loan cycles*(demeaned\ house size)							(5.76)	(3.08)
Constant	24,014.61	2.09	22,545.69	1.97	27,587.03	2.43	23,135.17	2.03
<i>Model Statistics</i>								
Sample	2,018.0		2,013.0		2,013.0		2,013.0	
F on Ho: u _i =0	3.776		3.759		3.659		3.728	
Overall R-square	0.097		0.095		0.103		0.097	

\a=var-mean(var), () = negative, av = availed, coeff. = coefficient, col rp = college reference person (reference person attended some college), elem, elementary, F on Ho = F-value on the Ho (Null-hypothesis - under fixed effects u_i=0 means all fixed effects coefficients [u_i] are all zero), ref. = reference, rp = reference person, sq = square, vill. = village.

Source: Operations Evaluation Mission.

**Table A13.3: Impact on Per Capita Savings (Income – Total Expenditure)
Estimation: Fixed-Effects Regression**

Variables	Treatment Variable							
	Availed Loan (1=Yes)		Months program available		Total Loans ('000)		No. of loan Cycles	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Member	2,236.09	1.64	2,480.37	1.91	2,405.95	1.74	2,408.72	1.71
Availed loan	1,086.47	0.56						
Age, ref. person	(299.55)	(1.04)	(224.11)	(0.79)	(273.93)	(0.98)	(212.86)	(0.75)
Age sq., ref. person	5.18	1.64	4.19	1.35	4.37	1.43	3.96	1.27
Female, ref. person	6,470.88	3.86	6,984.20	4.28	7,177.98	4.44	7,158.27	4.35
Elem, ref. person	3,679.23	0.50	3,427.81	0.47	1,843.94	0.25	4,204.14	0.58
Secondary, ref. person	5,719.60	0.78	5,869.42	0.80	2,838.71	0.39	6,061.62	0.83
Tertiary, ref. person	7,515.31	1.02	7,368.70	1.00	4,939.82	0.68	8,351.10	1.14
Years in village	7.53	0.16	19.67	0.43	(15.21)	(0.35)	(3.63)	(0.08)
House size	(0.55)	(0.05)	(2.15)	(0.21)	0.28	0.03	(0.96)	(0.09)
Availed loan*(demeaned\la age)	303.82	0.40						
Availed loan*(demeaned\la age sq)	(3.57)	(0.44)						
Availed loan*(demeaned\la female rp)	(1,273.61)	(0.36)						
Availed loan*(demeaned\la elem rp)	(12,378.80)	(0.81)						
Availed loan*(demeaned\la sec rp)	(7,381.94)	(0.49)						
Availed loan*(demeaned\la col rp)	(5,951.78)	(0.39)						
Availed loan*(demeaned\la years in vill.)	(17.56)	(0.19)						
Availed loan*(demeaned\la house size)	17.94	1.09						
Months program available			7.64	0.32				
Mos prog avail*(demeaned\la age)			(1.50)	(0.15)				
Mos prog avail*(demeaned\la age sq)			0.03	0.25				
Mos prog avail*(demeaned\la female rp)			(48.09)	(1.17)				
Mos prog avail*(demeaned\la elem rp)			(140.45)	(0.78)				
Mos prog avail*(demeaned\la sec rp)			(87.83)	(0.49)				
Mos prog avail*(demeaned\la coll rp)			(57.55)	(0.32)				
Mos prog avail*(demeaned\la years in vill.)			(0.86)	(0.78)				
Mos prog avail*(demeaned\la house size)			0.29	1.49				
Total loans availed ('000)					(8.54)	(0.26)		
Total loans av.*(demeaned\la age)					3.97	0.43		
Total loans av.*(demeaned\la age sq)					(0.00)	(0.04)		
Total loans av.*(demeaned\la female rp)					(71.81)	(1.65)		
Total loans av.*(demeaned\la elem rp)					(37.70)	(0.12)		
Total loans av.*(demeaned\la sec rp)					113.95	0.37		
Total loans av.*(demeaned\la col rp)					107.76	0.35		
Total loans av.*(demeaned\la years in vill.)					1.16	1.07		
Total loans av.*(demeaned\la house size)					0.10	0.85		
Number of loan cycles							54.17	0.18
No. of loan cycles*(demeaned\la age)							(27.70)	(0.30)
No. of loan cycles*(demeaned\la age sq.)							0.48	0.49
No. of loan cycles*(demeaned\la femal rp)							(646.14)	(1.45)
No. of loan cycles*(demeaned\la elem rp)							(2,217.31)	(0.95)
No. of loan cycles*(demeaned\la sec rp)							(1,290.50)	(0.55)
No. of loan cycles*(demeaned\la col rp)							(1,427.48)	(0.61)
No. of loan cycles*(demeaned\la years in vill.)							2.97	0.26
No. of loan cycles*(demeaned\la house size)							1.77	1.13
Constant	6,635.64	0.69	5,211.08	0.55	9,896.54	1.05	4,964.79	0.52
<i>Model Statistics</i>								
Sample	2,018		2,013		2,013		2,013	
F on Ho: u _i =0	2.027		2.005		2.024		2.002	
Overall R-square	0.033		0.035		0.043		0.036	

\la=var-mean(var), () = negative, av = availed, coeff. = coefficient, col rp = college reference person (reference person attended some college), elem, elementary, F on Ho = F-value on the Ho (Null-hypothesis - under fixed effects u_i=0 means all fixed effects coefficients [u_i] are all zero), ref. = reference person, sq = square, vill. = village.

Source: Operations Evaluation Mission.

**Table A13.4: Impact on per Capita Savings (Income–Total Exp+Educ+Health+Dur.Fur.)
Estimation: Fixed-Effects Regression**

Variables	Treatment Variable							
	Availed Loan (1=Yes)		Months program available		Total Loans ('000)		No. of loan Cycles	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Member	1,666.10	1.17	1,925.45	1.42	1,736.91	1.21	1,761.29	1.20
Availed loan	1,626.08	0.80						
Age, ref. person	(221.99)	(0.74)	(125.61)	(0.42)	(166.51)	(0.57)	(116.60)	(0.39)
Age sq., ref. person	5.16	1.57	3.94	1.22	4.00	1.26	3.72	1.15
Female, ref. person	6,461.64	3.71	7,189.74	4.24	6,994.08	4.17	7,190.84	4.21
Elem, ref. person	3,950.23	0.52	3,615.23	0.48	1,617.78	0.21	4,512.22	0.60
Secondary, ref. person	6,514.62	0.86	6,749.56	0.89	3,187.02	0.42	6,999.33	0.93
Tertiary, ref. person	9,577.25	1.25	9,451.53	1.24	6,525.52	0.86	10,497.16	1.38
Years in village	16.86	0.35	30.55	0.65	(14.76)	(0.32)	3.94	0.08
House size	7.19	0.63	4.15	0.39	7.42	0.72	7.83	0.73
Availed loan*(demeaned\la age)	480.18	0.61						
Availed loan*(demeaned\la age sq)	(5.70)	(0.68)						
Availed loan*(demeaned\la female rp)	41.22	0.01						
Availed loan*(demeaned\la elem rp)	(12,821.71)	(0.81)						
Availed loan*(demeaned\la sec rp)	(6,660.57)	(0.42)						
Availed loan*(demeaned\la col rp)	(6,814.94)	(0.43)						
Availed loan*(demeaned\la years in vill.)	(30.88)	(0.33)						
Availed loan*(demeaned\la house size)	19.74	1.15						
Months program available			14.23	0.58				
Mos prog avail*(demeaned\la age)			(0.79)	(0.08)				
Mos prog avail*(demeaned\la age sq)			0.02	0.14				
Mos prog avail*(demeaned\la female rp)			(43.30)	(1.01)				
Mos prog avail*(demeaned\la elem rp)			(142.93)	(0.77)				
Mos prog avail*(demeaned\la sec rp)			(81.83)	(0.44)				
Mos prog avail*(demeaned\la col rp)			(70.21)	(0.37)				
Mos prog avail*(demeaned\la years in vill.)			(1.17)	(1.02)				
Mos prog avail*(demeaned\la house size)			0.35	1.76				
Total loans availed ('000)					0.72	0.02		
Total loans av.*(demeaned\la age)					3.87	0.41		
Total loans av.*(demeaned\la age sq)					(0.01)	(0.05)		
Total loans av.*(demeaned\la female rp)					(40.97)	(0.91)		
Total loans av.*(demeaned\la elem rp)					(17.05)	(0.05)		
Total loans av.*(demeaned\la sec rp)					150.83	0.47		
Total loans av.*(demeaned\la col rp)					126.77	0.39		
Total loans av.*(demeaned\la years in vill.)					1.51	1.34		
Total loans av.*(demeaned\la house size)					0.12	1.02		
Number of loan cycles							154.39	0.48
No. of loan cycles*(demeaned\la age)							(24.89)	(0.26)
No. of loan cycles*(demeaned\la age sq.)							0.43	0.42
No. of loan cycles*(demeaned\la femal rp)							(503.39)	(1.09)
No. of loan cycles*(demeaned\la elem rp)							(2,288.08)	(0.94)
No. of loan cycles*(demeaned\la sec rp)							(1,238.19)	(0.51)
No. of loan cycles*(demeaned\la col rp)							(1,571.55)	(0.64)
No. of loan cycles*(demeaned\la years in vill.)							1.63	0.14
No. of loan cycles*(demeaned\la house size)							1.64	1.01
Constant	4,909.24	0.49	3,030.73	0.31	8,276.83	0.85	2,743.90	0.28
<i>Model Statistics</i>								
Sample	2,018		2,013		2,013		2,013	
F on Ho: u _i =0	2.123		2.095		2.114		2.090	
Overall R-square	0.048		0.049		0.061		0.052	

\a=var-mean(var), () = negative, av = availed, coeff. = coefficient, col rp = college reference person (reference person attended some college), elem, elementary, F on Ho = F-value on the Ho (Null-hypothesis - under fixed effects u_i=0 means all fixed effects coefficients [u_i] are all zero), ref. = reference, rp = reference person, sq = square, vill. = village.

Source: Operations Evaluation Mission.

Table A13.5: Impact on per Capita Food Expenditure Estimation; Fixed-Effects Regression

Variables	Treatment Variable							
	Availed Loan (1=Yes)		Months program available		Total Loans ('000)		No. of loan Cycles	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Member	(618.85)	(1.19)	(382.19)	(0.77)	(434.77)	(0.82)	(446.90)	(0.83)
Availed loan	1,332.99	1.80						
Age, ref. person	(342.24)	(3.12)	(328.97)	(3.04)	(316.48)	(2.96)	(334.18)	(3.09)
Age sq., ref. person	4.39	3.66	4.31	3.65	4.15	3.55	4.36	3.69
Female, ref. person	2,565.08	4.03	2,710.60	4.37	2,635.84	4.27	2,748.78	4.39
Elem. ref. person	199.15	0.07	229.19	0.08	(335.95)	(0.12)	419.52	0.15
Secondary, ref. person	1,773.31	0.64	1,962.27	0.71	1,504.31	0.54	2,153.23	0.78
Tertiary, ref. person	4,461.22	1.59	4,422.55	1.58	3,739.61	1.34	4,428.32	1.59
Years in village	(16.19)	(0.92)	(12.78)	(0.74)	(17.38)	(1.03)	(17.40)	(1.01)
House size	8.84	2.11	8.07	2.05	5.20	1.37	7.74	1.97
Availed loan*(demeaned\la age)	446.99	1.55						
Availed loan*(demeaned\la age sq)	(4.78)	(1.56)						
Availed loan*(demeaned\la female rp)	1,843.03	1.36						
Availed loan*(demeaned\la elem rp)	(3,213.50)	(0.56)						
Availed loan*(demeaned\la sec rp)	(3,022.67)	(0.52)						
Availed loan*(demeaned\la col rp)	(4,966.67)	(0.85)						
Availed loan*(demeaned\la years in vill.)	6.22	0.18						
Availed loan*(demeaned\la house size)	(13.10)	(2.09)						
Months program available			12.09	1.35				
Mos prog avail*(demeaned\la age)			4.63	1.24				
Mos prog avail*(demeaned\la age sq)			(0.05)	(1.36)				
Mos prog avail*(demeaned\la female rp)			19.13	1.22				
Mos prog avail*(demeaned\la elem rp)			(35.83)	(0.53)				
Mos prog avail*(demeaned\la sec rp)			(42.77)	(0.63)				
Mos prog avail*(demeaned\la coll rp)			(55.73)	(0.81)				
Mos prog avail*(demeaned\la years in vill.)			(0.14)	(0.33)				
Mos prog avail*(demeaned\la house size)			(0.16)	(2.13)				
Total loans availed ('000)					13.55	1.07		
Total loans av.*(demeaned\la age)					4.46	1.27		
Total loans av.*(demeaned\la age sq)					(0.05)	(1.37)		
Total loans av.*(demeaned\la female rp)					26.11	1.58		
Total loans av.*(demeaned\la elem rp)					(43.94)	(0.37)		
Total loans av.*(demeaned\la sec rp)					(59.57)	(0.51)		
Total loans av.*(demeaned\la col rp)					(58.30)	(0.49)		
Total loans av.*(demeaned\la years in vill.)					0.29	0.70		
Total loans av.*(demeaned\la house size)					(0.04)	(0.91)		
Number of loan cycles							140.92	1.20
No. of loan cycles*(demeaned\la age)							50.70	1.45
No. of loan cycles*(demeaned\la age sq.)							(0.58)	(1.56)
No. of loan cycles*(demeaned\la femal rp)							161.53	0.95
No. of loan cycles*(demeaned\la elem rp)							(674.11)	(0.76)
No. of loan cycles*(demeaned\la sec rp)							(747.03)	(0.84)
No. of loan cycles*(demeaned\la col rp)							(767.18)	(0.86)
No. of loan cycles*(demeaned\la years in vill.)							2.00	0.47
No. of loan cycles*(demeaned\la house size)							(1.17)	(1.98)
Constant	16,543.55	4.55	16,011.16	4.42	16,588.78	4.60	16,076.59	4.46
<i>Model Statistics</i>								
Sample	2,018		2,013		2,013		2,013	
F on Ho: u_i=0	3.597		3.572		3.532		3.576	
Overall R-square	0.061		0.060		0.063		0.059	

\la=var-mean(var), () = negative, av = availed, coeff. = coefficient, col rp = college reference person (reference person attended some college), elem. elementary, F on Ho = F-value on the Ho (Null-hypothesis - under fixed effects u_i=0 means all fixed effects coefficients [u_i] are all zero), ref. = reference, rp = reference person, sq = square, vill. = village.

Source: Operations Evaluation Mission.

Table A13.6: Impact on Other (Non-GBA) Loans

Variables	Availed of Non-GBA Loans		Amt. of Non-GBA Loans		No. of Non-GBA Loans	
	Coefficient	z-value	Coefficient	z-value	Coefficient	z-value
Member	(0.031)	(0.42)	(3.926)	(1.57)	0.022	0.18
Availed loan	(0.175)	(1.91)	(0.654)	(0.21)	0.166	0.96
Propensity score (PS)	1.160	2.68	46.546	3.03	0.348	0.48
Availed loan.*(demeaned\va PS)	(1.170)	(1.25)	(60.886)	(1.98)	(0.819)	(0.68)
Sigma			35.335	28.07		
Constant	(0.903)	(8.40)	(35.813)	(8.80)		
Sample	2,001		2,018		478	
Chi-square	13.823				2.329	
Estimation procedure	Probit		Tobit		Poisson	

\va=var-mean(var), () = negative, GBA = Grameen Bank approach.

Source: Operations Evaluation Mission.

Table A13.7: Probit First Stage – Propensity Score

Variables	Coefficient	Standard		P> z	95% Conf. Interval	
		Error	z-value			
Age, ref. person	0.0770	0.0190	4.06	0.000	0.0399	0.1142
Age sq., ref. person	(0.0007)	0.0002	(3.33)	0.001	(0.0011)	(0.0003)
Female, ref. person	(0.1447)	0.0908	(1.59)	0.111	(0.3228)	0.0333
Elem, ref. person	0.0643	0.3974	0.16	0.871	(0.7145)	0.8431
Secondary, ref. person	0.0543	0.3962	0.14	0.891	(0.7223)	0.8309
Tertiary, ref. person	0.0434	0.3993	0.11	0.913	(0.7392)	0.8260
Years in village	0.0035	0.0023	1.53	0.127	(0.0010)	0.0081
House size	0.0020	0.0005	4.35	0.000	0.0011	0.0029
Constant	(2.9919)	0.5924	(5.05)	0.000	(4.1530)	(1.8307)
Sample	2,018					
Pseudo R-square	0.034					

\va=var-mean(var), () = negative, Elem = elementary, ref. = reference.

Source: Operations Evaluation Mission.

Table A13.8: Impact on Personal Savings

Variables	Have personal savings		Amount of personal saving by group	
	Coefficient	z-value	Coefficient	z-value
Member	0.341	4.950	(0.447)	(4.700)
Availed loan	0.687	7.200	0.347	3.090
Propensity score (PS)	0.465	1.130	0.990	1.830
Availed loan.*(demeaned\alpha PS)	(1.469)	(1.550)	(0.710)	(0.670)
Cut point 1			0.630	4.560
Cut point 2			1.143	8.050
Constant	(0.045)	(0.440)		
Sample	2,010		1,056	
Chi-square	154.810		25.374	
Estimation procedure	Probit		Ordered Probit	

\alpha=var-mean(var), () = negative.

Source: Operations Evaluation Mission.

Table A13.9: Impact on Household Enterprise and Employment Estimation: Fixed-Effects Poisson Regression

Variables	Total Number of enterprises			Total number of employees		
	Coefficient	z-value	IRR	Coefficient	z-value	IRR
Member	0.210	4.130	1.234	0.237	5.512	1.267
Availed loan	0.185	2.630	1.203	0.161	2.729	1.175
Propensity score (PS)	0.850	2.950	2.340	0.814	3.364	2.257
Availed loan.*(demeaned\alpha PS)	(0.273)	(0.540)	0.761	0.294	0.735	1.342
Sample	2,018			2,018		
Chi-square	91.544			156.787		

\alpha=var-mean(var), () = negative, IRR = incidence rate ratio.

Source: Operations Evaluation Mission.

Table A13.10: First Stage Propensity Score Regression
Dependent Variable: Avail Loan
Estimation Procedure: Probit

Independent Variables	Coefficient	Standard Error	z-value
Age, ref. person	0.077	0.0190	4.06
Age sq., ref. person	(0.001)	0.0002	(3.33)
Female, ref. person	(0.145)	0.0908	(1.59)
Elem, ref. person	0.064	0.3974	0.16
Secondary, ref. person	0.054	0.3962	0.14
Tertiary, ref. person	0.043	0.3993	0.11
Years in village	0.004	0.0023	1.53
House size	0.002	0.0005	4.35
Constant	(2.992)	0.5924	(5.05)
Sample Size	2,018		
LR Chi-square (8)	74.73		

() = negative, Elem = elementary, ref. = reference, sq.= square.

Source: Operations Evaluation Mission.

Table A13.11: Impact on Total Assets
Estimation: Fixed-Effects Tobit

Variables	Coefficient	Standard Error	z-value
Member	1,015.2	100,937.5	0.01
Availed loan	(37,891.2)	122,070.3	(0.31)
Propensity score (PS)	1,396,583.0	612,817.9	2.28
Availed loan.*(demeaned\va PS)	(975,040.5)	1,208,059.0	(0.81)
Constant	(138,725.2)	150,595.1	(0.92)
sigma_u	0.0	45864.6	0.00
sigma_e	1,866,553.0		
rho	0.0		
Sample	2,018		
Chi-square (4)	5.38		

\va=var-mean(var), () = negative.

Source: Operations Evaluation Mission.

Table A13.12: First Stage Propensity Score Regression
Dependent Variable: Avail Loan
Estimation Procedure: Probit

Independent Variables	Coefficient	Standard	
		Error	z-value
Age, ref. person	0.0770	0.0190	4.06
Age sq., ref. person	(0.0007)	0.0002	(3.33)
Female, ref. person	(0.1447)	0.0908	(1.59)
Elem, ref. person	0.0643	0.3974	0.16
Secondary, ref. person	0.0543	0.3962	0.14
Tertiary, ref. person	0.0434	0.3993	0.11
Years in village	0.0035	0.0023	1.53
House size	0.0020	0.0005	4.35
Constant	(2.9919)	0.5924	(5.05)
Sample Size	2,018		
LR Chi-square (8)	74.73		

() = negative, ref. = reference, sq. =square.

Source: Operations Evaluation Mission.

Table A13.13: Impact on Education

Variables	Age groups						Exp. per att. child	
	6-12		13-16		17-24		Coefficient	t-value
	Coefficient	z-value	Coefficient	z-value	Coefficient	z-value		
Member	(0.044)	(0.16)	(0.049)	(0.21)	0.017	0.10	(39.305)	(0.05)
Availed loan	0.572	1.42	0.144	0.52	0.240	1.22	(681.985)	(0.62)
Propensity score (PS)	2.135	1.10	3.035	1.52	5.807	6.01		
Availed loan.*(demeaned\la PS)	0.209	0.06	1.163	0.40	(4.817)	(2.26)		
Age, ref. person							104.755	0.53
Age sq., ref. person							1.499	0.67
Female, ref. person							(575.653)	(0.51)
Elem, ref. person							1,795.530	0.96
Secondary, ref. person							5,082.852	2.63
Tertiary, ref. person							6,394.019	3.03
Years in village							27.014	0.92
House size							16.096	1.98
Elem school available							853.967	0.61
Secondary school available							(2,476.332)	(1.61)
Tertiary school available							1,429.158	0.78
Availed loan*(demeaned\la age)							725.980	1.80
Availed loan*(demeaned\la age sq)							(8.190)	(1.94)
Availed loan*(demeaned\la female rp)							(505.695)	(0.26)
Availed loan*(demeaned\la elem rp)							(1,859.148)	(0.46)
Availed loan*(demeaned\la sec rp)							(1,175.265)	(0.28)
Availed loan*(demeaned\la col rp)							(3,918.333)	(0.91)
Availed loan*(demeaned\la years in vill.)							(107.584)	(2.20)
Availed loan*(demeaned\la house size)							(9.484)	(0.97)
Availed loan*(demeaned\la elem school)							(223.880)	(0.09)
Availed loan*(demeaned\la sec school)							2,162.682	1.22
Availed loan*(demeaned\la ter school)							132.582	0.04
Constant	2.392	4.88	1.139	2.30	(2.245)	(8.90)	(6,009.348)	(1.21)
Sample	1,036		758		868		1,404	
Chi-square	5.261		7.125		39.436			
R-square							0.088	
Estimation procedure	GLM\lb		GLM\lb		GLM\lb		Fixed-Eff.	

\a=var-mean(var), \lb=Fractional Logit (Papke and Woolridge, 1996), () = negative, att = attending, col = college, elem = elementary, Exp. = Expenditure, GLM = Generalized Linear Model, ref. = reference, rp = reference person, sec = scndary, sq = squarare, ter = tertiary.

Source: Operations Evaluation Mission.

Table A13.14: First Stage Probit – Education

Variable	Coefficient	Standard	
		Error	z-value
Age, ref. person	0.0781	0.0191	4.09
Age sq., ref. person	(0.0007)	0.0002	(3.33)
Female, ref. person	(0.1493)	0.0912	(1.64)
Elem, ref. person	0.0671	0.3974	0.17
Secondary, ref. person	0.0537	0.3963	0.14
Tertiary, ref. person	0.0382	0.3994	0.10
Years in village	0.0033	0.0023	1.41
House size	0.0019	0.0005	4.11
Elementary school available	0.0590	0.1207	0.49
Secondary school available	(0.0432)	0.0716	(0.60)
Tertiary school available	0.1923	0.1057	1.82
Constant	(3.0729)	0.6073	(5.06)
Sample	2,001		
Pseudo R-square	0.0345		

() = negative, ref. = reference, rp = reference person, sq = square.

Source: Operations Evaluation Mission.

Table A13.15: Impact on Health

Variables	Proportion ill or injured		Prop who seek treatment if ill or injured		Prop fully immunized 0-5 years		Per capita medical expenditures	
	Coefficient	z-value	Coefficient	z-value	Coefficient	z-value	Coefficient	t-value
Member	0.193	1.39	0.171	0.73	0.259	1.34	(253.469)	(1.56)
Availed loan	0.062	0.38	(0.035)	(0.13)	(0.031)	(0.12)	19.656	0.07
Propensity score (PS)	1.967	2.17	2.170	1.62	0.967	0.92		
Availed loan*(demeaned\ a PS)	(1.828)	(1.15)	0.256	0.12	(1.921)	(0.90)		
Age, ref. person							(174.387)	(1.98)
Age sq., ref. person							2.300	2.11
Female, ref. person							5.883	0.02
Elem, ref. person							485.616	1.05
Secondary, ref. person							202.958	0.55
Tertiary, ref. person							493.215	1.33
Years in village							4.781	0.69
House size							2.226	1.01
Govt hospital available							(252.641)	(0.37)
Private hospital available							479.518	0.81
Private clinic available							(398.245)	(1.11)
Health clinic available							333.160	1.67
Barangay Health Station available							83.307	0.68
Availed loan*(demeaned\ a age)							63.685	0.53
Availed loan*(demeaned\ a age sq)							(0.943)	(0.65)
Availed loan*(demeaned\ a female rp)							230.852	0.48
Availed loan*(demeaned\ a elem rp)							(736.620)	(0.98)
Availed loan*(demeaned\ a sec rp)							(178.779)	(0.28)
Availed loan*(demeaned\ a col rp)							(997.452)	(1.36)
Availed loan*(demeaned\ a years in vill.)							(10.416)	(0.75)
Availed loan*(demeaned\ a house size)							(1.760)	(0.70)
Availed loan*(demeaned\ a govt hosp)							(718.734)	(0.68)
Availed loan*(demeaned\ a priv hosp)							(155.636)	(0.20)
Availed loan*(demeaned\ a priv clinic)							335.812	0.69
Availed loan*(demeaned\ a health clinic)							(dropped)	
Availed loan*(demeaned\ a BHS)							(320.088)	(0.95)
Constant	(2.927)	(13.16)	0.196	0.56	0.464	1.96	2,941.841	1.74
Sample	1,994		456		794		1,994	
Chi-square	9.199		5.448		3.733			
R-square							0.031	
Estimation procedure	GLM\ b		GLM\ b		GLM\ b		Fixed-Eff.	

\ a=var-mean(var), \ b=Fractional Logit (Papke and Woolridge, 1996), BHS = barangay health station, col = college, elem = elementary, GLM = Generalized Linear Model, govt = government, hosp = hospital, priv = private, ref. = reference, rp = reference person, sec = secondary, sq = square.

Source: Operations Evaluation Mission.

Table A13.16: First Stage Probit – Health

Variable	Coefficient	Standard	
		Error	z-value
Age, ref. person	0.0801	0.0193	4.15
Age sq., ref. person	(0.0007)	0.0002	(3.43)
Female, ref. person	(0.1466)	0.0920	(1.59)
Elem, ref. person	0.0954	0.3956	0.24
Secondary, ref. person	0.0950	0.3946	0.24
Tertiary, ref. person	0.0765	0.3976	0.19
Years in village	0.0036	0.0023	1.55
House size	0.0019	0.0005	4.10
Govt hospital available	0.4778	0.1144	4.18
Private hospital available	(0.1462)	0.1507	(0.97)
Private clinic available	(0.1156)	0.0900	(1.28)
Barangay Health Station available	(1.4195)	0.0860	(16.51)
Constant	(3.1444)	0.6023	(5.22)
Sample	1,994		
Pseudo R-square	0.042		

() = negative, ref = reference, sq = square.

Source: Operations Evaluation Mission.

Table A13.17: Impact on Hunger and Reduced Food Consumption

Variable	Hunger incidence		Reduced food incidence	
	Coefficient	z-value	Coefficient	z-value
Member	(0.049)	(0.32)	(0.023)	(0.26)
Availed loan	(0.004)	(0.02)	(0.051)	(0.47)
Propensity score (PS)	1.292	1.55	(0.343)	(0.63)
Availed loan.*(demeaned\ a PS)	(0.041)	(0.03)	1.607	1.66
Constant	(2.287)	(10.96)	(1.114)	(8.49)
Sample	2,014		2,009	
Chi-square	3.645		3.042	
Estimation procedure	Probit		Probit	

\a=var-mean(var), () = negative.

Source: Operations Evaluation Mission.

Table A13.18: First Stage Probit – Hunger

Variable	Coefficient	Standard Error	z-value
Age, ref. person	0.0770	0.0190	4.06
Age sq., ref. person	(0.0007)	0.0002	(3.33)
Female, ref. person	(0.1447)	0.0908	(1.59)
Elem, ref. person	0.0643	0.3974	0.16
Secondary, ref. person	0.0543	0.3962	0.14
Tertiary, ref. person	0.0434	0.3993	0.11
Years in village	0.0035	0.0023	1.53
House size	0.0020	0.0005	4.35
Constant	(2.9919)	0.5924	(5.05)
Sample	2,018		
Pseudo R-square	0.0340		

() = negative, ref. = reference, sq. = square

Source: Operations Evaluation Mission.

IMPACT ESTIMATES ON SELECTED OUTCOME VARIABLES

**Table A14.1: Aggregate Estimates
Using Clients as of 30 June 2006 of 1,648,052**

Item	At mean	90% Confidence Interval	
Per Capita Income (P billion)	8.6	0.02	17.19
Per Capita Expenditures (P billion)	6.8	0.48	13.15
Per Capita Savings 1 ^a	NS		
Per Capita Savings 2 ^b	NS		
Per Capita Food Expenditures (P billion)	2.2	0.19	4.20
Total Number of Enterprises	305,307	114,466	496,147
Total Number of Employment	705,402	492,740	918,065

^a Income-Expenditure.

^b Income-Expenditure+Education+Health+Durable Furniture.

Source: Operations Evaluation Mission.

Table A14.2: Non-GBA loans

Variables	Existing Clients	New Clients	Non- participating	Total
Other Loans (%)	20.1	25.8	26.5	24.8
Among those with Other Loans :				
Amount of Other Loans (P'000)	20.335	8.776	14.995	14.328
Number of Other Loans	1.648	1.179	1.206	1.280

GBA = Grameen Bank Approach.

Source: Operations Evaluation Mission.

Table A14.3: Impact on Other Loans

Item	Marginal Effects	Significance Level
Securing Other Loans	-0.0530	0.056
Amount of Other Loans		NS
Number of Other Loans		NS

Source: Operations Evaluation Mission.

Table A14.4: Impact on Savings in Program and Other Microfinance Institutions

Variable	Marginal Effects	Significance Level
Have personal savings	0.0230	0.000
Amount of Personal Savings:		
P0–P5,000	-0.124	0.003
P5,001–P10,000 Pesos	0.038	0.001
P10,000	0.086	0.005

Source: Operations Evaluation Mission.

Table A14.5: Saving Accounts in Program and Other Microfinance Institutions

Variable	Existing Clients	New Clients	Nonparticipating	Total
Have personal savings account	0.859	0.657	0.528	0.637
<i>Among those with personal savings:</i>				
Personal Savings P1–P5,000	0.653	0.794	0.658	0.697
Personal Savings P5,001–P10,000	0.181	0.128	0.147	0.149
Personal Savings P10,000	0.166	0.078	0.196	0.154

Source: Operations Evaluation Mission.

Table A14.6: Education outcomes

Item	Existing Clients	New Clients	Nonparticipating	Total
With children 6–12 years old (%)	50.2	57.6	48.6	51.2
<i>Among those with children 6–12:</i>				
Proportion attending school, 6–12 (%)	97.0	94.4	94.3	95.0
With children, 13–16 years old (%)	41.6	39.3	33.5	36.9
<i>Among those with children 13–16:</i>				
Proportion attending school, 13–16 (%)	88.1	86.9	86.7	87.1
With children 17–24 years old (%)	49.0	42.6	40.6	43.0
<i>Among those with children 17–24:</i>				
Proportion attending school, 17–24 (%)	34.4	30.6	29.7	31.2
Education expense per school age child (P)	5,931	4,615	5,392	5,312
Education expense per attending child (P)	8,241	6,300	7,268	7,239

Source: Operations Evaluation Mission.

Table A14.7: Health Outcomes

Item	Existing Clients	New Clients	Nonparticipating	Total
Proportion of members ill/injured (%)	9.7	10.1	8.2	9.0
With illness/injured members:	25.2	26.9	19.7	22.9
<i>Among those with ill/injured members:</i>				
Proportion who seek treatment (%)	70.0	69.6	67.0	68.6
With children 0-5 years old (%)	32.3	44.4	412.2	39.9
<i>Among those with children 0-5 years old:</i>				
Proportion fully immunized (%)	71.7	71.9	66.3	68.9
Per capita medical expenses (P)	645	560	872	740

Source: Operations Evaluation Mission.

Table A14.8: Hunger and Reduced Food Consumption Incidence

Item	Existing Clients	New Clients	Nonparticipating	Total
Hunger Incidence	0.023	0.019	0.023	0.022
Reduced Food Incidence	0.113	0.110	0.115	0.113

Source: Operations Evaluation Mission.

CONCEPTUAL FRAMEWORK ON THE EFFECTS OF MICROFINANCE ON THE STATUS OF WOMEN

1. Women in poor households are often the target of microfinance programs. The premises behind such targeting are twofold: (i) that microfinance is an effective tool in improving women's status, and (ii) that overall household welfare is likely to be higher when microfinance is provided to women rather than men. The following outlines the interaction of women's status, household welfare, and microfinance:¹

- Women are thought to make better borrowers than men. Evidence shows that women perform better in repaying loans than male borrowers.²
- Women's preferences regarding household business management and household consumption goals differ from men's.³ Additional resources in the hands of women materially affect both the quality of investments financed by the microfinance programs and how extra income is spent. Evidence also shows that women tend to be more concerned about children's health and education, and therefore are likely to channel more resources for household food and nonfood expenditures than men.⁴
- The status of a woman in the household is linked to how well she is able to enforce command over available resources. Increased ability to tap financial resources independently enhances her control, and, therefore, her influence in household decision-making processes.
- Microenterprises newly financed by microfinance open an important social platform for women to interact with markets and other social institutions outside the household, enabling them to gain useful knowledge and social capital. Group formation in many microfinance programs reduces transaction costs in credit delivery, and assists women in building and making effective use of these opportunities.
- Microfinance programs that are designed to cover all costs benefit both women and the supplier of microfinance services. In this regard, development goals related to women's empowerment and improved household welfare are self-financing, with no subsidies required.

2. These interactions point to the significant potential of microfinance for contributing to women's economic and social empowerment. Often, it has been assumed

¹ Drawn largely from Sharma, Manohar. 2003. In Quisumbing, Agnes R., ed. 2003. *Household Decisions, Gender and Development: A Synthesis of Recent Research*. 195–199. Washington, D.C., International Food Policy Research Institute (IFPRI).

² Khandker, Shahidur R., Baqui Khalily, and Zahed Kahn. 1995. Grameen Bank: Performance and Sustainability. *World Bank Discussion Paper* 306. Washington, DC.

³ More pronounced, particularly in societies with severe gender bias.

⁴ Blumberg, Rae. 1989. Entrepreneurship, credit, and gender in the informal sector of the Dominican Republic. In *Women in Development: A.I.D.'s Experience, 1973–1985*. Vol. 2. Washington, DC: United States Agency for International Development (USAID) Center for Development Information and Evaluation.

that increasing women's access to microfinance services will in itself lead to individual economic empowerment by enabling women's decisions about savings and credit use, enabling women to set up microenterprise, and increasing incomes under their control. It is then assumed that this increased economic empowerment will lead to increased well-being of women and also to social and even political empowerment.

3. Unfortunately, positive empowerment effects are not necessarily an automatic consequence of microfinance. Women's empowerment is a complex process of change that goes much further than women's access to microfinance services or increase in income.⁵ In male-dominated societies, men may use women to gain access to microfinance funds, diminishing women's role to being mere conduits of cash. Women may have limited control over their income, and what little income they earn may substitute for former male household contributions as men retain more of their earnings for their own use. Expenditure decisions may continue to prioritize men and male children, while daughters or daughters-in-law withstand the worst of unpaid domestic work. Furthermore, women may invest in existing activities that are low profit and insecure and/or in their husband's activities, resulting in a limited effect on income.

4. Disempowerment may even take place among women participants in microfinance programs. Payments on loans and micro-insurance divert resources that might otherwise go toward necessary consumption or investment. The responsibility for loans and savings on the shoulders of women may absolve men of responsibility for the household. Further, where microfinance programs use group meetings only for savings and credit, women's precious time for work and leisure are used up, cutting program costs but not necessarily the trade-off costs on women.

5. Empowerment therefore goes much further than either women's access to financial services or household level poverty reduction. Poverty alleviation as measured by increased income is not necessarily sufficient for women's empowerment because intra-household inequalities constrain women from enjoying benefits of the increase, even when they are the major contributors.

⁵ Mayoux, Linda. 2006. *Women's Empowerment through Sustainable Microfinance: Rethinking Best Practice*, Gender and Microfinance Website. Available: <http://www.genfinance.net>.

**PERCENTAGE DISTRIBUTION OF SURVEY RESPONSES ON WOMEN'S STATUS
BY TYPE OF RESPONDENT
(Philippines)**

	Existing Client	Former Client	Total
No. of Respondents	484.0	82.0	566.0
1. Who in your household decides...?			
a. To take out a loan?			
No answer	2.9	2.4	2.8
Husband only	2.7	8.5	3.5
Mostly husband	5.4	4.9	5.3
Husband and wife equally	50.4	47.6	50.0
Mostly wife	18.6	15.9	18.2
Wife only	13.8	12.2	13.6
Don't know	3.7	1.2	3.4
Not applicable	2.5	7.3	3.2
b. How to use loans you have taken?			
No answer	3.5	2.4	3.4
Husband only	2.3	6.1	2.8
Mostly husband	3.9	3.7	3.9
Husband and wife equally	48.6	45.1	48.1
Mostly wife	21.3	17.1	20.7
Wife only	14.5	17.1	14.8
Don't know	3.5	1.2	3.2
Not applicable	2.5	7.3	3.2
c. What you buy for your business?			
No answer	3.7	2.4	3.5
Husband only	1.7	6.1	2.3
Mostly husband	3.9	2.4	3.7
Husband and wife equally	42.6	37.8	41.9
Mostly wife	26.4	23.2	26.0
Wife only	15.5	19.5	16.1
Don't know	3.7	1.2	3.4
Not applicable	2.5	7.3	3.2
d. How your product is sold?			
No answer	3.7	3.7	3.7
Husband only	1.7	4.9	2.1
Mostly husband	3.7	1.2	3.4
Husband and wife equally	39.5	37.8	39.2
Mostly wife	28.7	23.2	27.9
Wife only	16.5	20.7	17.1
Don't know	3.7	1.2	3.4
Not applicable	2.5	7.3	3.2
e. How to use profits from your business?			
No answer	3.7	3.7	3.7
Husband only	0.8	4.9	1.4

	Existing Client	Former Client	Total
Mostly husband	3.5	2.4	3.4
Husband and wife equally	43.0	36.6	42.0
Mostly wife	26.2	22.0	25.6
Wife only	16.3	22.0	17.1
Don't know	3.9	1.2	3.5
Not applicable	2.5	7.3	3.2
f. What work you do during a normal day?			
No answer	6.8	4.9	6.5
Husband only	2.5	2.4	2.5
Mostly husband	2.9	1.2	2.7
Husband and wife equally	22.5	23.2	22.6
Mostly wife	29.5	23.2	28.6
Wife only	27.3	36.6	28.6
Don't know	6.0	1.2	5.3
Not applicable	2.5	7.3	3.2
2. When you want or need to buy things like food or clothing for yourself or your family, which of the following answers best describes your situation after joining the program for the last 4 years?			
No answer	2.9	2.4	2.8
You have your own money so can usually buy what you need	61.0	50.0	59.4
You occasionally have to get the money from your husband or someone else in the household	24.8	23.2	24.6
You always have to get the money from your husband or someone else in the household	6.2	13.4	7.2
Don't know	2.7	3.7	2.8
Not applicable	2.5	7.3	3.2
3. How you feel about the following statements			
a. Food			
No answer	2.5	2.4	2.5
Less in quantity	8.3	12.2	8.8
Same as before	50.6	47.6	50.2
More in quantity	27.3	26.8	27.2
Better quality of food	8.9	3.7	8.1
not applicable	2.5	7.3	3.2
b. Clothing			
no answer	2.5	2.4	2.5
Same as before	38.6	45.1	39.6
Worst than before, can't buy now when needed	14.3	18.3	14.8
Can now buy when needed	37.2	25.6	35.5
Can now buy when I want even if not needed	5.0	1.2	4.4
Not applicable	2.5	7.3	3.2
c. Medical care			
No answer	2.7	2.4	2.7
Same as before	38.4	48.8	39.9

	Existing Client	Former Client	Total
Have to look now for money when somebody got sick/during emergency	22.7	29.3	23.7
Can now have savings/cash for emergency needs	32.4	12.2	29.5
Not specify	0.8		0.7
Don't know	0.4		0.4
Not applicable	2.5	7.3	3.2
d. Provision of educational expenses			
No answer	5.2	3.7	4.9
Same as before	33.5	37.8	34.1
Doesn't now have the capacity to send all my children to school	9.3	9.8	9.4
Doesn't now have the capacity to send some of my children to school	5.6	11.0	6.4
Can now confident that I can send my children to school/college	31.0	19.5	29.3
Can have savings for my children's education	5.6	3.7	5.3
No more students	7.4	7.3	7.4
Not applicable	2.5	7.3	3.2
e. Home improvements			
No answer	3.3	2.4	3.2
Same as before	45.9	54.9	47.2
Doesn't have money now to even fix the house	19.0	22.0	19.4
Can now have savings to repair the house	22.3	13.4	21.0
Can now buy household appliances	6.0		5.1
Not specify	1.0		0.9
Not applicable	2.5	7.3	3.2
f. Use of Time			
No answer	2.5	2.4	2.5
Same as before	38.2	39.0	38.3
Spend more time for business and less time for household chores	28.7	31.7	29.2
Spend more time for business as well as for household chores	22.1	13.4	20.8
Spend more time for family and leisure	5.6	4.9	5.5
Spend less time for family and leisure	0.2	1.2	0.4
Not specify	0.2		0.2
Not applicable	2.5	7.3	3.2
g. Ownership of Assets			
No answer	2.7	2.4	2.7
Same as before	50.2	62.2	51.9
Owned more assets than before	41.5	18.3	38.2
Owned less assets than before	2.7	9.8	3.7
Not specify	0.4		0.4
Not applicable	2.5	7.3	3.2

	Existing Client	Former Client	Total
h. Physical mobility			
No answer	2.5	3.7	2.7
Same as before	43.8	50.0	44.7
Has more freedom to move	48.1	32.9	45.9
Has less freedom to move	2.7	4.9	3.0
Not specify	0.4	1.2	0.5
Not applicable	2.5	7.3	3.2
i. Perception of one's status			
No answer	2.7	2.4	2.7
Same as before	35.7	56.1	38.7
Feel more empowered	58.5	28.0	54.1
Feel less empowered	0.6	6.1	1.4
Not applicable	2.5	7.3	3.2
j. Training needs			
No answer	2.7	2.4	2.7
Does not need training	36.0	35.4	35.9
Need to acquire business skills	41.3	39.0	41.0
Need to acquire marketing skills	6.4	1.2	5.7
Need to acquire financial skills	5.0	7.3	5.3
Need to acquire negotiating skills	1.7	2.4	1.8
Need livelihood trainings	4.5	4.9	4.6
Not applicable	2.5	7.3	3.2
k. My role in performing HH chores			
No answer	9.3	3.7	8.5
Strongly agree	15.5	18.3	15.9
Agree	55.4	51.2	54.8
Disagree	13.8	13.4	13.8
Strongly disagree	0.6		0.5
Don't know	2.9	6.1	3.4
Not applicable	2.5	7.3	3.2
l. The care of children			
No answer	8.3	2.4	7.4
Strongly agree	20.0	17.1	19.6
Agree	53.1	54.9	53.4
Disagree	14.7	14.6	14.7
Strongly disagree	0.2		0.2
Don't know	1.2	3.7	1.6
Not applicable	2.5	7.3	3.2
m. I'm now capable of using my income			
No answer	6.8	3.7	6.4
Strongly agree	19.0	22.0	19.4
Agree	61.2	47.6	59.2
Disagree	9.5	17.1	10.6

	Existing Client	Former Client	Total
Strongly disagree	0.2		0.2
Don't know	0.8	2.4	1.1
Not applicable	2.5	7.3	3.2
n. I still have less control			
No answer	7.9	2.4	7.1
Strongly agree	7.0	3.7	6.5
Agree	25.4	31.7	26.3
Disagree	50.8	46.3	50.2
Strongly disagree	2.5	3.7	2.7
Don't know	3.9	4.9	4.1
Not applicable	2.5	7.3	3.2
o. I now have a greater say			
No answer	6.6	2.4	6.0
Strongly agree	18.8	14.6	18.2
Agree	48.3	50.0	48.6
Disagree	21.3	23.2	21.6
Strongly disagree	0.4		0.4
Don't know	2.1	2.4	2.1
Not applicable	2.5	7.3	3.2
p. I am now more active			
No answer	6.4	4.9	6.2
Strongly agree	21.9	14.6	20.8
Agree	53.3	43.9	51.9
Disagree	13.4	23.2	14.8
Strongly disagree	0.4		0.4
Don't know	2.1	6.1	2.7
Not applicable	2.5	7.3	3.2
q. I now have greater self-confidence			
No answer	6.8	4.9	6.5
Strongly agree	23.6	13.4	22.1
Agree	61.4	56.1	60.6
Disagree	3.9	12.2	5.1
Strongly disagree	0.2		0.2
Don't know	1.7	6.1	2.3
Not applicable	2.5	7.3	3.2
r. I now understand the division of work			
No answer	7.9	3.7	7.2
Strongly agree	20.5	11.0	19.1
Agree	60.1	65.9	61.0
Disagree	5.8	4.9	5.7
Strongly disagree	0.4	1.2	0.5
Don't know	2.9	6.1	3.4
Not applicable	2.5	7.3	3.2

	Existing Client	Former Client	Total
s. I now understand that my role may differ			
No answer	8.3	3.7	7.6
Strongly agree	16.5	14.6	16.3
Agree	63.2	63.4	63.3
Disagree	5.2	4.9	5.1
Strongly disagree	0.2		0.2
Don't know	4.1	6.1	4.4
Not applicable	2.5	7.3	3.2

HH = household, No.= number.

Source: Operations Evaluation Mission Impact Survey.

**DEVELOPMENT OBJECTIVES AND TARGET GROUPS
OF SELECTED ADB MICROFINANCE PROJECTS**

Project Title/No.	Classification	Development Objectives	Target Group
RMFP - PHI	Poverty reduction (primary) Gender and development (secondary)	Contribute to a reduction of poverty, create employment opportunities, and enhance rural incomes of the poorest of the poor (ultra poor)—the bottom 30% of the rural population as measured by income	Creation and expansion of microenterprises, targeting the ultra poor Women (90%)
PLDP - BAN	Women in development (primary) Poverty reduction (secondary)	Improve the status of women, reduce poverty, and increase rural employment in the project area	Poor and landless women (majority)
PLDP II - BAN	Poverty: core poverty intervention Thematic: gender and development	Reduce rural poverty in 20 districts of northwest Bangladesh	Poor households, concentrating on landless and households headed by women that are among the poorest of the poor
RLP - BAN	Poverty reduction (primary) Women in development (secondary)	Poverty reduction through the creation of sustainable farm and nonfarm employment	Rural poor households, focusing on women
SMDP - UZB	Poverty intervention. Thematic: economic growth, gender development	Create a viable and sustainable institutional framework and mechanism for effective delivery of financial services, particularly to poor, low-income households, and small and microenterprises.	SCU (100,000) members, of which one third will be from the poor, and in 5 out of 20 SCUs, at least 50% of the members are women

BAN = Bangladesh, No. = number, PHI = Philippines, PLDP = Participatory Livestock Development Project, PLDP II = Second Participatory Livestock Development Project, RLP = Rural Livelihood Project, RMFP = Rural Microenterprise Finance Project, SCU = savings and credit union, SMDP = Small and Microfinance Development Project, UZB = Uzbekistan.

Source: Operations Evaluation Mission.

GUIDELINES FOR DETERMINING THE EXTENT ADB PROJECTS HAVE MAINSTREAMED GENDER AND DEVELOPMENT IN PROJECT DESIGN AND IMPLEMENTATION

A. Involvement of Women and Men in Project Conceptualization, Design, and Implementation

- Have men and women been consulted in the identification of the development problem?
- Have consultations been conducted? At the central agency, subnational, or community level?
- Have records of the consultations with different parties at various levels been kept? Are these records gender disaggregated?

B. Collection of Sex-Disaggregated Data and Gender-Related Information

- At the planning stage
- Provided for in the project monitoring and evaluation system

C. Conduct of Gender Analysis and Identification

- Gender analysis as part of situation analysis
- Gender analysis of likely impacts of the project

Specifically, the following questions will be asked:

- Gender division of labor
 - Has the project helped poor women entrepreneurs become more efficient in their chosen fields?
 - Has the project helped address the issue of multiple work burdens of women?
 - Has the project addressed gender relations issue at the household and community levels?
- Access to and control of resources
 - Have women been given access to credit, information, training, and services?
 - Have women been involved in decision making over key aspects of the project?
 - Does the project have measures for mitigating negative effects on women and men?
- Constraints
 - Is the project design socially or culturally acceptable and accessible to women? Can women effectively participate or benefit from the project?

D. Presence of Gender Equality Goals, Outputs, and Outcomes

E. Presence of Activities and Interventions that Match Gender Issues Identified to Produce Gender Equality Outputs and Outcomes

F. Presence of Monitoring Targets and Indicators

- Does the project include gender equality targets and indicators for welfare, access, consciousness-raising, participation, and control? For instance, will the following gender differences be monitored:
 - Membership and leadership in credit organization or similar groups created by the project
 - Participation in training and similar activities

G. Commitment of Resources to Gender Issues

- How much is allotted to promote gender equality promotion or integration?
- Does the project have the expertise to integrate gender and development or to promote gender equality and women's empowerment?

H. Inclusion of Plans to Coordinate/Relate with the Agency's Gender and Development Efforts

- Will the project build on or strengthen the agency or government's commitment to the empowerment of women?
- Will it build on the initiatives or action of other organizations in the area?

COMPARATIVE LOAN SIZES

Table A19.1: Comparative Average Loan Sizes
(by country/project)

Country/Project	Average Loan (\$)	% of Per Capita GDP
Philippines	80.29 (RMFP)	7.0
Bangladesh	151 RLP	35.0
	145 PLDP	34.0
Uzbekistan	109 NGO	16.1
	1,375 SCU	204.2

GDP = gross domestic product, NGO = nongovernment organization, PLDP = Participatory Livestock Development Project, RLP = Rural Livelihood Project, RMFP = Rural Microenterprise Finance Project, SCU = savings and credit union.
Source: Operations Evaluation Mission.

Table A19.2: Average Loan Size, RMFP Philippines
(by MFI)

MFI	Average Loan Size (\$)
NGO	68.13
Banks	83.72
Cooperatives	106.30

MFI = microfinance institution, NGO = nongovernment organization, RMFP = Rural Microenterprise Finance Project.
Source: Operations Evaluation Mission.

**SELECTED ADB PROJECTS AND
PARTICIPATING MICROFINANCE INSTITUTIONS**

Selected Projects	DMC	Year Approved	Participating MFIs
Rural Microenterprise Finance Project (RMFP)	PHI	1996	NGOs, Banks, Cooperatives
Rural Livelihood Project (RLP)	BAN	1998	Cooperatives
Participatory Livestock Development Project (PLDP)	BAN	1997	NGOs
Participatory Livestock Development Project (PLDP II)	BAN	2003	NGOs
Small and Microfinance Development Project (SMDP)	UZB	2002	SCUs

BAN = Bangladesh, DMC = developing member country, MFI = microfinance institution, NGO = nongovernment organization, PHI = Philippines, SCU = savings and credit union, UZB = Uzbekistan.

Source: Operations Evaluation Mission.

LESSONS LEARNED IN IMPLEMENTING THE IMPACT SURVEY

1. Development practitioners often hesitate in conducting quantitative impact evaluations because they are too tedious, expensive, time-consuming, and technically demanding. Experience in the implementation of the impact assessment component of the special evaluation study on the Effect of ADB Microfinance Operations on Rural Poor Households and the Status of Women shows that these issues need not necessarily hinder donors and funding agencies from implementing a meaningful impact evaluation. In implementing the rigorous impact assessment of the Rural Microenterprise Finance Project in Philippines, the following lessons were learned.

2. **Impact Evaluations Need not be Expensive.** High quality impact evaluation requires resources but, with careful and advance planning, the conduct of the evaluation can be cost-effective. In the impact survey for the Rural Microenterprise Finance Project, the estimated cost covering a nationwide survey of 2,274 households, 116 *barangays* (villages), and 28 microfinance institutions (MFIs), excluding consultant costs, was about \$35,000 or a direct per unit cost of only \$14.47.¹ The total cost for implementing the field survey and evaluation, including cost of consultants, was an estimated \$143,000.² This amount is very reasonable, considering that a thorough impact evaluation would typically involve a few hundred thousand dollars. For example, in Montgomery et al. (1996), the cost for an impact evaluation of the credit program by Bangladesh Rural Advancement Committee was reported at \$250,000.³

3. **Appropriate Mix of Expertise in the Evaluation Team.** The team of consultants for the impact evaluation of the Rural Microenterprise Finance Project under this study was composed of a microfinance specialist and an impact evaluation specialist (econometrician), who were assisted by an evaluation analyst. The impact evaluation specialist recruited for the assessment had a strong statistical and econometric background, which were essential for the task. The microfinance specialist provided the knowledge and expertise on microfinance operations that directly affect impact on households. This team of specialists, with the assistance of an evaluation analyst, proved to be effective in formulating the framework; sampling and survey design; implementation of the field surveys; processing and analyzing survey data; and in estimating impact.

4. **Support and Cooperation of the Executing Agency and Participating Institutions.** To carry out the field surveys successfully, the full support and cooperation of concerned agencies are needed. The People's Credit and Finance Corporation, the Executing Agency of the Rural Microenterprise Finance Project, provided much-needed support by providing the database, assisting in the validation of the database, and coordinating with the sample MFIs for the scheduled field visits. The assistance of the People's Credit and Finance Corporation's was very effective.

5. The cooperation of MFIs was crucial in the implementation of field surveys, although the level of cooperation varied from one institution to another. Field surveys would tend to run smoothly whenever there was full cooperation of the MFI. However, whenever support was

¹ Unit cost refers to the cost per survey respondent, which includes travel costs, enumerators' fees, encoders' fees, etc.

² Regional TA 6312. *Special Evaluation Study on the Effect of ADB Microfinance Operations on Poor Rural Households and Status of Women*. The estimated amount refers only to the direct costs of the impact evaluation, including survey and consultant costs, and does not include the costs for other activities/components of this study.

³ Montgomery, R., D. Bhattacharya, and D. Hulme. 1996. Credit for the Poor in Bangladesh. In D. Hulme and M.P. Mosley, *Finance Against Poverty*, Vol. 2. London and New York: Routledge.

restrained or lacking, survey teams would experience difficulties in the field, causing delays and at times even cancellation in the survey of some selected sample *barangays* or Grameen Bank approach centers.⁴

6. **Support of *Barangay* Officials.** Some of the *barangays* selected for the survey were cancelled because concerned *barangay* officials did not allow the team to conduct the survey in their *barangay*. Some also refused to cooperate and provide the team with the necessary information/statistics regarding their *barangay*.

7. **Role of the Pretest.** A pretest was conducted with one MFI to determine if the questionnaires would generate the needed information for the study. Revisions were made on the questionnaire based on the results of the pretest.

8. The pretest also pointed out the issues regarding the information requirements for the sampling design. Initial talks with the People's Credit and Finance Corporation before the pretest revealed that their existing records can identify the MFI and branches, the total number of clients, and total number of active clients. However, the specific identification of these clients and their locations was not available. It was therefore not possible to identify households without visiting or validating with the MFIs in the field, or the People's Credit and Finance Corporation requesting their complete list of clients. This implied that more time would be needed and full cooperation was required from the MFIs to submit the client list on time. Since this was expected to cause major delays and uncertainties in the schedule of the field survey, the option taken was to determine the proportion of borrowers by type of MFI for each island group, the records of which were readily available from the People's Credit and Finance Corporation. Since MFIs could not readily provide the complete list of clients, there was no choice but to do the identification at branch level during the field visits, after the random selection of MFIs and *barangays* were determined using People's Credit and Finance Corporation records.

9. **Reliability of Database for the Sampling Frame.** The database from the People's Credit and Finance Corporation was not as reliable as initially perceived. Some selected areas turned out to have no clients of the type the survey required. In other areas, operations were closed down years ago. About half of the MFIs initially selected for the sample no longer existed or had past dues with the People's Credit and Finance Corporation. This caused some delays in the conduct of the field surveys as new areas have to be identified and located.

10. **Field Coordination.** Surveys may encounter unexpected problems in the field, which could be minimized through close coordination with concerned agencies. MFIs are to confirm in advance their availability for the survey. The survey team also needs to validate with MFIs the sample areas selected for the survey. In areas where sample areas are spatially dispersed, requiring more time for travel, local field coordinators may be tapped to assist in coordinating with MFI loan officers, and to do follow-up work. This arrangement was done in a few of the survey areas. In short, sufficient time needs to be allotted for field coordination and confirmation of field visits.

11. **Realistic and Flexible Schedule.** The original schedule of completing the field survey in 1 month was not achieved because of logistical and coordination issues faced in the field. As a result, the field survey took 3 months to complete. The following issues and challenges were faced by the survey team in the field:

⁴ These cancelled areas were replaced with new areas using new random sample draws.

- (i) Results of the random selection process generated a sample set of serviced *barangays* (treatment group) and expansion areas (nontreatment group) that were spatially dispersed from each other and therefore necessitated more travel time.
- (ii) Even though the time spent during the actual interview is only 45 minutes to 1 hour, as determined during the pretest, it took considerable time to locate selected households—increasing the amount of time to complete a questionnaire.
- (iii) The un-updated database of the People's Credit and Finance Corporation created problems in identifying and locating survey areas, adding to the length of time in conducting the actual interviews.
- (iv) Some MFIs were not able to confirm on time their availability for the survey, or were not available for the scheduled survey, causing delays and adjustments in the field.

12. In view of these issues, the schedule for the impact survey was extended until mid-January 2007.⁵

13. **Listing of Nonparticipants.** The survey team experienced difficulties in identifying qualified, but nonparticipating households because MFIs usually do not keep a listing of their prospective clients, or those that attended their program orientations. MFIs usually maintain only a collection list. Hence, the team relied on the referrals of the center officers and loan officers on households viewed to qualify for the program, but did not participate. It would have been ideal to create a household listing of qualified nonparticipants, but this would involve conducting another survey which would add to the time and costs of the survey.

14. **Simultaneous Field Surveys.** After 2 weeks of actual survey, the rate was only two *barangays* per day (at 20 households per *barangay*) for a team of six enumerators and one field supervisor. This meant that 55 survey days would be needed for the 110 *barangays* to generate the 2,200 sample households required by the survey. To accelerate the process, simultaneous survey teams were fielded in the islands of Luzon, Visayas, and Mindanao. On 15 October 2006, implementation of this strategy started with the fielding of at least two survey teams working simultaneously in separate sample areas. A maximum of four teams were fielded at any one time.

15. **Training of Enumerators and Encoders.** Given the technical contents of the survey questionnaire, it was important to recruit capable and competent enumerators or interviewers. The minimum requirements for enumerators were possession of a college degree and at least 1 year's work experience. Preference was given to enumerators who had survey experience. These enumerators were trained on the use of the questionnaire and how to conduct the interviews. The team also tapped local enumerators in areas where the local dialect was a barrier. After completion of the survey, encoders were trained on the use of the encoding and data processing module.⁶ Some of the enumerators were also tapped as encoders since they were already familiar with the questionnaire.

⁵ No field surveys were conducted for 2 weeks during the month of December 2006 because of the Christmas holidays, and also during the first week of January 2007.

⁶ Specifically, the CPro Software was used. CPro is a public-domain software used for processing survey and census data developed by the US Census Bureau, Micro International, and Serpo. It is also the main data processing system used by the National Statistics Office (NSO) of the Philippines.

16. **Data Encoding and Processing.** For the estimation procedures to run smoothly and efficiently, data encoded and processed from the survey should be clean and free of inputting errors. Ensuring quality control for data processing and encoding means closely supervising the encoding process, frequent cross-checking for consistency of encoded data and validation for encoded data that appear erroneous. This would require more time involvement from the supervisor or analyst.

17. **Value to Information Provided by Respondents.** Information provided by the respondents to the survey is of great value to the study. Yet, these respondents were not compensated for the information they provided and time spent for the interview. It is suggested therefore that in future surveys the respondents be provided with a small token (e.g., ball pen, pencil, etc.) after they are interviewed to express appreciation for their participation/inputs. These tokens need to be included in the survey budget.