AIMS

Assessing the Impact of Microenterprise Services (AIMS)
Management Systems International
600 Water Street, S.W.
Washington, D.C. 20024-2488
Tel: (202) 484-7170 • Fax: (202) 488-0754
E-mail: aims@msi-inc.com

MICROFINANCE PROGRAM CLIENTS AND IMPACT: AN ASSESSMENT OF ZAMBUKO TRUST, ZIMBABWE

OCTOBER 2001

Submitted to:

Monique Cohen, Ph.D.
Office of Microenterprise Development
Global Bureau, USAID

Submitted by:

by Carolyn Barnes
in Association with:
Erica Keogh and
Nontokozo Nemarundwe

The AIMS Project is implemented by Management Systems International (the prime contractor) in partnership with Harvard University, the University of Missouri, and the Small Enterprise Education and Promotion Network. The Project is a technical resource of the United States Agency for International Development, Global Bureau, Center for Economic Growth, Office of Microenterprise Development (Contract No.PCE-C-00-95-00036-00).

TABLE OF CONTENTS

LIST OF TABLES IN THE TEXT

BOXES

MAPS

ACKNOWLEDGMENTS

Many individuals have contributed to the successful completion of the assessment of Zambuko Trust and I am grateful to each of them. The general study design was developed by the AIMS team. In particular I would like to highlight the intellectual contributions of J. Gordon Arbuckle, Jr., Martha Chen, Monique Cohen, Dana de Kanter, Elizabeth Dunn, Elaine Edgcomb, Jennefer Sebstad, Donald Snodgrass and Russ Webster.

The work in Zimbabwe was dependent upon the high level of cooperation provided to the researchers by the officers and staff of Zambuko Trust. In particular I would like to thank Tawanda Sibanda, the Acting Executive Managing Director of Zambuko, David Kombanie, Ngwiza Mnkandla, and the managers and staff in Harare, Mutare and Bulawayo. They willingly and cheerfully provided information about the program and its clients, and permitted access to the files, which often meant that an AIMS field team member spent several days in their office.

In addition, key individuals in USAID/Zimbabwe and Opportunity International's Regional Office in Harare provided valuable advice and support. I am grateful to Tichaona Mushayandevu, the key point of contact in USAID/Zimbabwe; Martin Hanratty, the former head of USAID/Zimbabwe's Private Sector Office; and Dominic Magwada, then Regional Director of Opportunity International (OI).

Nontokozo Nemarundwe carried out the two rounds of case study interviews. Her thoughtful and sensitive manner in interacting with clients led to the success of this component. Erica Keogh led the survey fieldwork. In 1999 she was assisted by Doreen Pitfield. During both survey rounds Concilia Machingura and Tarisai Mukotekwa supervised the fieldwork and enumerators. The 1999 team consisted of Erick Fernando, Tichafa Marere, Danisa Moyo, Daisy Mufumba, Rufaro Mutizwa, Simon Taitira, Priscilla Tonde, Isaac Rufuse, and Simon Mvenge. Appreciation is extended to the data collection team for their dedication and hard work, which involved working irregular hours.

Those who provided valuable assistance in the initial phase of the study are acknowledged in the baseline report. While not individually named here, the contribution of each is remembered and appreciated. The external reviewers of earlier versions of this report made helpful suggestions. Elaine Edgcomb, Peter Little, Charles Reichardt, Mark Schreiner and Jennefer Sebstad are thanked for their contributions. Ky Johnson, Rose Johnson, and Victoria Michener of Management Systems International assisted with the preparation of the final report.

The assessment would not have been possible without the full cooperation of the microentrepreneurs who willingly consented to participate. Their responses to the letter sent in 1999 asking for their participation in the follow-up survey were heartfelt.

EXECUTIVE SUMMARY

In recent years the growth and expansion of microfinance programs and increasing attention to microfinance as a poverty reduction strategy have given rise to a number of important questions. To what extent are microfinance clients from poor households? Do clients borrow from other sources? What impacts occur at the household, enterprise and individual levels? Are the impacts positive or negative? Do the impacts vary among different sub-groups of clients? These questions are addressed in this longitudinal assessment of Zambuko Trust, Zimbabwe. The findings have implications for understanding the context in which microfinance programs operate and the market for microfinance products and related services in Zimbabwe and elsewhere.

Purpose of the Assessment

The assessment of Zambuko Trust (Zambuko) is one of three longitudinal studies undertaken by the U.S. Agency for International Development's Assessing the Impacts of Microenterprise Services (AIMS) Project. The main objective of the assessment is to determine the nature, extent and distribution of impacts from participation in Zambuko's program. The secondary objectives are to better understand a) the role of credit within the household economy and b) the extent to which Zambuko reaches the poor.

Design and Coverage

The assessment design is based on a mixed method approach. It involved a survey, case studies, pre-survey qualitative interviews, and data from Zambuko's information system and secondary sources. The survey was conducted in 1997 and then repeated in 1999 with the same respondents. To assist in identifying whether the changes between the two survey periods were a result of participation in Zambuko's program, the survey included a random sample of non-client microentrepreneurs who met Zambuko's basic eligibility requirements. The non-clients were matched according to gender and microenterprise sector with individuals in the client sample. The survey data are supplemented by information from nine case studies of Zambuko clients to highlight the change process and assist in interpretation of the survey results. The case studies were carried out in 1998 and 1999.

The assessment covers a randomly selected sample of microentrepreneurs who were Zambuko clients in 1997 and non-client microentrepreneurs from three geographic areas: Greater Harare (Harare and Chitungwiza), Bulawayo and Mutare. These cities have the largest concentrations of Zimbabwe's urban population and approximately 60 percent of all of Zambuko's clients lived in these cities in May 1997. The 1997 survey covered 691 respondents: 393 clients and 298 non-clients. More than three-fourths were women, since Zambuko emphasizes serving women. In the follow-up survey, 87 percent of the 1997 sample was re-interviewed: 344 clients and 255 non-clients.

The survey data were analyzed by several statistical techniques to identify significant differences between the groups: chi-square tests, t-tests, and analysis of variance in the gain scores. The impact variables were subject to an analysis of covariance (ANCOVA) using multiple covariants. The ANCOVA approach statistically matches observations in the client and non-client samples that have

the same 1997 values for the impact variable and a range of other selected variables, thus controlling for initial differences. It then compares the matched observations on their 1999 values for the impact variable to determine if there may be statistically significant differences between the clients and non-clients. The results then suggest whether or not participation in Zambuko's program has had a positive or negative impact on the client group.

The case study clients were interviewed following a protocol that set out a number of research questions about key changes in the enterprise, household and borrower. The protocol was designed to elicit responses about the chain of events leading to the changes.

Zimbabwe Context

Microenterprises are an important source of employment in Zimbabwe. In 1998 an estimated 860,000 micro and small enterprises were engaged in manufacturing, commerce and service activities. These enterprises generated self-employment and jobs for approximately 25 percent of Zimbabwe's working population.

Two important contextual factors affected the environment of microfinance institutions and microentrepreneurs in Zimbabwe during the study period: inflation and HIV/AIDS. Inflation, as measured by the consumer price index, increased rapidly in the late 1990s. The annual inflation rate rose from 14 percent in 1997 to 32 percent the following year, and then jumped to 70 percent in 1999. In 1999 the real value of the Zimbabwe dollar, when adjusted for inflation, was 50 percent less than it was in 1997.

In addition to inflationary pressures, Zimbabwe has been significantly affected by HIV/AIDS. An estimated one-quarter of the adults aged 15 to 49 are HIV/AIDS infected. Overall, an estimated 1.5 million adults and children were living with HIV/AIDS in 1999. While the life expectancy in Zimbabwe prior to the AIDS pandemic was 65, it is projected to decrease to approximately 39 by 2005. HIV/AIDS may negatively affect households by increasing dependency ratios, reducing the level of household income, and diverting resources.

Zambuko Trust

Zambuko began in 1992 and is a partner in the Opportunity International Network. Its mission is "to be a bridge between the marginalized, the unemployed and opportunities for enterprise and income generation" in Zimbabwe. It offers group co-guaranteed loans and individual loans backed by guarantors to individuals who have a microenterprise that is at least six months old, are not employed fulltime elsewhere, and have an enterprise that is deemed to be financially viable. The loans are normally nine to twelve months in duration and repaid on a monthly basis. Microcredit is accompanied by an orientation session that teaches sound business management practices and loan officers provide business management advice.

Also, Zambuko has a special loan product targeted at the very poor. It requires potential borrowers to attend eight hours of training, focused mainly on business management. The loans are usually for six months and are repaid on a monthly basis. Thus, Zambuko's microfinance program centers on microcredit, supplemented by business management training.

Zambuko has branch offices in all of Zimbabwe's major towns. Since 1996 it has extended more than 10,000 loans each year. It issues more loans to microentrepreneurs than any other organization in Zimbabwe.

Microentrepreneurs and their Households

The profile of Zambuko clients reveals that among those interviewed in 1997 approximately two-thirds of the new clients and half of the repeat clients were from households under the US$2 per capita a day poverty line. The typical client in the survey is a married female about 41 years old, with seven to eight years of education. Her household has five to six persons living in a residence that they either own or are purchasing through a rent-to-buy arrangement.

An important finding is that between 1997 and 1999 nearly half of the respondents had an increase in the proportion of their household members who were not economically active. The tendency toward a higher economic dependency ratio partially reflected the dependency status of individuals who joined the respondents' households during the study period. Most new members were the result of births and persons looking for work joining the household. Twelve percent of the households took in a sick person or a person from a household that had experienced illness or death. Also, at the time of the 1999 interview, thirteen percent of the clients who had not taken a loan since 1997, referred to as departing clients, had a household member who was chronically ill and unable to work in the last six months.

An analysis of factors that were significantly associated with movement of households out of extreme poverty by 1999 indicated that the change was primarily related to fewer household members, more sources of income, and a lower economic dependency ratio. Since the definition of poverty was primarily based on daily per capita income, the household's size, structure and number of income sources influenced whether it moved out of extreme poverty. The same factors contributed to movement into poverty.

The contribution of enterprises to total household income was 56 percent in 1999, revealing a decline since 1997 when it averaged two-thirds of total household income. Approximately half of the enterprises for which clients had secured their loans and against which non-clients were matched (referred to as matched enterprises) were in manufacturing. These enterprises were primarily focused on knitting, sewing and crocheting items for sale. Forty percent of the matched enterprises were in trade and less than 10 percent were engaged in services, agriculture and food preparation.

Clients' Use of Credit

The cumulative sum of all loans borrowed from Zambuko averaged Z$10,052 per person for those who had taken at least one loan since 1997, referred to as continuing clients, and Z$2,921 for

the departing clients.[1] Sixty percent of the continuing clients had taken three or more loans from Zambuko. In contrast, 60 percent of the departing clients had taken only one loan.

In 1997 the average size of the last loan was equivalent to 20 to 25 percent of the client's monthly net revenue from the enterprise that secured the loan, and approximately 12 percent of the client household's total monthly income. Thus, the loan size was relatively small in terms of total household income. This suggests that the borrowers may draw on money from other sources to assist with repaying the loan.

Approximately half of the client respondents used their 1997 loans exclusively for their enterprise. The other half used a small portion for savings or household needs and the rest for their enterprise. The use of funds outside the enterprise was not significantly related to the timely repayment of the loan. Clients normally use their loans to purchase enterprise inputs or stock in bulk.

In 1997 approximately 60 percent of the client respondents reported that if they had not received a loan from Zambuko they would not have made such expenditures. Among those who had taken a loan since then, half of them reported that they would not have made such expenditures if they had not received a loan from Zambuko.

Borrowing from other formal sources and from informal sources appears to be limited. Borrowing from informal sources occurs, but plays a minor role since the amounts are usually small. Other than microfinance organizations, the main source of formal credit are businesses that sell furniture, appliances and other types of durable assets on a hire-purchase arrangement to households with a wage earner in the formal sector. The findings suggest the potential for expansion of credit by formal institutions, especially when the economy improves.

Program Impacts

The results from the impact analysis of the survey data, which controlled for specific, initial differences, make a strong case that Zambuko's program has a positive impact on its clients. The impacts tend to vary among clients based on whether or not they had remained in the program. In some areas, microfinance appears to have an impact only on continuing clients, departing clients or those who were continuing clients that had received more than one loan at the time of the 1997 interview, referred to as repeat continuing clients. The results suggest that Zambuko's program has a positive impact on clients from extremely poor households, especially among those who remain in the program.

Household Level. Loans provide a lump sum of money that clients tend to use for their enterprise. The generation of profits from the use of the loans and better management of financial resources are likely to explain the ability of client households to make lump sum expenditures. The results suggest that participation in Zambuko had an impact on *client households acquiring assets*. Participation appears to be strongly related to the amount of money repeat continuing client households had spent on household durable assets. Also, the results indicate a positive impact on the acquisition of a stove by the households of continuing clients and departing clients, and the acquisition of a refrigerator by

[1] One U.S. dollar was equivalent to Z$11.9 in September 1997 and Z$38.1 in September 1999.

continuing client households. Both of these assets are timesaving devices, which improve the quality of life for women who are responsible for preparation of meals.

Zambuko's program also appeared to have a positive impact on *the value of funeral-related assistance* that continuing client households provided to other households. This also indicates the improved ability to make lump-sum expenditures.

Education of children in the household represents an investment in the future income-earning potential of household members. This investment is both in terms of expenditure of funds and foregoing labor in the household and its enterprises. Attendance at urban public primary schools involves payment of tuition and special fees, and expenditures on uniforms and other items. In 1999 the proportion of the household's boys aged 6 to 16 attending school was higher for the continuing and departing clients than the non-clients. The same pattern was apparent when analyzing only those households that were extremely poor in 1999. The results suggest that Zambuko's program had an impact on the education of boys aged 6 to 16 in client households.

Participation in Zambuko's program also appeared to have had a positive impact on the *frequency nutritious foods were consumed* in extremely poor households and the *diversification of income sources* among departing clients. Better management of financial resources is likely to explain the higher consumption levels found among extremely poor continuing clients, compared to non-clients, in the frequency that meat, chicken or fish, and milk were consumed in their households. The results on the diversification of income sources among departing clients imply that loans enabled these households to gain an additional income source.

In the month prior to the 1999 interview, the *income* in continuing client households averaged Z$4,4091, adjusted to 1997 constant values to take into account inflation. This represented a decrease of approximately Z$400 compared to the month prior to the 1997 interview. Departing clients and non-clients had lower levels of income both years than did continuing clients. However, by 1999 these two groups managed to increase their monthly household incomes to Z$4,032 and Z$3,555 respectively, in inflation adjusted values, representing a 20 percent increase for departing clients and 33 percent increase for non-clients. When controlling for initial differences, the 1999 level of income did not appear to have been related to participation in Zambuko's program.

Most respondent households experienced at least one, major financial shock in the two years prior to the 1997 and the 1999 interviews. Serious illness of a household member, financial obligations to non-household members, and death of a household member were the most frequently reported causes of the financial shocks. Almost no household sold or rented out assets as a coping strategy. Most households dealt with the financial shocks by reallocating their income and drawing down their savings. The *coping strategies* were similar across client and non-client households.

The results suggest impacts that relate to selective allocation of financial resources. The following appear to have been unaffected by participation in the microfinance program: the value of assistance given to non-household members, education of household's girls aged 6 to 16, expenditures on housing improvements, and acquisition of a television, electric fan or means of transport.

Enterprise Level. Estimates were collected on the *net revenue* the month prior to the interview for the matched enterprise and other microenterprises owned by the household. The results reveal that the average monthly net revenue of the matched enterprises in 1999 was lower in inflation adjusted values than in 1997 for the continuing clients, departing clients and non-clients. The decreases were especially evident in the enterprises of the extremely poor. Further analysis suggests that Zambuko had a positive impact on the inflation-adjusted value of the monthly net revenue of the matched enterprise of repeat continuing clients. In spite of the unfavorable economic environment, they earned an estimated Z$1,380 a month more than the non-clients in 1999.

When considering the total net revenue from all the household's enterprises, positive gains were made by the departing clients and non-clients. Nevertheless, both years the level of income was higher for the continuing clients than the other two comparison groups. The estimated values in 1999 did not suggest that microfinance had an impact on the level of income from all the household's enterprises.

Also, participation in the microfinance program does not appear to have had an impact on *employment* in the matched enterprise and in all household enterprises. Employment was measured by the number of paid employees, total person-hours worked last week, and total person-days worked last month. The results are likely to be related to the unfavorable economic conditions for microenterprises in 1999.

The *value of assets* in the matched enterprise and all household enterprises tended to be higher in both 1997 and 1999 for the continuing and departing client groups, than the non-clients. The impact analysis did not suggest that the differences in 1999 between the groups were associated with participation in Zambuko's program. Nevertheless, the average value of all enterprise assets in 1999 for departing client households was estimated to be Z$4,987 more than for the non-client households.

Transaction relationships refer to ways microentrepreneurs organize and manage their businesses in reference to others. The study found that transaction relationships in the matched enterprises were largely unaffected by participation in the microfinance program. The majority of respondents operated their enterprises from their residence in both 1997 and 1999. Clients were more likely than non-clients to sell outside their town of residence, in small towns and rural areas in Zimbabwe and places in South Africa. The pattern did not change significantly from 1997 to 1999. The respondents sell to individuals who are normally the final consumer. These customers often ask for credit. Among those who extended credit, significantly more departing clients than non-clients *insisted on a deposit* in 1999. The result suggests the influence of training by Zambuko.

Individual Level. Participation in a microfinance program may have positive or negative impacts on the individual borrowers. Participation in Zambuko's program appears to have had a positive impact on clients having an *individual savings account* and on the *number of ways extreme poor continuing clients' saved*. Both of these imply that participation in a program that does not contain a savings component nevertheless may have an impact on the way people save.

When excluding training from Zambuko, approximately 10 percent of all respondents had received *business management training* between 1997 and 1999. Among those who had been trained, approximately three-fourths reported that they had done something differently as a result. The most common change was improvement in business record keeping, followed by 'better financial management.' More than three-fourths of those not receiving training said that they would be interested in attending a course, but the majority did not know of a source.

The case study findings support the hypotheses that participation in a microfinance program can lead to *greater self-esteem and self-confidence*, and enhances *clients' ability to plan for the future*. The greater self-esteem and self-confidence appear to be associated with clients' increased ability to manage their enterprise, meet the financial demands of the household, and acquire assets.

Implications

The assessment's findings and conclusions have implications for microfinance institutions (MFIs) in Zimbabwe. The implications may also have broader applicability.

Influence of the Macroenvironment. High rates of inflation are likely to place economic stress on MFIs as well as households. For MFIs, the loan money repaid has a lower real value than the money borrowed. Also, interest rates may not keep pace with inflation. Therefore, a MFI is likely to suffer as the money received has less value than the money paid out. Over time, this may lead to an erosion of the MFI's capital base. Fees charged in addition to the interest rate should be increased on a regular basis to keep pace with inflation. For clients, inflation is likely to put economic stress on their enterprise, which makes it difficult to increase the real value of their enterprise net revenue, which in turn may affect the household's allocation of income. The likely negative effect of high inflation on MFIs and clients suggests that caution should be exercised in the establishment of new microcredit programs and expansion of existing credit programs, until the economy improves. An inflationary environment also implies that MFIs may be faced with decisions related to the level of services that can and should be provided.

Financial Products and Terms. The assessment results suggest that there may be a market for small, short-term loans. Many microentrepreneurs join a microcredit program to test if it is appropriate for them. The findings reveal that 60 percent of the client respondents who did not seek another loan after 1997 had received only one loan. Also, nearly half of the Zambuko's clients are traders and even those in manufacturing did not tend to invest their loan funds in an enterprise asset. Traders in particular have rather rapid turn-around times and loans of four- to six-month duration appear to be more suited to their needs. Moreover, an assessment to determine the feasibility of a short-term loan is likely to be more accurate than an assessment for a longer-term loan, given the unstable economic environment and situation of households.

The findings also suggest that there is a dearth of financial services accessible to microentrepreneurs' households for non-enterprise investments. There may be a niche market for loans specifically related to the building of rental units by those who own their homes. These loans would most likely require a repayment period longer than one year.

Given that repayment problems were not found to be associated with the use of some of the loan funds outside the enterprise, when the economy improves, it may be worth exploring the feasibility of offering loans, secured by an enterprise or another source of income, for educational or emergency needs. Also, there may be a demand for savings accounts that are designated for limited uses, such as educational expenses. While in general, there does not appear to be a lack of access to savings services in these key urban areas, restricted access accounts might help individuals set aside money for specific, lump sum needs. The findings do indicate that clients save in spite of inflationary pressures, since they need access to cash for school fees and unanticipated lump sum expenditures.

Business Management Training. The case studies and survey data on business management training reveal that microentrepreneurs value and benefit from basic business management training. There appears to be an unmet demand for this type of training that is appropriate to low-income microentrepreneurs. MFIs in Zimbabwe may want to pilot a training product focused on this target group to determine if it can be a financially sustainable service. Or, there may be scope for MFIs in Zimbabwe to establish a partnership with an existing business management training organization that can provide appropriate training.

Poverty Reduction. The results show that microfinance programs can reach and serve the poor. Moreover, they may have a positive impact on extremely poor households. The findings, however, suggest that household size and structure strongly influence whether or not a household moves out of extreme poverty, when poverty is defined primarily by per capita daily income, taking into account purchasing power parity. This implies that movement of households out of poverty may be beyond the reaches of microfinance programs.

Program Leavers. Clients have left the Zambuko program for a number of reasons. Clients often leave due to difficulties repaying the loan and this departure may be either voluntary or coerced. Others leave because they move outside the program's catchment area. Especially during periods of instability in the economy and household, some may leave, despite satisfaction with the program, because they do not have an obvious, viable use for credit at a given time. They may want to 'rest' for a time before taking another loan. The value of an MFI program like Zambuko is that it provides access to institutional credit otherwise not available to poor households in Zimbabwe.

Implications for Future Assessments. A number of key lessons were learned in the conduct of this assessment. These lessons may be useful not only to the microfinance industry but also other types of programs concerned with measuring their results.

First, the experience highlighted that care ought to be used in setting increased household income as an indicator of program results. While many programs targeted at the disadvantaged and poor often seek to increase household income, a number of non-program factors can influence household income levels irrespective of the program. Therefore, it might be more reasonable to expect a program to increase a particular source of income, rather than total household income. As suggested by this and other studies, income is difficult to measure precisely. Therefore, a multi-pronged approach that considers income, indicators of expenditure flows, and asset accumulation help to overcome this weakness.

Second, the survey findings indicate the importance of using a non-client control group. This group represents what occurred among non-program participants and enables the analysts to more convincingly identify the specific impacts of program participation.

Third, the findings on changes in the household's poverty status indicate that the definition influences the results. This suggests the need for the microfinance industry to agree on some common approaches to defining and discussing poverty.

.

I. INTRODUCTION

The 1990s witnessed an upsurge in interest in microcredit as a strategy for lending to entrepreneurs from poor households. This was led largely by those who favor microfinance as an approach to poverty reduction. The upsurge was accompanied by attention to the sustainability of the microfinance services provided by non-governmental organizations, through charging commercial rates of interest and using sound business practices. It was followed by attention to broadening the types of institutions that reach this population and the types of products offered.

As more microfinance institutions (MFIs) have been established and their outreach expanded, there has been growing interest in understanding their clients and impact. When this assessment was designed, the number of methodologically rigorous impact studies was limited, but the numbers having been growing (Sebstad and Chen 1996, Gaile and Foster 1996, and Sebstad and Cohen 2000). The concept of impact assessments has expanded beyond documenting program effectiveness and results to include data to inform MFI program management decisions. In addition, there has been greater attention to determining if the programs are serving the poor.

The objectives of this study of Zambuko Trust (Zambuko) in Zimbabwe are to better understand who accesses its services, the role of loans within the household economy, and the impacts of participation. An unplanned outcome of this two-staged assessment is that it contributes to an understanding of the likely impact of microfinance programs that operate in environments with high rates of inflation.

A. Understanding Clients and Program Impacts

A number of questions surround the issue of program outreach and impacts. To what extent are the program's clients from poor households? Do clients borrow from other sources? Does program participation have a positive impact on the household, enterprise and client? Are the impacts similar across sub-groups of clients?

The challenge is to identify the changes that are a result of MFI program participation. As evaluation specialists Rossi and Freeman (1989) explain:

> Establishing impact is essentially making a case that the program led to the observed or stated changes. This means that the changes are more likely to occur with program participation than without program participation. It does not imply that the changes always occur from program participation. Rather, it increases the probability that the changes will occur.

Changes also occur among those who have not joined the Zambuko program. These are revealed among the non-client comparison group. Thus, the examination of clients and non-clients enables the analyst to identify the differences that are likely to occur due to participation in Zambuko's program. However, since the client sample represents those who 'self-selected' to become participants and hence may differ from the non-clients on one or more characteristics, the influence of the initial differences needs to be taken into account to determine the impact of MFI program participation.

B. Overview of the Assessment

The assessment centers on Zambuko Trust, one of the first programs established in Zimbabwe to become a self-sustaining organization that provides credit to microentrepreneurs. Its mission is "to be a bridge between the marginalized, the unemployed and opportunities for enterprise and income generation." Established in 1992, Zambuko has grown from a small program operating in Harare, the capital city, to having offices in all of the major cities in Zimbabwe. In 1997 and 1999 Zambuko had more clients than any other organization providing microcredit to microentrepreneurs in Zimbabwe. Loans are its main product, supplemented by orientation training on business management and business management advice from loan officers.

1. Objective and Scope of the Assessment

This impact assessment of Zambuko Trust is one of three longitudinal studies undertaken by USAID's Assessing the Impact of Microenterprise Services (AIMS) Project to gain a better understanding of the processes by which microenterprise services strengthen businesses and improve the welfare of microentrepreneurs and their households. The other assessments focus on Mibanco in Lima, Peru, and the SEWA Bank in Ahmedabad, India, which is affiliated with the Self-Employed Women's Association (SEWA).

The main objective of the assessment is to determine the nature, extent and distribution of impacts resulting from participation in a microfinance program. The secondary objectives are to better understand a) the role of microcredit within the household economy, and b) the extent to which Zambuko reaches the poor. The results from the assessment are intended to assist Zambuko, its partners and other interested entities to better understand the role of microfinance programs in such contexts and to provide information that can be used for program planning.

The assessment included a survey in 1997 with a follow-up survey, two years later during the same months, of the same sample. To assist with identifying impacts associated with participation in the Zambuko program, the survey covered a comparison group of non-client microentrepreneurs from the same communities as the clients. The non-client comparison entrepreneurs were randomly selected from among those who met Zambuko's basic eligibility requirements, and were matched with clients on the basis of gender and microenterprise sector. The survey data are complemented by nine case studies of Zambuko clients to add depth to our understanding of how and why changes have occurred. These case studies were carried out in 1998 and again in 1999 in conjunction with the follow-up survey.

The survey design focused on three geographic areas where Zambuko had been in operation for more than one year: Greater Harare (Harare and Chitungwiza), Bulawayo and Mutare. These cities have the largest concentrations of Zimbabwe's urban population and contained approximately 60 percent of all of Zambuko's clients in May 1997. The sampling resulted in the 1997 assessment covering 691 respondents: 393 clients and 298 non-clients. Over three-fourths of them were women, due to Zambuko's emphasis on serving women. In the follow-up survey 87 percent of the 1997 sample were relocated and re-interviewed: 344 clients and 255 non-clients.

2. Assessment Framework and Hypotheses

To analyze the impact of microfinance services, the AIMS Project uses a framework that conceptualizes the relationship between microenterprises and people's lives, where people are considered as individuals and as members of households and communities (see Chen and Dunn 1997). The AIMS definition of *household* places emphasis on residence. A *household* is defined as a single person or group of persons who usually live and eat together, whether or not they are related by blood, marriage or adoption; and, the individuals recognize each other as members of the same household. Included in this definition are persons who are not living there full time because they are away at school.

Microenterprises are defined by USAID as very small, informally organized business activities (not including crop production) undertaken by low income, poor people. *Microenterprises* are further defined as having ten or fewer employees, including the owner operator and any paid or unpaid workers (USAID n.d.). However, for the purposes of the study, no attempt was made *a priori* to determine if a Zambuko client met these criteria. Judging from the case studies and the survey findings, however, all of them met the employment criteria, and approximately two-thirds were poor, measured in terms of daily per capita income.

It was anticipated that participation in Zambuko's program would result in a) improvements in the economic welfare of households, b) enterprise growth or diversification, and c) increased empowerment of clients. Under each of these broad-based hypotheses, a number of specific hypotheses were developed. It should be noted that there were no previous impact studies of microfinance programs in Zimbabwe to help guide the selection of the hypotheses and variables.

C. Organization of the Report

Following the introductory chapter, the next two chapters provide background information. Chapter II focuses on the environment in which the microentrepreneurs and Zambuko operate. After a brief profile of the historical context, key economic changes since 1990 and the HIV/AIDS epidemic are highlighted. The report then discusses the microenterprise sector in Zimbabwe and the study sites. Chapter III explains the impact hypotheses, survey methodology, and the sample of respondents. Then the methods used to analyze the two data sets are summarized. Last, it provides information on the case study design and methods.

Chapter IV describes Zambuko's program and clients. It draws on information from the 1997 survey to address if Zambuko reaches the poor. Examples from the case studies are used to discuss motivations and the process of becoming a Zambuko client. Chapters V and VI present the results of the survey and associated qualitative studies. Chapter V centers on the microentrepreneurs, their households, and financial management. It profiles changes and continuity in the respondents' households. Thereafter, the role of financial services in the household economy is addressed. Chapter VI focuses on the impact of Zambuko's program. It looks at indicators of the impact of the program on households, enterprises and individual borrowers. The final chapter addresses the significance of the findings and their implications.

Annex 1 presents the data used to calculate the U.S. dollars per capita, per day poverty lines, explains the classification of the three poverty groups used in the impact analysis, and summarizes the analysis of changes in household poverty status. Annex 2 presents tables on descriptive data referenced in the text. The statistical data that support the discussion in Chapter VI on impacts are provided in Annex 3.

II. THE ENVIRONMENT FOR MICROENTREPRENEURS AND MICROFINANCE PROGRAMS

The macroeconomic and social environment influences the operations and performance of Zambuko Trust (Zambuko) and other institutions in Zimbabwe. The larger environment also influences the circumstances, options and choices of households and owners of microenterprises. This chapter highlights key factors in the environment of Zambuko and the microentrepreneurs who participated in the assessment. It provides a brief overview of the economic environment and the prevalence of HIV/AIDS. Next, the chapter profiles each of the study sites that were covered by the assessment. It concludes with a description of the microenterprise sector in the 1990s.

A. The Zimbabwe Economy

Zimbabwe has undergone profound economic and social changes in the last two decades. When Zimbabwe gained independence in 1980, it inherited a system of economic protectionism and inequalities in the structure of the economy. In the 1980s a series of measures were undertaken to address these problems. However, since 1997 the economy has been in a downward spiral and inflation has been rampant. This section describes key conditions in Zimbabwe that have affected the welfare of households and the microenterprise industry, with special attention to the urban areas where the survey was undertaken. Approximately 35 to 40 percent of Zimbabwe's population of nearly 12 million persons, live in urban areas.

1. The Pre-1990s Environment

During the lifetime of Zambuko clients, Zimbabwe emerged from an internal fight for independence. When independence came in 1980, Zimbabwe had a well developed, but high-cost, manufacturing sector which had grown rapidly during the years of external sanctions imposed by Great Britain to prevent trade with Rhodesia (Zimbabwe's former name) as a result of the Unilateral Declaration of Independence (UDI) by the white settler regime. The manufacturing sector together with mining and commercial agriculture provided employment to almost half of the Zimbabwean labor force.

The formal sector was dependent on the indigenous labor force but, from 1946 to the 1960s, the size of the black urban population was controlled through restrictions on housing accommodations in urban areas. This population lived largely in low-cost accommodation, predominately hostels for single men, while their spouses and families remained in rural areas. Beginning in the 1960s, local councils made

rental houses available in the high-density suburbs (called African townships). At the time of independence, 25 percent of Zimbabwe's population was living in urban areas, including more than 1.2 million blacks. The urban population was largely supported by employment in the formal sector of the economy. Throughout the 1980s wage employment grew, especially in services and the public sector, although it failed to keep pace with growth in the urban population (Rakodi 1994) and the general rate of population growth (Hawkins et al. 1988). Also, wage increases did not keep pace with inflation and consequently by 1986 minimum real wages fell below the 1980 level, except for domestic workers (Rakodi 1994).

After independence, attention was given to the provision of better living conditions and more housing units in urban areas. The publicly owned rental units in high-density areas were turned into owner-occupancy units. A number of the households in the AIMS survey were able to buy the place where they resided through a rent-to-buy scheme that was used to transfer ownership. Also, a number of low-cost housing schemes began adjacent to the high-density areas outside the main cities, with financial assistance from USAID and the World Bank. The new schemes were largely based on provision of a basic three- or four-room house with area for expansion, and with indoor piped water, toilets and electricity. In contrast, latter housing schemes commonly started with a basic two-room house.

The immediate post-independence period brought a major change in the legal status of women. Prior to the 1982 Legal Age of Majority Act, an African woman in Zimbabwe (like women in South Africa, Swaziland, Lesotho and Botswana) was legally a perpetual minor, under the guardianship of a male, be it the husband, father or male kin. This meant that a woman was unable legally to enter into marriage, commercial or other contracts, without the consent of her father, husband, or male guardian; could not sue or be sued; and was stripped of all rights over her children upon death of the husband. The 1982 Act gave both genders majority status at age 18.[2]

In spite of achievements made in the 1980s, by the last half of the decade structural problems were evident. These included a high degree of effective monopoly through vertical and horizontal integration of capital, lack of significant job creation, and low levels of investment. Also, the import substitution policy, which the government inherited from UDI, permitted industries a high degree of protection against competition (Gibbon 1995). In addition, a number of factors limited the government's ability to finance changes needed to stimulate broad based economic growth (see Barnes and Keogh 1999).

2. Economic Situation Since 1990

Economic stresses were prevalent in the 1990s. The period leading up to the AIMS survey in 1997 was characterized by macro-level structural changes in the economy, a period of severe, widespread drought, and high levels of inflation. This combination resulted in economic hardship

[2] Laws governing ownership of property, however, are still influenced by race. If both husband and wife are Africans, customary law applies, giving the husband full control of family property. However the Matrimonial Causes Act (1985) allows the equitable distribution of family property between spouses upon divorce in a registered marriage under customary or general law. Although a widow cannot have a share of her deceased husband's property if he leaves no will, she can take legal action to win support for herself and her children (UNICEF 1994; Dengu-Zvogbo et al. 1994).

for the majority of the population but also spurred a relaxation of regulations governing microenterprises.

The macroeconomic adjustments initiated in 1990 and 1991 contained a series of measures intended to improve the Zimbabwean economy. These measures included a) the introduction of cost-recovery measures (e.g. school fees and user fees for health services) to reduce recurrent public expenditures, b) elimination of subsidies to state-owned enterprises through rationalization, commercialization and privatization, c) deregulation of price controls on almost all consumer goods, and d) introduction of free collective bargaining, which in effect abolished statutory wage regulation on all but agricultural and domestic workers. It also ushered in relaxation of enforcement of licensing and zoning regulations for the informal and small-scale enterprises (Gibbon 1995).

As the immediate economic repercussions of structural adjustment were being felt in 1991 and 1992, the situation was aggravated by a serious drought. Poor rains in the 1990/91 rainy season were followed by two additional years of low rainfall, with many parts of the country receiving 40 percent or less of normal precipitation. Agricultural production fell, consumer prices rose, and employment levels outside of the agricultural sector declined (Barnes and Keogh 1999).

From 1995 through 1999 the real gross domestic product (GDP) growth rate varied but tended to be in the positive realm. The real per capita GDP rate tended to be low or negative. Public debt grew as a percentage of GDP, so that by 1999 it was 97 percent of the GDP. Sadly, for the first time since it attained independence, Zimbabwe defaulted on its foreign debt repayments in 1999.

Table II-1. Macroeconomic Statistics, 1995-1999

	1995	1996	1997	1998	1999
Real GDP Growth Rate (market prices, percentage change)	-0.6	8.7	3.7	2.5	-0.2
Real Per Capita GDP (percentage change)	-4.0	5.4	.06	-0.7	-3.1
Total Public Debt (percentage of GDP; end of period)				86.1	97.4
Domestic Debt				28.6	30.3
External Debt	51.0	43.2	57.5	67.1	53.8

Source: IMF, *Zimbabwe: Recent Economic Developments, Selected Issues, and Statistical Appendix,* January 2001.

Domestic debt had risen from Z$12.4 billion in 1994 to Z$24.7 billion by 1995. By the end of 1998, it had reached Z$46.8 billion. In the first quarter of the 1999 fiscal year, interest payments on domestic debt amounted to Z$4 billion, which was more than the total amount of Z$3.7 billion originally budgeted for the Ministry of Health and Child Welfare (Machipisa 1999).

The inflation rate as measured by the Consumer Price Index (CPI) rose substantially after the launching of the AIMS survey in September 1997. In the 12 months after the survey began, the CPI increased 32 percent. The following 12-month period it reached 70 percent (table II-2). The CPI data reveal that the cost of basic necessities increased substantially between 1997 and 1999 and continued to rise in the year 2000 (table II-3). The price for food, medical care, and transport and communication more than doubled between September 1997 and September 2000. The year-on-year increases were particularly high in 1999. As a result, business establishments tended to cut back on

the number of employees and some businesses have closed, as documented in numerous articles in the Zimbabwean newspapers during this period.

Table II-2. Annual Increases in the Consumer Price Index, September 1997-2000

1997	1998	1999	2000
14.4%	31.7%	69.7%	62.0%

Source: Central Statistical Office, *Quarterly Digest of Statistics*, June 2000 and Reserve Bank of Zimbabwe, *Monthly Review,* October 2000.

Table II-3. Zimbabwe Consumer Price Index for Selected Items, 1997-2000

	1997	1998	1999	2000 (Oct.)
		1990=100		
Food	658.0	1,072.1	1,680.9	2,507.3
Rent, rates and electricity	467.0	519.4	705.2	1,069.2
Medical care	774.9	895.9	1,743.0	2,595.2
Transport and communication	486.3	789.3	1,297.8	2,379.9
Education	438.2	536.1	732.8	1,045.6
		Year-on-year Percent Change		
Food	18.9	62.9	56.8	47.6
Rent, rates and electricity	23.8	11.2	35.8	55.0
Medical care	8.8	15.6	94.6	146.6
Transport and communication	24.2	62.3	64.4	121.6
Education	44.1	22.3	36.7	46.6

Source: IMF*, Zimbabwe*: *Recent Economic Developments, Selected Issues, and Statistical Appendix,* January 2001.

B. HIV/AIDS Epidemic

The negative impact of the macroeconomic environment on households has been exacerbated by the social and economic effects of the high incidence of HIV/AIDS in Zimbabwe. In mid-1999, the population of Zimbabwe was estimated to be between 11.3 and 11.9 million.[3] While life expectancy prior to the AIDS epidemic was 65, it is projected to decrease to approximately 39 by 2005. The population growth rate in 1999 was considered to be only two percent, whereas the annual growth rate between 1980 and 1995 was estimated to be 3.1 percent.

In the year 2000, an estimated one-quarter of the adults aged 15 to 49 were HIV/AIDS infected. Overall, an estimated 1.5 million adults and children were infected by the end of 1999. Deaths due to AIDS were estimated to be 130,000 in 1997 and 160,000 in 1999. Some 624,000 children under age 15 are estimated to have lost their mother or both parents by the end of 1999 (UNAIDS and WHO 2000).

[3] Two sources via the internet, the U.S. Census Bureau (2000) and the UNAIDS fact sheet on Zimbabwe, vary on their estimates. The IMF (2000) using government statistics places the 1999 population at 11.9 million.

The national data are limited to AIDS cases reported by the health authorities and to the HIV sentinel surveillance survey results from women attending antenatal clinics. Between 1987 and 1999 the reported number of AIDS cases stood at 81,206. Data on the provincial distribution of these cases show that 16 percent were in Harare and 12 percent in Bulawayo (Monitoring and Evaluation Unit 1999).

Table II-4 provides information from the sentinel surveillance clinics in the geographic locations covered by the assessment. The data indicate that in 1991 the HIV prevalence rate in Bulawayo was under the rate for Harare the previous year, but by 1995 the rates were nearly the same for these two cities as well as Mutare. The rate in Harare was lower in 1997 than 1995 and overall the number of AIDS cases reported in 1997 was the lowest in the five years for which data are available. Nevertheless, the AIDS cases reported for the first six months of 1998 were more than double those reported for Harare the previous 12 months (Monitoring and Evaluation Unit 1998.). The following year, 1999, had the lowest number of AIDS cases reported since 1993 (Monitoring and Evaluation Unit 1999).

Table II-4. HIV Sentinel Survey Results: Pregnant Woman at Antenatal Clinics

Location	Year	Sample Size	% HIV +
Harare City	1990	282	24
	1995	278	32
	1997	601	28
Chitungwiza	1992	150	29
	1997*	299	32
	1997*	301	34
Bulawayo City	1991	304	17
	1993	287	26
	1995	313	30
Mutare City	1993	171	25
	1995	164	32

*The 1997 data for Chitungwiza are from Seke North and St. Marys respectively.
Source: HIV, AIDS, STD and TB Fact Sheet, 1998. November 1998. Monitoring and Evaluation Unit, National AIDS Coordination Program.

Regrettably, the sentinel surveillance survey has not been undertaken since 1997 to provide more current data on HIV prevalence rates among pregnant women (Mutangadura 2000). The data on cases tested by the Public Heath Laboratories indicate that the rate of infection may have peaked in 1995. It is difficult to determine whether or not the rate of new cases is decreasing. In informal conversations, it becomes obvious that many people are infected but refuse to acknowledge it and thus escape being reported in the national statistics. Also, when pregnant women are tested for HIV at clinics, they normally choose not to know the results, thus increasing the potential for further spread of the disease.[4]

[4] Interview with a social worker from a surveillance clinic, Chitungwiza, January 2000.

C. Study Sites

The respondents in the survey live in three urban areas. The following profiles describe the contexts in which microentrepreneurs, their customers and Zambuko operate.

Greater Harare. Harare Province contains the nation's capital city. According to the 1992 population census, it was the most densely populated province and contained 14 percent of the country's 1992 population. Harare Province covers three districts: Chitungwiza, Harare Urban, and Harare Rural.

The core of Chitungwiza consists of three older high-density areas, which were largely residential sites for workers in the capital city prior to independence. It now contains several newer housing areas and its own commercial base with an up-scale shopping center, small business centers, and market facilities. The largest industry in Chitungwiza is a cotton mill, which was closed for a few years, but reopened in 1997. It employs about 2,000 workers. Chitungwiza is the third largest town in Zimbabwe and in 1992 it had a population of 274,912 persons.

Harare Urban District consists of the core commercial center of the city, an adjacent formal sector industrial area, and low-density residential areas as well as the high-density areas with their smaller commercial and industrial areas. Many of the high-density areas, like those in Chitungwiza, are nearly self-contained communities, with banks, shops, post offices, market facilities, and schools. The main wholesale agricultural products market is located in Harare town.[5] Adjacent to it, microentrepreneurs operate from large market facilities, streets, and industrial 'parks.' The population in Harare Urban District numbered 1.2 million people in 1992, which made it the largest in the country.

Bulawayo. Bulawayo, Zimbabwe's second largest city, is the seat of Bulawayo Province. According to the 1992 population census, the population was 621,742, representing six percent of the total population of Zimbabwe. Like Harare, Bulawayo contains the older commercial city, a formal sector industrial area, and adjacent high-density areas. Approximately 82 percent of the residents live in the high-density areas that consist of the older suburbs and newer housing developments.

Bulawayo, situated in the southwest of the country, is located in a region that is susceptible to frequent bouts of drought. The surrounding rural areas are largely devoted to animal husbandry. Bulawayo is the main trade link between South Africa and the rest of Zimbabwe. A major communications and transport network links it with the industrial complexes in the southern part of the country. The headquarters for the National Railways of Zimbabwe and several large formal sector industrial operations are located in Bulawayo.

Mutare. Situated in the Eastern Highlands, Mutare is Zimbabwe's gateway to Mozambique. Mozambique's port at Beira is Zimbabwe's closest and primary access to sea routes. The road, rail and oil pipeline that link Beira with Zimbabwe pass through Mutare.

[5] An excellent study of fruit and vegetable traders in Harare was conducted by Nancy Horn (1995).

Mutare is the provincial capital of Manicaland Province. Mutare is Zimbabwe's fourth largest city and its 1992 population numbered 131,808. The city's industrial base reflects the agricultural activities in surrounding rural areas, such as production of deciduous fruits, tea and coffee. Older and new high-density suburbs are situated a few miles from the city center.

D. The Microenterprise Sector

Microenterprises are important to the livelihoods of many households. Enforcement of the laws and regulations covering the conduct of microenterprises has been relaxed to make it easier for individuals to operate microenterprises. Also, there has been an increase in the establishment and outreach of organizations providing microfinance services.

1. Changes in the Micro and Small Enterprise Sector 1991 to 1998[6]

Changes in the macroeconomic setting in the 1990s have affected the microenterprise sector. Trends in the micro and small enterprise (MSE) sector from 1991 to 1998 have been documented by three nationwide sample surveys carried out on behalf of USAID. Although the resultant reports aggregate most of the MSE data, they provide the best source of information on the microenterprise sector in the 1990s.

Between 1991 and 1998, the number of MSEs in urban areas increased 30 percent, while the number of persons employed in these enterprises increased 52 percent. Increases in the urban population and job retrenchments, as well as the lack of other income-earning opportunities, contributed to these growth rates. The growth of microenterprises in urban areas during this period also occurred in other Africa countries as a reaction to economic conditions (see Bryceson and Jamal 1997, and Tripp 1997). In contrast to the urban areas, the number of MSEs in rural Zimbabwe and employment in them decreased between 1991 and 1998. As a result, the actual number of enterprises decreased by one percent between 1991 and early 1998. In the latter period, approximately 860,329 enterprises were engaged in manufacturing, commerce or services, employing 1.64 million people or 25 percent of Zimbabwe's working age population.

A major change in the 1990s was the decrease in the percentage of MSEs owned by women. Whereas women represented 74 percent of all MSE proprietors in 1991, they accounted for only 58 percent of all MSE owners in 1998. The likely reasons for this are a) retrenched men starting enterprises and b) a decline in activities dominated by women, such as crocheting, knitting, and textile apparel manufacturing.

The sectoral distribution of MSEs shifted between 1991 and early 1998. The proportion of all MSEs involved in manufacturing dropped from 72 percent to 42 percent. During the same period the proportion of MSEs engaged in trade more than doubled, reaching 45 percent of the total MSEs. Also, there was an increase in the service sector, but it still represented less than five percent of the

[6] This section is based almost entirely on McPherson 1998 and Daniels 1994. It refers exclusively to manufacturing, commercial and service enterprises, although the former study also included crop enterprises. These studies covered all businesses with 50 or fewer employees, including working proprietors, unpaid workers and apprentices.

total MSEs. Most of the shift was to low profit activities, such as vending farm products and selling used clothes. The birth of low profit firms was largely a result of a lack of access to better options, rather than the demand for goods, and low entrance costs.

Employment in MSEs (especially microenterprises) does not usually translate into reasonable profit levels. Daniels (1994) found that close to two-thirds of all MSEs made less profit than the minimum wage for domestic workers in Zimbabwe, and more than three-fourths of the MSEs had profits below the average employee earnings within the formal sector.[7] As a result, businesses often close. The closure of firms appears linked to the broader economic context. For the period 1988-1996, regression analysis suggested that a one percent decrease in the GDP growth rate led to a 0.35 percent increase in the overall MSE death rate (McPherson 1998). Closure of an enterprise, however, may be accompanied by birth of a new enterprise by the same owner.

2. Laws and Regulations

According to regulations, anyone operating a business (including home-based income-generating ventures) is required to obtain a license. The type of license depends on the nature of the business, such as trading, vending, and hawking. Licenses are renewable annually, with payment of a fee. With a license, entrepreneurs can operate without fear of being closed down or having goods confiscated as long as they abide by the regulations. Microenterprises, including home-based enterprises, are required to provide public sanitary facilities: a toilet, water, and waste material disposal bins.[8] As noted above, the structural adjustment program begun in 1990 called for lessening restrictions on micro and small enterprises. As a result, local authorities have relaxed enforcement of regulations, especially on the operation of enterprises from residences. Also, they have designated a number of new industrial sites, 'people's markets' and flea markets. Within the main city centers, sites have been designated for venders. However, there are periodic crackdowns, especially in Bulawayo, on microentrepreneurs operating on undesignated sites and without licenses.

Both the second nationwide MSE survey and the AIMS 1997 survey found that most microentrepreneurs do not have a license. Proprietors, especially of home-based operations, usually claim that they are not required to have a license. The 1997 survey findings support the conclusion that enforcement of existing regulations has been relaxed.

3. Organizations Providing Services to Microentrepreneurs

A number of organizations emerged in the last half of the 1990s to provide services to microentrepreneurs. The post-independence programs undertaken by the government and banks focused on development of indigenous businesses, largely by-passed microentrepreneurs. For example, the Small Enterprise Development Corporation was established to address indigenous businesses that were unable to access loans from banks. It requires that the prospective borrowers be operating from proper premises for which they hold title deeds or a formal lease. They also have

[7] At that time, the minimum wage for domestic workers was the lowest set wage rate in Zimbabwe: Z$2,133 per year plus Z$871 per year for accommodation. The average earnings in the formal sector outside of agriculture were estimated to be Z$1,084 per month.

[8] This information was collected for AIMS in July 1998. Kefasi Nyikahadzoi interviewed City Council officials and local police in Harare.

to provide a formal project proposal, documentary proof of outstanding orders, and a copy of a registration certificate. These requirements ipso facto exclude the vast majority of microentrepreneurs.

The number of non-banking organizations that provide microfinance services for microentrepreneurs grew in the last half of the 1990s. With the exception of Zambuko Trust, these organizations tend to be small, with limited outreach and institutional capacity. For example, at the end of December 1997 the cumulative number of loans disbursed by the Zimbabwe Women Finance Trust was 2,795; at the end of December 1998 Phakama had 339 active borrowers; and in May 1998 Masvingo-Credit Against Poverty had 2,000 outstanding loans. In contrast, Zambuko had over 10,000 outstanding loans in December 1998.

In addition, banks began to reach out to microentrepreneurs. In 1997 the Commercial Bank of Zimbabwe, in cooperation with CARE, initiated a pilot effort. It established a community banking window at the Highfield (a section of Harare) branch in an effort to reach microentrepreneurs, albeit the upper end of this segment. By the end of March 1999 the community banking program had disbursed 2,873 loans.

Outside donor assistance has been key to the development of the microfinance industry in Zimbabwe. The total donor multi-year commitment to Zimbabwean microfinance institutions as of mid-1999 was U.S.$27.6 million (Zimbabwe Donor 1999). Most donor assistance, however, was suspended the following year due to political events in the country.

The emergence of several MFIs led in 1997 to the establishment of the Zimbabwe Association of Microfinance Institutions (ZAMFI), with a Secretariat. Its mission is to a) provide a platform for microfinance advocacy, b) promote the professionalization and standardization of the industry, and c) promote capacity building. ZAMFI's functions include coordination and provision of training, provision of financial expertise to members, and general coordination, documentation and networking. As of 1999, ZAMFI's member institutions included Zambuko Trust, Masvingo Credit Against Poverty, National Association of Co-operative Savings and Credit Unions, Phakama Economic Development Company (Pvt) Ltd, Zimbabwe Ecumenical Church Loan Fund, Mennonite Economic Development Association, Collective Self Finance Scheme, and Barclays Bank of Zimbabwe, as well as supporters of microfinance in Zimbabwe, such as Opportunity International, CARE and World Vision.

III. STUDY DESIGN, METHODS AND DISTRIBUTION OF FINAL SAMPLE

The main objective of the assessment is to determine the impact of Zambuko Trust's microfinance program on clients, their households and enterprises. The research design and statistical methods used to analyze the data enable the researcher to make a strong, plausible association between program participation and impacts. Conclusions about causality "cannot be made with certainty but only with varying degrees of plausibility" (Rossi, Freeman and Lipsey 1999 p. 235). The design of the assessment had to balance use of sufficient rigor with practical considerations, such as time, money and minimal disruption to clients and Zambuko's operations. Thus, a quasi-experimental research design was used that involved Zambuko clients and non-client microentrepreneurs. The latter served as the control group.

The assessment is based on a mixed method approach. A longitudinal survey, conducted in 1997 and in 1999, covered randomly selected Zambuko clients as well as non-client microentrepreneurs meeting specified criteria. Prior to the design of the questionnaire, in-depth interviews were held to test the appropriateness of the assessment's hypotheses and to identify relevant measures. A series of interviews were held with nine case study clients. The results of the case studies permit a better understanding of the web of events, circumstances and conditions internal and external to client households that led to changes among the clients, their households and enterprises. The results from the qualitative and quantitative research approaches were supplemented by participant observations, data from Zambuko's management information system and secondary data.

This chapter describes the impact hypotheses and survey methodology. The longitudinal survey was premised on interviewing the same respondents in both 1997 and 1999, but a small proportion of the respondents were not re-interviewed in 1999. The section on respondents included in the final analysis compares the distribution of the 1997 and 1999 interviews, and the characteristics of the survey drop outs with those re-interviewed. This is followed by an explanation of the key comparison groups used in the data analysis and the statistical tests used to analyze the survey data. The chapter ends with a description of the methods used to select the case study participants, conduct the interviews, and analyze the data.

A. Impact Hypotheses

The research design was guided by a set of impact hypotheses formulated at the household, enterprise and individual levels. Inclusion of hypotheses at different levels takes into account that loans may be secured for an enterprise, but the loan or the profits from the enterprise may be used outside the enterprise. The hypotheses at the individual level address ways that an individual, especially women, may become empowered by participation in a microfinance program. The hypotheses were selected on the basis of a review of prior microenterprise impact evaluations (Sebstad and Chen 1996) and the outcome of investigations on key issues, such as the use of asset holdings as an indicator of economic status (Barnes 1997, and Inserra 1997). In addition, the decisions on the hypotheses and their measures were made based on preliminary investigations at the three AIMS core impact assessment sites and a series of AIMS team meetings and discussions with outside experts.

It was anticipated that participation in Zambuko's microcredit program that includes business management training leads to a) improvements in the economic welfare of households, b) enterprise growth, and c) increased empowerment of borrowers, especially women. A number of hypotheses were identified at each level since the options available to clients are related to their particular circumstances. The hypotheses are listed below.

Household level: Improvements in household economic welfare

- Greater diversification in the sources of household income.
- An increase in the level of household income.
- An increase in household assets, including improvements in housing and addition of appliances, means of transport, and microenterprise fixed assets.[9]
- An increase in the proportion of the household's school-aged boys and girls in school.
- An increase in the household's dietary mix and frequency of consumption of key foods.
- An increase in the value of cash and in-kind goods provided to persons outside of the household.
- An increase in the household's effectiveness in coping with shocks.

Enterprise level: Enterprise growth

- An increase in microenterprise net revenue.
- An increase in enterprise fixed assets, especially among repeat borrowers.
- An increase in the paid and unpaid employment generated by the enterprise.
- Improvements in the transaction relationships of the enterprise.

Individual level: Empowerment of clients

- An increase in the client's control over use of loan funds and income generated by her enterprises.
- An improved pattern of personal savings.
- A better position from which to deal with the future through more pro-active behavior in dealing with the future and increased confidence.
- An increase in self-esteem and in respect from others.

B. Survey Methodology

A number of methods were used to help ensure the quality of the assessment's results. Client and non-client respondents were randomly selected according to predetermined procedures. The questionnaire was pre and pilot tested. In 1999, preparations for the second round of data collection involved refinement of the questionnaire and location of the 1997 respondents. Prior to collection of the data for each round, enumerators attended a one-week training session. During the data collection phase, additional measures were taken to help ensure the quality of the data, including a review of completed questionnaires and team meetings. After data entry, the data were validated and cleaned.

[9] This household-level hypothesis refers to the total value of fixed assets for all enterprises in the household. The enterprise-level hypothesis refers to the fixed assets of a single enterprise.

1. Sampling

Selection of Geographic Locations. When the sample design was developed in April 1997, Zambuko had a number of branches and satellite offices. Logistics and cost implications dictated limiting the number of geographic areas covered by the survey. After a discussion with the Executive Director of Zambuko, it was decided that the sample of clients should be from Bulawayo (excluding the new Gwanda office) and Greater Harare (i.e. Harare and Chitungwiza) since these were established programs that included clients who had received more than one loan, and the majority of clients were from these geographic areas. In addition, Mutare was included to represent Zambuko's offices in the smaller cities. Since Mutare and Bulawayo had a smaller number of clients than Harare and Chitungwiza, the design called for including an adequate number of respondents from each geographic area, taking into account the likelihood that some would not be relocated and re-interviewed in 1999.

Consideration was also given to clients of the Trust Bank due to its different outreach methodology. It was decided that the Trust Bank clients in the Kuwadzana area of Harare and in Chitungwiza should be treated as a separate geographic area within Greater Harare. The design called for including at least 70 Trust Bank clients so that the data for this group could be analyzed using descriptive statistics. However, by 1998 the Trust Bank group sampled from Chitungwiza were no longer part of the Trust Bank program because the women had voted to end their mandatory bi-weekly meetings; hence, they became part of the mainstream group lending program. Since the Trust Bank respondent group was too small in 1999 to provide a meaningful analysis as a separate group, they were merged with the other clients for analysis.[10]

Other Sampling Considerations. As indicated in the previous chapter, Zambuko provides loans to individuals who have enterprises and the loans are to be used for a designated enterprise. Zambuko classifies the enterprises into five sectors. For the period from September 1, 1996 to April 30, 1997, Zambuko records showed that 44 percent of the loans went to the manufacturing sector, 46 percent to the trading sector, and the remaining loans went to the other three sectors – food preparation, agriculture and services. It was decided to use a systematic random sampling approach so the sample would be representative of the sectoral distribution in each of the selected areas**.**

The design centered on inclusion of a sample of non-client microentrepreneurs as the control group to permit a comparison of changes in the impact variables between clients and non-clients, and thus facilitate the identification of the impacts of Zambuko's program. The non-clients were matched with clients on the basis of specific characteristics and had to meet basic criteria used by Zambuko for vetting clients (see below). Thus, care was taken to help ensure that the client and non-client samples shared key characteristics.

Determination of the sample size took into account the need to have sufficient statistical power after the second survey round to detect changes between the main comparison groups: clients and non-clients. It had to account for the likelihood of not being able to relocate some of the first round survey respondents for the second round of the survey two years later.

---

[10] A preliminary analysis of this sub-sample in 1999 indicated that they did not vary significantly from others in the client sample on assets, an indicator of poverty level.

Since a major premise in the microfinance industry is that certain impacts, such as asset accumulation, are more likely to occur with continued program participation, the sample group needed to include those clients who had received more than one loan. In 1997 Zambuko was in an expansion phase and a preliminary random check of loan applications indicated that the vast majority were applying for their first loan. Therefore the decision was made to categorize the sample population into new and repeat clients and then take a random sample among both groups. This decision was based on the recognition that some of clients would leave the program after completing their 1997 loan cycle.

Clients who recently received new or additional loans became the sample population. This decision was based on two reasons. First, Zambuko prided itself on a quick turn around between time of loan application and receipt of loan, and the survey work could not interfere with normal operations of the program. Furthermore, one would risk data bias if persons were interviewed between the time of loan application and approval. Second, the size of the client sample, its distribution among three geographic locations, and the limited amount of information on each client in the computerized database meant that several weeks lead time was required to develop the sampling frame, identify new and repeat borrowers (since this distinction is not part of the computerized database), draw the sample, obtain the address of each from individual files, and then locate each client in the sample. These procedures ruled against attempting to interview clients before receipt of their loan.

Selection of Clients. The sampling of clients consisted of the following. First, a list was compiled of all recipients of loans extended between March 1 and June 30, 1997 in the three geographic areas. It consisted of 2,434 borrowers. Second, the loan officers designated whether those on the list from their branch office were new or repeat clients. Third, the list was narrowed to cover only those receiving loans from May 1 to June 30, and this resulted in 1,281 new clients and a much smaller number of repeat clients. Fourth, the repeat client list was expanded to cover loans given from April 1 to June 30, but those receiving loans in April for less than six months were excluded. The resulting list contained 196 repeat clients. Fifth, a sample of 244 was randomly selected from the list 1,281 new clients. All repeat clients were included in the sample. Sixth, elimination from the sample of more than one client per household, failure to locate the individual, illness, death, closure of the business, and refusal to be interviewed led to 83 of the clients from the original sample being dropped from the study. Re-sampling from the original lists was undertaken to replace the new clients dropped from the sample, but since repeat clients constituted a census, no additional repeat clients were added to the sample.

Selection of Non-clients. The design called for matching non-clients to clients on the basis of key characteristics, and for sampling 25 percent fewer non-clients than clients.[11] To identify those clients that would have a matched non-client, client records were sorted by geographic area, sector, supervisor and date of loan. Thereafter a one in four systematic procedure, with a random starting point in each case, designated every fourth client as not requiring a matching non-client.

[11] This decision was made based on resource constraints and the desire to include a large enough sample of clients to allow for a comparison between new clients, repeat clients and non-clients at the time of the first survey to determine, for example, the extent to which new clients were similar to non-clients. Also, it was anticipated that those in the program for a longer period of time might have impacts that would differ from those with less program participation. Indeed, the analysis in Chapter VI does reveal such instances.

Each non-client was matched with a specific client on the basis of gender, enterprise sector and geographic location. In addition, to be included in the study, the non-client microentrepreneur had to meet eligibility criteria employed by Zambuko: a) never received credit from a formal organization for their enterprise, b) be the sole or joint owner of an enterprise at least six months old, and c) not be employed elsewhere on a full-time basis.

To increase the randomness of the selection of microentrepreneurs for the non-client sample, a random number of one to three was assigned every member of the client sample that was to be matched. This signified the number of non-client microentrepreneurs meeting the screening criteria who had to be identified prior to selection of the person who would be included in the non-client sample. For example, if a number *two* were assigned the client, the *second* non-client identified, meeting the eligibility criteria and matching the client's gender and enterprise sector, would be included in the non-client sample.

A random walk method was employed to identify microentrepreneurs who met the criteria for inclusion in the study. The walking method procedures were specified *a priori* for residential and business sites. For example, when the client's business was in a residential area, from the front of the house the interviewer turned right, went to the first road intersection, turned right and walked to the third intersection and then turned left; from there the interviewer asked a series of questions to identify who met the criteria for inclusion in the study.

During fieldwork, a total of 19 non-clients were interviewed for whom their corresponding clients were not ultimately available for inclusion in the study. These non-clients, however, were retained in the sample. In addition, 25 of the originally matched non-clients could not be found for interviewing, and five were found not suitable since they were not the true owner of the business. In each case where a rematch had to be carried out, the preceding random number screened person was designated for interview. In those cases where the random number was one, a new screening process occurred.

2. Survey Implementation

Questionnaire Design. The design of the questionnaire for the first round of data collection involved a series of stages over several months. First, an initial set of impact hypotheses, variables and measures was drawn up by the AIMS core team. Second, the AIMS principal investigator, Carolyn Barnes, spent two weeks in Zimbabwe carrying out open-ended interviews in the three geographic areas to test if the hypotheses, variables and measures seemed to be appropriate. Concomitantly, a consultant carried out in-depth interviews on coping with financial shocks and on empowerment to identify ways that these might be covered in a questionnaire (Barnes 1997). Third, the results of the initial exploratory work in Zimbabwe, as well as in the other two AIMS core impact assessment countries, led to further refinement of hypotheses, variables and measures by the AIMS core team. Fourth, a draft survey instrument was tested in Harare and Chitungwiza and further refined. The resulting instrument was used to train the field enumerators. The pilot test during the training session led to clarifications and some refinements to the questionnaire.

The questionnaire contained three main sections. First, the respondents were asked a series of questions about their households and themselves. Second, questions were asked about the *matched* enterprise owned by the respondent. The *matched* enterprise was the one for which the client had

taken a loan and which was used in selection of the corresponding non-client respondent. Third, information was gathered about other enterprises of the respondent and household members. The owner, manager or another knowledgeable person was asked about their enterprise. If there were more than three enterprises in the household, the detailed questions were asked on the most profitable enterprises. In instances where the household had more than three enterprises, only information on fixed assets was gathered on any additional enterprises.

In preparation for the second survey round, the original questionnaire was shortened. Questions proven unreliable or unessential were eliminated. In particular, only a limited set of questions were asked regarding the second and third enterprises. Also, a few questions were added that centered on illness and new household members. The modified questionnaire was tested and refined.

Training and Data Collection. Both the first and second round survey teams were headed by Erica Keogh. The core field team included a professional collaborator and two field supervisors. The supervisors participated in both surveys. Sixty percent of those on the 1999 enumeration team had worked on the first round of the survey. The enumeration team consisted of individuals who spoke Shona, the primary local language in Greater Harare and Mutare, and a few who also spoke Ndebele, the local language in Bulawayo.

The 1997 and 1999 training sessions for the enumerators followed the same format. The training included a discussion of good interviewing skills, ethical issues, the purpose of each question, key terms, the protocol for introducing the study and gaining consent, and other instructions. An instructions manual and a written protocol were provided to the enumerators and supervisors. The training also consisted of mock interviews among the field team members in the local language. The first two days of training consisted of explaining the purpose and meaning of each question, discussing the Shona translation of each question, and role-playing. Later, enumerators worked in pairs and did mock interviews, supervised by members of the core team. Also, enumerators practiced how to introduce the study and themselves, and reviewed methods and best practices for conducting interviews.

On the third day, the field supervisors and AIMS principal investigator took the enumerators to a high-density area not penetrated by Zambuko's program to both practice administering the enterprise questionnaire and pilot test the instrument. To the extent possible, the same individuals interviewed in the 1997 pilot test were re-contacted in 1999. The next day, the team discussed the experience, specific questions and interview techniques. Day five was spent administering both the household and enterprise questionnaires in the test site. Additional days were spent in the office clarifying interview techniques and definitions of terms used in the questionnaires. Near the end of the training, a test was administered to assess the capability of each enumerator and to identify potentially weak areas and individuals.

During the initial days of implementing the survey, training continued. It focused on clarification of issues and addressing specific questions arising from the field experience. After two weeks of data collection in Harare and Chitungwiza, the Bulawayo sub-team spent two days in preparation for their work in southern Zimbabwe. This included translation of the questionnaire into Ndebele and practice sessions. Later interviews were conducted in Mutare.

In each of the three geographic areas, the daily pattern tended to be similar. Each morning before moving out to the field, the whole field team met and handed in interviews they had done and reviewed the previous day. Enumerators gave their completed questionnaires to team leaders for checking and particular issues were discussed. Each questionnaire was checked for missing data and inconsistencies. In 1999 a senior coordinator reviewed each questionnaire before it was submitted for data entry. When difficulties were encountered with specific questions, most of these were rectified through the training and the supervision process. In some instances, however, respondents clearly did not know the answer.

Assessment Protocol. A written protocol was developed for the introduction of the assessment and gaining of consent to participate in the study. Enumerator training in 1997 and 1999 included an explanation of the protocol and mock sessions introducing the study and responding to questions.

At the start of the 1997 survey, the supervisors, aided by select enumerators, contacted each client and explained the objective of the study. Confidentiality of the information was stressed, pointing out that only the research team would see their individual questionnaires and that their information would be aggregated with that of others. Then, the clients were asked if they would be willing to participate, and arrangements were made for the interview. Enumerators used the same protocol with the non-client sample. In 1999, the enumerators reintroduced the study to the respondents and either carried out the interview then or set up a convenient time. The protocol again stressed the confidentiality of the information.

The field team members carried copies of a letter from Management Systems International that set out the above information in case someone wanted further verification. In addition, each member wore a photo identification badge to signal that the person belonged to the research team.

1999 Relocation Methods. A fundamental pre-requisite for the second survey round in 1999 was to relocate and interview the 1997 respondents. Three strategies were employed. First, in mid-June a letter was sent to the 1997 respondents asking their willingness and availability to be interviewed between September and November, and asking them to confirm their current address. Stamped addressed envelopes were included to encourage reply. By mid-July additional letters were sent related to the 50 percent who had not replied; this time the letters were sent to the address of the person they had identified in 1997 as their contact person. Overall, this method resulted in a satisfactory response rate of 68 percent. In three percent of the cases, the contact person replied that the person was deceased or their whereabouts was unknown, and a few letters were returned to sender by the post office. The responses were often accompanied by personal notes that indicated willingness to participate in the follow-on survey. For those who had replied to the letter, enumerators were required to make up to four visits in order to make contact with the person or after three visits to arrange to interview a knowledgeable household member. When the 1997 respondent was seriously ill or deceased, a knowledgeable household member was interviewed.

For the 30 percent not located through written correspondence, enumerators visited their home and business addresses. Maps marked with the location of each 1997 respondent assisted the teams in relocating the respondents who had not responded, as well as those who had. In cases where the person still lived or worked at the site but was not present, enumerators were required to pay two visits to attempt to contact the person or a member of their household. If they were no longer at this site, neighbors were asked if they knew where they might be located.

Data Entry, Validation and Cleaning. Prior to data entry a series of questions were checked for errors. In particular, attention was given to ensuring enterprise fixed assets were not included in the list of items under the question about household assets purchased in the previous 24 months. When an enterprise asset was misrecorded here, the question on recent purchases for the enterprise was reviewed to check whether the information was also recorded there, and when missing it was added. Next, the data from each questionnaire were entered, using a prepared format in Epi Info Version 6. Care was given to providing appropriate linkages between the 1999 and 1997 data sets. This facilitates merging of the two sets.

In 1999 independent operators entered data. Thereafter, a supervisor compared the entries and checked each anomaly against the original questionnaire and marked the correct value on the printout and then the data entry operator edited each file so as to show the corrected values. Data cleaning involved printing and reviewing a series of tables.

C. Respondents Included in the Analyses

As explained above, the research team took great care selecting the sample of client and non-client respondents and relocating the respondents in 1999. Overall the relocation effort was a success. This section compares the distribution of the 1999 interviews with the 1997 interviews and compares key characteristics of those interviewed with those not re-interviewed. It also explains the reasons for excluding some of those re-interviewed from the database for the analyses presented in Chapters IV and V. The section ends with a profile of the loan history of the client respondents.

1. Comparison of 1999 and 1997 Interviews

The re-interview rate was good: 88 percent of the clients and 86 percent of the non-clients, including substitute respondents. Table III-1 sets out the re-interview rate by geographic location, gender and participation status. The integrity of the overall sample in terms of gender distribution and participation status was maintained. There was almost no change in the proportion of client and non-client respondents that were female. Moreover, there was little variation in the response rate between clients and non-clients. The response rates were rather uniform by geographic area, with one exception: only 75 percent of the non-client sample in Bulawayo were re-interviewed. The primary reason for not re-interviewing the 1997 respondent or an appropriate substitute was that the respondent had relocated and the person's location was unknown to neighbors and the contact persons cited in 1997. In addition 11 were identified as deceased and four were too ill to be interviewed.

Table III-1. Interviews Completed by Geographic Area, 1997 and 1999

Status and Location	Number Interviewed in 1999		Total Response Rate in 1999	Number Interviewed in 1997	
1997 Zambuko Clients	Total No.	% Female		Total No.	% Female
Greater Harare	200	90	88	228	83
Bulawayo	69	86	85	81	78
Mutare	75	76	89	84	75
Total	344	84	88	393	83
1997 Non-clients					
Greater Harare	160	86	88	182	86
Bulawayo	45	78	75	60	78
Mutare	50	76	89	56	75
Total	255	82	86	298	82

2. Characteristics of Those Re-Interviewed Compared to Survey Drop Outs

There was a slight tendency toward losing male respondents: 19 percent of the 67 male clients and 18 percent of the 54 male non-clients were not re-interviewed. In comparison, 11 percent of the female client respondents and 14 percent of the female non-client respondents did not take part in the 1999 survey. The sector distribution of those re-interviewed and those not re-interviewed varied slightly (table III-2). The clients and non-clients that dropped out of the assessment tended to differ in marital status and housing tenure, but not those who remained in the assessment. Among those re-interviewed, the monthly household income levels in 1997 tended to be higher among the clients than non-clients (table III-3). The opposite was true among the drop outs from the assessment. Irrespective of the differences, the distribution of those re-interviewed varied less than three percent from the distribution of the 1997 respondents on marital status, housing tenure and household monthly income level. For example, 35 percent of the client households interviewed in 1997 had over Z$4,000 in monthly income, whereas among those re-interviewed in 1999, 34 percent had monthly income at this level in 1997. Thus, the overall integrity of the sample was maintained.

Table III-2. 1997 Enterprise Sector of Those Re-interviewed Compared to Those Not Re-interviewed in 1999

	Re-interviewed 1999				Not Re-interviewed			
	Clients N=344		Non-clients N=255		Clients N=49		Non-clients N=43	
	Number	%	Number	%	Number	%	Number	%
Manufacturing	181	53	124	49	23	47	21	49
Trade	138	40	113	44	22	45	18	42
Other	25	7	18	7	4	8	4	9

Table III-3. 1997 Key Characteristics of Those Re-Interviewed Compared to Those Not Re-interviewed

	Re-interviewed				Not Re-interviewed			
	Clients		Non-clients		Clients		Non-clients	
	Number	%	Number	%	Number	%	Number	%
Marital Status, 1997								
Married	250	73	188	74	37	77	23	55
Unmarried	92	27	65	26	11	23	19	45
Total	342	100	253	100	48	100	42	100
Housing Tenure, 1997								
Own/rent-to-buy	206	60	139	55	17	35	19	44
Other	135	40	115	45	32	65	24	56
Total	341	100	254	100	49	100	43	100
Household Monthly Income, 1997								
Under Z$2,000	113	33	114	45	17	35	22	51
Z$2,000-4,000	112	33	98	38	12	24	16	37
Over Z$4,000	119	34	43	17	20	41	5	12
Total	344	100	255	100	49	100	43	100

Among the 49 clients not interviewed, Zambuko files show that one-quarter of them had taken at least one loan since September 1997. An analysis was undertaken of the client sample to determine if they had repaid their last loan on time, that is completed payment of the principal and interest by the final due date (table III-4). The results reveal that over half of those not re-interviewed had not paid on time, compared to approximately 40 percent of those who remained in the assessment.

Table III-4. Repaid Last Loan on Time, Comparison of Those Re-interviewed and Those Not Re-interviewed

	Re-interviewed N=335		Not Re-interviewed N=46	
	Number	%	Number	%
Yes, repaid last loan on time	207	61	19	41
No, did not repay on time	130	39	27*	59

Note: Statistically significant at .009 level.
* Five of these persons had died since 1997.

Of those who were new clients in 1997, 52 percent had repaid their last loan on time. Among those with more than one loan when interviewed in 1997, referred to as repeat clients, 70 percent had repaid on time. It is interesting to note that among the repeat clients not re-interviewed, two thirds (8 out of 12) had repaid on time. In contrast only one third (11 out of 34) of the new clients not re-interviewed had paid their last loan on time. Thus, among the 1997 new clients, a significantly greater proportion of those not re-interviewed, compared to those interviewed in 1999, had not repaid their loan on time.[12] Among those re-interviewed, a significantly greater proportion of those

[12] Chi-square test showed the difference to be statistically significant at the .01 level.

who had taken a loan since 1997 than those who had not taken another loan since 1997 had repaid their last loan on time: 75 percent and 50 percent respectively.[13] The findings suggest that those who take more than one loan are more likely than those who only take one loan to repay on time. The repayment by the repeat clients does not necessarily reflect 'survivor' bias since 40 percent of them did not take a loan after 1997.

The results suggest that microentrepreneurs who take only one loan are testing the program to determine if it is appropriate for them, and have less of a commitment to meeting the loan repayment schedule than do those who had taken more than one loan. Not until the year 2000 did Zambuko strictly enforce the group loan co-guarantee. Therefore, the findings on loans repaid in full by their due date reflect the timely payment of the loans by the borrower. The data are only related to payment on time, and do not reflect the proportion who never paid off their loans. When the loan repayment dates are in the middle of the month, clients often have difficulty paying on time since credit extended to customers is usually paid shortly after the end-of-the-month payday.[14]

3. Distribution of Respondents for the Final Analyses

As noted in the previous section, 599 persons were interviewed in 1999. Among the non-clients, 14 had taken one or more loans from Zambuko since the 1997 survey. These individuals were excluded from the analyses in the following chapters since they no longer met the criteria for inclusion in the control group. In addition, the survey interviews that were done with the case study respondents were excluded from the database to eliminate the possibility that the qualitative interview process might have influenced the survey responses in 1999.

When the original 1997 respondent was not available during the survey period, a substitute was interviewed. The primary reason for a substitute respondent was that the 1997 respondent was out of town. In addition, four clients and four non-clients were deceased, and four clients were too ill to be interviewed. Prior to the data analysis stage, each case with a substitute was carefully studied to make sure that an appropriate substitute had been selected for responding to household questions. As shown in table III-5, only seven percent of those interviewed in 1999 were not the same person interviewed in 1997. The substitute respondents tended to be spouses, adult children, or mothers of the 1997 respondent. On questions relating to individual level changes, the responses of the substitutes were excluded from the analysis. It should be noted that from this point onwards when the text refers to client and non-client respondents, the findings include information from substitute respondents unless stated otherwise.

[13] The chi-square test showed the difference to be statistically significant at the .01 level.

[14] This was a point former and current clients made during focus group sessions in December 2000 - January 2001.

Table III-5. Respondents on Household Questions, 1999

	Same Respondent as 1997		Different Respondent in 1999		Total
	Number	%	Number	%	Number
Clients	318	94	20	6	338
Non-clients	225	93	16	7	241
Total	543	94	36	6	579

Eighty-five percent of the new clients from the 1997 sample and 92 percent of the clients who had received more than one loan from Zambuko at the time of the first round of the survey (called repeat clients) are included in the database for the analyses in the following chapters. Thus the final analyses are based on a client sample that consists of 38 percent who were repeat clients in 1997 and 62 percent who were new clients in 1997.[15] By the time of the second round of the survey, 43 percent of the 1997 new clients and half of the 1997 repeat borrowers had taken at least one loan from Zambuko. This indicates a slightly higher rate of additional borrowing from Zambuko among those who already were repeat borrowers in 1997. This is explored in more detail in Chapter V.

Table III-6 below shows the distribution of completed enterprise questionnaires in 1999. In nearly all cases, the owner or manager of each enterprise was interviewed. In 1997 the selection criteria for non-clients included having an enterprise in the same sector as the enterprise for which the client had secured the loan. These enterprises are referred to as the *matched enterprise.* In addition, information was gathered on up to two other household enterprises and on enterprise assets for any additional enterprises. In 1999, a small proportion of the households no longer had an enterprise, and 31 percent of the client households and 24 percent of the non-client households had more than one enterprise.

Table III-6. Number of Completed Enterprise Questionnaires Per Respondent Household, 1999

	Clients N=344		Non-clients N=255		Total N=599	
	Number	%	Number	%	Number	%
None	26	8	26	10	52	9
One	212	62	167	65	379	63
Two	96	28	53	21	151	25
Three	9	2	8	3	15	3
Four*	0	0	1	-	1	-
Five	1	-	0	0	1	-

*A dash mark (-) signifies less than one percent.

A review was conducted of the respondent for each of the enterprises covered in the assessment. In a few cases where the respondent was not the owner or manager of the enterprise and knowledge of the enterprise was questionable, these were excluded from the analysis and treated as missing data.

[15] This excludes six case study respondents who were interviewed but the questionnaires removed from the survey database.

D. Analysis of the Survey Data

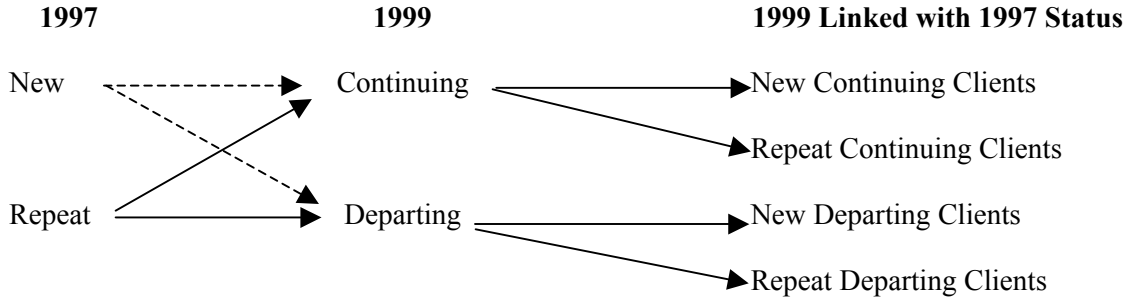
This section explains the different comparative groups used in the analysis of the data. In particular, the client sample was classified in two ways that took into account the loan status at the time of the interview. Next, impact analysis issues are discussed. Then the section explains why particular statistical methods were used, and describes the approaches used to analyze the survey data.

1. Comparative Groups

The basic comparative groups for the analysis are a randomly selected group of microentrepreneurs who were clients of Zambuko Trust in 1997 when the first round of the survey was conducted and a randomly selected group of microentrepreneurs who have never taken a loan from Zambuko.[16] The non-clients serve as the control group.

The client group consisted of those who were on their first loan in 1997 and those who had taken more than one loan at the time of the first interview. These are referred to as *new clie*nts and *repeat clients* respectively. By the time of the follow-on interview some clients had not taken any additional loans from Zambuko since the 1997 interview. They are referred to as *departing clients*. Those who had taken at least one additional loan since the 1997 interview are called *continuing clients*. In a few instances, the data were analyzed by the respondent's 1997 loan status plus their 1999 loan status. For example, a *repeat continuing client* was one who had more than one loan by the time of the 1997 interview and had taken at least one loan since then. Use of the five categories in effect takes into account the intensity and timing of participation in the program.

Chart III-1. Basic Analytic Categories of the Client Sample, 1997 and 1999



The sub-group distinctions were made for the analysis of the client data because it was assumed that participation since 1997 would affect the likelihood of whether or not impacts from Zambuko's loan program would be detected. In particular, it was assumed that among those who had not received an additional loan in the interim period, evidence of impacts may have faded by 1999 due to events internal and external to the households and their enterprises that would obliterate any short-term gains from receipt of a small-sized loan, such as an increase in food consumption or enterprise net

[16] It should be noted that only six of the non-clients had received a loan from another formal organization between 1997 and 1999.

revenue. Therefore, a series of analyses were performed on the impact variables using the following comparison groups: a) clients and non-clients, and b) continuing clients, departing clients and non-clients. In addition, on most impact variables, the analysis was also carried out on a) new continuing clients, new departing clients, repeat continuing clients, repeat departing clients, and non-clients and, b) new clients, repeat clients and non-clients. For ease of presentation, the findings on continuing clients, departing clients and non-clients are given. This decision was taken for the reason explained above. The results of the analyses based on the five comparison groups, which take into account both the 1999 and 1997 loan status, are included when they add another dimension to the interpretation of the findings.

In addition, for specific impact variables an analysis was done of those households that were extremely poor in 1999, based on the poverty classification described in Chapter V for table V-9. The extremely poor continuing client, departing client and non-client households were compared on a limited number of variables to determine if impacts had been experienced among the extremely poor client groups.

2. Impact Analysis Issues

The basic objective of an impact assessment is to determine the effect of the intervention on program participants. This section addresses two separate issues that can threaten the validity of results: selection bias, and bias stemming from the existence of the treatment prior to the baseline study. These may affect the results in opposite ways.

Three types of selection bias may be evident: individual, program and group. There may be initial differences between the client and non-client samples. These initial differences may be due to tangible and intangible factors, such as household income and motivation. The potential for these initial differences arises in research situations in which the individuals studied are free to choose to participate in the program assessed. Another potential bias occurs in the study of microfinance programs since the implementing organization is involved in selection of the clients, following specific criteria. For those who receive group co-guaranteed loans, there is also the possibility that bias has been introduced into the group selection process.

These potential selection biases were taken into account. First, the non-clients were matched with the clients on the bases of gender and enterprise sector. In addition, the non-client sample was selected according to the basic criteria used by Zambuko loan officers: have an enterprise that is at least six months old, be the sole or joint owner of that enterprise, and not be employed fulltime elsewhere. Loan officers also assess the viability of the enterprise, but since that requires more time, this criterion was not used.

In 1997, the group selection bias appears to have been limited. Groups were formed among those who tended to know at least a few members, and the co-guarantee was not strictly enforced. Therefore, the vetting of members by the group was not as rigorous as it became later. In 1997,

groups were encouraged to form among people who knew one another, and who were considered to be trustworthy. In subsequent loan cycles, individual members often dropped out and new ones joined.[17]

Since the survey gathered information on the same variables at more than one point in time, this helped to take into account selection bias. The bias was reduced since there was a two-year period in which changes might take place, including departing the microfinance program.

Statistical methods were used to address the problem of separating the impact of the program from the influence of selection differences. An analysis of variance (ANOVA) with gain score was conducted. As explained later, this focuses on changes in the same variables between 1997 and 1999. The gain score analysis, which looks for differences in the mean change between the groups, does not assume that the groups were similar at the beginning.

Also, an analysis of covariance (ANCOVA) was carried out using multiple covariates. The ANCOVA analysis with covariates helps to control for some initial differences, as explained in the following sections. The ANCOVA addresses the issue of self-selection that arises in quasi-experimental research designs, where respondents are not randomly assigned to the client and non-client groups, but it was not feasible to control for all the possible initial differences.

A different issue concerns the potential bias stemming from not having a true baseline measure, which is a measure prior to entering the program, against which to measure changes and differences at a later stage. The first round of the survey in 1997 was conducted a few months after the clients had received their last loan. For some borrowers, it was their first Zambuko loan, and, for the others, it was their second or third loan. This implies that the 1997 data may have captured the immediate impact of the loans received rather than the pre-program situation. Therefore, the results of the analyses *might* make microfinance appear less effective than it is. There was no way to address this issue in the analysis of the assessment survey data. Only 14 non-clients had taken a loan from Zambuko since 1997, and thus the number was too small to provide a meaningful analysis of them as a separate group. However, the pre-loan situation was explicitly addressed in the case study interviews in 1998, so these qualitative data provide an insight into the changes that occurred since joining Zambuko's program.

3. Statistical Methods

The survey data were analyzed using a number of approaches: chi-square tests, t-tests, ANOVA gain score analysis, and analysis of covariance (ANCOVA) with covariates. Simple chi-square tests were used for two types of analyses. They were conducted to determine if the comparison groups differed significantly on the direction of change between 1997 and 1999. The findings on the direction of change provide the reader with a better understanding of the variation within a particular comparison group: the percentage of those who experienced positive change, negative change, and no change. Second, they were used to analyze the distribution of each sample group on particular variables. This type of analysis was done to complement findings on the

[17] The criteria used by loan groups is covered in Barnes (2001), which analyzes the relationship between microfinance and households coping with chronic illness and death.

averages for each of the comparison groups, since group averages obscure information on variation within a group.

Independent samples t-tests were used to determine whether there were significant differences in 1997 and 1999 between any two of the three or five comparison groups. The mean values for each year are reported in the tables for each of the impact variables. When the t-tests yielded significant differences between a pair, these are noted. The results permit a better understanding of differences in the means in 1997 and 1999 between any two sub-groups used in the analysis.

As mentioned in the previous section, two statistical methods were used that take into account the possibility that the comparison groups differed initially on a particular impact variable. The ANOVA gain score analysis examines the change in performance from the first survey to the second, follow-on survey. It calculates the relative differences in the two scores for each comparison group and then examines whether the results differ significantly between any two of the comparison groups taking into account the grand mean across all respondents. When the score involves a numerical value, it is based on the 1999 findings minus the 1997 for each respondent.[18] The method centers on the change in each comparison group on a particular variable, rather than on the absolute values or levels for each group. As such, it does not assume that the two groups were similar in 1997 on the variable analyzed. The gain score approach used in the analysis does not attempt to take into account the influences of other factors.

The second method used was ANCOVA, which is an extension of an elementary test (ANOVA) by including the pretest measure in the model in the form of a linear regression. In this way it provides an adjustment for the initial differences between the groups. As Reichardt (1979, p.155) explains:

> The estimate of the treatment effect in ANCOVA is the difference between the predicted posttest scores of individuals in the two groups who have been "matched" on pretest scores. A statistically significant difference suggests that one group would have significantly outperformed the other on the posttest *if the groups had started with the same pretest scores*.

Initial differences between the analytic groups may influence the values found in 1999 in the impact variables. Therefore, the ANCOVA statistically matches observations in the analytic groups on their 1997 measures and other covariates and then "uses the average difference between the matched groups on posttest scores to estimate the treatment effect" (Reichardt and Mark 1998, p. 217-218).

The ANCOVA approach was carried out with multiple covariates or independent factors to control for a number of differences between the analytic groups in 1997, including differences in the 1997 measure on the impact variable. In other words, a number of 1997 measures on each respondent were included to adjust for initial differences. For example, the analysis on the dollar value of

[18] In a few instances, the gain score varies slightly from the value of 1999 minus 1997 for the comparison group due to rounding each of the values.

assistance given to persons outside the household matched respondents on the amount given in 1997, gender of the respondent, and poverty status to determine the effect of participation in Zambuko's program.

The ANCOVA procedure matches observations and gives expected differences in the means, thus suggesting the effect of participation in Zambuko's program. It addresses whether the client group outperformed the non-clients in 1999 by more than should have been expected on the basis of initial selection differences. The test may introduce bias if there was random measurement error in the 1997 scores and if irrelevant covariates are used (Reichardt 1979). Hence, the results suggest areas of impact and make a strong plausible case for where impacts occurred.

4. Covariates

As discussed above, one reason for including covariates or independent variables is to explicitly control for values on specific factors that might influence the results on the impact variable. A second reason for including multiple covariates is that the analysis will suggest whether a specific independent variable significantly influenced the differences found in 1999. The 1997 values were used for the covariates included in the ANCOVA analyses. The tables in Annex 3 list the covariates included in each test.

A number of covariates were selected for inclusion in the impact analysis. The selection was influenced by the factors thought to be most closely associated with the impact variable, since adding independent variables unrelated to the impact variable decreases the precision of the test. For example, gender studies have highlighted that women and men often have different constraints and opportunities, and so gender was included in the analysis of the enterprise impact variables. Also, the poverty level of the household is likely to influence the use of funds within the household so this was included as a covariate to analyze expenditures on household assets and acquisition of specific types of assets.

Geographic location was often used as a covariate since the local environment might influence the findings. Greater Harare respondents were compared with those from Bulawayo and Mutare since the numbers in these latter two areas were relatively small. When analyzing the enterprise-level impact variables, the covariates used in the analysis of the matched enterprise were enterprise sector, gender of the owner, and geographic location. For the analysis of the individual-level impact variables, marital status and gender were included as covariants in the relevant statistical analyses.

At the household level, the following variables were normally used as covariates:

- number of economically active household members,
- number of income sources,
- housing tenure (own or purchasing residence compared to other tenure forms, such as renting),
- household level of poverty (based on a income/asset/expenditure measure of poverty) a) extremely poor compared to all others, and b) non-poor compared to all others,
- whether or not the household experienced a financial shock in the last two years due to illness or death, and
- gender of the microentrepreneur.

5. Interpreting Statistical Significance

The results of tests of statistical significance indicate whether or not the differences between the comparison groups are the result of mere, chance coincidence, or whether they reflect a true difference between the groups. When the statistical test gives a value of 0.10 or below, it indicates that the observed case is not just a chance coincidence and hence indicates that the dependent variable (e.g., continuing client/non-client status) is positively correlated with the independent variable (e.g., amount spent on assets). The test means that there is only a 10 in 100 probability that the apparent difference would have occurred due to chance. When the results yield a value between 0.11 and 0.15, the findings are referred to as marginally significant when the evidence suggests that there is a relationship.

When interpreting the results, it is important to consider that there are several reasons why the data may not show statistical significance. The main reasons are listed below.

- The hypothesis tested might not be true. The anticipated impact is not occurring.
- The measurement approach used to test the hypothesis was not sound. It may have been ambiguous, difficult to answer or not a good indicator for measuring the hypothesis.
- The 1997 data collected when clients were in the midst of their loan cycle may have captured short-term impacts that inflated the 'baseline' measures used in the analyses.
- There may be too few observations in the sample relative to the size of the variation in the responses, resulting in a wide confidence interval that wraps across zero.

When the findings are not statistically significant, it does not necessarily mean that program participation has not had an effect. When the results are statistically nonsignificant, it may be that the confidence interval is very wide and covers quite a large range of values so that its is possible that the treatment effect is very large.

6. Changes in Dollar Values

Several of the impact variables are measured in terms of Zimbabwe dollar values. However, during the assessment period, inflation as indicated by the Consumer Price Index (CPI) was high and the Zimbabwe dollar decreased in value. Thus, on variables that measured last month's expenditures and revenue, and the current value of assets, the data provided in 1999 were deflated to 1997 constant values.

The CPI was 488.5 in September 1997 and 1091.6 in September 1999. Using September 1997 as the base (September 1997 = 100), the CPI value in September 1999 was 223.47. The results show that the value had more than doubled since 1997. Thus, the formula used was to deflate the 1999 values by 2.235. For example, the monthly income of clients averaged Z$9,071 in September 1999; when deflated (9,071 divided by 2.235) to real income values or 1997 constant values, the average income was Z$4,059.

Data from questions that gathered information over a longer period, however, were not deflated. An example is the amount of money spent on household durable assets the past 24 months. It was not feasible to deflate to 1997 constant value for each of the monetary values, since the responses

covered a range of months, inflation rates varied from month to month, and often respondents could not recall the exact month the expenditure was made.

7. Other Considerations

When an analysis is based on the mean value for a group, it might be influenced by a few responses that are either extremely high or extremely low. Therefore, the impact variables based on dollar values were analyzed to determine if outliers, that is values at the extreme, influenced the results. The initial data verification and cleaning process had already determined if the outliers represented data entry errors or special cases. For the analyses without outliers, values more than three standard deviations ('z-scores') from the mean were removed. In general, the pattern between the comparison groups was consistent whether or not the outliers were included in the data analyzed. In the few cases where the results were not consistent and the findings differed significantly, the results of the analysis without the outliers are reported in the text as well as Annex 3.

Another consideration was the treatment of missing data. In particular, respondents often could not provide an estimate in response to questions that centered on monetary values, such as the amount of income earned by a household member last month. These cases are treated as missing values and are not included in the analysis. This leads to the N values, that is, the number of persons reporting, varying among the analyses of specific variables. In a few cases the data were missing on a covariate. Therefore, the person was dropped from the analysis, and the respondent base for the t-tests and gain score analysis was adjusted to include only those respondents included in the ANCOVA.

It is legitimate to ask if the survey questionnaire or its administration affected the range of impact findings. It was particularly difficult for respondents to estimate the amount of income received from each source since the respondents did not always know the exact amount a son, daughter or spouse earned. On the questions related to the value of the assets owned, respondents had to roughly estimate the current market value of items. There is no reason, however, to assume that respondents in one comparison group were better able to answer the questions than the other respondents. The replies should be interpreted as indicating an estimate rather than precise monetary values. Furthermore, to help ensure continuity and reliability in the way the questions were answered, some analyses excluded substitute respondents.

E. Case Study Methods

To complement the quantitative survey data results, the assessment included case studies of nine Zambuko clients. The purpose of the case study research and the criteria and process used for selection of the individual cases are described below. Also, information is provided on the basic study questions, the database that was generated, and the analysis of the information.

1. Purpose, Scope and Process

In-depth interviews were carried out with select clients to a) better understand complex phenomena and interrelationships, b) explore factors, other than program participation, that may have contributed to the changes in key impact variables and c) illuminate the impact process and,

where possible, establish a chain of evidence about causal relationships. In particular, the individual-level hypotheses were tested through the case study research.

The case study approach involved in-depth interviews with select clients at two time periods. The first interviews were conducted in the fall of 1998, a year after the 1997 survey. These interviews focused on a brief economic history of the household and then changes that occurred from the period immediately prior to joining Zambuko until the 1997 survey. In addition, key changes since the 1997 interview were documented, with attention to how and why the changes took place. The second round of interviews took place in the fall of 1999. In these, the focus was on the changes that had occurred since the previous interview.

In sum, the case study interviews centered on the economic history of the respondent, key characteristics prior to joining Zambuko's program, and changes between first survey interview and the 1999 interview. In particular, the case study discussions covered the following:

- components of the household economic portfolio,
- financial and risk management behavior,
- intra-household control over resources and income,
- self-esteem,
- orientation toward the future,
- transaction relationships,
- motivations, impacts and client perspective on impacts, and
- alternative explanations for changes in income, expenditures and assets.

An experienced facilitator, Nontokozo Nemarundwe, carried out the case study interviews. In 1998 she met two to three times with the individual and in 1999 she met with the individual one to two times. Each individual was interviewed both years. The first session in 1998 and the session in 1999 usually lasted 60 to 75 minutes. These were carried out in the person's home, normally without other household members or friends present, although sometimes a child present. In 1997 the facilitator used a tape recorder to aid in documenting the discussion, and in 1999 Loveness Nyikahadzoi accompanied her to take extensive notes on the discussion.

2. Selection of Case Study Participants

Case study participants were selected after an initial analysis of the 1997 survey data. For efficiency, it was decided to select nine individuals from the Greater Harare area. The following criteria guided the categorization of the Greater Harare client respondents from which the cases were randomly selected in 1998. First, since the 1997 interview the client should have taken an additional loan, or at the time of selection be in the process of acquiring an additional loan. The decision to include only microentrepreneurs who were continuing with the program was made since the main purpose of the case study interviews was to illuminate the impact process. No attempt was made to control for the total number of loans received.

Second, a balance was sought between those who had been new clients and those who had been repeat clients at the time of the 1997 survey. In addition, since the Trust Bank represents a different product, approximately half were to be Trust Bank participants. Third, since most of the survey's client respondents were women, only women were considered for the case studies, with one

exception explained below. Extreme outliers were removed from the sample population (such as one-person households and 20-year-old clients) in order to draw from those that characterized the majority of the client sample. Fourth, one male client was selected among the men meeting the first criteria, to represent the higher end borrowers who have paid employees and were expanding their business. The following framework was used for the random selection of the case study participants.

	1997 New Clients	1997 Repeat Clients
Women, Main Program	2	2
Women, Trust Bank	2	2
Men, Main Program		1

3. Distribution of Case Study Participants

The random selection yielded five case study participants from Harare and three from Chitungwiza. Since the Chitungwiza Trust Bank clients had become clients in Zambuko's regular program, in fact only two Trust Bank participants were included out of a total of nine cases. Those initially selected by the process described above were contacted to determine their willingness to be a case study participant. In one instance the initially selected person was unavailable and the first person on the substitute list agreed to participate.

At the time of the first survey interview, all of the case study respondents lived in households with three or more persons. One was a widow, one a divorcee and the others were married. Two were renters and the others either owned their homes or were purchasing them through rent-to-buy schemes. At the time of the 1997 survey, four were either the sole or primary income earner in their household.

None of the case study respondents are identified in this report by their real names. Also, other information that might lead to identifying the individual who provided the information has been altered to ensure the confidentiality of the person providing the information.

4. Data Files and Analysis

The data files on each case study individual consist of the following:

- 1997 and 1999 survey questionnaires,
- 1998 hand-written notes and/or typed transcript,
- 1998 summary information on household and enterprise data from 1997 questionnaire,
- 1998 and 1999 interview records,
- 1999 hand-written notes and typed transcript of interview, and
- 1998 and 1999 synthesis documents.

The data for each case were analyzed by grouping the responses according to the major topics listed in section E.1 above, and by different time periods: prior to joining Zambuko, at the time of the 1997 survey, between the 1997 survey and the 1998 interview, and from the time of the 1998 interview to the 1999 interview. The assessment's hypotheses drove the analyses. In addition, the data were analyzed according to certain themes to illustrate and illuminate changes that had taken

place. Selected analyses are integrated with the findings from the survey. When the case study data are counter to the survey findings, these instances are pointed out. In these instances, the case study data indicate that the hypothesis is valid, although the findings may not be generalizable and representative.

IV. ZAMBUKO TRUST'S PROGRAM AND CLIENTS

A. Zambuko Trust

The assessment centers on Zambuko Trust (Private) Limited (Zambuko). This chapter provides an overview of its mission, organizational structure and geographic coverage. Zambuko's lending products, methods and terms are described. This information helps in furthering an understanding of the loan conditions and Zambuko's outreach strategy. Data are presented on Zambuko's financial portfolio, such as number of loans outstanding at the end of the year and the value of these. To help understand who joins Zambuko's program, a profile is presented on the geographic distribution of loans, the proportion of loans going to women, and the sector distribution of clients' enterprises. In addition, this chapter addresses the question: to what extent does Zambuko reach the poor? The analysis addresses the income, consumption and asset level of respondents' households. Last, information drawn from qualitative studies describes how people learn about Zambuko, the decision-making process, and motivations for obtaining a loan.

1. Goals and Objectives

Zambuko, a partner in the Opportunity International Network, emerged from the efforts of a group of Zimbabwean business, community and church leaders who joined together in 1990 to establish a microenterprise lending organization. The name Zambuko means *a bridge* in the Shona language and reflects the mission of the organization: "to be a bridge between the marginalized, the unemployed and opportunities for enterprise and income generation." Its goal centers on creation of employment and generation of income for the underprivileged through microenterprise business activities. To become a self-supportive, viable organization is also a stated goal.

Zambuko's objectives focus on facilitating the expansion of microenterprises, creating employment opportunities within the microenterprise sector, and promoting the transition of microenterprises to formal enterprises. Its service objectives are: provision of loans, training in business practices and administration, and on-going business support services to clients. Its objectives include ensuring that women are equal recipients of loans and services.

2. Organization and Geographic Coverage

Zambuko started its operations in October 1992, with assistance from Opportunity International. Zambuko is incorporated under a Certificate of Incorporation and is regulated under the Companies Act. Zambuko is wholly owned by Gesher Trust, a welfare organization which is constituted in terms of a Notarial Deed of Trust executed in 1991. Zambuko is a licensed moneylender, registered in accordance with the provisions of the Money Lending and Rates of Interest Act, which regulates interest-bearing loans.

Over the years, Zambuko's organizational structure and geographic coverage have undergone changes that reflect expansion of the program, lessons learned, and utilization of best practices in the microfinance industry. In its initial stage, Zambuko served Harare and Domboshawa, a rural agricultural area approximately 20 kilometers from Harare. The experience in Domboshawa, which coincided with a prolonged period of drought, led Zambuko to focus on urban and peri-urban

settings, and to shy away from loans for crop production activities. This focus coincided with the burgeoning of microenterprise firms in urban rather than rural areas.

After its start-up year, Zambuko began establishing branch offices, to which smaller, satellite offices were linked. Branch offices were staffed with a branch officer, loan officers and an accounts clerk. Potential clients would receive a half-day of training at the branch office prior to formal application for a loan, and clients within a branch's catchment area were required to travel to the branch office for all financial transactions.

In 1997 Zambuko changed its organizational structure to decentralize several functions (table IV-1). Branch offices were relocated to areas with a high concentration of clients (and potential borrowers) for ease of monitoring by loan officers and to lessen the distance clients must go to transact business. Each branch operates as a basic business unit and has a manager or supervisor, at least one loan officer and an accounts clerk. In the fall of 1997, there were five regional offices and 18 branch offices. These were staffed with approximately 56 individuals, supported by a Headquarters Unit of 10 individuals.

Table IV-1. Zambuko Trust Regional Offices and Branches, August 1997

Regional Office	Branch Offices 1997	Additional Branch Offices By 2001
Harare	Harare City, Chitungwiza, Mbare, Kuwadzana, Bindura, Chinhoyi	Highfields, Marondera
Bulawayo	Bulawayo City, Gwanda, Mpopma, Nkulumane and Pumula	
Gweru	Gweru City, Kwekwe, Kadoma	Mkoba
Mutare	Mutare City, Rusape, Dangamura	Sakubva, Chipinge
Masvingo	Masvingo City	Zvishavane, Gutu, Istarn

Source: Zambuko files.

The regional offices perform management functions, such as monitoring of the branches and enforcement of steps to reduce delinquencies and defaults. Regional offices are also responsible for handling all loan applications and borrowers with loans over Z$20,000.[19] In 1999 Zambuko had 25 branch offices under five regional offices. By the end of the year 2000, the full-time personnel numbered 130, including 19 in the headquarters office that contains the audit and accounts officers. The accounting function is centralized at the Head Office. By this time loan officers had been renamed business development officers to reflect both the lending and training features of Zambuko's program.

[19] The Zimbabwe dollar is used throughout this report. One U.S. dollar was equal to Z$11.9 in September 1997 and to Z$38.1 in September 1999

3. Lending Products, Methods and Terms

Initially Zambuko provided loans to individuals, but in 1995 it started providing group-guaranteed loans (Box IV-1). By late 1996 the policy was to provide loans only to members of groups, but continue with individual loans to repeat, individual loan clients. Potential clients were encouraged to form a group of 5 to10 members. At an initial one-half day orientation session prior to receipt of the loan, the requirements were explained and good basic management practices encouraged. Up to the year 2000, individuals within a group would pay their installments and the group guarantee was not strictly enforced. After being in a group scheme, a client might ask and be approved for an individual loan product. Resistance to group-guaranteed loans outside of Harare and Chitungwiza, however, led Zambuko to continue to issue loans to individuals who would pledge a non-essential asset and have a co-guarantor.

Box IV-1. Zambuko Products and Methods

Individual	The requirements are 1) a personal guarantor, and 2) pledge of a movable fixed asset. Where feasible, loans are provided to a cluster of individuals who are either resident or conduct business in the same area and work together in some way. Installments are paid monthly. The individual is required to attend a half-day training session prior to formal application for a loan.
Group	A self-selected group of 5 to 10 persons, who either reside or conduct businesses in the same geographic area, co-guarantee each other. A non-essential movable household asset is pledged by each member against the loan. Installments are made monthly. Each person is required to attend a half-day training session prior to formal application for a loan.
Trust Bank	This is a variant of the village banking model aimed at the poor. In 1997 it consisted of a self-selected group of five members who co-guaranteed loans to each of its members, and five to seven groups formed a center**.** This was changed in 1998 to a group of 20 to 30 members co-guaranteeing loans to its members, but later reverted to groups of 10 members. Members are required to attend one-hour training sessions for eight weeks prior to receipt of loan and are expected to attend bi-weekly meetings. Loan installments are made monthly.

In early 1996 Zambuko began a Trust Bank program for poor women. The methodology includes group formation, intensive business training and orientation for eight weeks prior to receipt of first loan, six-month loans and bi-weekly group meetings covering topics of concern to members. During the orientation period there is a compulsory savings requirement that is equivalent to the first loan payment installment. In 1997 Zambuko did not exclude women who were not poor from joining this program, although in 1998 they did. Also later men were able to join the program. The loan officers responsible for Trust Bank groups report directly to their branch officers, but are overseen by the Trust Bank Coordinator in the Headquarters' Unit.

Table IV-2 compares the loan terms between August 1997 and August 1999. The interest rate rose by 13 percent, while during the same period the inflation rate as measured by the CPI rose substantially. Loan officers are responsible for on-site review of the information in the loan application, an appraisal of the microenterprise, and vetting of the applicant and loan amount. They may determine that the applicant should get a smaller amount than requested. In addition, they are

to discuss and agree with clients on the repayment period for individual and group loans, and the practice indicates that the loan period is usually 9 to 12 months. The branch officer reviews and approves applications. Each loan officer is assigned a number of persons for whom s/he is responsible. This responsibility consists of follow-up visits to check on the client, provision of informal business advice, and reminders to clients to make their loan repayments on time. The loan officer issues warnings when the loans are delinquent.

Table IV-2. Comparison of Terms in August 1997 and in August 1999

	August 1997	August 1999
Interest rate per annum; straight line basis	32%	45%
Application fee	Z$70	Z$200
Processing fee	3.5% on loans >Z$5,000; 4.5% on loans < Z$5,000)	Replaced with 5% administrative fee
Late payment fee	5% of principal in arrears.	Same
Initial deposit	10% of approved loan amount, refunded if loan conditions met.	Not required. Replaced in October 1999 with savings requirement of 7 ½% of approved loan amount initially plus 7 ½% amortized over life of loan.
Size of loans: individual and group lending program	Between Z$2,500 and $15,000, with repayment period of 6 to 12 months, and for loans greater than Z$15,000, an 18-month repayment period. Maximum initial loan size of Z$5,000.	Same.
Size of loans: Trust Bank	Maximum initial loan of Z$2,500, with Z$9,000 the maximum for subsequent loans. Repayment period 6 months, but increased with size of loan.	Same.

In January 2001, the administrative fee was increased to six percent, with one percent of the amount for insurance of the loan upon death of the borrower. By late 2000, the interest rate stood at 48 to 52 percent. Well-paying clients on their fifth or greater loan cycle paid the lower rate, clients on their third and fourth loan cycle paid 50 percent and the newer clients paid 52 percent. Application fees were dropped for repeat clients. As of mid-2001, the other provisions remained the same as noted for August 1999.

3. Financial Data and Program Growth

Zambuko's loan portfolio has grown rapidly (table IV-3). The number of loans outstanding in August 1998 was almost four times the number in August 1996. The rapid expansion of the program contributed to the rise in the delinquency rate during this period, as inadequate attention was given to quality of the portfolio in contrast to size of the portfolio. Economic stresses from within and outside the clients' households are likely contributors to the rise in the delinquency rate,

that is, loans overdue for more than 30 days. Since 1999 the measures taken by Zambuko have helped to reduce the delinquency rate. The measures include enforcement of the group co-guarantee. Since mid-2000, the group co-guarantee of members has been strictly enforced. The repayments must be made as a group, rather than as individual members, and the amount due from all members must be paid, or a late payment fee is applied.

Zambuko's enactment of measures to reduce the delinquency rate coupled with donors halting their assistance due to the political situation in the country account for the reduction in the number of loans extended in 1999 and 2000. Over the years, a number of donors have assisted with the establishment, expansion and strengthening of Zambuko. During the assessment period the main donors were the Australian Agency for International Development and the U.S. Agency for International Development. Funding was also received from the Humanist Institute for Cooperation with Developing Countries (HIVOS), a Dutch NGO, and Opportunity International.

Table IV-3. Financial Record of Zambuko Trust, September 1995-December 2000

	Sept. 95-Aug. 96	Sept. 96-Aug. 97	Sept. 97-Aug.98	Sept. 98-Dec. 98	Jan. 99-Dec. 99	Jan. 00-Dec. 00
Loans Outstanding at End of Year (number)	3,934	10,558	15,947	13,380	12,244	9,696
Loans to Women (percentage)	77%	77%	78%	79%	83%	81%
Total Value of Loans Outstanding at End of Year (Z$)	3,339,326	17,405,917	27,141,302	30,018,127	37,835,027	55,491,614
Average Loan Size (Z$)	n.d.	2,537	3,036	5,517	5,496	10,162
RATES						
Nominal Annual Interest Rate Charged by Program	32%	32%	35%	37%	45%	50%
Local Interbank Interest Rate	37%	35%	35%	42%	52%	58%
Inflation Rate	18%	18%	30%	30%	61%	62%
Exchange Rate	10.3	11.9	32.0	37.0	38.0	55.0
Delinquency Rate (30+ days)	19%	16%	25%	0.07%	6%	2%
CLIENT REVENUE						
Interest Income from Clients (Z$)	1,531,918	3,003,870	9,751,791	4,236,608	15,933,898	31,100,574
Fee Income from Clients (Z$)	372,801	1,784,394	2,921,377	8,284,253	7,618,703	8,891,521
NON-FINANCIAL EXPENSES						
Administration (Z$)	4,431,766	7,286,860	15,687,310	7,712,755	24,881,777	31,100,751
Depreciation of Fixed Assets	295,150	n.d.	561,714	290,611	1,264,962	1,586,586
Loan Loss Provision	721,844	1,808,311	3,454,179	3,887,109	378,788	540,294

Source: Zambuko Trust Financial Records and, for the exchange and inflation rates, issues of the *Monthly Bulletin* of the Reserve Bank of Zimbabwe.
Note: The fiscal year was from September 1 to August 31, but was changed in 1999 to coincide with the calendar year.

Zambuko's expansion between 1996 and 1998 was accompanied by an increase in staff and hence administrative expenses. The increases in administrative costs also reflect salary increases to adjust for inflation. At the same time, the capital base of the program has been affected by inflation. The annual flat interest rate has been lower than the annual rate of inflation since September 1998. Subsequently Zambuko has increased its interest rate, but the inflation rate continues to soar beyond it. The relatively high delinquency rate up to 1999 and inflationary pressures have contributed to an erosion of the program's capital base.

B. Distribution of Loans and Clients

Zambuko loans primarily to women (table IV-3). Zambuko begin with a policy of serving both men and women, and the good repayment performance of women compared to men led the organization to make a strategic decision to target women (World Bank 1997). At the time, this decision was underscored by the preponderance of female micro and small enterprise (MSE) proprietors in Zimbabwe. In 1991 nearly 75 percent of all MSEs were owned by women, but the ratio thereafter fell. By 1998, 58 percent of the enterprises were owned by women (McPherson 1998).

Using Zambuko's classification of enterprises into five sectors, data on the sector distribution of loans reveal that most went to microentrepreneurs engaged in either manufacturing or trade (table IV-4). The 'other' category includes services, agriculture, and food preparation businesses, such as catering and restaurants. Agriculture accounts for most of the enterprises in the 'other' category. No more than one percent were involved in food preparation, largely due to government enforcement of regulations governing enterprises engaged in food preparation, and four to five percent were service based.

Table IV-4. Sector Distribution of Zambuko Loans by Geographic Location for Fiscal Years 1995/96 and 1996/97 (percentage)

Location	Fiscal Year 1996/97			Fiscal Year 1999		
	Manu-facturing	Trade	Other*	Manu-facturing	Trade	Other*
Harare Region	52	41	7	53	39	8
Bulawayo Region	36	39	25	37	43	20
Mutare Region	21	73	6	24	65	11
Gweru Region	46	29	25	36	44	20
Masvingo Region	22	55	23	24	51	25
Chinhoyi & Bindura	31	51	18	30	48	23
% of All Clients	41	45	14	39	46	15

Source: Zambuko Management Information System.
*'Other' consists of services, agriculture and food preparation.

Overall, the sector distribution of the enterprises varied only slightly in 1999 compared to 1996/97. The sector distribution of Zambuko clients in 1996/97 parallels the distribution of manufacturing and commerce in MSEs nationwide in 1998. The sector distribution of manufacturing, commercial and

service MSEs found in the Third Nationwide Survey in Zimbabwe was: 42 percent manufacturing, 45 percent trade, and 4 percent services, with the remaining in hotels, bars, restaurants, construction, transport, and renting out apartments, rooms and houses.

C. Reaching the Poor

To what extent does Zambuko reach microentrepreneurs from poor households? The information below includes different dimensions of poverty: household income levels, value of household assets, and daily per capita income related to purchase power parity. The analyses center on the similarities and differences between microentrepreneurs on their first Zambuko loan (new clients), those with more than one loan (repeat clients) and non-client microentrepreneurs at the time of the 1997 survey interview. It draws on the 691 interviews conducted in 1997. The data comparing new clients and non-clients permit an analysis of the extent to which Zambuko reaches microentrepreneurs from poor households.

1. Income and Assets

Estimates were obtained on the level of household income in the month prior to the survey to indicate the relative level of income across the comparison groups. These findings take into account cash income from all sources. Approximately two-thirds of the reported household monthly income was derived from microenterprise activities. A comparison of the AIMS 1997 data with findings from Zimbabwe's Third Nationwide Survey of micro and small enterprises conducted less than six months apart found that the enterprise revenue of new clients and non-clients was similar to the national average. The nationwide survey that included small enterprises as well as renting property, found average enterprise profits to be Z$25,027 per year, or Z$2,084 per month for all the households' enterprises. This is very similar to the monthly net revenue reported in the AIMS study by new clients and non-clients for their matched enterprise, Z$2,165 and Z$2,054 respectively. In comparison, the monthly net revenue averaged Z$3,698 in the matched enterprises of the repeat clients (Barnes and Keogh 1999).

The distribution of estimated monthly income shows that nearly half of the households of the new clients and non-clients compared with approximately one-fifth of the repeat client households had monthly income of less than Z$2,000. The results reveal that average per capita monthly income was lower among new client households (Z$798) than non-client households (Z$867), but significantly higher among repeat client households (Z$1,261).[20] The findings indicate that Zambuko attracts microentrepreneurs from lower income households.

To obtain an indicator of the household's poverty level, data were aggregated from three questions: estimates of the value of household consumer durables purchased in the past 24 months; the estimated value of other, selected appliances, electronic equipment and transport owned by the household; and the value of the fixed assets in all of the household's enterprises. The results reveal that on average new client households had a higher asset value level than non-clients, Z$14,052 compared to Z$9,919 respectively, but averaged Z$6,769 less than the repeat client households. Approximately half of the new clients and non-clients compared with one-quarter of the repeat

[20] The chi-square test was significant at the .03 level.

clients, had selected household assets with an estimated value of less than Z$5,000. When the averages for the three asset categories were analyzed separately, the findings reveal a large, significant difference between the repeat clients and the other comparison groups in the value of all the household's enterprise fixed assets. The average value was Z$8,006 for repeat clients but only Z$3,538 for new clients and Z$2,265 for non-clients (ibid.).[21]

2. Poverty Levels

An analysis was done to assess the poverty levels of the respondent households, based on global standards related to purchasing power parity.[22] This standard, used by the World Bank and others, refers to per capita household income equivalent to approximately US$1 per person, per day and US$2 per person, per day (World Bank 2000). The lower poverty line, referred to as US$1 a day poverty, is equivalent to the mean national poverty line of the ten low-income countries, while the US $2 a day poverty line matches average national poverty lines in lower middle income countries. The Bank's estimates are based on the latest available household surveys and on the International Comparison Project of the United Nations that estimate purchasing power parity in 1993 for 110 countries. Purchasing power parity adjusts the dollar values found through conversion from the local currency to US dollars at the prevailing exchange rate to reflect differences in price structure among countries. Annex 1 provides the formula used to calculate per capita income in Zimbabwe.

The income data for the month prior to the survey were used to estimate daily per capita income. Since respondents sometimes had difficulty reporting the income of other household members, the findings should be regarded as suggestive. The results reveal that a significantly greater proportion of repeat client households than new client and non-client households were above the US$2 a day poverty line. The households of clients on their first loan tended to be more like the non-clients rather than repeat clients (table IV-5). The findings suggest that microentrepreneurs from poor households access loans from Zambuko, and the majority of those who remain in the program are from poor households. Thus, the results indicate that Zambuko does reach and retain microentrepreneurs from poor households.

Table IV-5. Poverty Levels of 1997 Respondents' Households: Per Capita, Per Day Income 1997 (percentage)

	Repeat Clients N=148	New Client N-238	Non-clients N=290	Total N=676
Below US$1 a day	22	42	40	37
Between US$1 -$2 a day	33	28	37	33
Above US$2 a day	45	30	23	30

Note: Chi-square test significant at the .01 level. Excludes those with incomplete data.

[21] The chi-square test was significant at the .01 level.

[22] Regrettably, reliable data are not available on the distribution of poverty nationwide nor on poverty in urban Zimbabwe, which would help locate the sample within a larger context.

D. Joining Zambuko

How do microentrepreneurs learn about Zambuko's program, what is the decision making process, and what motivates them to apply for a loan from Zambuko? The information in this section is drawn from the case study research, the qualitative interviews conducted to inform the development of the survey questionnaire, and observations made in Greater Harare, Bulawayo and Mutare in 1996.

Microentrepreneurs usually learn informally about Zambuko from relatives and colleagues. In some cases, they may learn about Zambuko at a formal presentation. For example, at the suggestion of their loan officer, a cadre of clients that operate in the central market in Mutare organized and held an introductory presentation for fellow stall renters to encourage them to join. In the eight case studies that included information on how the participant learned about Zambuko, the respondents mentioned a friend or relative as their source of information (Box IV-2). Learning about Zambuko is the first step toward gathering more detailed information on the program's services and requirements.

Box IV-2. Examples of Learning About Zambuko

Mrs. Jimu learned about it from her uncle's wife, who had introduced her to selling doilies in South Africa and buying household goods for resale in Zimbabwe. Mrs. Sithole heard about the loan program from her sister who had heard about it from another Zimbabwean vendor in South Africa.

Prior to formally applying for a loan, potential applicants for individual and group-guaranteed loans attend a four to six hour training session that explains the process and requirements and provides some training on business management. Those seeking to join the Trust Bank program are required to attend 10 hours of training over an eight week period prior to receipt of their loan. The training focuses on loan requirements and general business management advice, such as how to calculate profits. After the training, the microentrepreneurs may decide that a loan is not appropriate for them.

All of the married female case study respondents said that they discussed the possibility of receiving a loan with their husband before they applied. Women tend to seek the permission or consent of their husbands to incur the debt since the husbands' assistance with repayment might be required (Box IV-3). This is discussed further in Chapter VI.

Box IV-3. Examples of the Decision-making Process

A Trust Bank participant, Mrs. Lepani, explained that at first her husband feared that if she took the loan and failed to repay it, they might lose their house to Zambuko. After lengthy discussions, they agreed that she should start by applying for a small amount which her husband could afford to repay if her plans did not succeed.

Mrs. Laizah, who received a group-guaranteed loan, said that prior to obtaining the loan she had to think through a business plan to decide how she would spend the funds and whether she would be able to repay the loan. Then she approached her husband, explained her plan, and sought his consent since incurring a debt would place the household at risk. Finally, she had to approach Zambuko and convince them of her commitment and the viability of her plan (Barnes 1997).

Loan applicants normally have a plan for the use of the funds they receive. For most the plan involves capitalizing their enterprise. In particular, they plan to purchase supplies and stock in bulk in order to improve their profit margins. This is often a means to achieving a higher-level objective (Box IV-4). The discussions with the case study participants reveal that the loans provide a lump sum of money that enable the microentrepreneurs to improve their profit margins, and often to expand or diversify their businesses. For the women, their higher-level objective is often related to a household rather than enterprise objective. The case studies of continuing clients reveal that these objectives may be achieved within a few years.

Box IV-4. Examples of Motivations For Obtaining Credit

Mrs. Lepani says the reason she first joined Zambuko was to get a lump sum that would enable her to buy inputs in bulk. This would help her meet orders from customers and expand her enterprise. She continues to be a client because her plans had not been entirely fulfilled by 1999, and she does not have enough savings to achieve them on her own. For example, she wants to buy a decor-sewing machine. However, since late 1998 a number of financial difficulties due to the death of extended family members and an accident that hospitalized her husband and daughter depleted her savings and enterprise inputs. She used her latest loan to revitalized her enterprise.

Mr. Murgani was motivated to join Zambuko in mid-1996 because he wanted to purchase more equipment and supplies to facilitate expansion of his photography business. He wanted to borrow money where the interest rates were not as high as those charged by moneylenders. He had tried to secure credit through banks and other non-governmental organizations but had failed. Securing a loan from Zambuko was a breakthrough, although the loan size continues to be less than he wants due to limitations informally imposed by other group members. Nevertheless, he continues to be a Zambuko client.

E. Discussion and Conclusions

The distribution of clients' enterprise sector mirrors the sector distribution of MSEs nationwide, indicating that no barriers or preferences are apparent based on enterprise sector. Zambuko's concentration on women, however, no longer reflects the national distribution of enterprise ownership: in 1999, 78 percent of Zambuko's clients were women, whereas nationwide women owned only 58 percent of the MSEs. Zambuko's emphasis on women microentrepreneurs is justified on the basis of repayment performance, as well as other gender considerations (Mayoux 1998). The main difference appears to be that those who remain in Zambuko's program tend to have a higher monthly net revenue from their matched enterprise in comparison to the net revenue from all household enterprises covered in the nationwide survey

The findings related to the poverty level of client households indicate that Zambuko reaches the poor. Indeed, new client households averaged a lower level of income than non-client households and approximately the same percentage of both groups were below the US$1 a day poverty line. Also, the average value of the fixed assets in all of the household's enterprises was similar for clients

and non-clients. These findings support the conclusion that Zambuko reaches microentrepreneurs from poor households.

Repeat clients tended to be significantly different from the new clients and non-clients on the poverty measures. Because data are not available on the repeat clients prior to their joining Zambuko, one cannot conclude that program participation led to repeat clients differing significantly from the others. They may have been better-off when they joined Zambuko than those in the new client comparison group. The results in Chapter VI suggest that length of time in the program is positively related to higher levels of net revenue in matched enterprises and higher levels of expenditure on assets. Therefore, the information on repeat clients may be the result of participation in Zambuko's program.

The importance of the AIMS findings lies in establishing that the majority of repeat as well as new clients are poor, according to the global poverty level standards. Overall, the vast majority of clients were below the US$2 a day poverty line. The results suggest that one-third of Zambuko's clients belonged to extremely poor households and one-third were from households that are moderately poor. Chapters V and VI further address the issue of poverty and program participation.

V. MICROENTREPRENEURS, THEIR HOUSEHOLDS AND FINANCIAL MANAGEMENT

During the assessment period, Zimbabwe microentrepreneurs and their households operated in an environment with a relatively high rate of inflation and a high HIV prevalence rate. The reader may recall that the annual inflation rate was 32 percent in 1998 and it rose to 70 percent the following year, and that approximately one-fourth of those aged 15 to 45 were estimated to be infected by HIV/AIDS.

This chapter describes the entrepreneurs and households covered in the assessment. It centers on changes and continuity in the respondent households, with particular attention to household composition, housing, and income sources and levels. Then the extent to which households have been affected by illness and death inside and outside their household is addressed. It also analyzes the poverty levels of the respondents' households and reasons for changes in poverty status between 1997 and 1999. Next the chapter focuses on the role of credit within the household's financial portfolio. Attention is given to loans obtained from Zambuko: whether or not clients took additional loans after the 1997 survey, the influence of the enterprise sector upon loans taken, the relative size of loans to enterprise net revenue and household income, and loan use. Other sources of credit and informal borrowing are also discussed. The chapter concludes with examples of the ways clients and their households cope with inflation.

A. Continuity and Change in the Household

This section sets forth the context and situation of respondents' households during the assessment period. The decision-making process related to whether or not to take additional loans from Zambuko, and how loan funds and enterprise profits are used plays out within this larger household context. Furthermore, key factors within the household are likely to mediate the impact of participation in Zambuko's microfinance program.

Household composition is important because the human resource base of a household both contributes to and makes demands upon a household's economic resources. Since housing is both an important asset and an indicator of the stability of the household, information is presented on housing tenure. Attention is then given to illness and death since they may affect the household's economic activities and demands on resources. Next, household income sources are analyzed. Households may earn income in a variety of ways, and some types yield a more steady flow than others. The importance of enterprise net revenue and wage income are assessed in terms of total household income.

1. Household Composition

The respondents were on average 41 years old in 1999 with seven to eight years of education. The marital status of most respondents remained the same between 1997 and 1999: more than two-thirds were married and remained that way. When there was a change in marital status, it tended to reflect a change from being married to being single, widowed, separated or divorced. In comparison, only four percent of the respondents who were unmarried in 1997 were married at the time of the 1999 survey. Overall, 32 percent of the 1999 respondents were not married, that is they

were widowed, separated, divorced or single, compared to 26 percent in 1997. Six percent of the respondents had become widowed since 1997 (A2, tables 1-4).

Even when the respondents' marital status remained constant, their households were likely to undergo a change in size between 1997 and 1999. By 1999, one-third of the households were smaller and 38 percent were larger, while one-third remained the same size. In 1997 the average household size was significantly higher for continuing clients and departing clients compared to non-clients: 5.8, 5.7 and 5.3 respectively. In 1999 the departing client households averaged six members and were significantly larger than those of non-clients (table V-1).

In 1999 compared to 1997, the tendency was for a larger proportion of total household members to be economically inactive. As indicated in table V-1, the average economic dependency ratio was higher in client than non-client households in both 1997 and 1999. An analysis of the trend in the proportion of economically dependent members to total number of members in each household reveals that in more than three-fourths of the households the economic dependency ratio had changed. In 48 percent of the households the dependency ratio had increased, and in 33 percent of the households the ratio had decreased. The tendency toward having a higher economic dependency ratio partially reflects economically inactive individuals joining the respondents' households during the study period (A2, tables 5-6).

Table V-1. Average Household Size and Economic Dependency Ratio, 1997 and 1999

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241
Average Number of Household Members, 1997*	5.8	5.7	5.3
Average Number of Household Members, 1999**	5.8	6.0	5.4
Average % of Household Members Not Economically Active, 1997	60	59	57
Average % of Household Members Not Economically Active, 1999	62	62	58

* Significant differences in 1997 between continuing clients and non-clients (p=.04), and between departing clients and non-clients (p=.08).
** Significant difference between departing clients and non-clients (p=.01).

In 1999 nearly half of the client and non-client households had a new household member, defined as an individual who joined in the last 24 months and stayed for more than six months (A2, table 7). Those with new members tended to have one to two new members. The most frequently cited reason for someone joining the household was that the new member was looking for employment. The second most common reason was the birth of a new household member. Among those households with new members, approximately 10 percent reported children joining the household due to the death or illness of one or more of their parents, and 10 percent said a sick person came to live with them. A much smaller proportion of households had an adult with possibly one or more accompanying children joining them due to a death in the previous household, or they had someone coming to care for a sick person (A2, tables 8-10). In general, 12 percent of the respondent households took in a new member due to illness or death.

In summary, most of the respondents did not undergo a change in marital status during the assessment period. However, two-thirds of them experienced a change in the size of their household and the average number of household members increased among the departing clients. The tendency was toward having a larger proportion of household members who were not economically active. In general, the economic dependency ratio increased in each of the three comparison groups. Almost half of the households gained a new household member, usually someone looking for work or a new infant born to a household member. A number of households had also gained a new member due to illness or death in the person's household. Overall, these new members did not drastically increase the mean size of households, probably due to adult children moving out of the household. The changes in household size and dependency ratio are also likely to reflect death of a household member, a topic discussed below.

2. Housing Tenure

Zimbabweans place a high value on home ownership. After independence, individuals living in city council-owned houses and apartments were able to purchase the place where they resided, usually under a rent-to-buy arrangement that does not involve a mortgage. Ownership of these residences is less a reflection of income than being well situated to take advantage of the change in housing tenure. In addition, new high-density suburbs sprang up to meet the demand for housing. Nevertheless, the demand for affordable housing still exceeds the supply, so renting is common. A household may rent a room in a house or a room in a separate unit adjacent to the main house. A room in a separate rental unit normally is wired to provide light, but does not have electrical outlets; the household normally shares access to a bathroom and a water facet. In the sites covered by the survey, virtually all main houses have electricity, indoor piped water and toilet facilities, and almost all are situated on a paved road.

Approximately 80 percent of the respondent households resided at the same place in 1999 as they did in 1997. In 1999 nearly two-thirds of the continuing clients compared to 64 percent of the departing clients and 54 percent of the non-clients lived in a residence that their household either owned or were purchasing. This represented a small increase among the households of continuing and departing clients, but not non-clients (table V-2 and A2, tables 11-12).

Table V-2. Housing Tenure, 1997 and 1999 (percentage)

	Continuing Clients N=154	Departing Clients N=182	Non-clients N=240
1997 Own or Rent-to-buy	65	56	54
1999 Own or Rent-to-buy	68	64	54

Among those whose households neither owned nor were renting-to-buy in 1997, a larger proportion of client than non-client households had gained a more secure tenure status by 1999: nearly one-fourth of the continuing clients and departing clients compared to 16 percent of the non-clients. Moreover, among those households that owned or were renting-to-buy their residence in 1997, a smaller proportion of the continuing clients and departing clients than non-clients moved into a place with less secure tenure, such as a rental unit (table V-3). The difference in the tenure status between

the households of departing clients and non-clients was significant (p=.04), with a greater proportion of the non-client households moving to a less secure tenure status.

Table V-3. Controlling for Housing Tenure in 1997, Comparison of Changes Between Clients and Non-clients (percentage)

	Continuing Clients	Departing Clients	Non-clients
Not Owned or Rent-to-buy in 1997	**N=53**	**N=80**	**N=110**
In 1999, Owned or Rent-to-buy	23	25	16
Owned or Rent-to-buy in 1997	**N=99**	**N=96**	**N=112**
In 1999 Other Tenure Status*	8	6	14

*Significant difference between departing clients and non-clients (p=.04).

3. Illness and Death

Illness and death are of particular concern given the HIV/AIDS epidemic in Zimbabwe. Because of Zimbabweans' reluctance to speak of HIV/AIDS among friends and family, the assessment did not directly address the topic. However, a number of additional questions in 1999 indirectly sought to better understand the prevalence of illness and death in respondent households.[23] The question on financial shocks that was asked in both 1997 and 1999 elicited responses about illness and death of household and non-household members. The case studies provide examples of illness and death affecting the respondents' households, and these are presented in Chapter VI illustrating ways households cope with these events. The impact of HIV/AIDS, however, differs from other causes since its occurrence in an adult implies that a spouse as well as young offspring are likely to become infected.

The survey findings reveal that in 1999 illness and death inside and outside their households tended to affect departing clients and non-clients more than continuing clients. That year a slightly smaller proportion of continuing clients (64 percent) than departing clients (73 percent) and non-clients (70 percent) reported one or more financial crises due to illness or death inside or outside their household the past 24 months, having a chronically ill household member, or taking in at least one new household member due to illness or death (A2, table 13).

A relatively high proportion of respondents reported on a financial crisis due to illness and death of a household member in the past 24 months. The rate reporting a financial shock associated with serious illness of a household member varied slightly between 1997 and 1999. In comparison, the proportion of households with death of a household member causing a financial crisis was lower in 1999 than 1997 (table V-4). It may be incorrect to conclude, however, that these events actually occurred less. As a current client explained; "illness and death are so common - they are part and

[23] These were carefully selected among indicators used by the World Bank and others in surveys to identify the incidence of HIV/AIDS.

parcel of everyday."[24] Thus, the respondents may have begun to think of them as recurring events, rather than unexpected shocks (Wright et al. 2000).

Table V-4. Percentage of Households with Financial Crises in the Past 24 Months Due to Serious Illness and Death of Household Member, 1997 and 1999*

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241	Total N=579
1997				
Serious Illness/Injury Household Member	28	29	24	27
Death of Household Member	21	25	22	23
1999				
Serious Illness/Injury Household Member	22	24	26	24
Death of Household Member	15	15	12	14

Death of a spouse is a major financial as well as emotional shock. The rate of widowhood increased slightly more among the departing clients than the other comparison groups. Eight percent of the departing clients, compared with five percent of the continuing clients and four percent of the non-clients, had become widowed between 1997 and 1999. Overall, 16 percent of the 1999 respondents were widows or widowers: six percent had become widowed since 1997 and 10 percent were widowed in 1997 and had not remarried by the time of the 1999 interview.[25]

To complement the data on financial shocks due to serious illness of a household member, in 1999 respondents were asked if they had a household member who was been chronically ill and unable to work in the last six months. A significantly greater proportion of departing clients than continuing clients and non-clients reported in the affirmative: 13 percent of the departing clients, compared with five percent of the continuing clients and eight percent of the non-clients. Also, a specific question was asked about lack of seeking medical assistance due to financial reasons.

Overall 13 percent of the respondents reported that a household member needed but did not receive medical treatment in the six months prior to the 1999 interview due to lack of funds. A slightly greater proportion of departing clients than the other comparison groups reported being unable to meet medical needs: 15 percent of the departing clients compared with 10 percent of the continuing clients and 12 percent of the non-clients. Further analysis revealed that those with a chronically ill member were more likely than other households not to have sought medical treatment due to a lack of funds: 38 percent compared to 10 percent respectively. (A2, tables 14-16).

[24] This was stated by a man attending a focus group session for a randomly selected sample of current clients in Mbare branch, Harare, January 9, 2001. The other 13 clients in the session agreed with his comment (Barnes 2001).

[25] In a longitudinal impact assessment conducted in Uganda, which also has a high HIV prevalence rate, 16 percent of the respondents were widows or widowers in 1999, up from 6 percent in 1997 (Barnes, Gaile and Kibombo 2001).

Box V-1. Chronically Ill Household Member

At the time of the survey in 1997, Ms. Mlanga reported she had paid hospital bills and bought medicine for her sister's child who was seriously ill for approximately six months. Subsequently she met the funeral expenses. During this financial crisis she coped by cutting down on expenditures for food and household supplies. In late 1998 she paid for her sister's hospital admission fees. Thereafter, the widowed sister came to live with Ms. Mlanga since her in-laws sent her away when they took over her deceased husband's property and care of her remaining children. Evidence suggests that the sister is HIV-infected. The sister, who is financially dependent on Ms Mlanga, helps by looking after her nephew when his mother works.

Besides illness and death of a member, households are often affected by the illness and death of an individual outside of their immediate household, such as a son, daughter, siblings or parents. These events may create a financial shock when the household takes responsibility to provide cash or goods to assist those in need. Illness and death outside the household also may involve household members taking time away from income generating activities to visit or care for the sick or to attend funerals.

Box V-2. Death of Non-household Members

From the time of the survey in 1997 to completion of the first case study interviews in late 1998, five close relatives of Mrs. Tatira had died. This led to her household spending money unexpectedly to help with funeral expenses. The money came from her husband's savings and her enterprise revenue. The latter combined with working less in her enterprise due to traveling to attend the funerals caused her to draw down on her savings to pay her loan installments.

Another way households assist others affected by illness and death is by absorbing someone in need. Among all respondent households, 12 percent reported that children joined the household due to death or illness of one or more parents, a sick person came to live with them, or an adult with possibly one or more accompanying children joined their household due to a death in their previous household. Chapter VI assesses ways households have coped with illness and death, and provides examples of coping behaviors from the case studies.

4. Sources of Income

A household may earn income in a variety of ways: microenterprises, salaried or wage employment,[26] rental property, casual labor, and remittances. Its total income may be spread across

[26] Although there is a difference between wage and salaried employment, with the latter carrying benefits, the survey did not try to distinguish between these two forms of employment. Herein the term wage employment is used to refer to both wage and salaried employment.

a number of activities or be largely dependent upon one source. Wage employment and rental income may provide a steady stream of income. In contrast, the flow of income from microenterprises usually fluctuates within a month, with the highest volume of sales occurring in the week after payday for wage earners, and from month to month. For most Zimbabwean microentrepreneurs, November and December tend to be their high sales months due to increased purchases made for Christmas and New Year celebrations. Because of the holiday expenditures and education expenses in January, the first two months of the calendar year tend to be low sales months for most microentrepreneurs. May and June are the best months for those entrepreneurs who sell sweaters and bedcovers.

Enterprises. Approximately 80 percent of the matched enterprises from the 1997 survey were still in existence and owned by a household member in 1999. In nearly every case, ownership had not changed to another household member. In a few instances the enterprise had been transferred to a non-household member; these are treated as permanently closed in relation to the respondent's household. The majority of the businesses that had closed ceased operation in 1998. The most common reason given for closure of the matched enterprise was "too little profit." A small proportion (15 percent) of the closed enterprises ceased operation due to the illness or death of the 1997 respondent (A2, tables 17-20).

Approximately one-fifth of all respondent households had added a new enterprise since 1997. The tendency was greater among the households of departing clients than the other groups (A2 tables 21-25). The addition of a new enterprise could be accompanied by closure of another, less profitable business. The tendency across the respondent groups was toward fewer rather than more household enterprises in 1999 (table V-5 and A26, tables 21-26). In both 1997 and 1999, continuing clients averaged a significantly larger number of enterprises than did the non-clients, but the net change between the two periods did not differ significantly.

Table V-5. Average Number of Enterprises Owned by the Household, 1997 and 1999

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241
1997*	1.34	1.28	1.22
1999**	1.29	1.22	1.16
Net change	-0.05	-0.15	-0.06

*Significant difference between continuing clients and non-clients (p= 0.06).
**Significant difference between continuing clients and non-clients (p=.07).

Other Sources. Wage income may provide a steady flow of income for the household. Approximately one-third of each comparison group had at least one fulltime wage earner in both 1997 and 1999. The loss of a source of regular wage income between 1997 and 1999 was greater among the continuing clients than the other groups: 21 percent for continuing clients, 11 percent for departing clients and 13 percent for non-clients. In contrast, the proportion of households that had acquired a source of wage income since 1997 was similar across the comparison groups: 12 percent (table V-6).

Table V-6. Households with Wage Earners, 1997 and 1999

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241
Proportion of Households With Wage Earners			
No Wage Earners in 1997 and 1999	32	39	42
At Least 1 Both Years	35	38	33
At Least 1 in 1997, None 1999	21	11	13
At Least 1 in 1999, None 1997	12	12	12
Average Number Wage Earners			
1997 Average	.71	.57	.55
1999 Average	.56	.64	.52
Net Change *	-.15	.07	-.03

*Significant difference between continuing clients and non-clients (p=.10) and between continuing clients and departing clients (p=.01), with the others doing better than the continuing clients.

In 1997 the continuing clients averaged a higher number of wage earners than the departing clients and non-clients (table V-6). By 1999 the average was highest among the departing clients. The difference in the change between the two years was significantly lower for the continuing clients than the other groups: -.15 for continuing clients compared to +.07 for departing clients and -.03 for non-clients.

Renting out rooms in the residence or a separate rental unit is a common way to earn income. In both 1997 and 1999 nearly 40 percent of the respondents' households received income from rent. Households might also receive cash remittances or gifts, but the findings indicate that this was not a common source of income. Less than 10 percent of the households reported receiving remittances or gifts the month prior to the 1999 survey. This represented a 14 percent decrease since 1997 (A2, table 27).

Relative Contributions to Household Income. Respondents' households normally relied on more than one source of income. Yet, enterprise income tended to be the household's main source of income in both 1997 and 1999. In 1997 approximately 70 percent of the total monthly income was derived from household-owned enterprises, and the rate decreased to 56 percent in 1999. The pattern was the same among the comparison groups (table V-7). Related to this, the proportion of wage income to total income increased slightly between 1997 and 1999.

An additional analysis was undertaken to determine the proportion of each comparison group whose household livelihood was exclusively dependent on their enterprises. In 1997 for more than one-third the households, their enterprise revenue accounted for 95 percent or more of all household income in the month prior to the interview: 30 percent of the continuing clients, 40 percent of the departing clients and 42 percent of the non-clients. The proportion of households exclusively dependent on their enterprises for their livelihood declined by 1999. That year the proportion totally reliant on their enterprises was similar across the comparison groups: 20 percent of the continuing households, 21 percent of the departing client households, and 27 percent of the non-client households (A2, table 28).

Table V-7. Ratio of Enterprise Net Revenue and Wages To Total Household Income

	Continuing Clients N=120	Departing Clients N=141	Non-clients N=190
Av. % of Enterprise Net Revenue to Total Household Income, 1997	68	71	69
Av. % of Enterprise Net Revenue to Total Household Income, 1999	57	55	56
Av. % of Wage Income to Total Household Income, 1997	20	17	19
% of Wage Income to Total Household Income, 1999	25	22	25

Note: Includes only those with complete information on income.

The results suggest greater diversification of household income sources in 1999 than 1997. This is examined more thoroughly in Chapter VI. The findings above highlight the relative importance of income from microenterprises to the household economy. In general, enterprise revenues decreased in importance to total household income during the assessment period. However, nearly one-fifth of the households were entirely dependent on their enterprises for their livelihood in 1999.

5. Household Poverty Levels

This section discusses the distribution of respondent households according to their level of poverty. First, the households were classified on the basis of income poverty following global standards related to purchasing power parity, following the same procedure that was discussed in Chapter IV. Due to exclusion of households with missing values, one-fifth of the respondent households were not covered by the analysis. Second, to obtain an estimate of household poverty level for the entire sample, a new classification approach was employed. Thereafter, changes in poverty status between 1997 and 1999 were analyzed.

Per Capita Poverty Levels. An analysis was done to estimate the poverty levels of respondent households in both 1997 and 1999. Based on the calculations provided in Annex 1.A, Zimbabwe per capita, per day income was transformed into US$1 and US$2 a day poverty lines. The analyses of respondent households excluded those with missing values either year. The findings reveal that the majority of respondents' households were below the US$2 a day poverty line, signifying that most were poor. In 1997 a significantly smaller proportion of continuing clients than departing clients and non-clients were below the US$1 a day poverty line (p=.01). In 1997 approximately one-third of the continuing client and departing client households compared to nearly one-fifth of the non-client households were above the US$2 a day poverty line (table V-8). That year non-clients were significantly more likely than the departing clients to be above the US$2 a day poverty line (p=.01). Also, continuing clients were significantly more likely than the departing clients to be above the US$2 a day poverty line (p=.08). In 1999 the differences between the comparison groups were not statistically significant. Roughly one third were below the US$1 a day poverty line and nearly one-third were above the US$2 a day poverty line.

Table V-8. Per Capita Poverty Levels of Households, 1997 and 1999 (percentage)

Per capital	Continuing Clients N=120	Departing Clients N=141	Non-clients N=190
1997			
Below US$1 a day*	24	41	40
Between US$1 -$2 a day**	43	36	23
Above US$2***	33	23	37
1999			
Below US$1 a day	32	32	36
Between US$1-$2 a day	41	35	39
Above US$2	27	33	25

*Significant differences between continuing clients and non-clients (p=.01), and continuing clients and departing clients (p=.01)

**Significant difference between departing clients and non-clients (p=.02).

***Significant differences between departing clients and non-clients (p=.01), and between continuing clients and departing clients (p=.08).

Reclassification. Since the income information was incomplete on a number of households, an analysis was done to enable the analyst to classify all of the 579 respondent households on the basis of poverty. This exercise involved developing a model to predict factors associated with three levels of poverty, as explained in Annex 1.B. The new poverty classification followed the same method used for the US$1 and US$2 a day poverty analysis to classify households into three poverty groups and then took into account the household's size, asset base, expenditures on assets and frequency of consumption of meat/chicken/fish, eggs and dried fish. Those households with incomplete income data were classified into one of the poverty categories based on their predicted category status with incomplete information plus consideration of the other factors. Then these categories were used to a) analyze movement in and out of poverty between 1997 and 1999, b) analyze specific changes among households that were extremely poor in 1999 based on their participation status, and c) determine if the 1997 poverty level influenced the 1999 results on key impact variables. The results of the first analysis appear below in table V-9. The others are presented in the next chapter and the statistical results are provided in Annex 3.

Table V-9. Estimates of Poverty Levels of All Respondents' Households, 1997 and 1999 (percentage)

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241	Total N=579
1997				
Extremely Poor	25	41	40	36
Moderately Poor	39	30	43	38
Not Poor	36	29	17	26
1999				
Extremely Poor	23	24	33	27
Moderately Poor	37	40	30	32
Not Poor	40	36	37	42

Changes in Poverty Status. Based on the categorization of households as shown in table V-9, an analysis was done to determine factors associated with changes in the poverty status of the respondents' households. A logistic regression approach was used to account for movements of respondents between the poverty categories during the two periods. The results indicate that half of the respondent households had changed their poverty status and that movement to another category was mainly related to factors associated with household size and economic dependency levels.

Among those who were extremely poor in 1997, two years later more than half had moved out of extreme poverty, and were moderately poor or not poor by 1999. Among those who were extremely poor in 1997, 49 percent of the continuing clients, 64 percent of the departing clients and 51 percent of the non-clients had improved their status. The difference between the departing clients and non-clients was significant (p=.09). Movement out of poverty was related to the following:

- decreasing household size,
- increasing number of income sources,
- decreasing economic dependency ratio, and
- increasing number of economically active household members.

Between 1997 and 1999, 11 percent of the non-poor households became either moderately poor or extremely poor. Among those who were not poor in 1997, 43 percent of the continuing clients, 48 percent of the departing clients and 31 percent of the non-clients had fallen into poverty by 1999. The difference between the departing clients and non-clients was significant (p=.09). The common factors associated with movement into poverty were:

- increasing household size,
- decreasing number of household income sources,
- increasing economic dependency ratio, and
- decreasing/same proportion of household income from enterprise revenue.

Attention was given the poverty level of households that took in a sick person or an individual with illness or death in their previous household. The 1997 poverty level of the household was not significantly related to whether or not the household had absorbed such a person. However, the 1999 poverty level of the household was significantly associated with taking in a member due to illness or death. Interestingly, 16 percent of the moderately poor compared to nine percent of the extremely poor and nine percent of the non-poor had taken in a person. This result may reflect the newcomer being economically active and increasing the number of income sources in the household, and departure of other household members. Therefore, the results do *not* indicate that the non-poor were more likely than the poor to take in individuals due to illness or death. Nor do the results suggest that absorption of a person due to illness or death tended to have a negative impact on the poverty level of the household.

In general, household size tended to be higher among the poor than non-poor in 1997; and, by 1999 the size increased for the poor households but decreased for the non-poor. Households that moved out of extreme poverty tended to be significantly smaller than those that remained in extreme poverty: 5.8 compared with 6.4 respectively (p=.07). Similarly, households that moved into poverty had significantly more members in 1999 than those who remained non-poor: 5.3 compared to 5.0

respectively (p=.08). The results are as anticipated since per capita daily income was used to define poverty levels.

In summary, the results suggest that household poverty, largely defined by U.S. dollar per capita, per day income, is closely associated with the number of household members, the household's economic dependency ratio, and the number of household income sources. In addition, falling into poverty appears to be associated with not having increased the proportion of household income from enterprise revenue. This suggests that an increase in the ratio of household income from enterprises is positively associated with staying out of poverty. Significantly more continuing clients and departing clients than non-clients fell into poverty during the assessment period. The reasons are appear to be associated with changes in their households rather than microcredit per se.

Household size and structure were found to strongly influence whether or not a household moves out of poverty, when poverty is defined primarily by U.S. dollar per capita, per day income, linked to purchasing power parity. This influence seems to weaken the potential of microfinance programs to propel households out of poverty.

B. Financial Services and Financial Management

Zambuko loans present the opportunity to invest a lump sum of money but they also represent taking a risk. This section focuses on the role of loans in the household economy. It examines the average amount of money borrowed from Zambuko and then considers the loan amounts in relation to key factors in the enterprise and the household economy. Zambuko loans are also analyzed in regard to their uses and enterprise sectors. Reasons for not continuing in the program are also discussed. Then, other forms of borrowing are analyzed. The chapter ends with illustrations from the case studies on approaches used to cope with inflation.

1. Zambuko Loan Amounts

The cumulative sum of all loans since joining Zambuko's program averaged Z$10,052 for continuing clients, that is those who had taken one or more loans since 1997. For those who had not taken another loan since 1997, referred to as departing clients, the cumulative amount borrowed averaged Z$2,921.[27] Departing clients had averaged 1.5 loans: nearly two-thirds of them had taken only one loan and 27 percent had taken two loans prior to the 1997 interview. In contrast, continuing clients averaged three loans: 40 percent had taken two loans and 60 percent had taken three or more loans from Zambuko by the time of the 1999 interview. When taking into account both the 1997 and 1999 participation status of the client sample, repeat continuing clients averaged 3.8 loans while both the new continuing clients and repeat departing client groups averaged 2.3 loans. The new departing clients had taken only one loan from Zambuko (A2, tables 29-30).

[27] The amount borrowed by departing clients was equivalent to approximately US$245 in 1997 and the average amount borrowed by continuing clients was equivalent to less than US$650 at the time they took their loans.

There was no difference between those who stayed in Zambuko's program and those who departed in terms of the sector of their main enterprise.[28] Slightly more than half of each group had an enterprise in the manufacturing sector (table V-10). Most of these enterprises centered on knitting, sewing and crocheting items for sale. Nearly all of the other enterprises were engaged in trade, most commonly the sale of food, such as fruits, vegetables, and commercially prepared food and snack items. In the 'other' sector, the enterprises were engaged in services, agriculture (livestock trade, poultry rearing and gardening) and food preparation (restaurants, catering and bakeries).

Table V-10. Zambuko Loans and Matched Enterprise Sector

	Continuing Clients N=155	Departing Clients N=183
Sector Distribution (percentage)		
Manufacturing	51	54
Trade	43	38
Other	6	8
Average Number of Loans		
Manufacturing	3.0	1.5
Trade	2.9	1.3
Other	2.5	1.9
Average Sum of All Loans (Z$)		
Manufacturing	9,586	2,802
Trade	10,353	2,734
Other	11,750	4,707
Sum of All Loans As % of 1999 Matched Enterprise Asset Values		
Manufacturing	386	721
Trade	3,842	2,115
Other	504	563

The results do not suggest that the number of loans and loan amounts differed greatly by enterprise sector. Among the continuing clients, the average number of loans tended to be lower among those in the 'other' sector than in manufacturing and trade, although the amount borrowed tended to be greater. In comparison, departing clients with enterprises in the 'other' sector averaged a higher number of loans and higher loan amount that those in trading and manufacturing. The average number of loans and average total loan amount varied little between those with enterprises in the manufacturing and trading sectors.

Loan Size Relative to Household Economic Portfolio. For both client groups, the average size of the most recent Zambuko loan in 1997 was substantially higher than the average value of the enterprise's fixed assets in 1999. As table V-10 indicates, in the manufacturing sector the amount borrowed was nearly four times the nominal value of fixed assets in continuing clients' enterprises and more than seven times the value of the fixed assets in the departing clients' enterprises. The

[28] When the enterprise included activities in more than one sector, the activity that generated the most revenue the last two months was used for the sector classification.

loan values were even greater when compared to the fixed assets of trading enterprises. The findings indicate the very low level of fixed capital in the enterprises.

An analysis was carried out comparing the value of the recent loan received to the value of the monthly net revenue of the matched enterprise, the monthly net revenue of all the household's enterprises, and the monthly household income from all sources. In 1997, the average size of the loan was equivalent to 22 percent of continuing clients' matched enterprise net revenue and 24 percent of the departing clients' matched enterprise net revenue. When considering the loan in relation to the monthly net revenue from all the household's enterprises, it accounted for 18 percent among the continuing clients and 19 percent among the departing clients. The amount borrowed tended to be relatively small compared to total household income the month prior to the interview. Loans were equivalent to 10 percent of the continuing clients monthly household income and 12 percent of the monthly household income of departing clients (A2, table 31).

In summary, no discernable differences were found between the continuing clients and departing clients on the basis of enterprise sector. Also, within each sub-client group, little variation was found between sectors. The results reveal that the loan amounts are much larger than the value of the enterprise fixed assets. The magnitude of the findings is probably influenced by the analysis of the asset data in nominal values. Nevertheless, the results underscore the generally low level of fixed assets in the enterprises for which the loans were obtained. The low level is related to most entrepreneurs using their home as their base of operation, as discussed in Chapter VI, and the low capital-intensive manufacturing activities. The size of the loan is relatively small related to the total household income, but equivalent to nearly one-quarter of the monthly net revenue of the matched enterprise. Hence, the findings suggest that the ratio of microcredit debt to monthly household income is relatively small.

2. Use of Zambuko Loans

Zambuko expects that the loans offered to microentrepreneurs will be used in the designated enterprise. In each interview, clients were asked to specify how they used their most recent Zambuko loan funds. The question took into account that the funds might be allocated across a number of uses. The analysis was done for all clients and their loan uses recorded in 1997 and then on those who had taken at least one loan since then.

The responses were classified into three categories 1) exclusively for an enterprise, 2) enterprise plus savings, and 3) inside and outside the enterprise. 'Exclusively for the enterprise' includes expenditures on inputs and supplies, fixed assets, wages, and other items solely related to an enterprise. When loan funds were spent on the enterprise and household rent, food, health or education, the responses were classified as 'inside and outside the enterprise.' Respondents sometimes mentioned saving a portion of the money borrowed, and these instances were classified separately, since it was not clear how the savings would be used. Often clients save a portion of their loan to make their first loan installment, but the savings might also be used for non-enterprise expenditures.

The findings on the 1997 loan uses reveal that only two clients reported using the entire amount on household-related expenditures. The majority (57 percent) used the loan for their enterprise, one-fourth used the funds for both their enterprise and savings, and 17 percent used the funds both inside

and outside the enterprise. The difference between continuing clients and departing clients on loan use was significant. A higher proportion of the departing clients (31 percent) than continuing clients (20 percent) reported that they used the loan for both the enterprise and savings (A2, table 32).[29]

Another analysis was undertaken to determine the relationship between loan use and repayment of the loan on time, that is payment of all interest and principle by the final due date. The results based on the 1997 loan reveal that timely repayment was not significantly related to the use of some of the loan funds outside the enterprise.[30] Nevertheless, repayment problems were more noticeable among those who reported allocating loan funds for the enterprise and savings (46 percent), compared to those using the funds inside and outside the enterprise (39 percent) and those expending the entire loan on their enterprise (20 percent) (A2, table 33). Continuing clients were significantly more likely than departing clients to have paid off their 1997 loan on time irrespective of how the funds were allocated. The differences between the two groups were significant irrespective of the loan use category.[31]

An analysis was also done for the last loan taken by continuing clients: 58 percent reported that they used the funds only for enterprise related expenditures, while 14 percent used it for both the enterprise and savings, and 28 percent used it outside and inside the enterprise. Payment of their last loan on time was not significantly influenced by the loan use category. Those who had used their loans for their enterprise and savings, however, were slightly more likely to have repaid the loan on time, compared to those who used it only for the enterprise or inside and outside the enterprise (A2, tables 33-34). The findings suggest a sufficient cash flow in the households to cover loan repayment, irrespective of loan use.

In 1999, approximately half of the continuing clients reported that if they had not received their last loan from Zambuko they would not have made such expenditures. Their response indicates that Zambuko loans did not substitute for other sources of funding. In comparison, nearly one-fifth of the continuing clients said that they would have used their savings for those expenditures and one-quarter reported that they would have borrowed elsewhere (A2, table 35). In the 1997 survey, 60 percent of the clients reported that they would not have made the expenditure if they had not accessed Zambuko loan funds, 17 percent said that they would have used their savings, and 14 percent reported that they would have borrowed funds from another source (Barnes and Keogh 1999).

3. Reasons for Leaving Zambuko's Program

The survey did not collect information on why individuals stopped taking loans from Zambuko. However, reasons for leaving the program were gathered during focus group sessions with a sample of client respondents from the survey and a sample of microentrepreneurs from Harare, Chitungwiza, Mutare and Bulawayo who received loans in the year 2000. Also, insight on

[29] The difference was significant at the .08 level.

[30] Data on whether or not the loan principal and interest were repaid in full by the final due date were obtained from Zambuko files.

[31] The difference between the two client groups on use of the loan on enterprise and savings is significant at the .08 level, whereas the other differences are significant at the .01 level.

reasons for leaving the program were gained from three of the case study respondents who were no longer taking loans in 1999. It should be noted that unlike some microfinance programs, Zambuko does not consider a microentrepreneur who is 'resting' between loans to be a program client.

The focus group discussions revealed that the most common reasons why individuals drop out of Zambuko's program are failure to repay their loan and difficulties making their monthly loan installments. For example, a Chitungwiza participant explained that her loan co-guarantee group rejected three members who wanted to get another loan because they had experienced difficulties meeting their loan installments on time. If the difficulties with loan installment payments were associated with illness or death, the affected members are normally allow to remain in the group for the next loan cycle.

Faced with caring for the sick, clients may not seek to take another loan, even if they were able to pay their previous loan installments on time. For example, one survey client from Harare explained that she stopped borrowing because her son was very ill due to AIDS and required her attention. Another from Bulawayo said that she dropped out of Zambuko because she had to take care of her son and then an ill son-in-law. Carrying for a sick person may involve a temporary relocation to the rural areas or another town. The focus group sessions also revealed an instance in which the departure of group members due to illness in their household led the other members not to apply for another loan. In this case, two of the group's five members did not want to take another loan due to illness in their households and the other members decided to stop borrowing until they were all ready to seek another loan. The remaining members made this decision rather than to add new members to their group that they did not trust as much to repay their loans in a timely manner.

Reasons other than past or potential difficulties with loan repayments also account for some departures. Mentioned most frequently in the focus group sessions was leaving Zambuko's program because the person relocated. This reason also accounts for the departure of two of the case study respondents. Some clients stopped borrowing because of the rise in the interest rate and fees. Others left because they wanted loans larger than the loan officer deemed feasible and appropriate. The discussions at nine focus group sessions identified only five individuals who left the program and secured a loan from another institution. Non-financial reasons were occasionally cited as the reason for clients dropping out of the program. These reasons include: marital problems, acquisition of a fulltime job, and attendance at a training college.[32]

Those who attended the focus group sessions who were not currently clients did not want to be referred to as having left Zambuko's program. This was true for those from Bulawayo, Chitungwiza and the Trust Bank branch in Harare. They like to consider themselves as having 'waited a time' before getting another loan. It is difficult to generalize to the larger population of drop outs, since this intent probably contributed to their willingness to attend the discussion. The finding, though, is supported by one of the case study respondents. In this instance, the woman stopped taking loans after a serious accident left her impaired and unable to work. She used her savings to pay-off her loan and intends to take another loan once she recovers.

[32] The focus group participants represented 26 loan co-guarantee groups, varying in size from five to forty members, that formed between 1996 and 1998 with a total of 232 original members. The information from them suggests that approximately three percent of the group members had died during their loan cycle.

As noted in the study of drop outs from MFIs in East Africa (CGAP 2000), in practice it is often difficult to isolate a specific factor in the drop-out process. Financial management decisions appear to be the main reason microentrepreneurs leave Zambuko's program. Persons may decide to leave, or group members may exclude them the next loan cycle because of their poor repayment record. However, other reasons also account for program departures, such as devoting more time to care for the sick, and moving to place not covered by Zambuko. Those who leave may also plan to return when their circumstances and situations improve.

4. Other Sources of Credit

Microfinance programs were initially begun to provide access to loans at commercial rates to those who did not have access to formal lending institutions and to individuals who depended largely on moneylenders who charged extremely high interest rates. However, microentrepreneurs may borrow from a number of formal and informal sources. Therefore, the assessment sought to identify other sources of credit accessed by the respondents and their households.

The information below covers sources of credit other than Zambuko that are used for enterprises and the household. It includes attention to the source of funds for the purchase of enterprise fixed assets, household durable assets and real estate. It also draws on information on strategies used by households to cope with their major financial shocks. The term 'informal borrowing or credit' refers to obtaining money from an individual that needs to be repaid, with or without interest payments.

Enterprises. Microentrepreneurs might borrow funds for their enterprises from sources other than Zambuko. Among those reporting other sources since 1997, banks and other MFIs were mentioned most frequently. Nevertheless, the total number of individuals accessing these sources was extremely low: eight respondents got loans from banks and 19 (three percent) received loans from other MFIs. The amount borrowed averaged Z$86,733. Informal borrowing was more common, but still only 10 percent reported borrowing from family members, friends or other individuals. The amounts borrowed informally varied greatly, from Z$400 to over Z$10,000.

Attention was given in the survey to the source of the funds used to acquire enterprise fixed assets between 1997 and 1999. However, in nearly 40 percent of the cases no information was recorded on the source of funds, indicating a problem with administering the questionnaire. Therefore, the findings are suggestive. Among those reporting, four percent had obtained one or more items on credit (excluding Zambuko) for their matched enterprise since 1997. Nearly all of these individuals had acquired the item through a hire-purchase arrangement. This arrangement is sometimes available in stores that sell relatively high-priced fixed assets, such as furniture and sewing machines. The buyer must have at least one household member in formal employment and must show a recent pay slip. Otherwise, a microentrepreneur may be able to acquire a fixed asset on a hire-purchase arrangement if the buyer has a bank account and a guarantor who is employed in the formal sector of the economy. A hire-purchase arrangement is similar to a lease-purchase arrangement, whereby the seller extends credit to the buyer who makes an initial down payment and then pays a set amount each month until the full amount is paid.

The AIMS qualitative interviews in 1996 shed light on the relatively low level of borrowing from sources other than Zambuko The interviews revealed that clients might borrow money from a business-minded friend or relative to meet a business crisis or to invest in a business. As one woman

explained, "Those who are not entrepreneurial would consider it wrong for someone to gain a profit from gifts of money or non-interest bearing loans." Informal borrowing for business expenditures may carry interest charges (Box V-3).

Box V-3. Access to Informal Credit

Mr. Madzudzo had been operating a welding business for the past five years. The business experienced heavy losses a couple years ago that affected his ability to repay a major business debt. He had to use the household's savings and sell a few non-essential assets to pay off the debt. To continue operating his business, he resorted to borrowing money on a soft-loan basis from friends who also have enterprises. These loans, he said, could only be provided by persons who had confidence in his business and with whom he had a long working relationship (Barnes 1997).

The relatively low rate of respondents that borrowed funds for their enterprise from informal sources is revealed in both the survey and the case studies. The case study findings and initial qualitative interviews suggested that relatively few microentrepreneurs had ever borrowed from moneylenders, contradicting the assumption that MFIs substitute for borrowing from moneylenders who charge higher rates of interest.

In the 1997 survey, respondents were asked if they were able to get credit from their main supplier. Overwhelmingly the reply was no. Only five percent of the respondents could obtain their inputs on credit from their main supplier (Barnes and Keogh 1999). This question was dropped from the 1999 questionnaire, since respondents found it to be naïve.

Households. Hire-purchase arrangements are available in some stores for the purchase of major assets, such as furniture and appliances. This type of arrangement is available to households with a wage earner in the formal sector. Between 1997 and 1999, 23 percent of the respondents' households purchased a household asset on a hire-purchase arrangement. This represented a six percent increase over the 1995 to 1997 period. Households of one-third of the continuing clients compared to one-quarter of the departing clients and 16 percent of the non-clients had purchased one or more items through a hire-purchase arrangement since 1997 (A2, table 36). For the 1997 to 1999 period, the differences between the groups were statistically significant ($p=.05$).

Difficult economic times might explain the rise in the use of the hire-purchase method to acquire assets. Also, the economic environment probably accounts for an overall decrease in the proportion of households buying an asset in the last two years: the percentage decreased from 95 percent to 70 percent. Other financial assistance with purchase of a household asset was nearly non-existent. In 1997 only one person mentioned borrowing informally and two reported taking loans. In 1999 one respondent said that an item had been purchased with money borrowed informally and four respondents (two percent) stated that loan funds had been used.

Among the 50 respondents who purchased a house, land, or a building between 1997 and 1999, only two received a loan, three had received assistance from their employer, and three had been helped by relatives. These findings are suggestive since some households may have indirectly obtained credit for their purchases.

Households faced with a major financial crisis may borrow informally or take a loan. In 1997 when naming ways their household coped with a major financial shock, 14 percent of the respondents reported that their households borrowed informally and only two percent reported taking a formal loan. The latter consisted of four clients. Similarly, in 1999, 10 percent reported borrowing informally and one percent said that they took a formal loan (A2, tables 37-38).

5. Savings

Saving is an important part of financial management. Savings can be held in formal institutions, or in a variety of informal ways. A common way to save is through participation in a rotating savings and credit association (ROSCA). These groups tend to be small and composed of persons who have a common bond, such as neighborhood, church, work place or loan group. The amount of money contributed tends to be small. The women interviewed tend to consider ROSCAS as savings for small household items, and unreliable for meeting unanticipated needs for cash. Nearly one-third of the respondents were ROSCA members in both 1997 and 1999, one third did not participate either year, and the others were a member one year but not the other. The tendency was more toward participating in 1999, rather than dropping out of a ROSCA.

The case study findings reveal that participation in Zambuko's program relates to clients opening a personal savings account and that some individuals continue to borrow in spite of having a sum equal to the amount of the loan in their savings account. The latter tends to occur because loans are available for viable enterprises, but not for non-enterprise uses. The case study respondents revealed that they reserve their savings for lump sum expenditures, such as school fees and investment in rental units, and for emergency needs. The relationship between savings and participation in Zambuko's program is examined further in the next chapter.

6. Coping with Inflation

The case study respondents reported that they have had to increase their prices to adjust for the cost of their goods and inputs. As Mrs. Lepani explained, when she first increased the prices her customers complained, but after a while they got used to it. Some like Mr. Murucha report that they increased their prices but decreased their profit margin in order to attract customers. Mrs. Sithole who sells items she sews used another approach. In January 1998 when input costs rose substantially, she decided to increase the price of her products, but her sales declined. Consequently, she decided to adopt a strategy of using less expensive materials and revert to her old prices. However, as inflation continued she has had to increase the sales price of her products made of cheaper materials.

Ms. Mlanga stopped selling second hand clothes outside of town because the prices she could charge did not permit an adequate profit margin due to the rise in bus fares. She considered switching to bartering items for maize or livestock, but rejected these possibilities. Instead, she is concentrating on her hair salon and vending of snack items. In comparison, Mrs. Jongwe started going to South Africa to market her products, even though "the trips are quite strenuous," because she realizes better profits.

In terms of coping with the rising cost of basic needs, Mrs. Sithole's household has reduced its purchases of food items such as eggs to be able to afford basic items, such as mealie-meal, cooking

oil and bread. Mrs. Musingwini's household also reduced expenditures on food. The Lepani household used a different strategy. They started another enterprise, but then had to close it when Mr. Lepani was no longer able to work. Thereafter, they resorted to renting out more rooms to lodgers.

Two of the case study households decided to split up to reduce their cost of living, with some members moving to the rural areas. The cost of living is lower in the rural areas, households can be less reliant on the cash economy, and farming can provide an additional source of income. Mrs. Taitira and Mrs. Musingwini moved to a house in the rural areas, leaving behind their husbands. In another case, Mrs. Sithole's husband divides his time between his urban and rural homes. These individuals grow crops and tend livestock in the rural areas. Mrs. Musingwini sells some of her harvested crops in Harare to wholesalers. She moved to the rural area because "life was becoming very tough in Harare."

C. Discussion and Conclusions

The results suggest that there was little continuity within most households between 1997 and 1999. They tended to increase in size, with more economically dependent members. Nearly one-quarter of the households experienced a serious illness of a member and in 14 percent a member died. When illness and death inside and outside the household were considered, more than two-thirds had been affected.

The household's livelihood base also tended to change. There was a slight tendency to having fewer household enterprises in 1999 than in 1997. This may be related to the decline in the ratio of enterprise net revenue to total household income. While nearly 60 percent of the households had at least one fulltime wage earner either year, 14 percent lost this as a source of income while 12 percent gained wage income. The net change analysis on the average number of regular wage earners indicates that continuing clients were significantly more likely than the others to have loss wages as part of their household income.

The first poverty analysis based on daily per capita income covering households with complete income data, suggests that the majority of Zambuko's clients are poor. Between 1997 and 1999, there was a drop in the proportion of continuing client households and non-client households that were above the US $2 a day poverty line. However, the second poverty analysis that classified all respondent's households, largely but not exclusively on US dollar per capita, per day poverty levels, yielded different findings. This analysis suggests that there was a shift in all the respondent groups toward being less poor. The difference between the two analyses is most likely attributable to the way poverty was defined and the number of households covered.

Using the second classification system, the results of the analysis of factors associated with changes in poverty status between 1997 and 1999 suggest that household composition and structure largely influence changes. Both analyses should be treated as suggestive. The main benefit of the poverty change analysis is the identification of factors beyond the influence of microfinance programs that contribute to changes in households' poverty status. Microfinance programs may reach poor households and help ameliorate their situation, as indicated in the following chapter, but movement out of poverty appears to be related to changes in the household's composition and structure. This

implies that movement of households out of poverty may be beyond the reaches of a microfinance program.

The findings on the relative size of the microcredit to enterprise net revenue and household income suggest that the loans are significant in relation to the former but relatively small compared to total household monthly income. Yet, microcredit is significant in the Zimbabwe context since other options for receipt of credit from formal or informal sources for enterprise activities appear to be limited. Very little borrowing was evident among the respondents. Credit from formal and informal sources for non-enterprise uses was not common, with the exception of hire-purchase arrangements to acquire durable assets.

Entrepreneurs and their households are faced with economic pressures as they try to maintain their households and enterprises, and meet financial obligations. The findings on loan use and repayment on time indicate that the use of the loan is not necessarily related to timely repayment. It appears that funds from savings or other household sources may be used to pay off the loan. The results also appear to be linked to the integrity, motivation and other personal qualities of the borrower. Those who value access to Zambuko's program and have a strong sense of obligation to repay debts seem more likely than others to repay their loans on time.

In summary, the findings point to Zambuko reaching microentrepreneurs from poor households. Alternatives to loans from MFIs are very limited in Zimbabwe. Hence, Zambuko offers microentrepreneurs an option that they otherwise are unlikely to have. The next chapter analyzes the impact of participation in Zambuko's program.

VI. IMPACT ANALYSES

A number of qualitative and quantitative studies have pointed to the impacts microfinance programs have on clients, their enterprises and households (Sebstad and Chen 1997, Hulme and Mosley 1996). It is widely assumed by supporters of microfinance programs that small-sized loans to owners of microenterprises will lead to a rise in enterprise profits and other positive changes in the enterprises, improvements in the welfare of clients' households and greater empowerment of the clients. Moreover, microfinance is normally regarded as a poverty alleviation or reduction strategy, as attested to by the Microcredit Summit in 1997 and the existence of the Consultative Group to Assist the Poorest (CGAP), a multi-donor effort to address poverty through the support and promotion of microfinance programs. Yet, the loan sizes tend to be small relative to the impacts they are assumed to have and microentrepreneurs often do not remain in their MFI program.

This chapter presents and analyzes the findings on the key impact variables. In particular, it looks at the impact of Zambuko's program on the welfare of the household, growth and diversification of microenterprises, and empowerment of microentrepreneurs. Attention is given to determining if positive or negative impacts occurred among clients.

The assessment based on the AIMS household economic portfolio approach takes into account the fungibility of resources within the household. It acknowledges that microcredit is extended to microentrepreneurs based on criteria associated with their enterprise activity, but the loans funds may not be spent on the enterprise. Also, additional net revenue generated by the enterprise as a result of the loan funds may be spent outside the enterprise to improve the welfare of the household or to assist non-household members. Microcredit with supplemental business management training may have a positive impact on clients' financial management, control over resources, and self-confidence and self-esteem.

Since the client respondents represent those who 'self-selected' to participate in Zambuko's program, they may have differed initially from the non-clients on one or more characteristics. Therefore, the ANCOVA analyses took into account specific, initial differences in order to determine the impact of Zambuko's program, as explained in Chapter III. The basic comparative groups were continuing clients, departing clients and non-clients. On some impact variables, information is also presented based on the respondent's 1997 and 1999 participation status and on those who were extremely poor in 1999. When the results for the comparison groups differ significantly, the findings are associated with respondents' program participation status. The details of the statistical analyses of the impact variables are located in Annex 3.

In this chapter, unless otherwise noted, the years 1997 and 1999 are used to refer specifically to the time of the first survey interview and the follow-on survey interview respectively. Both surveys began in September and continued through October into the early part of November.

A. Overview of the Results

The results presented in this chapter occurred in a highly inflationary environment. The respondents tended to experience a number of changes in their households, as discussed in Chapter V, unrelated to whether or not they participated in Zambuko's program. This chapter presents the

1997 and 1999 findings on the impact variables, the findings on change between the two surveys, and ANCOVA estimates of the impact of Zambuko's program. It also draws on the AIMS qualitative studies to illuminate and complement the quantitative data.

The survey findings suggest a number of positive impacts of Zambuko's program on the client comparison groups.[33] There was one indicator of positive impact that was consistent throughout the client sample: the proportion of the household's boys aged 6 to 16 enrolled in school. Both the continuing clients and departing clients had a significantly higher proportion of boys in this age range enrolled in school than did the non-clients. This was also found when analyzing the households that were extremely poor in 1999.[34] Otherwise, the analyses suggest that the participation status of the client, associated with the number of loans taken and the timing of the loans, was related to the type of impact participation had (Box VI-1).

Box VI-1. Respondent Categories

Continuing clients – at least one loan since 1997
Departing clients- no loans from Zambuko since 1997
New continuing clients – first Zambuko loan in 1997 and at least one additional loan
Repeat continuing clients – more than one Zambuko loan in 1997 and at least one loan since then
New departing clients – only took one loan from Zambuko
Repeat departing clients – more than one loan in 1997 but no Zambuko loan since then
Non-clients –no loans from Zambuko

The results make a strong case for the impact of Zambuko's program on the welfare of client households and on enterprise growth and diversification among sub-sets of the clients. The findings suggest that the program had a positive impact on the net revenue in the matched enterprises of the repeat continuing clients. Also, participation in Zambuko's program was found to be strongly associated with a limited number of positive results among the extremely poor clients, particularly those who had taken at least one loan since the 1997 interview.

The analyses also identified factors other than program participation that appear to have influenced the findings in 1999. In some instances, whether or not the household had been affected by illness or death between 1995 and 1997, age of the household head, and 1997 poverty level were significant predictors. Usually the 1997 response to the question related significantly to the outcome; that is to say, those who had higher levels in 1997 tended to have higher levels in 1999 irrespective of participation in Zambuko's program.

[33] The references to statistically significant differences from the ANCOVA analyses refer to positive impacts on clients, since no negative impacts were identified.

[34] The 1999 poverty level was used since the analysis of changes in poverty status indicated a great deal of change since 1997 associated with household size and structure. The analyses of the extremely poor in 1999 address whether the extremely poor clients and their households experienced positive impacts from participation in Zambuko's program that may have ameliorated their situation and conditions.

B. Household Level Impacts

Participation in a microfinance program may have a positive impact on the economic welfare of clients' households. The impact may be apparent in the level of household income or certain types of expenditures. Also, improvements in household welfare may be evident in diversification of income sources, strategies for coping with financial shocks, education of children, food consumption patterns, and the accumulation of specific assets. When considering a number of these impact variables, special attention was given to determine if participation in Zambuko's program had an impact on client households that were extremely poor in 1999.

1. Diversification of Income Sources

Diversification of income sources may represent a strategy to spread risks across a number of sources to smooth income, or a risk taken to identify a new market niche with a view to increasing income. Diversification of income sources was analyzed two ways. The first approach focused on the number of sources. The second approach used an inverse Simpson index. The latter calculation is based on the proportions of total income earned by each of the sources of income.[35]

In 1997 nearly one-fifth of the client households and one-third of the non-client households had only one source of income. The pattern between 1997 and 1999 was toward more rather than fewer income sources. Forty percent of the households had more sources, a similar percent experienced no change, and 21 percent had fewer sources in 1999. Among those households with a rise in the number of income sources, approximately one-third established a new enterprise and the same percentage secured a wage position. Among the others, 12 percent had acquired rental income and 16 percent reported on other sources (A2, tables 39-40).

The poverty level of the household was significantly related to the number of income sources. It is often assumed that the poor have more income sources, while the non-poor have fewer due to specialization. However, the opposite was found. In 1999 those households that were not poor averaged a higher number of income sources (2.9) than the extremely poor households (2.2) and the moderately poor households (2.6). The differences were significant at the .01 level. The 1999 results represented a gain score increase in income sources between 1997 and 1999 for the non-poor (0.4) and moderately poor (0.2), whereas the number of sources tended to decline for the extremely poor (-0.1). The changes between the two years were significantly greater for the non-poor compared to the extremely poor ($p=.01$) and for the non-poor compared to the moderately poor ($p=.10$). Hence, poverty was not found to be associated with more income sources, as often assumed.

In 1997 continuing clients averaged a significantly larger number of household income sources than the departing clients and non-clients: 2.6, 2.2 and 2.3 respectively. By 1999, the average number of household income sources had risen to 2.7 for continuing clients, 2.7 for departing clients and 2.5 for

[35] The inverse Simpson index is affected by the number of income sources as well as how evenly income is spread across the sources. If all sources do not contribute equally to total income, then the index is less than the total number of income sources (see Dunn and Arbuckle 2001).

non-clients (table VI-1). The gain score analysis reveals the greatest change among departing clients.

Table VI-1. Diversification of the Household Income Sources, 1997 and 1999

	Continuing Clients	Departing Clients	Non-Clients
Average Number of Sources*	**N=154**	**N=182**	**N=241**
1997	2.60	2.22	2.17
1999	2.72	2.67	2.47
Gain Score	.12	.45	.30
Inverse Simpson Index**	**N=120**	**N=141**	**N=190**
1997	1.80	1.66	1.65
1999	1.86	1.87	1.79
Gain Score	.05	.22	.14

* Significant differences between continuing clients and non-clients in 1997 (p=.01) and in 1999 (p=.05). In 1999 significant difference between departing clients and non-clients (p=.07). Significant differences between continuing clients and departing clients in 1997 (p=.03) and in their gain score (p=.10).
**Significant differences in 1997 between continuing clients and non-clients (p=.06) and between continuing clients and departing clients (p=.03).

The ANCOVA results indicate that participation in Zambuko's program had a positive impact on diversification of income sources in departing client households (A3, table 3). Departing client households averaged 0.19 more income sources than non-client households (p=.07*)*. The results also suggest that households affected by illness or death between 1995 and 1997 had a significantly lower level of diversification than household not affected by these crises (p=.01).

Since diversification of income sources is often considered as a strategy to spread risk and create a steady flow of income, an analysis was conducted of extremely poor households. As mentioned above, the extremely poor households tended to experience a decrease rather than an increase in the number of income sources during the assessment period (table VI-2). The ANCOVA results did not indicate that participation in Zambuko's program had an impact on diversification of income sources in the households of the extremely poor clients (A3, table 37). It did reveal that the households of male respondents had significantly fewer income sources than the female respondents (p=.05). One possible reason is that the wives of the male entrepreneurs assist with their husbands' enterprises. Also, extremely poor households affected by illness or death between 1995 and 1997 diversified less than those not coping with these events (p=.04).

Table VI-2. Average Number of Income Sources Among the Extremely Poor Households, 1997 and 1999

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-Clients N=80
1997	2.29	2.43	2.14
1999	2.23	2.25	2.14
Gain Score	-0.06	-0.18	0

The analysis with the inverse Simpson index was conducted on a smaller sample size, since households with incomplete income estimates were excluded. In 1997, the level of diversification

was significantly greater among continuing clients than non-clients, whereas by 1999 the levels varied slightly across the comparison groups (table VI-3). The gain score analysis indicates significantly more diversification among departing clients than the non-clients and continuing clients. The results of the ANCOVA analysis with covariates did not suggest that participation in Zambuko had an impact on the number of income sources, measured with the inverse Simpson index (A3, table 3). However, households with more economically active members in 1997 had higher levels of diversification in 1999 than those with fewer economically active members (p=.06).

Table VI-3. Diversification of Income Sources, Inverse Simpson Index

	Continuing Clients N=120	Departing Clients N=141	Non-Clients N=190
1997*	1.80	1.66	1.65
1999	1.86	1.87	1.79
Gain Score**	.05	.22	.14

Note: Excludes those with incomplete information on enterprise income.
* Significant difference between continuing clients and non-clients (p= 0.04).
** Significant differences between departing clients and non-clients (p=.08) and between continuing clients and departing clients (p=.06).

The differences found using the two measures of diversification of income sources is probably attributable to the smaller number of respondents covered by the inverse Simpson index, as well as the uneven spread of income across the sources as measured by the index. The results of the ANCOVA analysis based on the less complex measure, which covered nearly all respondents, suggest that Zambuko's program had an impact on diversification of income sources in departing client households. It appears that microcredit enabled the households of former clients to spread their risks across a larger number of income sources and to take risks**.**

2. Level of Household Income.

Respondents estimated the amount of income obtained from each source the month prior to the interview. This timeframe was used because recall is better on regular, recurring income patterns for shorter periods of time (Little 1997). In addition, interviewees were asked about lump sum income the past 12 months; for the analysis, these amounts were divided by 12 to obtain a monthly estimate. Since the enterprise questionnaire had a series of questions that guided the respondent in remembering the income data, the net revenue information for the matched, second and third enterprises was taken from the enterprise questionnaire.

The households of continuing clients averaged a significantly higher income level in 1997 than the households of departing clients and non-clients (table VI-4 and A3, table 4). The 1997 monthly income for continuing clients averaged Z$5,625 which was Z$1,958 more than for the departing clients and Z$2,593 more than for the non-clients. In 1999 the monthly income level for continuing clients was higher than for the other groups, but the differences were not significant. The results suggest that income levels had evened out among the comparison groups by 1999.

Between 1997 and 1999 the real value of continuing clients' household income decreased, indicating that this group's income level had not keep pace with inflation. In contrast, the real value of income rose for the other two groups. The largest gain was among the non-clients who started with a lower level of income and the change between the two years was significantly higher for non-clients than

continuing clients. This gain among non-clients is most likely due to non-enterprise income, since enterprise income tended to decrease, as discussed later in the enterprise section.

Table VI-4. Average Value of Household Income Last Month (Zimbabwe dollars in 1997 constant values)

	Continuing Clients N=120	Departing Clients N=141	Non-clients N=190
1997*	5,625	3,667	3,032
1999	5,507	4,466	4,243
Gain Score**	-117	798	1,209

*Significant differences between continuing clients and non-clients (p= 0.01), and continuing clients and departing clients (p=.01).
**Significant difference between continuing clients and non-clients (p=.10).

Zambuko does not appear to have had an impact on the clients' total household income (A3, table 5). However, the ANCOVA results indicate that the amount of income in 1997 and number of income earners were positively related to the income levels in 1999. The reader may recall that the gain score analysis that did not control for initial differences between the households found the greatest change among the non-clients. The gain score findings for the non-clients may have been influenced by the number of income earners in these households.

3. Assistance to Non-household Members

With the high incidence of HIV/AIDS, assistance to others in the form of cash and gifts plays an important role in helping those less fortunate. Assistance to non-household members has been a normal part of the lives of Zimbabwe households, as part of their social obligation to family, kin and community. Urban dwellers tend to provide money and in-kind contributions to parents, family members, and close relatives, especially those in rural areas where the flow of income tends to be irregular. The survey asked about the value of all cash and in-kind assistance to persons outside the household the month prior to the interview.

Client households were more likely than non-client households to assist others in both 1997 and 1999, or at least in one of these years (table VI-5). Eleven percent of the non-clients, compared to five percent of each of the client groups, did not provide assistance in 1997 nor did they in 1999. In comparison, over half of the households assisted others in both years, and the rate was highest for the departing client households.

In 1997 the average value of assistance given varied only Z$22 between the comparison groups, from Z$330 for the continuing clients to Z$308 for the non-clients. The difference between the comparison groups in 1999 was greater: from Z$448 for continuing clients to Z$374 for non-clients. The rise in the value of assistance given was greater among the client groups than the non-clients (table VI-6).

Table VI-5. Households Providing Assistance to Non-household Members the Month Prior to the Interview, 1997 and 1999 (percentage)

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241
Gave Neither Time	5	5	11
Gave Both Times	58	62	52
Gave in 1997, Not 1999	22	15	17
Gave in 1999, Not 1997	15	18	20

The ANCOVA results did not indicate that participation in Zambuko's program was related to the value of the assistance client households provided to others in 1999 (A3, table 6). The amount of the assistance given in 1997 was not related to the amount given in 1999. The household's poverty status did influence the results. The non-poor provided Z$236 more in assistance than did the extremely poor and moderately poor (p=.01), while the extremely poor households gave Z$260 less than the other households (p=.01).

Table VI-6. Average Value of Assistance Given Non-household Members Last Month, 1997 and 1999 (Zimbabwe dollars in 1997 constant values)

	Continuing Clients N=155	Departing Clients N=183	Non-clients N=241
All Assistance Given			
1997 Average Z$ Value	330	312	308
1999 Average Z$ Value	448	440	374
Gain Score	158	128	65
Funeral-related Assistance			
1997 Average Z$ Value	87	92	136
1999 Average Z$ Value *	159	107	63
Gain Score	72	15	-74

*Significant difference between continuing clients and non-clients (p= 0.03).

With the high prevalence of HIV/AIDS, funerals of siblings, adult children, extended family members, friends and colleagues are all too frequent. Households may assist others with funerals by providing money or in-kind assistance, such as food. The data on funeral-related assistance the month prior to the interview were analyzed separately from other types of assistance.

In 1997 the average value of funeral-related assistance given by non-client households was higher than for the client groups (table VI-7). In 1999 the opposite pattern was found, and continuing clients gave significantly more than the non-clients. That year continuing clients gave almost twice as much as they did in 1997 and non-clients gave half their 1997 amount.

The results of the ANCOVA analysis suggest that participation in Zambuko's program had a positive impact on the value of funeral-related assistance given by continuing client households in 1999 (A3, table 6). When respondents were matched on the value of funeral-related assistance given in 1997, geographic area, gender of respondent, whether or not affected by illness or death, and poverty level, continuing clients were estimated to have given Z$85 more than the non-clients (p=.03). None of the covariates were found to have significantly influenced the value of funeral-related assistance in 1999.

A separate analysis was done of the extremely poor households (table VI-7). The value of funeral-related assistance tended to be low both years. In general, the extremely poor departing client households gave less and the other groups gave more in 1999 than in 1997. The gain score difference between the extremely poor departing client and non-client households is significant (p=.10), with the change being positive among the non-client households. The results of the ANCOVA analysis, however, did not find that program participation was significantly related to the value of the funeral-related assistance that extremely poor households provided to others (A3, table 38).

Table VI-7. Value of Funeral-related Assistance Extremely Poor Households Provided Non-Household Members the Month Prior to the Interview, 1997 and 1999 (Zimbabwe dollars in 1997 constant values)

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-clients N=80
Average Z$ Value 1997	45	93	15
Average Z$ Value 1999	67	29	44
Gain Score*	21	-64	29

* Significant difference between departing client and non-client (p= 0.10).

In summary, the results suggest that Zambuko has had a positive impact on the level of funeral-related assistance continuing client households provided to persons outside their household. The findings also reveal that a higher proportion of the continuing client and departing client households than non-client households assisted others in 1997 and in 1999. However, neither client group gave significantly more than the non-clients, when controlling for a number of initial differences. The results indicate that continued participation in Zambuko's program has better enabled households to respond to the needs of those burdened with burying a loved one. Their ability to respond is probably associated with improvements in financial management, which are discussed later in this chapter.

4. Strategies for Coping with Financial Shocks

The majority of the respondents' households faced at least one financial shock in the 24 months prior to the 1997 and 1999 interviews. The number reporting a financial shock increased from 59 percent in 1997 to 75 percent in 1999 (table VI-8). In 1999, however, the continuing clients were significantly less likely than departing clients to have reported a financial shock. That year the most commonly reported financial shocks were the serious illness of a household member and crises requiring financial assistance to non-household members, followed by death of a household member (A2, table 38).

Table VI-8 Proportion Reporting on One or More Financial Shocks in the Last 24 Months

	Continuing Clients N=152	Departing Clients N=183	Non-clients N=236	Total N=571
1997	59	60	58	59
1999*	68	79	75	75

*Significant difference between continuing clients and departing clients (p=.03).

The analysis sought to determine the extent to which households reduced their asset base, that is rented out or sold assets, to raise money to deal with their main financial shock. In both years, less than two percent of the respondents reported renting out or selling an asset. Overall, the responses revealed no discernable differences in the ways client and non-client households coped with financial shocks (A2, table 37). The most common response was use of savings, followed by use of the income earned by household members.

The case studies provide examples of the ways continuing client households have coped with serious financial shocks. The three case study examples below illustrate ways Zambuko's program helped the clients grow and diversify their enterprises, and increase their enterprise revenue and their savings. These changes better enabled the clients and their households to mitigate the loss of their main source of income.

Mrs. Chikaro. This is the case of a client who lost her husband, the household's main income-earner. She was left with six children to care for in the four-room home that they own. Zambuko loans played an important role in Mrs. Chikaro's ability to cope with the loss of her husband. The loans helped her to gain confidence and to diversify her income sources, so the household did not suffer greatly with the loss of its main source of income.

Before becoming a Zambuko client, Mrs. Chikaro sold tomatoes, popcorn, vegetables and freezits,[36] earning around Z$300 a week. She also knitted doilies by hand. At that time she had a personal savings account, which normally had a low balance. She did not save on a regular basis because the flow of income from her enterprise was erratic and low. She took her first loan from Zambuko in 1994.

Mrs. Chikaro's husband grew very ill in June 1996 and her production went down while she cared for him. During the illness they mainly used the husband's salary to meet medical and other expenses, although sometimes she used her enterprise revenue for household needs. While her husband was ill, she spent less time on her enterprise since she was unable to go to the commercial farming areas where she had the majority of her customers. When her husband was ill and her enterprise was not fully active, Mrs. Chikaro would use her savings to pay loan installments. Her husband had encouraged her to save the profits from her enterprise.

After her husband died, Mrs. Chikaro continued to borrow from Zambuko. By then she had two enterprises: vending of snacks, and sewing. She traveled nearly every month to rural areas of Zimbabwe to sell her sewn items. In January 1998 she expanded her enterprise. She bought a knitting machine and began knitting baby sets and sweaters for adults. She also began sewing blankets from pieces of cloth. In 1999 she built a rental unit, adding another source of household income.

By late 1999 her savings had grown to about Z$40,000, which was Z$8,000 less than she had the previous year due to expenditures on the rental unit. She says that she still borrows from Zambuko because she needs money to expand her enterprise, while at the same time she needs to maintain the security of her savings in case of a financial crisis.

[36] A freezit is sugar-flavored ice in a small plastic wrapper.

She reports that being a client of Zambuko helped her household a lot after her husband's death because she had managed to save money, which she otherwise would not have had. Since then she has been able to cope financially with the deaths of several extended family members and her own illnesses in May and September 1999. In another instance, she lost over Z$10,000 to her business partner at the Gokwe market. The partner was supposed to sell goods and maize for Mrs.Chikaro and give her the money, but she did not hand-over all of it. Mrs.Chikaro said that if it were not for her savings, this crisis would have brought down her business.

Mrs. Lepani. Participation in Zambuko's program has empowered Mrs. Lepani to take over the financial responsibilities of her household. Mrs. Lepani has become the main breadwinner. She is an example of an entrepreneur who was prepared to handle a crisis in part because Zambuko loans helped her to increase her enterprise income. In 1998 Mrs. Lepani's household suffered several crises including the deaths of her husband's parents and a bus accident that injured one of her children and her husband. Medical bills for the child and husband were substantial. Her husband did not recover fully and had to resign from his salaried position in January 1999; this ended the household's steady source of income. Also, the husband was unable to continue with his part-time enterprise.

Mrs. Lepani joined Zambuko in mid-1997. In October that year she netted Z$600 from her enterprise knitting sweaters, baby sets and hats. By October 1999, when her husband was no longer working regularly, she was supporting the household by operating two enterprises. Her knitting netted Z$1,710 per month and her trading activities netted Z$2,244, in 1997 constant values.

She attributes the success of her sales in part to improved product quality. After gaining knowledge and learning new skills from Zambuko loan-group members, she was able to improve her products and attract a different type of customer - those who earn a wage income. Mrs. Lepani reports that the Zambuko loans enabled her to generate substantial amounts of income, enough to start saving money for "big projects," like building two rental rooms behind her house. Rental income is a key source of financial security for them.

"Since my husband stopped working, we now face problems paying school fees, but it's not too bad because my business is helping a lot." She said that if she had not joined the program, the household would be cutting back on its food expenditures to pay school fees. Mrs. Lepani's increased income from expansion of her business activities has enabled the household to cope with the loss of the husband's salary and part-time enterprise.

Mrs. Jimu. This is the case of a Zambuko client whose business and life have been severely disrupted by crises. Microfinance played an important role in her ability initially to cope with the situation and thereafter a supportive extended family has been helping her. She was able to accumulate savings very quickly due to a lucrative business that the loans helped her grow.

Mrs. Jimu began her business in 1975. At that time, she sold seat covers and doilies in South Africa. She would then buy kitchen utensils in South Africa to bring back and sell in Zimbabwe. Her husband provided her with start-up money. He also gave her money to branch out, purchasing vehicle parts in South Africa for resale in Zimbabwe to a transport company owned by relatives.

Mrs. Jimu joined Zambuko in July 1996. She used her first three loans to buy sewing and knitting materials and vehicle parts. She would make and commission doilies, tie dyes and cloth to sell in South Africa. In South Africa she would use the earnings to buy spare automobile parts for resale in Harare. The loans made it possible for her to buy large quantities of auto parts. This proved to be a very lucrative business. "That is when I earned a lot of money." There were times when she would collect Z$30,000 to $36,000 from one sale.

Prior to joining Zambuko, she would give her earnings to her husband to deposit in their joint building society savings account. Money from that account was used for non-recurrent expenditures, such as the purchase of furniture. She also participated in a rotating savings and credit association (ROSCA) and used the money to purchase her kitchen utensils.

Mrs. Jimu opened her own bank account after joining Zambuko. Her husband had urged her to start saving all of her money "for use in difficult times." She did this, although she would occasionally buy clothes for the family and purchased a radio and television set. By late 1997, her husband had become ill, so she was unable to travel to South Africa. He died in early 1998. She had Z$36,000 in savings and this together with her enterprise revenue enabled her to maintain her household while awaiting the release of her husband's pension funds and money in his bank account.

In September 1998 she was seriously injured in a car accident. She has been out of business ever since the accident. For a few months, her daughter had a full-time job that helped meet household expenses. Subsequently, Mrs. Jimu moved in to live with her sister and brother-in-law. In spite of her financial difficulties, she used her savings to repay the loan that she took from Zambuko prior to her accident. In late 1999, she was awaiting a prosthesis, which should help her to walk. She plans to restart her enterprise and get another loan from Zambuko.

5. Education of Household Members

Zimbabweans place a high value on education of their children. Formal education is a prerequisite to participating more fully in the economy. The findings below are based on those households that had boys and girls in the specified age range and the proportion of their children enrolled in school at the time of the interview. Officially, one begins primary school at the age of six and secondary school at age 13. At the end of six years of primary school, there are official national examinations, as there are after four years in secondary school. Fees are charged for taking these examinations. Urban, public primary schools require payment of tuition, other fees may be charged, and uniforms must be purchased. Education beyond the primary school level normally involves tuition fees each term, and purchase of books, supplies and uniforms. Education of older children in the household may involve foregoing labor in the household's enterprises.

The findings on education of boys and girls in urban households reveal a relatively high rate of schooling of those aged 6 to 21. Over 90 percent of the household's boys and girls aged 6 to 16 were enrolled in school and two-thirds of those aged 6 to 21 were in school. It should be noted that the enrollment rates of those in the eligible age group tend to be higher in Zimbabwe than most other African countries (see World Bank 2001).

Boys Aged 6 to 16. In 1997 the proportion of the household's boys aged 6 to 16 in school was lower for departing clients than continuing clients and non-clients: 90 percent, 97 percent and

96 percent respectively. In 1999, the rate averaged 98 percent for both the continuing clients and departing clients, compared to only 94 percent for the non-clients (table VI-9). Between 1997 and 1999 the gains were significantly greater for the departing clients than the other comparison groups.

Table VI-9. Proportion of the Household's Boys and Girls Aged 6 to 16 and Aged 6 to 21 in School

	Continuing Clients	Departing Clients	Non-clients
Boys Aged 6 to 16	**N=73**	**N=88**	**N=97**
1997*	97	90	96
1999**	98	98	94
Gain score***	1	8	-2
Girls Aged 6 to 16	**N-79**	**N=91**	**N=109**
1997	95	93	95
1999	93	91	93
Gain score	-2	-2	-2
All Aged 6 to 21	**N=130**	**N=147**	**N=169**
1997	78	78	77
1999	79	76	76
Gain score	2	-2	-1

Note: Only analyzes households with children in specified category both survey periods.
* Significant differences in 1997 between departing clients and non-clients (p= 0.09) and between departing clients and continuing clients (p=.03).
** In 1999 significant difference between continuing clients and non-clients (p=.06).
*** The gain score differences significant between departing clients and non-clients (p=.07) and between continuing clients and departing clients (p= 0.01).

The results of the ANCOVA analysis suggest that participation in Zambuko's program had a positive impact on the education of boys aged 6 to 16 in client households (A3, table 5). For households with similar percentages of boys aged 6 to 16 attending school in 1997 and similar values on the other covariates, the estimated mean difference between departing clients and non-clients was 4.5 percent (p=.05) and between continuing clients and non-clients it was 3.8 percent non-clients (p=.11). Both of these estimates indicate that the clients had a higher rate than the non-clients. Whether or not the household had been affected by illness or death between 1995 and 1997 also influenced the findings. Affected households compared to unaffected households had 3.5 percent less of their boys in school (p=.06), suggesting a negative long-term impact of illness and death upon education of boys.

Table VI-10. Proportion of the Extremely Poor Household's Boys and Girls Aged 6 to 16 in School

	Extremely Poor Continuing Clients	Extremely Poor Departing Clients	Extremely Poor Non-clients
Boys Aged 6 to 16	**N=20**	**N=27**	**N=34**
1997	97	91	97
1999*	100	98	90
Gain Score**	3	7	-7
Girls Aged 6 to 16	**N=23**	**N=26**	**N=30**
1997	94	97	94
1999***	83	91	92
Gain Score	-10	-6	-2

Note: Only analyses households with boys/girls aged 6 to 16 both survey periods.
* Significant difference between the continuing clients and non-clients significant (p=.05).
** Significant differences between continuing clients and non-clients (p=.05) and between departing clients and non-clients (p=.03).
*** Significant difference between continuing clients and departing clients (p=.10).

Attention was given to determine if participation in Zambuko's program had a positive impact on extremely poor client households sending their boys aged 6 to 16 to school (A3, table 40-42). In 1997, on average 97 percent of the boys in extremely poor continuing client and non-client households attended school, compared to 91 percent in the departing client households. In 1999, there was an increase in the rate of boys aged 6 to 16 in school among the extremely poor client groups, whereas the rate decreased for the non-clients. In 1999 all of the extremely poor continuing client households had all their male members aged 6 to 16 in school. The gain score changes were significantly higher for the continuing clients than the non-clients (p=.05) and for the departing clients compared to the non-clients (p=.03).

The ANCOVA results suggest that Zambuko had a positive impact on the education of boys aged 6 to 16 in extremely poor client households (A3, table 39). When matched on a number of initial differences, the estimates signal that the rate of boys aged 6 to 16 attending school was 9.3 percent higher among the departing clients compared to non-clients (p=.08) and 9.7 percent higher among the continuing clients compared to the non-clients (p=.10). The covariates were not found to influence the results, with the exception of the 1997 rate of the household's boys in this age range in school.

Girls Aged 6 to 16. Similar analyses were undertaken on the proportion of the household's girls aged 6 to 16 in school. The rate varied from 93 to 95 in 1997, but in 1999 it decreased by two percent in each of the comparison groups (table VI-9). The results of the ANCOVA analysis with covariates did not find microfinance to be significantly related to the rate of girls aged 6 to 16 in the household that were enrolled in school (A3, table 7). The findings did indicate the mean rate to be five percent less in the non-poor households compared to the poor households (p=.02) and

three percent less in the extremely poor households compared to others (p=.09). These results suggest that the moderately poor households did better than the others.[37]

Among the extremely poor households, the proportion of the household's girls aged 6 to 16 in school was above 93 percent in 1997, but it decreased in 1999. The decrease was greater among the continuing clients (-10.4) than the departing clients (-5.6) and non-clients (-2.0). In 1999 the rate was significantly less for continuing clients than non-clients. The ANCOVA results did not suggest that participation in Zambuko's program was closely associated with education of girls aged 6 to 16 in households of extremely poor clients (A3, tables 40-42).

All Aged 6 to 21. In 1997 more than three-fourths of the household's members aged 6 to 21 were enrolled in school. Between 1997 and 1999, the rate of the household's children in this age range in school increased for continuing client households, but declined slightly among the other comparison groups. Participation in Zambuko's program was not found to have an impact on the schooling of household members aged 6 to 21 among the continuing clients and the departing clients (A3, tables 8-9).

When taking into account participation status in 1997 and 1999, the proportion of the household's children aged 6 to 21 in school varied in 1997 from 74 to 80 percent (table VI-11). Between 1997 and 1999 the rate rose for the repeat continuing clients and repeat departing clients, but decreased in the other comparison groups. The change among the repeat continuing clients was significantly greater than for the non-clients, new continuing clients and new departing clients.

Table VI-11 Proportion of Household's Boys and Girls Aged 6 to 21 in School

	Repeat Continuing Clients N=55	New Continuing Clients N=75	Repeat Departing Clients N=55	New Departing Clients N=92	Non-clients N=169
1997	74	80	74	80	78
1999	83	77	75	77	77
Gain Score*	8	-4	1	-4	-1

Note: Only analyzes households with children aged 6 to 21 both survey periods.
* The differences significant between repeat continuing and non-clients (p= 0.08,), new continuing clients (p=.04) and new departing clients (p=.03).

Zambuko's program appears to have had an impact on the education of children aged 6 to 21 in the households of repeat continuing clients. Compared to the non-clients, repeat continuing client households were estimated to have 6.5 percent more of their children aged 6 to 21 in school (p=.11). Also, the mean difference was significantly higher for the repeat continuing clients than new continuing clients (p=.10), repeat departing clients (p=.11), and new departing clients (p=.11) (A3, tables 10). Thus, the results of both the ANCOVA analysis and gain score analysis suggest that Zambuko's program was closely associated with the schooling of children aged 6 to 21 in repeat client households.

[37] The analysis of girls in school by whether or not the household was possibly HIV affected did not indicate that illness or death in the household was closely related with a lower rate of girls aged 6 – 16 in school (Barnes forthcoming).

Summary. Participation in Zambuko's program appears to have had an impact on the schooling of boys aged 6 to 16 in the client households. The findings suggest that this impact occurs among the extremely poor client households as well as the other client households. The results imply that in the 6 to 16 age range, the households tended to send more boys than girls to school. The impact findings do not suggest a significant relationship between participation in Zambuko's program and the schooling of girls aged 6 to 16. The decline between 1997 and 1999 in the rate of the household's girls aged 6 to 16 in school may be associated with girls dropping out to help with household enterprises, but that the decline was not related to participation in Zambuko's program.[38]

The results suggest that Zambuko had a marginally significant impact on the schooling of children aged 6-21 in the repeat continuing client households. This implies that several loans increase the likelihood that the household would send more of its members aged 6 to 21 to school.

6. Food Consumption

Nutrition is an important factor in the well-being of household members. An indicator of nutritional intake is the variety of food consumed, especially foods high in protein and other nutrients, and the frequency with which these are consumed. Food is also an important component of household budgets. Respondents were asked the number of days in the seven days prior to the interview that certain basic food items were consumed in the household. The general pattern was a decrease in consumption rates, except for consumption of meat, fish or chicken (A2, table 41). Since food is such an important component in the budgets of poor households, an analysis was undertaken to determine the impact of Zambuko on the frequency with which certain basic food items were consumed among extremely poor client households.

The general trend among extremely poor households was toward less frequent consumption of meat, fish, or chicken as well as milk and eggs in 1999 compared to 1997. However, extremely poor continuing client households had a slight increase in the average number of times that meat, fish or chicken was consumed in the households, whereas consumption was reduced in the other groups (table VI-12). The gain score results were significant between the extremely poor continuing client and non-client households (p=.09).

The results of the ANCOVA analysis on meat, fish or chicken consumption suggest that participation in Zambuko's program had a positive impact on consumption in the households of extremely poor continuing clients (A3, table 44). The analysis controlled for specific initial differences in 1997, including whether or not the households had children under 10 years old, whether or not the household was affected by illness or death, and gender of respondent. The mean difference in consumption was estimated to be 0.95 or nearly one day between the continuing client and non-client households (p=.03), with consumption higher among the continuing client households.

[38] The decline does not appear to be associated with the household being affected by chronic illness or death of adult household members between 1997 and 1999 (Barnes 2001).

Table VI-12 Average Number of Days Specified Foods Consumed in Extremely Poor Households the Last Seven Days

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-clients N=80
Meat/Chicken/Fish			
1997 Av. Number Days	3.5	3.6	3.4
1999 Av. Number Days*	3.9	2.3	2.9
Gain Score**	0.4	-0.3	-0.5
Milk			
1997 Av. Number Days	1.7	1.8	1.3
1999 Av. Number Days	1.3	1.1	0.8
Gain Score	-0.4	-0.7	-0.5
Eggs			
1997 Av. Number Days	1.5	1.6	1.6
1999 Av. Number Days	0.9	1.1	1.0
Gain Score	-0.6	-0.5	-0.6.

*Significant difference between continuing clients and non-clients (p=.03).
**Gain score difference significant between continuing clients and non-clients (p=.09).

Milk tended to be consumed less than twice in the last seven days. The number of days was slightly higher among the client groups than the non-clients in 1997 and 1999. The ANCOVA results suggest a marginally significant impact of microfinance on households of the extremely poor continuing clients. They were estimated to consume milk 0.54 more days than the non-clients (p=.12) (A3, tables 44). Both years egg consumption averaged less than twice in the last seven days. The averages were similar for the three groups. Microfinance did not appear to be associated with the frequency eggs were consumed in the household (A3, tables 46).

In summary, the results suggest that Zambuko's program had a significant impact on the consumption of meat, fish or chicken in extremely poor continuing client households. The program also appears to have had a marginally significant impact on the number of days milk was consumed in these households. This was in spite of a general, downward trend in the consumption of food items rich in protein and other nutrients. The reduction of consumption of these items probably reflects a cash management strategy, as households had to cope with the rising cost of living.

7. Investments in Household Durable Assets and Housing Improvements

The assessment sought to determine if Zambuko's program had an impact on investments in household durable assets and housing improvements. Both of these types of expenditures are regarded as indicators of improvements in the household's welfare. Household durable assets, such as appliances and furniture, represent improved quality of life. The assessment obtained estimates of the amount of money the household spent on durable assets in the 24 months prior to the survey, and on housing improvements in the last 12 months. Both variables relate to the use of income and savings.

Household Durable Assets. A significantly greater proportion of the client groups than non-clients reported their households had purchased items in the 24 months prior to the interview (table VI-13*)*.[39] Continuing client households averaged a higher level of expenditure in both 1997 and 1999 than did the other comparison groups (table VI-14). Between the two years, the nominal amount spent by continuing clients (Z$9,645) was more than double the amount spent by departing clients and approximately 11 percent more than spent by non-clients. The difference in the gain score was significantly lower for departing clients than continuing clients and non-clients, indicating less change.

Box VI-2. Unmarried Client Accumulating Household Assets

In May 1997 when she received her first Zambuko loan, Ms.Mlanga, a 32 year old divorcee with a four year old son, had very few household assets: a bed, small wardrobe, two- plate electric cooker and a push tray. By late 1997 she had acquired a cassette player. In April 1998 she bought a wardrobe for Z$1,500 on a three-month lay away plan, and gave her old one to her niece. When the wardrobe was paid off, she purchased a kitchen cupboard for Z$1,300 on similar terms. Also she bought a two plate paraffin stove when she moved into a two-room rental unit without electricity. In mid 1999, again on a lay away plan, she bought a kitchen table with four chairs for Z$1,700. She purchased all of these items with the profits from her enterprise plus money earned working in a hair salon.

Table VI-13. Households That Invested in Durable Assets During the Last 24 Months, 1997 and 1999 (percentage)

	Continuing Clients N=155	Departing Clients N=182	Non-clients N=241	Total N=578
No Expenditures 1997 nor 1999	14	13	25	18
Expenditures Both Times	43	45	38	42
1997 Expenditures, None in 1999	13	11	10	11
1999 Expenditures, None in 1997	30	31	27	29

Note: Chi-square significant at the .07 level.

[39] For those who had acquired items on a hire-purchase arrangement, nearly all had fully paid for the items by the time of he 1999 interview.

Table VI-14. Average Amount Spent on Durable Assets the Last 24 months, 1997 and 1999 (Zimbabwe dollars)

	Continuing Clients N=147	Departing Clients N=175	Non-clients N-232
Average Amount 1997	3,370	2,657	2,340
Average Amount 1999*	13,015	7,397	10,983
Gain Score**	9,645	4,740	8,643

*Significant difference between continuing clients and departing clients (p=.03).
**Significant differences between departing clients and non-clients (p=.09), and departing clients and continuing clients (p=.05).

The ANCOVA results did not indicate any measurable impact of Zambuko's program on the sum invested in durable assets between 1997 and 1999 (A3, table 8). Households of continuing clients were estimated to have spent Z$1,929 more than the non-client households. The nonsignificant finding is probably related to the wide range in the amount spent.[40] Those owning or renting-to-buy their residence reported an estimated Z$6,536 more in expenditures than households with another tenure status (p=.01). This result is likely to be due to limited funds and limited space in rented premises. Also, the estimated amount spent by households with older aged heads was less than reported by households headed by younger individuals (p=.01). The reason probably relates to households headed by older individuals already having basic items, like furniture and appliances. In addition, the level of expenditures reported in 1997 appears to have influenced the level reported in 1999 (p=.01).

A separate analysis was done for the extremely poor households (A3, tables 47-48). The average amount spent in the 24 months prior to the 1997 interview was similar across the three comparison groups. In 1999 the average amount reported by extremely poor continuing client households (Z$2,888) was almost double the amount reported by the extremely poor non-client households and 60 percent more than reported by the extremely poor departing client households (Z$1,750). The gain score differences were even more pronounced: Z$1,465 for continuing client households compared to Z$51 for non-client households and Z$695 for departing households. The ANCOVA results indicate that the extremely poor continuing clients spent Z$1,231 more than the non-clients, but the difference was not statistically significant. The nonsignificant finding is probably due to the wide range in values obtained.[41]

To determine if on-going borrowing from Zambuko was related to investments in household durable assets, another analysis was undertaken that considered respondents' 1997 and 1999 participation status (table VI-15 and A3, table 12). The analysis was conducted with and without the outliers. When the extreme values were removed, the results indicate that repeat continuing clients spent a higher amount than the other comparison groups in 1997 and 1999. The change between the two years was significantly higher for the repeat continuing clients compared to the other groups (p=.02).

[40] When respondent households were matched on certain, similar characteristics in 1997, the 95 percent confidence level in the ANCOVA analysis comparing continuing clients and non-clients ranges from –4,460 to +6,281.

[41] The ANCOVA analysis, which controlled for specific 1997 values, revealed that the 95 percent confidence interval ranged from -491 to + 2,954 when continuing clients were compared to non-clients. This contributes to the nonsignificant test results.

In comparison, with the outliers, the gain score differences between the groups were not significant.

Table VI-15. Average Amount Spent the Last Two Years on Household Durable Assets, Five Comparison Groups (Zimbabwe dollars)

	Repeat Continuing Clients N=59	New Continuing Clients N=82	Repeat Departing Clients N=62	New Departing Clients N=109	Non-clients N=224
Average Amount 1997	3,233	2,274	2,491	2,252	1,610
Average Amount 1999	12,354	6,735	7,250	7,643	6,856
Gain Score*	9,121	4,461	4,759	5,391	5,246

*With outliers (3 standard deviations from the mean) removed, the gain score differences significant between repeat continuing clients and non-clients (p=.02), new continuing clients (p=.02), repeat departing clients (p=.04), and new departing clients (p=.04).

Zambuko's program appears to have had an impact on the amount repeat continuing client households spent on household durable assets in 1999 (A3, table 13). Repeat continuing clients were estimated to have spent Z$4,213 more than non-clients (p=.02). In comparison, with the outliers, the repeat continuing clients spent marginally more (Z$5,369) than the non-clients (p=.15). With and without the outliers, housing tenure status, age of household head and amount spent on durable assets in 1997 were significant predictors of the amount reported in 1999.

In summary, participation in Zambuko's program appears to have had a positive impact on expenditures for household durable assets among the households of the repeat continuing clients. The wide range of expenditures in the analyses influenced the results of the statistical tests, and it would be incorrect to conclude that participation in Zambuko had no impact on expenditures on durable assets among the other client households. Rather, the other analyses do not confirm that there was an impact on these clients.

Housing Improvements. Households may invest in home improvements. These improvements can range from adding a rental unit to installing a telephone. In general, client households averaged a higher level of expenditure in 1997 than did the non-clients. By 1999 the opposite pattern was found. That year the nominal, average amount spent was higher among the non-clients than the client groups (table VI-16 and A3, table 14).

Table VI-16. Expenditures on Housing Improvements the Last 12 Months, 1997 and 1999 (Zimbabwe dollars)

	Continuing Clients N=155	Departing Clients N=183	Non-Clients N=241
1997 Average. Value	1,898	1,882	1,089
1999 Average Value	5,364	5,544	6,552
Gain Score	3,466	3,662	5,464

When respondents were matched on the amount spent in 1997 and on housing tenure, the ANCOVA results did not provide evidence that Zambuko had an impact on housing improvements (A3, table 15). Continuing clients had spent an estimated Z$1,929 more than the non-clients, and the departing clients had spent Z$3,119 less than the non-clients. The findings did suggest that the amount spent in 1997 and housing tenure were significant predictors of the amount spent in 1999 (p=.03 and p=.01 respectively). Households that owned or were renting-to-buy were estimated to have spent Z$6,911 more than households with another tenure status.

Box VI-3. Expansion for Renting

Mrs. Chikaro, a widow, recently added four rooms to her house. In June 1999 she used savings from her enterprise for bricks and money from her late husband's pension to finance the other costs. She decided to build rooms for lodgers since she considers this a reliable source of income.

The Lepani family had a two-room rental cottage built on their residential property in 1998. The money came primarily from Mrs. Lepani's enterprise savings; the husband contributed funds for the roofing since it was expensive and she had used up most of her savings. She says that building the cottage was made possible by the loans she received from Zambuko since they enabled her to substantially increase her enterprise revenue, which in turn enabled her to start saving money for big projects like building her cottage. In mid-1999 she had a toilet installed in the cottage. She used Z$2,000 from her savings and her son paid the balance of Z$1,500.

8. Ownership and Sale of Household Assets

To further analyze accumulation of household durable assets, data were collected on ownership of a stove, refrigerator, black and white or colored television, electric fan, and means of transport. The findings complement the analysis on expenditures and indicate the standard of living among respondent households. Also, data were gathered on sale of household durable assets and reasons for the sales. This was done since two very different reasons might lead to sale of assets: financial pressures and the upgrading of items.

In 1999, continuing clients were likely than the other comparison groups to have the specified assets (table VI-17). More than half of the continuing client households had a stove, refrigerator, television and fan. Excluding televisions, less than half of the departing client and non-client households had these items. Stoves and refrigerators were the items most often acquired since 1997 (A3, tables 16-17).

Table VI-17. Ownership of Select Appliances and Transport (percentage)

	Continuing Clients	Departing Clients	Non-clients	Continuing Clients	Departing Clients	Non-clients
	% Owning in 1999			Gain Score		
Stove*	60	47	39	17	14	5
Fridge**	59	41	39	17	3	11
Television***	86	78	77	0	6	10
Fan******	52	41	36	8	6	5
Transport********	16	14	10	4	2	5

* In 1999 significant differences between continuing clients and non-clients (p=.01) and between continuing clients and departing clients (p=.02). Significant difference in the gain scores for continuing clients and non-clients (p=.03).
** In 1999 significant differences between continuing clients compared to non-clients (p= 0.01) and to departing clients (p=.01). Significant difference in the gain scores for departing clients and non-clients (p= 0.05) and between departing clients and continuing clients (p= 0.01).
*** In 1999 significant differences between continuing clients compared to non-clients (p= 0.02) and to departing clients (p= 0.06). Significant difference in the gain scores for continuing clients and non-clients (p= 0.03).
**** In 1999 significant difference between continuing clients compared to non-clients (p=.01) and to departing clients (p=.05).
***** In 1999 significant difference between continuing clients and non-clients (p=.10).

Continued participation in Zambuko's program appears to have had a positive impact on the acquisition of stoves and refrigerators (A3, tables 18-19). The ANCOVA analysis matched respondents on the basis of whether or not they had the item in 1997 and age of household head, housing tenure and poverty level. When matched on these covariates, an estimated 13 percent more of the continuing clients than non-clients (p=.01) and six percent more of the departing clients than non-clients (p=.15) had acquired a stove. For refrigerators, nine percent more of the continuing clients than non-clients had a refrigerator in 1999 (p=.04). The household's poverty status and housing tenure influenced the results. As might be expected, fewer of the extremely poor households than other households acquired a stove (p=.05) and a refrigerator (p=.01). Also, either owning or renting-to-buy their residence, compared to other tenure arrangements, influenced acquisition of a stove (p=.01) and a refrigerator (p=.01) by 1999.

The findings do not indicate that participation in Zambuko's program was associated with acquiring a fan, television or a means of transport (A3, tables 18-20). The results of the ANCOVA analyses for these items indicate that housing tenure and poverty status were related to acquisition of some types of assets. More households owning or renting-to-buy their residences than those with other tenure arrangements acquired fans and televisions, but not transport. Fewer extremely poor households compared to the others acquired a means of transport, while more of the non-poor than moderately poor and extremely poor obtained an electric fan.

Households may sell durable assets to raise cash when financial crises occur. One-fifth of the respondents reported that their household had sold an item in the 24 months prior to the 1999 survey. Continuing clients (28 percent) were more likely than departing clients (16 percent) and non-clients (18 percent) to have sold a household durable asset between 1997 and 1999.[42] Among those selling an asset, nearly half of them sold the item because they purchased an upgraded version of the same item, and approximately 40 percent (eight percent of all respondents) sold it because they needed the

[42] The chi-square test yielded a 0.01 level of statistical significance.

money (A2 table 42). There was little difference between the comparison groups on the reason for the sale. Hence, departing clients were not more likely than others to have sold an asset because they needed the money for a pressing financial obligation. Only one client, a continuing client, reported having sold an item to repay a Zambuko loan.

In summary, Zambuko appears to have had a positive impact on continuing clients' households acquiring timesaving appliances, that is stoves and refrigerators. It also increased the likelihood that departing client households would get a stove. The findings point to the relatively low standard of living and material wealth level of most client households.

C. Impacts on Enterprises

The assessment sought to determine if Zambuko's program, which provides microcredit associated with business management training, had an impact on the enterprise for which the clients had secured their loans and on other enterprises in the household. In particular, the study concentrated on stability and growth of enterprises through increased net revenue (profit), value of assets, and employment. It also addressed improvements in the operation and management of the enterprises. The matched enterprise analyses cover only those enterprises that were still open in 1999. Since respondent households might own more than one enterprise, the survey gathered detailed information on up to three enterprises and asset data on any additional enterprises. The findings on up to three enterprises represent nearly all of the household enterprises since only four households had more than three enterprises in 1999.

1. Net Revenue

After considering the marketing margin of the enterprise's three top products, respondents were asked to estimate the total sales revenue and expenditures the month prior to the interview. Then they were asked to estimate the net revenue for that month. This process was used for the matched enterprise and then up to three household enterprises. The 1999 data presented below have been adjusted to take into account inflation.

Matched Enterprises. In both 1997 and 1999, the matched enterprises of continuing clients averaged a higher level of net revenue than those of the other comparison groups. In 1997 their monthly income of Z$3,053 was Z$855 more than earned by the non-clients and Z$944 more than earned by the departing clients. Between 1997 and 1999, the real value of the enterprise net revenue declined across the comparison groups, indicating that revenue did not keep pace with inflation (table VI-18). The decline was greatest in the enterprises of continuing clients. Nevertheless, the enterprises of the continuing clients still averaged a higher level of monthly net revenue in 1999 than did the other groups: Z$764 more than the departing clients and Z$799 more than the non-clients.

Table VI-18. Average Net Revenue in Matched Enterprise the Month Prior to the Interview, 1997 and 1999 (Zimbabwe dollars in 1997 constant values)

	Continuing Clients N=113	Departing Clients N=137	Non-Clients N=188
1997 Average Amount*	3,053	2,109	2,198
1999 Average Amount	2,868	2,104	2,069
Gain Score	-185	-5	-128

Note: For same matched enterprise in 1997 and 1999.
*Significant differences between continuing clients and non-clients (p=.10) and between continuing clients and departing clients (p=.05).

The results of the ANCOVA analysis do not indicate a relationship between microfinance and the monthly net revenue of the matched enterprise in 1999 (A3, table 21). The enterprises of continuing clients were estimated to have Z$451 more in net revenue than the non-client enterprises, but the difference was not statistically significant. The results did imply that a number of other factors were significant predictors of higher levels of net revenue in 1999. Male respondents had an estimated Z$1,297 more in monthly net revenue than did the female respondents (p=.01), suggesting that the men had more robust and competitive enterprises. Those with higher levels of net revenue in 1997 were more likely to have a higher level in 1999 (p=.01). Also, the non-poor had an estimated Z$789 less in earnings than the extremely poor and marginally poor (p=.11). This finding may reflect those non-poor entrepreneurs who had fallen into poverty by 1999 and have been caused by lack of competitiveness. Enterprise sector, extreme poverty, illness or death, and geographic area did not influence the 1999 level of matched enterprise net revenue.

In 1999 the monthly net revenues were lower than two years earlier across the comparison groups, but the decline was particularly evident among the extremely poor entrepreneurs (table VI-19). Between 1997 and 1999, the net revenue in the matched enterprises of the extremely poor declined by 42 percent among the continuing clients, 35 percent among the departing clients, and 52 percent for the non-clients. In 1999 the extremely poor departing clients had the highest level of net revenue.

The ANCOVA results indicate that the extremely poor departing clients did marginally better than the non-clients in 1999, implying that participation in Zambuko's program had a positive impact on them (A3, table 50). Their enterprises were estimated to have earned Z$162 more than the non-client enterprises (p= 0.15). This finding suggests that Zambuko's program had a positive influence on the ability of the extremely poor departing clients to fend off negative pressures on their matched enterprises.

Table VI-19 Average Net Revenue Matched Enterprises of the Extremely Poor the Month Prior to the Interview, Poverty Analysis (Zimbabwe dollars in 1997 constant values)

	Extremely Poor Continuing Clients N=27	Extremely Poor Departing Clients N=29	Extremely Poor Non-Clients N=56
1997 Average Amount	1,367	1,292	1,476
1999 Average Amount	788	837	710
Gain Score	-579	-454	-766

Note: Analyzes the same matched enterprise in 1997 and 1999.

An analysis based on the 1997 and 1999 participation status of the respondents found that repeat continuing clients, compared to the other groups, had a higher level of matched enterprise net revenue in both 1997 and 1999. In 1999 the average monthly net revenue of repeat continuing clients (Z$4,160) was twice as much as earned by the non-clients and by the new continuing clients (table VI-20). Between the two years, the change was greatest among the new continuing clients who experienced a decline in the real value of their enterprise net revenue.

Table VI-20. Matched Enterprise Average Net Revenue the Month Prior to the Interview, Five Analytic Groups (Zimbabwe dollars in 1997 constant values)

	Repeat Continuing Clients N=51	New Continuing Clients N=62	Repeat Departing Clients N=54	New Departing Clients N=83	Non-clients N=188
1997 *	3,708	2,514	2,284	1,994	2,198
1999**	4,160	1,805	2,183	2,052	2,069
Gain Score	451	-708	-101	58	-128

Note: Analyzes the same matched enterprise in 1997 and 1999.
* Significant differences between repeat continuing clients and non-clients (p= 0.08), repeat departing clients (p=.10) and new departing clients (p=.05).
** Significant differences between repeat continuing clients and new continuing (p=.09).

Zambuko appears to have had a positive impact on the net revenue in the matched enterprises of the repeat continuing clients (A3, table 22). For households with similar values on the covariates, the enterprises of repeat continuing clients were estimated to have earned Z$1,379 more than the non-client enterprises (p=.02). The results suggest that the repeat continuing clients also had a significantly higher level of matched enterprise net revenue than did the other client groups.[43] The 1997 level of matched enterprise net revenue and gender of respondent influenced the net revenue levels in 1999 (both at the .01 level of significance). Also, non-poor households compared to the extremely poor and moderately poor had a higher level of net revenue in 1999 (p=.10).

Up to Three Household Enterprises. When up to three household enterprises were considered, continuing clients averaged higher levels of monthly net revenue in both 1997 and 1999 than the other comparison groups (table VI-21). The monthly net revenue for continuing clients was Z$3,850 in 1997, which was approximately a third more than earned by the departing clients and by the non-clients. In 1999, the differences were less between the continuing clients and the other groups. The net revenue for continuing clients declined in real value between 1997 and 1999. In comparison, both the departing clients and non-clients experienced a slight increase in the real value of their households' enterprise net revenue. The findings suggest that those who started with a higher level of net revenue had difficulty with increasing their enterprise net revenues to keep pace with inflation.

[43] The ANCOVA mean differences were significant between the repeat continuing clients and new continuing clients(p=.02), repeat departing clients (p=.10 and new departing clients (p=.10).

Table VI-21. Average Net Revenue in Up to Three Enterprises the Month Prior to the Interview, 1997 and 1999 (Zimbabwe dollars in 1997 constant values)

	Continuing Clients N=135	Departing Clients N=159	Non-Clients N=207
1997 Average Amount	3,850	2,515	2,324
1999 Average Amount	3,471	2,925	2,659
Gain Score	-379	410	335

Participation in Zambuko's program does not appear to have had an impact on the monthly net revenue in the households' enterprises (A3, table 23). The ANCOVA results indicate that the enterprises of departing client households earned Z$187 more than those of the non-clients, and the enterprises of continuing clients earned Z$163 more than those of the non-clients. The differences were not statistically significant. The results did imply that the number of enterprises marginally influenced the 1999 results (p=.12), with those with fewer enterprises in 1997 having a higher level of net revenue in 1999. This finding may reflect those with fewer enterprises having opened new businesses by 1999, or high levels of net revenues in a few specialized enterprises. In addition, those with higher net revenue levels in 1997 had higher levels in 1999 (p=.01).

2. Enterprise Fixed Assets

Microentrepreneurs invest in fixed assets, such as tools, equipment, and machines, for their enterprises. These assets represent the store of wealth in the enterprise.[44]

Matched Enterprises. In both 1997 and 1999 the average value of the matched enterprise fixed assets was higher for continuing clients than the other groups. In 1997 the value was Z$4,824 for continuing clients, which was more than twice the value of assets held by non-clients but only Z$800 more than the matched enterprise assets of departing clients (table VI-22). Between the two years the non-clients had a higher level of gain than did the clients groups, and the difference was significantly higher for the non-clients than continuing clients (p=.06). The findings imply that the client respondents may have had less need to invest further in fixed assets for their matched enterprises.

Zambuko's program does not appear to have had an impact on the value of fixed assets in clients' matched enterprises (A3, table 24). According to the ANCOVA results, the value of fixed assets in non-client enterprises was Z$899 more than the continuing clients and Z$312 more than the departing clients, but the differences were not statistically significant. The results are largely attributable to the wide variation in the data and hence confidence intervals.[45] The value of the matched enterprise fixed assets in 1997, gender of respondent and extreme poverty influenced the outcome in 1999. The fixed assets in matched enterprises owned by men were valued at $2,509 more than those in the enterprises owned by the female respondents (p=.01). This result implies that

[44] Assets purchased on a hire-purchase basis had been paid off in full or almost entirely paid for by the time of the interview. Therefore, it is appropriate to consider the total value of all enterprise assets as representing a store of wealth.

[45] The 95 percent confidence interval varied from -2,346 to +567 between continuing clients and non-clients, and -1,700 to +1,076 between departing clients and non-clients.

the men tend to have enterprises that are reliant on higher-cost machinery and equipment, such as automobile repair shops and carpentry workshops. The extremely poor were estimated to have assets valued at Z$1,670 less than moderately poor and non-poor (p=.02).

Table VI-22. Estimated Value of Fixed Assets in the Matched Enterprise, 1997 and 1999 (Zimbabwe dollars 1997 constant values)

	Continuing Clients N=124	Departing Clients N=145	Non-clients N=199
1997 Average Z$ Value*	4,824	4,007	1,933
1999 Average Z$ Value	4,834	4,723	3,522
Gain Score**	10	716	1,588

*Significant difference between continuing clients and non-clients (p=.08).
**Significant difference between continuing clients and non-clients (p=.06).

All Household Enterprises. When considering fixed assets in all of the household's enterprises, in 1997 the average value of the assets owned by continuing client households (Z$5,020) was more than twice the asset value for non-client households but only Z$634 more than the value of enterprise assets in departing client households (table VI-23). Two years later the value had increased for each of the comparison groups, but the rise was greatest in departing client households. That year the value of enterprise assets in departing client households was nearly double that of the continuing clients households and almost three times greater than the non-clients households. The change was significantly greater for the departing client households than the non-client households (p=.10).

The ANCOVA analysis with covariates did not find a significant relationship between participation in Zambuko's program and the value of assets in all of the household's enterprises in 1999 (A3, table 25). The average value of enterprise assets in departing client households was estimated to be Z$4,987 more than among the non-client households (p=.18). The insignificant finding is probably due to the wide range of values, so it would be incorrect to conclude the Zambuko did not have an impact on the value of enterprise assets among the departing client households. [46]

Table VI-23. Average Estimated Value of All the Household's Enterprise Assets, 1997 and 1999 (Zimbabwe dollars in 1997 constant values)

	Continuing Clients N=144	Departing Clients N=163	Non-Clients N=216
1997 Average Value*	5,020	4,386	2,197
1999 Average Value**	6,485	12,412	4,206
Gain Score***	1,466	8,027	2,009

*Significant differences between continuing clients and non-clients (p=.06) and between departing clients and non-clients (p= 0.08).
**Significant differences between continuing clients and non-clients (p=.07) and between departing clients and non-clients (p= 0.12).
***Significant differences between departing clients and non-clients significant (p=.10) and between departing clients and continuing clients (p= 0.11).

[46] The 95 percent confidence interval between continuing clients and non-clients was –9,307 to +6,006 and between departing clients and non-clients it was –2,311 to 12,285.

When the 1997 and 1999 participation status was considered, the ANCOVA results suggests that the value of all the household's enterprise fixed assets was Z$13,421 more for the repeat departing clients than the non-clients (p=.01) (A3, tables 26-28). When the extremes values were removed from the analysis, the difference was not statistically significant. This implies that a small number of the repeat departing clients contributed to raising the average value in 1999 for the repeat departing clients.

Summary. Participation in Zambuko's program does not appear to have led to the accumulation of fixed assets in the enterprise that secured the loan. Neither did it have a measurable impact on the value of the fixed assets in all the enterprises owned by continuing and departing client households. Impact was detected in the value of the assets in all the enterprises of the repeat departing client households. This result was largely influenced by the value of the assets in a small number of repeat departing clients' households. The nonsignificant results of the ANCOVA analyses tend to reflect a wide variation in the values.

The gain score analysis of changes between 1997 and 1999 indicates that the average value of fixed assets in matched enterprises was higher for non-clients than continuing clients. The reason for the difference between the matched enterprises of continuing clients and non-clients may be that the continuing clients had little need to invest in fixed assets since they already had the assets required to operate their enterprise. The findings imply that the matched enterprise was less important than other enterprises in the households of departing clients.

3. Employment

Microenterprises may provide productive employment for the owner and generate work for unemployed and underemployed household members and for paid non-household members. Paid employment is often considered to be a significant outcome of microfinance programs, although the findings from impact assessments tend not to support this premise (Sebstad and Chen 1997) and the case studies of Zambuko clients indicate the impermanence of paid jobs. The survey gathered information on each person who assisted in the enterprise the week and month prior to the interview in 1997 and in 1999. Data on the number of hours worked were gathered for each person who worked more than one hour the previous week, while information on the number of days worked was gathered for each person who worked more than one day the month prior to the interview.

Matched Enterprise. These enterprises normally had one or two individuals working in them. In 1997 approximately one-third of the enterprises had someone besides the microentrepreneur assisting with the operation and the rate climbed to nearly one-half in 1999 (table VI-24). In most cases, the additional help came from household members. In 1997 paid employment averaged less than one person in every two enterprises. That year the average number of paid employees was highest among continuing clients and lowest among the non-clients. Two years later the average number was highest among the departing clients. Between the two years, paid employment increased in the enterprises of departing clients and non-clients, whereas it decreased slightly the enterprises of continuing clients. The results of the ANCOVA analysis, which controlled for the number working in 1997, gender and sector, did not suggest a relationship between microfinance and paid employment in the matched enterprise (A3, tables 29-30).

Table VI-24. Labor Inputs in Matched Enterprise, 1997 and 1999

	Continuing Clients N=113	Departing Clients N=137	Non-clients N=188
Percentage With Unpaid or Paid Employees			
1997	35	34	32
1999*	50	40	49
Gain Score	15	6	17
Average Number of Paid Employees Last Month			
1997	.40	.36	.23
1999	.37	.45	.32
Gain Score	-.03	.09	.11
Average Number of Person-hours Worked Last Week			
1997	62	62	68
1999	61	65	74
Gain Score	-1	3	6
Average Number of Person-days Worked Last Month			
1997	37	35	36
1999	35	36	39
Gain Score	-2	1	3

* The difference between departing clients and non-clients is significant (p=.10).

The number of person-hours worked the previous week varied from 61 to 68 in 1997 and from 61 to 74 in 1999. Both years the non-clients reported the highest number of person-hours worked last week. When considering person-days worked last month, there was less variation between the comparison groups. The average number of person-days varied from 35 to 36 in 1997 and 35 to 39 in 1999. The changes in hours and days worked tend to reflect the pattern of change in the number of paid employees. The ANCOVA results did not indicate that participation in Zambuko's program had an influence on the number of person-hours worked last week and person-days worked last month in the matched enterprise (A3, table 17).

Up to Three Household Enterprises. Employment in up to three household enterprises was assessed to determine if participation in Zambuko's program had an impact on labor in household enterprises. Less than one-third of each of the comparison groups had a paid worker in their household enterprises the month prior to the 1997 and 1999 interviews (table VI-25). In both years, paid workers were slightly more common among continuing client households than the others. In 1997 continuing clients and departing clients were significantly more likely than non-clients to have paid employees in their household enterprises. The proportion with at least one paid worker in 1999 represented a greater gain among the non-client than client households.

In both 1997 and 1999, the average number of paid employees was higher among the client comparison groups than the non-clients (table VI-25). Between the two years, the number of employees increased slightly in each of the comparison groups. There was no indication of microfinance impact from the ANCOVA analysis on paid employment in the household's enterprises (A3, table 32).

Between 1997 and 1999, the trend was toward an increase in the number of person-hours worked last week and the number of person-days worked last month in the household's enterprises. The average number of person-hours varied from 70 to 76 in 1997, and from 86 to 92 in 1999. The average number of person-days worked the month prior to the interview varied from 42 to 46 in 1997. By 1999 it had increased for each comparison group, but the change was greatest for the non-clients and departing clients. The ANCOVA results do not indicate an impact of microfinance on the mean number of person-hours and person-days worked in up to three household enterprises in 1999.

Table VI-25. Labor Inputs in Up to Three Household Enterprises, 1997 and 1999

	Continuing Clients N=144	Departing Clients N=168	Non-clients N=216
Proportion with Paid Employees Last Month			
1997*	26	24	14
1999	30	26	24
Gain Score	4	2	10
Average Number of Paid Employees Last Month			
1997**	.47	.46	.23
1999***	.54	.66	.38
Gain Score	.08	.20	.15
Average Number of Person-hours Worked Last Week			
1997	74	72	74
1999	81	89	84
Gain Score	7	17	10
Number of Person-days Worked Last Month			
1997	45	43	41
1999	46	48	47
Gain Score	1	5	6

* Significant differences between continuing clients and non-clients (p=.01) and between departing clients and non-clients (p=.02).

** Significant differences in 1997 between continuing and non-clients (p=.02), and between departing clients and non-clients (p=0 .05).

*** Significant differences in 1999 between departing clients and non-clients (p=.09).

Summary. The findings indicate that there had been a lot of change in the employment patterns in enterprises, but these changes were not a result of microfinance. The lack of an impact of participation in Zambuko's program on paid employment is likely to be associated with the use of unpaid household labor, as suggested in the findings on the matched enterprise. It may also be associated with the decrease in the real value of the net revenue of the matched enterprises of continuing clients and departing clients, as well as the decline in the real value of the net revenue in all the enterprises of continuing client households. The nonsignificant findings imply that there was neither a positive nor negative impact on employment in the enterprises of the clients and their households.

4. Transaction Relationships

Transaction relationships refer to ways microentrepreneurs organize and manage their businesses in relation to others. The reasons for changes in transaction relationships may vary from reducing risks to taking risks. The quantitative data below refer to changes in the matched enterprises that operated in both 1997 and 1999. The location of the main business premise, selling outside the town of residence, extension of credit to customers, and the keeping of business records are analyzed.

Location. Most respondents' matched enterprises are based in their homes. This enables them to handle domestic responsibilities more easily and reduces overhead expenditures. However, microentrepreneurs normally prefer to locate their business in a more public place to attract customers (Barnes and Keogh 1999 and case study data).

In 1999, 23 percent of the continuing clients, 37 percent of the departing clients and 41 percent of the non-clients operated their enterprises from a location other than their residence. This result represents a decline of five percent among the continuing clients, but a slight increase among the other comparison groups (A2, tables 43-46). In 1999 non-clients were significantly more likely than continuing and departing clients to have their base of operation separate from their residence, and this reinforced the pattern found in 1997.[47] The change among the continuing clients indicates a financial management decision, which may be related to more attention devoted to selling outside the town of residency.

Long Distance Markets. A number of respondents sell outside the city where they reside. In 1997 the most common place was "other towns in Zimbabwe," followed by South Africa and then rural Zimbabwe. Sales outside often involve making items, such as sweaters and bedspreads, and then traveling to sell them. In rural Zimbabwe these items might be bartered for grain and in South Africa the revenue might be used to purchase items to resell in Zimbabwe. The descriptions of Mrs. Jimu in Chapter V and Mrs. Sithole later in this chapter illustrate long distance marketing.

As revealed in table VI-26, both years continuing clients were more likely than the others to sell outside of the town where they reside. A higher proportion of the continuing clients than the others traveled more frequently in 1999 than in 1997. The change between the two years, however, did not differ significantly across the comparison groups. The findings suggest that microentrepreneurs who sell outside their town of residence are more likely than other microentrepreneurs to seek loans from Zambuko. The monthly loan repayment schedule appears not to be a major hindrance to these long-distance operators.

[47] In 1997, 38 percent of the non-clients compared to approximately 28 percent of the continuing and departing clients had their matched enterprise at a location separate from their residence and the difference was statistically significant at the .10 level. In 1999 the difference between these groups was significant at the .01 level (A2, tables 43-44).

Table VI-26. Matched Enterprise Sales Trips Outside Town Where Respondent Resides, 1997 and 1999 (percentage)

	Continuing Clients	Departing Clients	Non-clients
Sales Trips Outside Town of Residence in Last Three Months*	**N=124**	**N=143**	**N=199**
None in 1997 and 1999	27	37	45
Trips Outside in 1997 and 1999	48	35	28
Trips Outside in 1997, not in 1999	15	16	13
Trips Outside in 1999, not in 1997	11	12	14
Frequency of Trips the Last Three Months Outside Town	N=91	N=90	N=109
Less in 1999 than in 1997	35	41	39
Same	18	24	10
More in 1999 than in 1997	47	35	41

*Chi-square level of statistical significance 0.01.

Credit. The respondents primarily sell directly to the final consumers. These customers often ask for credit. Most of the respondents provide credit selectively to customers, including customers outside their city of residence, and some insist on a deposit (Barnes and Keogh 1999). During the assessment period some respondents became more careful about whom they extend credit to, while others felt compelled to extend credit more widely to attract and keep customers (table VI-27). Continuing clients were significantly more likely than the others to extend credit in both 1997 and 1999. Among the others, the tendency was toward not extending credit in 1999. Most of those who extended credit insisted on a deposit. Between 1997 and 1999, departing clients were significantly more likely than continuing clients and non-clients, to have begun to insist on a deposit when extending credit to customers. Zambuko appears to have had an impact on these departing clients. The ANCOVA results indicate that 13 percent more of the departing clients than non-clients insisted on a deposit before extending customer credit in 1999 (p=.03). This finding is probably related to the business management training received from Zambuko.

Table VI-27. Pattern of Extending Credit, 1997 and 1999 (percentage)

	Continuing Clients	Departing Clients	Non-clients
Pattern of Credit Extension*	N=123	N-145	N=199
Yes Both Years	82	65	69
No Both Years	2	14	9
Yes in 1997, No in 1999	11	13	15
Yes in 1999, No in 1997	6	8	7
Insists on a Deposit When Extending Credit**	N=100	N=93	N=135
1997**	69	52	61
1999***	69	72	59
Gain Score****	0	20	-2

* Chi-square level of significance 0.03.

** Significant difference in 1997 between continuing clients and departing clients. In 1999, significant differences between continuing clients and non-clients (p=.10) and between departing clients and non-clients (p=.03). The gain score differences significant between continuing clients and non-clients (p=.08), between departing clients and non-clients (p=.08) and between departing clients and continuing clients (p=.08).

Business Records Kept. The results of the business training received from Zambuko tend to be reflected in the findings on the keeping of business records. In 1997 client respondents were significantly more likely than non-clients to keep business records. By 1999, more non-clients were keeping records, although the rate was lower than for the clients: 85 percent of the continuing clients, 78 percent of the departing clients and 71 percent of the non-clients (table VI-28). Given that most continuing clients were already keeping records in 1997, it is not surprising that the non-client gains compared to continuing clients were marginally significant.

In 1997 and 1999 more clients than non-clients kept sales records and expenditure records. Respondents were asked if they kept some receipts or records of sales, a partial record, or complete record. When considering those with better records and those with less complete records, the net difference was greater among non-clients than clients. The results for continuing clients may be related to a decline in business activity and attention to another enterprise.

Table VI-28. Record Keeping in Matched Enterprise, 1997 and 1999 (percentage)

	Continuing Clients	Departing Clients	Non-clients
Keeps Business Records*	N=123	N=144	N=198
1997, Yes	82	67	59
1999, Yes	85	78	71
Gain Score	3	11	12
Sales Records **	N=123	N=145	N=197
None 1997 and 1999	3	15	24
Same type 1999 as in 1997	37	33	29
Decline in Record Keeping in 1999	27	16	11
Better Records in 1999	33	36	35
Expenditure Records**	N=123	N=145	N=197
None 1997 and 1999	21	34	46
Same Type 1999 as in 1997	26	18	16
Decline in Record Keeping in 1999	24	19	12
Better Records in 1999	29	29	26

*Chi-square significance in 1997 and 1999 at the .01 level.
**Chi-square significant at the .01.level.

5. Illustrations of the Impact of Zambuko on Enterprises

Mr. Murgani. *"[Zambuko] helps when I want to buy business equipment, which I cannot afford if I just use my savings."* When we first met him in 1997, Mr. Murgani was already a homeowner with an established enterprise, and a supplemental business of buying items at auctions for resale. He was able to expand his photography and framing business substantially with the help of Zambuko loans, complemented later by bank loans. Mr. Murgani used his Zambuko loan funds to invest in fixed assets for his photography business. These investments ratcheted his business up to a higher level of activity.

Mr. Murgani began his photography enterprise in 1972. Then he traveled from door to door offering to take photographs. He uses his carpentry skills to make the frames for his photos, adding value to

the product. Before joining Zambuko, Mr. Murgani relied on *chimbadzo* (the local system of money lending at high interest rates) to obtain loans for his enterprise.

Mr. Murgani used his first Zambuko loan, combining the funds with his savings, to buy a video camera. The video camera was an important boost to the business because it enabled him to offer both still and video photography. This led to larger assignments such as parties, weddings and graduations. Mr. Murgani's business has grown significantly since he started receiving large orders. He has been able to meet these orders thanks to the loans received from Zambuko. With his second and third loans he bought another camera, an electric drill, a sealing machine, wood for frames, and a flash. The loans helped him to buy materials in bulk and at a discount. As a result, he was able to process photos in time and have enough frames on hand so that he could sell them immediately to customers instead of making them upon order.

In 1998 Mr. Murgani began specializing in enlarged portrait photographs, which are more profitable than small photos. He also added another source of income to the household. Since Mr. Murgani had a computer and printer, his son started typing documents for people. The same year Mr. Murgani had difficulty with his employees. One employee stole money and was fired. After this, he maintained only one fulltime paid employee. His adult daughter also helps fulltime.

In July 1999 Mr. Murgani took his fourth Zambuko loan, with which he bought lenses to enlarge photographs, as well as other equipment. He said in October 1999 that both his expenses and revenues had increased. He had expanded his market since he had better equipment to meet the demands.

Besides borrowing from Zambuko, starting in 1998 Mr. Murgani has begun to get loans from a commercial bank to invest in equipment. Initially he borrowed Z$5,000, then Z$15,000 from the bank. In late 1999 he was planning on applying for a Z$30,000 loan from the bank after he completed paying his recent loan. These amounts are higher than what he can get from Zambuko through his loan group, since his group insists on each member borrowing a similar amount. Yet, he says if he had not joined Zambuko he would not have advanced since he had been unable to secure credit from banks and other non-governmental organizations. Securing a Zambuko loan was a breakthrough.

Mrs. Lepani. Microcredit from Zambuko has permitted her to diversify her business activities, which involved a change in transaction relationships, such as sales location and suppliers. Between 1994 and 1996, she would travel to South Africa to sell the doilies that she made. She saved enough money to buy a knitting machine. She then had difficulty buying wool because it was expensive. The first Zambuko loan in 1997 permitted her to buy wool. She knitted wool sweaters and traveled to Zambia to sell them. The trip to Zambia was an unsuccessful venture and she actually lost money because the price for sweaters had dropped and the exchange rate was unfavorable.

She used her second loan in June 1998 to buy poultry, sausages, and wool, and to add to her savings. The loan gave her the opportunity to experiment with new products. She was encouraged by the results this time. By mid-1999 Mrs. Lepani was knitting fewer items because of the low profit margin on items. She used her June 1999 loan for buying and selling poultry, freezits, cooking oil and second hand clothes. Mrs. Lepani was able to substantially increase her enterprise net revenue. This revenue in turn aided in purchasing materials for construction of a two-room rental cottage in

back of her house, with the expectation that the rent will enable her to obtain and repay larger loans from Zambuko.

Mrs. Sithole. Access to Zambuko loans has permitted Mrs. Sithole to buy higher-grade materials and thus expand her market. She began her enterprise by sewing chair backs and wall hangers in 1985. Her start-up money came from selling items from her dowry. She was able to buy a sewing machine in 1989. In 1996 she joined Zambuko's Trust Bank program: "I joined because I wanted to develop myself. I'd spent two or three years doing the same thing with no real results." With her first Zambuko loan, she was able to purchase better materials, which enabled her to sew and sell higher priced items. Mrs. Sithole said, "Now I am able to do a lot of things that I could not before, especially the seat covers that I was not able to afford before."

With her second, third and fourth loans from Zambuko, Mrs. Sithole continued to buy sewing materials. On her sixth loan, however, she experimented with a new product. In addition to purchasing sewing materials she bought grain bags that she intended to resell in Mozambique. During transport, half of the grain bags were stolen. Furthermore, for the bags she did sell, the exchange rate with Zimbabwean dollars was not favorable. She lost money on that endeavor and had to borrow Z$3,000 from her niece in order to repay her Zambuko loan. In 1999 she experimented again with a new product. With the funds from the sale of the sewing machine that she had bought in 1998, she purchased stone carvings to sell in South Africa.

D. Individual Level Changes

Zambuko loans and business management training may lead to greater empowerment of clients, particularly female clients. This increased empowerment may take the form of improved financial management and the clients' perception of their ability to face the future. It might also occur through greater self-esteem and self-confidence, and a stronger position in relation to spouses in making financial decisions. The AIMS survey and qualitative studies sought to determine the impact of Zambuko on its clients beyond the indicators of economic improvements in the household and enterprise. It was recognized that the quantitative survey research might not detect the quality of the changes, so the case studies sought to make up for this deficiency.

1. Business Management Training

The orientation training given by Zambuko to loan applicants, the pre-loan intensive training provided to Trust Bank clients, and the follow-up supervision by loan officers cover basic business management practices. Since the 1997 survey, a significantly greater proportion of the continuing clients than non-clients had received business management training: 35 percent of the continuing clients compared to eight percent of the non-clients.[48] Of those who had received training, nearly half were trained by Zambuko (A2 tables 47-50). Since the orientation training is not required after the first loan, the continuing client responses seem to reflect the advice given by loan officers and some individuals actively seeking out training. For instance, in Chitungwiza, clients seeking further training are sometimes invited to sit-in on the business management training given to new Trust

[48] The difference between the continuing clients and non-clients was significant at the .01 level. The data exclude substitute respondents.

Bank clients. Excluding those reporting to have been trained by Zambuko, 13 percent of the continuing clients, eight percent of the departing clients and seven percent of the non-clients had received business training since 1997. Most of them had attended training at a formal training institution. The results do not suggest that Zambuko had an impact on receipt of business management training from other sources

Among those who had been trained, approximately three-fourths reported that they had done something differently as a result. The most common change was improvement in business record keeping, followed by 'better financial management' (A2 table 50).

Those not receiving business management training were asked if they knew of a source and if they would be interested in attending a course. More clients than non-clients knew of a source: 55 percent of the continuing clients, 59 percent of the departing clients and 34 percent of the non-clients. Over 80 percent in each group said that they would be interested in attending a course (A2 tables 51)**.** The findings suggest that the demand for training has not been met and the feasibility of providing appropriate training for microentrepreneurs on a cost-recovery or fee plus subsidy basis ought to be explored.

2. Individual Savings Patterns

Saving is an important part of financial management. The money saved can be held in formal institutions, or in a variety of informal ways. The analysis centered on whether or not the microentrepreneurs had individual savings accounts with formal institutions, and the number of ways that the extremely poor saved. Savings patterns were studied since individuals do not like to divulge their level of savings. The information below is based on those individuals who were interviewed in both 1997 and 1999.

A notable feature among the respondents is the preponderance of individuals with personal savings accounts with building societies, banks and the post office (table VI-29). In 1997 individual savings accounts were held by 92 percent of the continuing clients, 82 percent of the departing clients and 70 percent of the non-clients. Between 1997 and 1999 the rate increased slightly among continuing clients but decreased for the other comparison groups. The rate of change was significantly different between the continuing clients and the other comparison groups.

The results of the ANCOVA analysis, which controlled for having an account in 1997, respondent's gender and marital status, and household income level, suggest that participation in Zambuko's program had a positive impact on clients' having an individual savings account in 1999 (A3, table 35). An estimated 19 percent more of the continuing clients than non-clients had an individual account ($p=.01$). Also, one percent more of the departing clients than non-clients had an individual account ($p=.05$). The findings also indicate that microentrepreneurs from very low-income households were significantly less likely than the others to have a personal savings account ($p=.06$).

Table VI-29. Had an Individual Savings Account, 1997 and 1999 (percentage)

	Continuing Clients N=135	Departing Clients N=183	Non-clients N=543
1997, Yes*	92	82	70
1999, Yes**	93	81	67
Gain Score***	1	-1.1	-2.7

*Significant differences in 1997 and 1999 between continuing clients and non-clients (p=.01) and between departing clients and non-clients (p=.01).
**Significant difference between continuing clients and departing clients in 1997 (p=.02) and in 1999 (p=.01).
***Significant differences between continuing clients and non-clients (p=.05) and between departing clients and non-clients (p=.05).

An analysis was undertaken to determine if participation in Zambuko's program had led to a rise in the number of ways the extremely poor save. It covered accounts with formal institutions, participation in rotating savings and loans groups, burial societies, and cash saved at home. In 1997 the extremely poor respondents tended to have one or two types of savings. By 1999 extremely poor continuing clients had increased the number of ways they saved, while there was a decline among the other comparison groups. The change between 1997 and 1999 was significantly greater for continuing clients than non-clients and departing clients.

Table VI-30. Average Number of Ways Extremely Poor Respondents' Save*

	Extremely Poor Continuing Clients N=33	Extremely Poor Departing Clients N=41	Extremely Poor Non-clients N=76
1997*	1.97	1.73	1.54
1999*	2.39	1.59	1.49
Gain Score**	0.42	-0.15	-0.05

*Significant differences between continuing clients and non-clients in 1997 (p=.02) and in 1999 (p=.01), and between continuing clients and departing clients in 1999 (p=.01).
**Significant differences between continuing clients and non-clients (p=.06) and between continuing clients and departing clients (p=.05).

Zambuko's program appears to have had a positive impact on the number of ways extremely poor continuing clients saved (A3, table 53). When matched on the covariates, the estimated mean differences of 0.78 between the continuing clients and non-clients and 0.04 between the continuing clients and departing clients are significant at the .01 level. In both instances, the continuing clients saved in significantly more ways than other comparison groups.

In summary, participation in Zambuko's program appears to have a positive impact on clients' savings patterns. The training received and the financial discipline acquired from meeting the loan installment schedule probably account for personal savings accounts among clients. Among the extremely poor, these same factors are likely to have caused the continuing clients to save in more ways than departing clients and non-clients.

3. Illustrations of Better Financial Management

Mrs. Sithole. This is the case of a Trust Bank client whose improved financial management skills have helped her to diversify and expand her enterprise products and markets, and improve and increase production. As she explained:

> Before, I never really planned on how to use the money. I would just use it for whatever need was there at the time. But now I really plan, putting aside money I need to buy materials to keep the business going.

Mrs. Sithole said that the Zambuko program and her loan group have helped her to improve her planning and budgeting skills and get new ideas. She said, "One may run out of ideas if they keep to themselves in their homes, but you find that in these meetings we give each other ideas." She has more customers now and keeps records.

Prior to joining Zambuko, Mrs. Sithole was participating in a ROSCA with three people who contributed Z$100 per month. Later they contributed Z$250 a month. She appreciated receiving the lump payouts to buy household goods like plates and blankets. She dropped out of her ROSCA in November 1998 when she had to replace her kitchen utensils that were stolen.

At the time she joined Zambuko, she had a personal savings account. She eventually opened a second building society savings account. She deposits when she has spare money, but was saving less in 1999 than the previous year. Her savings balance improved after joining Zambuko due to increased and diversified production, but she had to dip into her savings when her husband's business declined and to make up for a business loss in Mozambique. Although she had some savings in 1998, it was much less than the Z$6,000 she borrowed from Zambuko in March that year. Before joining Zambuko she never used to borrow for her enterprise activities.

Her customer base has expanded to include people who have full-time employment. She often gives credit to those who have a regular wage position, but normally asks for a 50 percent deposit. She accepts a lower rate if it is a trusted customer. At times Mrs. Sithole experiences problems with defaulters, but this is rare. In 1998 some customers who used to buy her products for resale in South Africa defaulted on paying her, but eventually she had them repay in the form of blankets they had brought back to resell in Zimbabwe.

Mrs. Musingwini. Participation in Zambuko's program enabled Mrs. Musingwini, who belongs to a relatively poor household, to increase her savings and improve her financial management skills. Mrs. Musingwini said that the Zambuko program helped her learn how to save money and that her savings have grown since she joined in early 1997. Nevertheless, a major household financial management decision was made in 1999: she moved to the rural areas where it costs less to live.

Before joining Zambuko, neither she nor her husband had a savings account because they "did not have enough extra income to open an account." She had been participating in ROSCAs for many years. Initially she used the ROSCA money to set up her enterprise and later she usually spent it on items for the household, such as kitchen utensils.

By late 1997 she had opened a savings account with a building society and she was able to deposit up to Z$8,000 in good months. In 1998 she also participated in a ROSCA of Z$20 a week with her Zambuko group members. In April 1998 her husband opened his own savings account with a bank. Since moving to the rural areas, Mrs. Musingwini and her husband opened a joint savings account. They deposit about Z$5,000 to 6,000 a month and had a balance of about Z$25,000 at the time of the second case study, September 1999. They intended to invest in a money market account but they ended up using the money for hospital bills and funeral expenses for a relative.

Prior to joining Zambuko, Mrs. Musingwini had never borrowed from formal institution. If the household had financial problems they would borrow from friends or relatives. She and her husband would discuss and agree on the amount to borrow and how it would be repaid.

Mrs. Musingwini attributes her improved management skills to the training she received from Zambuko. If she had not received this training, she said, she might have stopped her business activities when she moved to the rural areas. She attended one day of training in 1997 on How to Start and Operate a Business. Afterwards, she started to keep partial records on her business activities. Also, she started insisting that her well-known customers make a deposit before she would extend them credit.

Ms. Mlanga. Ms. Mlanga is another example of a Trust Bank client who credits Zambuko training with improving her financial management skills. She now keeps records of creditors and budgets her income.

> When I come back from selling, I do not go to SPAR [a large grocery chain store] immediately. I go home, sit down then take my pencil and calculate my Zambuko installment, rent, food and the money left for ordering supplies. In the past I did not do this, I would just spend the money. I did not have any knowledge of saving or how to budget money. I was just a person who would get money and spend it then eventually end up broke.

She feels confident and believes that she has become a good manager. By managing her increased income, she is able to pay her rent on time and has been able to afford to rent two rooms instead of one. She buys groceries that last her the month, while before she would buy a few items at a time whenever she had money.

Ms. Mlanga had no bank account prior to joining Zambuko but she did participate in ROSCAs. When we met her in 1997 she had opened a savings account and no longer participated in rounds (ROSCAs) because her group members were no longer able. A year later she was participating in a group that contributed Z$10 a month, but she sometimes had to assist another member to make her contributions on time.

When she sold second hand clothes, she would extend credit to customers since it helped her to sell more items. The customers would pay half of the price of the item and then negotiate terms of payment for the balance. She does not get credit from her suppliers and reports that before joining Zambuko she never borrowed from elsewhere.

4. Ability to Face the Future

Downward economic pressures combined with the possibility of being affected by HIV/AIDS appears to have led people to plan for the future. More respondents in 1999 than 1997 stated that they considered themselves in a good position to deal with the future: 85 percent of the clients, up eight percent from 1997, and 80 percent of the non-clients, which was 10 percent more than in 1997 (A2, table 52). Client status, marital status, gender and the presence of other income earners in the household did not significantly influence the findings.

Two factors appear to be related to respondents' replies discussed above. First, more reported to be doing something to prepare for the future. The rate of respondents reporting that they were doing something alone or jointly with other household members rose from 53 percent to 84 percent among the clients, and 46 percent to 83 percent among the non-clients (A2, table 53).

Box VI-4. Planning for the Future

By late 1999 Mrs. Chikaro was in the midst of completing expansion of her house. She will rent out some rooms to lodgers and use one room for her knitting machine. Once the extension is complete, she plans to buy another knitting machine and employ someone to assist with her enterprise.

The second factor is less transparent. Respondents seemed reluctant to think about possible difficulties. As Ms. Mlanga explained, "I do not like to think about negative things and try to maintain a positive attitude." She feels good about plans for setting up her own hair salon and her vending business provides a small, but dependable income. However, she has fears since prices are continuously increasing. She plans to cope by increasing her prices and believes that her customers will understand as "everyone is aware of inflation." All case study participants expressed concern about the future because of inflation. Yet, they also pointed to ways they had managed their enterprises in light of their increased costs and many were considering additional changes.

5. Respect and Self esteem

Nearly all respondents in 1997 and 1999 (99 percent) reported that they felt that the adults in their households respected their contribution to the household. In 1999 three-quarters of the respondents felt that their adult household members respected them more than in 1997. The findings did not significantly differ between clients and non-clients.

The qualitative interviews with continuing clients document a rise in self-esteem. The clients often cited their ability to meet household needs and buy extra items as leading to greater self-esteem (Box VI-5).

Box VI-5. Increased Self-Esteem

Mrs. Lepani reports that she feels like a "true mother and wife" because participation in Zambuko has enabled her to meet household expenses and she can influence household decisions.

A divorcee, Ms Mlanga explains, "Even though I can not do everything - I still feel good because I have been able to do a lot for myself. Now I don't have to ask (beg) for things from other people. I do things for myself". She says that if it were not for Zambuko and the interaction she has with other women in her Trust Bank group, she would not have achieved what she has so far.

A widow since early 1997, Mrs. Chikaro says that prior to becoming a Zambuko client she did not have any confidence in her enterprise and herself because her enterprise was struggling to survive. But, in 1998, she reports "someone coming into my house would not know that there is no man," since she is doing well meeting all the household expenses by herself from her enterprise.

Mrs. Sithole says that she feels good about herself since she can buy items she wants for herself and does not have to be jealous of other women. "If I had not joined the Zambuko program, I would not be as far ahead as I am now."

6. Decision Making

The AIMS assessment, particularly the case studies and the 1996 qualitative interviews (Barnes 1997), paid attention to gender dimensions within the household. This was done to learn patterns of decision making, and what happens to social relations and the loci of control over resources within a household as a woman increases her income, or as the household comes to rely more on her financial contributions. The survey sought to determine if clients gained more control over decisions on the use of revenue from their matched enterprise. Also, it sought to identify if there was greater individual decision making among the continuing clients on applying for a loan and use of the loan funds. To help with the interpretation of the information, the questionnaire asked about assistance with repaying the loan.

The interviews in 1996 on intrahousehold relationships revealed that the husband tends to make major household decisions in consultation with the wife. This cannot be equated to joint decision making since the wife's opinion is not necessarily taken into account. Women tend to be responsible for decisions related to provision of food and children's daily needs. As a woman's income increases or becomes more important in relation to other sources of household income, this pattern shifts. As this occurs, the woman may employ bargaining or negotiating skills within the household. The shift may lead to a conflict, but the woman may pursue a strategy of conflict reduction to ameliorate the situation. One technique is to consult with the husband on most of her business-related activities to gain his trust and confidence. The intensity of the conflict or tension usually wanes as the parties reach a tacit acceptance of the new pattern (Barnes 1997).

Box VI-6. Greater Involvement in Decision Making

Mrs. Laizah found that as her income increased from dressmaking she was consulted and valued more by her wage-earning husband. She also learned the details of her spouse's income after she started contributing to household expenditures. At the same time, her husband became stricter about her freedom of association and movement (Barnes 1997).

Microenterprise Revenue. Respondents were asked about the loci of decision making on the use of their matched enterprise revenue the previous month. The findings for the married respondents reveal that in both 1997 and 1999 roughly 30 percent were solely responsible for the decision and approximately the same proportion were not solely responsible for the allocation of the revenue (table VI-31 and A2, table 54). For the others, the tendency between the two years was toward less not more individual decision making. The results do not indicate that MFI program participation led to greater control over the earnings from the enterprise. The trend toward more consultation and joint decision making probably reflects the financial pressures due to the rise in the cost of living.

Table VI-31. Whether or Not Married Respondents Solely Responsible for Decisions on Use of Matched Enterprise Revenue, 1999 compared to 1997 (percentage)

	Continuing Clients N=85	Departing Clients N=110	Non-clients N=143
Not Solely Responsible 1997 nor 1999	31	29	27
Solely Responsible 1997 and 1999	31	25	35
Solely Responsible 1997, Not in 1999	23	30	25
Not in 1997, Solely Responsible in 1999	15	16	13

Zambuko Loan. An analysis was conducted of decision making among married clients who had taken at least one loan since 1997 (A2, tables 55-56). It centered on their most recent loan. The rate of married respondents that reported that they alone made the decision to take their last loan decreased from 51 percent in 1997 to 44 percent in 1999. For the other married respondents, the decision to take a loan was primarily done in consultation or jointly with their spouse. Among married women, about one-quarter reported a change to autonomous decision making and a similar proportion experienced greater involvement of another person, while approximately half said there was no change. Among the married men, slightly more than half said there was no change and one-third reported greater involvement of another person. Thus, the findings indicate a trend away from sole decision making among the male continuing clients.

It appears that the decision to apply for another loan involves consideration of how the monies will be used. Once the decision is made, the borrower then normally controls the use of the loan funds. There was little change between 1997 and 1999 among the married respondents who reported that they alone made the decision on how to use the loan monies: 67 percent in 1997 and 70 percent in 1999 (A2, table 57). This represented a slight increase among the females in sole decision making.

When asked about their most recent loan, one-quarter of the continuing clients reported that they had received some assistance with loan repayments. Among them, nearly all stated that their spouse had

helped them. Approximately one quarter of the 106 clients who received no assistance with loan repayments in 1997 reported receiving assistance with their latest loan. The 15 clients who reported some assistance in 1997 also reported assistance with repayment of their most recent loan. Thus, the findings indicate that assistance with loan repayments has tended to increase among those who continued to borrow from Zambuko. This probably reflects the growing importance of the enterprise to the household economy and the household operating more as a joint economic unit.

Summary. The results suggest that during the assessment period the trend among married clients and non-clients was more consultation and joint decision making with the spouse, rather than the financial decision being solely made by the microentrepreneur. This pattern was found among both married women and men. The findings probably reflect the financial pressures experienced by households and the importance of the enterprise revenue to the household economy.

7. Illustrations of Increased Empowerment

Mrs. Lepani. Mrs. Lepani represents a case in which a Zambuko client gained influence in her household, especially in relation to her husband, because her enterprise became more financially important in the household economy. Prior to joining Zambuko, Mrs. Lepani's husband had overall say on how the household's primarily source of income, his salary, was used, but as her enterprise grew she became involved in deciding how that money should be used and "actually influenced decisions taken." In January 1999 her husband had to leave his full-time job and close his part-time business. She became the primary income earner. By the fall of 1999 she reported that her husband respects her contribution to the household even more now than before. She said that she feels good that she can influence household decisions.

When Mrs. Lepani first applied for a loan in 1997, she consulted her husband. For the loan she took in 1999, she just informed her husband that she was going to apply and he agreed. She did not have to ask him like the first time because he now understands how the loan helps both the enterprise and household. Also, since he no longer has a full-time job, she has more decision-making power.

Around the time of her first loan, she often made decisions about use of her enterprise revenue without asking her husband for approval because the income she generated was not much and thus her husband did not mind how she used the money. After getting her second loan, she would tell her husband how she wanted to use the money and they would discuss it. Currently she asks for her husband's endorsement and influences the outcome.

Mrs. Sithole. This is another case of a woman whose loan helped her gain more decision-making influence in her household. She also developed self-esteem and self-confidence that come from being recognized as an important contributor to the household economy and from her ability to acquire items for the household. Mrs. Sithole's enterprise grew after she joined Zambuko. Over time it has became an important source of income for the family. Mrs. Sithole now has more control over household resources and she can make independent decisions. She feels good about her contributions to the household, recognizing that they are very useful especially since her husband had difficulties with his enterprise.

Prior to joining Zambuko in early 1996, Mrs. Sithole contributed about 20 percent of her household's total income. The primary source was her husband's enterprise. Since her first loan in

1996, her husband's enterprise has been losing customers due to the increased cost of inputs and falling demand. Hence, her enterprise profits have been used to meet expenses his income used to cover. In 1998 she was using her enterprise revenues to buy food and pay fees for one of her children to attended boarding school. At that time, she made decisions on the use of discretionary income, but informed her husband prior to using the money. She and her husband agreed that money from lodgers be used to pay for household utilities and buy food for the household. Because of difficulties with his enterprise, the husband spends most of his time now in their rural home engaged in agricultural production. Mrs. Sithole, meanwhile, had gained the confidence and security to experiment with new business lines.

She says that nowadays she is able to influence decisions they make jointly, which was not the case a couple years ago. For instance, although she had been consulting her husband each time prior to taking a loan, in 1999 she decided to apply without asking him. This was partly because he was in the rural areas and partly because he is aware that she applies for loans so she did not feel it was necessary for her to consult him. In comparison, prior to joining the program, both she and her husband would consult each other on financial transactions but he tended to control the outcome.

Prior to joining Zambuko, she did not feel good about her contribution to household income because her earnings were low and unpredictable. In 1998 she explained: "I now feel like a complete human being as I can contribute toward the welfare of my family." Prior to joining the program, she would make promises to her children if they asked her to buy them something, but would not be able to fulfill these promises. Nowadays if her children ask her to buy them something that she feels is useful, she can promise to do so, then save the money and buy it. This ability to do things she never was able to do previously makes her feel good.

Mrs. Jongwe. In this household, the Zambuko client became the primary income earner after her husband lost his job. Her husband eventually began to work in her enterprise and she gained the power to influence decisions because her enterprise is the household's primary source of income. Her husband supports and respects her contribution.

Prior to joining Zambuko, her husband was the main income earner. She and her husband would discuss plans "but he had a upper hand in decision making as he would have the final say." Before applying for her first loan, she told her husband about the Zambuko program and asked him if it was all right for her to go and apply for a loan. After some discussion, they agreed she should take a loan. She says that if her husband had refused, she would not have taken it. She always talked with her husband before taking subsequent loans, although she alone decided about her last loan.

Mrs. Jongwe joined Zambuko in 1996 about the time her husband was retrenched. She used her loans to buy cloth for sewing products to sell in South African and in Zimbabwe. She briefly experimented in early 1998 with grinding peanuts and selling the butter, but discovered that the market for this was poor and she had technical problems with the grinding. She travels to South Africa to sell her products and buy things for people in Zimbabwe who had placed orders with her. In 1999 she began building a cottage in the front of her house to use as her sewing room.

After losing his salaried job in 1996, Mr. Jongwe occasionally worked part time. By late 1998 he was assisting his wife by taking some of her products to sell on the streets in Harare city center. His

input increased over the months and by September 1999 Mrs. Jongwe reported him working full-time in the enterprise.

In 1998 Mrs. Jongwe reported that her contribution to the welfare of the household was very significant and household members, especially her husband, valued her contribution. Mrs. Jongwe and her husband together draw up their household budget, which includes rental income and remittances. They jointly decide on the use of the profits from her enterprise. In 1999 she reports being happy with her accomplishments so far, but still wants to increase her savings.

E. Summary and Conclusions

This section summarizes the impact findings from the ANCOVA analyses of the survey data. It also addresses areas where the case studies, but not the analysis of the survey data, found impacts. The next chapter address ways that participation in Zambuko probably led to the impacts found. The reader should recall that the average amount borrowed was Z$10,052 for continuing clients and Z$2,921 for departing clients. The amount borrowed by departing clients was roughly equivalent to US$245 in 1997, the last time they borrowed, and the average amount borrowed by continuing clients was equivalent to less than US$650, at the time they took their loans. It was not expected that impacts would be found on all of the indicators covered in the assessment, but rather the assessment sought to identify how additional funds might be spent and the outcomes that might be associated with business management training.

1. Impact Findings

The ANCOVA results suggest that a number of the study's hypotheses were confirmed. Table VI-32 summarizes hypotheses, impact variables, and the results of the statistical tests of significance. The results make a strong case that participation in Zambuko's program, centered on microcredit associated with business management training, has an impact on the welfare of the household, enterprise growth and diversification, and on empowerment of the client. It should be noted that on no indicators did the ANCOVA analysis with covariates indicate that the differences between the non-clients and continuing clients or departing clients were significantly higher for the non-clients.

The results on diversification of income sources among the departing clients, the value of funeral-related assistance given by continuing client households, and education of boys aged 6 to 16 in the household among extremely poor departing client households are extremely strong. In all instances, the client group in 1997 had a lower mean value than the other comparison groups, but in 1999 it had the highest. Moreover, the results of the ANCOVA analysis that controlled for specified initial differences also pointed to Zambuko having had an impact on the client group.

A number of indicators of the same hypotheses were analyzed using the ANCOVA approach with covariates and the statistical tests did not suggest a relationship with participation in Zambuko's program. Also, some hypotheses at the enterprise and individual levels were not found to be significantly related to program participation. These hypotheses and their indicators are summarized in Table VI-33.

Table VI-32 Program Impacts Suggested From Analyses of the Survey Data

Level	Client Status	ANCOVA Statistical Significance
Household Well-being		
Diversification of Income Sources	Departing Clients	<.10
Increase in Value of Assistance to Non-household Members: Funerals	Continuing Clients	<.05
Increase in Proportion of Boys and Girls in Household in School: Boys Aged 6 to 16	Departing Clients	<.05
	Continuing Clients	<.15
	Extremely Poor Continuing Clients	<.10
	Extremely Poor Departing Clients	<.10
Children Aged 6 to 21	Repeat Continuing Clients	<.15
Increase in Frequency Key Foods Consumed in Extremely Poor Households: Meat/chicken/fish	Extremely Poor Continuing Clients	<.05
Milk	Extremely Poor Continuing Clients	<.15
Increase in Household Assets: Expenditures on Household Durable Assets	Repeat Continuing Clients	<.05
Acquisition of a Stove	Continuing Clients	<.01
	Departing Clients	<.15
Acquisition of a Refrigerator	Continuing Clients	<.05
Enterprise Growth/Diversification		
Increase in Enterprise Net Revenue: Matched Enterprise Net Revenue	Repeat Continuing Clients	<.05
	Extremely Poor Departing Clients	<.15
Increase in Value of Enterprise Assets: In All the Household's Enterprises	Repeat Departing clients	<.01
Transaction Relationships: Insists on Deposit When Extending Credit	Departing Clients	<.05
Individual Empowerment		
Savings Patterns: Individual savings account	Continuing Clients	<.01
	Departing Clients	<.05
Number of ways saves, (among extremely poor households)	Extremely Poor Continuing Clients	<.01

Table VI-33. Indicators Tested and Impact of Microfinance Not Suggested by the Survey Data

Household Well-being
Diversification of Income Sources, Inverse Simpson Index
Household Income Last Month
Increase in Value of Assistance to Non-household Members: Value of Assistance to Non-Household Members Last Month
Increase in Proportion of Boys and Girls in Household in School: Girls Aged 6 to 16 Girls Aged 6 to 21 Boys Aged 6 to 21 Children Aged 6 to 16
Increase in Frequency Key Foods Consumed in Extremely Poor Households Eggs
Increase in Household Durable Assets: Expenditures on Housing Improvements the Last 12 Months Acquisition of Television Electric Fan Means of Transport
Enterprise Growth/Diversification
Increase in Enterprise Net Revenue: Net Revenue in All Household Enterprises Last Month
Increase in Value of Enterprise Assets Value of Assets in Matched Enterprise
Increase in Employment in Enterprises: Matched Enterprise Number of Employees Average Person-hours Worked Last Week Average Person-days Worked Last Month Up to Three Household Enterprises Average Number of Paid Employees Average Person-hours Worked Last Week Average Person-days Worked Last Month
Transaction Relationships: Separation of Business Location from Residence More Frequent Trips Outside to Sell
Individual Empowerment
Respect
Ability to Face the Future
Doing Something to Prepare for Future
Decision Making: Enterprise Revenue Loans

On a number of indicators neither positive nor negative impacts were discernable. The reason for the nonsignificant findings on respect, self-esteem and ability to face the future is probably due to

the difficulty of measuring these in a survey. The case studies of continuing clients provide information to support these hypotheses. The findings on less individual decision making on taking loans and use of enterprise revenue are most probably related to the importance of the enterprise earnings in the household economy and the economic pressures on households from the increases in the cost of living. The results indicate that other factors influence decision making more than program participation.

2. Impacts on the Extremely Poor

Approximately one-quarter of the client respondents were extremely poor in 1999. Although they were very poor, it does not mean that participation in Zambuko's program had no impact on them. The results of the ANCOVA analysis suggest that participation in Zambuko's program had a positive impact on both extremely poor continuing clients and departing clients sending their boys aged 6 to 16 to school. Also, it appears that Zambuko's program had an impact on the real value of the net revenue of the matched enterprises of extremely poor continuing clients. Zambuko's training and loans are likely to have enabled them, compared to other extremely poor departing clients and non-clients, to cope with pressures on their enterprises. As a result, they have been able to increase the frequency with which certain nutritious and relatively expensive food items are consumed in their households. The findings on the extremely poor support the assumption that improvements among the very poor will be found in their increased ability to meet basic needs.

3. Influence of Other Factors

The ANCOVA analyses considered a number of covariates with their 1997 values that might be associated with the 1999 results. Some of these were shown to significantly influence the 1999 findings, irrespective of the household's participation status. On most variables, those with high levels in 1997 also had high levels in 1999. Those instances where the 1997 level was not related to the 1999 results are: assistance to non-household members, funeral-related assistance, milk consumption among extremely poor households, and amount spent by extremely poor household on assets.

When considering the 1997 poverty status of the household, those who were either moderately poor or non-poor did significantly better than the extremely poor households in regards to the rate of the household's girls aged 6 to 16 in school and children aged 6 to 16 in school, and the acquisition of specific assets - stove, refrigerator and transport. The moderately poor and extremely poor did significantly better than the non-poor in terms of their level of matched enterprise net revenue, and the education of the household's children aged 6 to 16 and its girls aged 6 to 16. The findings on education suggest that the advances were made in the moderately poor households.

Whether the household was affected by illness or death in the 24 months preceding the 1997 interview was sometimes significantly associated with the 1999 findings. Those affected in 1997, compared to unaffected households, had a lower level of diversification of income sources and a smaller proportion of children aged 6 to 16 in school. Among the extremely poor, the affected households had a lower level of diversification of income sources, but had a higher level of expenditures on assets than the unaffected households.

The results of the statistical tests of significance on the poverty and affectedness covariates need to be used with caution. The household's poverty level may have changed and it may have been affected by illness or death since the 1997 interview. Therefore, the tests on each covariate should be regarded only as indicating how the 1997 status influenced the 1999 finding.

VII. CONCLUSIONS AND IMPLICATIONS

This chapter provides the conclusions from the study, discusses the ways by which the impacts may have occurred, and considers the implications of the findings. It addresses who is reached by Zambuko's program, the role of microcredit within the household economy, and the impact of the microfinance program which links microcredit with business management training. The implications of the findings for microfinance programs are addressed. The last section presents the implications of key lessons learned for future assessments.

A. Client Households and the Role of MFIs in Zimbabwe

Factors external and internal to the households of MFI clients may positively or negatively influence whether participation in a microfinance program, centered on credit supplemented by business management training, has positive impacts and the types of impacts. These factors are discussed below. Also, the implications of the findings related to who joins Zambuko's program are highlighted.

1. Factors Influencing Impacts

Factors external to the household appear to have influenced the assessment results. In particular, inflation was high between 1997 and 1999. The inflationary environment has meant that microentrepreneurs have had to be pro-active to attract customers and to maintain the real value of enterprise net revenues. The case study profiles provide examples of ways clients have adjusted their enterprises, often by diversifying their products or beginning a new enterprise. The tendency was for those with higher levels of enterprise revenue in 1997 to have more difficulty maintaining the real value of their enterprise net revenues.

Within this inflationary context, a household's loss of a regular source of wage income can put even more economic pressure on its enterprises to sustain the household. Twelve percent of the respondent households no longer had a wage source of income by 1999. This suggests that the enterprise net revenue may be used to meet immediate household consumption needs rather than to invest in longer-term improvements.

The negative economic climate appears to have contributed to a general trend of diversification of income sources. Some households have a member that secured a wage job, while others have begun to derive income from new enterprises or the sale of crops. The ratio of enterprise net revenue to total household income tended to decrease between 1997 and 1999. The reason for the decline appears to be twofold: for some, a higher level of income from non-enterprise sources, and for others, a decrease in enterprise income in relation to a relatively similar level of income from other sources.

The rate of inflation compared to Zambuko's interest rate and fees favored borrowing. The inflation-adjusted value of the interest and principal repaid was marginally more than the value of the money borrowed**.** For households coping with the increases in the cost of living, this appears to have had a limited effect on taking another loan. The findings on the proportion leaving the program and the reasons for departure do not suggest that the low cost of borrowing led individuals to remain

in the program. As the reader may recall, loan amounts tended to be small in relation to total household monthly income levels.

In 2000 an estimated one-quarter of the Zimbabweans aged 15 to 49 were HIV/AIDS infected. This suggests that related illnesses and deaths are likely to negatively influence the amount of money customers spend on microentrepreneurs' products and services. Even though the microentrepreneur may not be HIV infected, the high HIV prevalence rate has several negative consequences, as suggested in the assessment data. Those who dropped out of Zambuko's program were more likely than other clients to have a chronically ill household member.

Illness and death can create financial shocks in the household. They affect the availability and use of household income. The illness or death may be inside or outside the microentrepreneur's household. Also, households may take in a sick person or a child from a household where one or both parents have died. More than two-thirds of the respondent households had been affected by illness or death in one of these ways. They were able to cope by readjusting their household budget and drawing down on their savings.

2. Financial Services

The findings suggest that microentrepreneurs in Zimbabwe have few options beyond MFI loans to obtain credit for their enterprises. When asked what they would have done if they had not received a loan from Zambuko, in 1997 only 14 percent said they would have borrowed from other sources, and, in 1999, 20 percent of the continuing clients claimed that they would have borrowed from another source. These responses suggest the relatively low level of access microentrepreneurs have to sources of funding outside the household.

Some types of durable household and enterprise assets, such as furniture and appliances, are accessible through hire-purchase agreements. This type of arrangement, however, is only available to households with a formal sector wage employee or individuals with bank accounts and a guarantor employed in the formal sector. For those outside the formal sector of the economy, loans for the purchase of property seem to be extremely limited. Informal borrowing takes place, usually to address a financial crisis. Yet, even this does not appear to be widespread among the respondent microentrepreneurs. Hence, the financial services market for low-income households in Zimbabwe appears to be limited largely to MFIs.

The limited number of options appears to explain why some clients obtain loans from Zambuko even when these loans are less than the amount they have in their savings. The case studies suggest that clients prefer to take out loans rather than draw down on their savings, which are reserved for special lump sum expenditures and emergency needs.

Group-guaranteed loans present both an opportunity and a risk to the members. As indicated in the focus group sessions, the members tend to be willing to help those who are unable to meet their installments when illness and death affect their financial situation. Those who are either late in making their installments or fail to repay their loans place a financial burden upon their group members, especially since Zambuko began to strictly enforce the group guarantee.

The findings on the size of the most recent loan in relation to enterprise net revenue and monthly household income suggest that loan amounts are less than one-quarter of the monthly net revenue in the enterprise that secured the loan, and less than 15 percent of the household's total monthly income. Thus, the loan size is relatively small in relation to household income. The findings on assistance with repayment of loans reveal that other sources of income within the household may be drawn upon to assist with loan repayment.

B. Impacts of Microfinance in Zimbabwe

Participation in a microfinance program in Zimbabwe appears to have positive impacts on clients. The results of the ANCOVA analyses, which controlled for initial differences in 1997 on specific variables, indicate that the type of impact tends to vary among sub-groups of clients.

1. Impacts on Household Welfare

Zambuko appears to have an impact on the ability of client households to make lump sum expenditures. Participation in Zambuko's program enabled client households to invest in household durable assets. More continuing clients than non-clients had acquired a stove and a refrigerator. In addition, more departing clients than non-clients had acquired a stove. These timesaving items add to the household's quality of life. Acquisition of three other assets – transport, television and an electric fan – was not found to be related to participation in Zambuko's program. The latter enhances the quality of life, but is not an essential item, and transport is a very costly item that appears to be largely outside the grasp of most respondent households. When asset accumulation was measured through the amount of money spent, repeat continuing clients had spent a significantly larger amount in 1999 than had the non-clients. The results imply that loans and the resultant enterprise net revenues help improve the standard of living in client households.

Education of children in the household represents an investment in its human resource base. The impact results indicate that participation in Zambuko's program had an impact on the education of the household's boys aged 6 to 16. This impact was found among departing clients and continuing clients, including those households that were extremely poor. The findings suggest that these households manage their resources to invest in the education of boys aged 6 to 16. This was not found to be true for girls in the same age range. Zamuko's program also appears to be linked to educating children aged 6 to 21 in the repeat continuing client households.

The results imply that participation in Zambuko's program had an impact on the level of funeral-related assistance provided by continuing client households. This result may be associated with the basic character of these households, since it involves allocation of financial resources that otherwise could have been used in the household or its enterprises. It also suggests that enterprise earnings and client's savings are used to meet this social responsibility.

Also, Zambuko appears to have had an impact on the diversification of income sources among departing clients. The finding implies that Zambuko had a positive influence on the ability of these households to smooth their income flows and manage risks. It also suggests that even though clients may leave the program they may have benefited from their participation.

2. Impacts on Enterprise Growth

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

The results of the ANCOVA analyses with multiple covariates suggest that participation in Zambuko's program had a limited impact on the enterprise monthly net revenue and the value of enterprise assets, and no identifiable impact on employment in the enterprise. Zambuko appears to have had an impact on the monthly net revenue in the matched enterprises of the repeat continuing clients and those of the extremely poor departing clients. Also, Zambuko had a positive impact on the value of assets in all the enterprises of the repeat departing clients' households. The ANCOVA results did not indicate that participation in Zambuko's program was related to increased employment, measured in terms of paid employment, person-hours worked and person-days worked in the matched enterprise nor in up to three household enterprises.

The enterprises operated in a harsh economic environment. The results on enterprise net revenue reveal that across the matched enterprises of the continuing clients, departing clients, and non-clients, the tendency was for the real value of the net revenue to be lower in 1999 than 1997. The situation was more favorable when up to three household enterprises were taken into consideration. There was a gain in real value among departing clients and non-clients, but not continuing clients. In general, the value of enterprise revenue to total household income decreased between 1997 and 1999.

The findings on the enterprise in relation to the findings at the household level are discussed more completely below in the section on impact paths. This section addresses how there could be positive impacts at the household level, but limited impact on enterprise net revenues.

3. Impacts at the Individual Level

The findings from the survey data and the case studies suggest that MFI programs that contain some basic business management training tend to improve clients' management of financial resources. Participation in a program that does not contain a savings component appears to have an impact on the way people save. Program participation also influences the way clients extend credit. Better money management, including the habit of saving money, appears to be regarded by clients as an important impact of participation in Zambuko's program. The case study participants told of ways that credit and basic business management training have had a positive impact on them, their households and enterprises.

Particularly since survey instruments are not a very good way to obtain sound data on changes in respect, self-esteem and decision making, the information from the case studies help to substantiate that these are valid areas of inquiry for qualitative techniques. The case study findings support the hypotheses that participation in a MFI can lead to greater self-esteem and self-confidence, and enhance a client's ability to plan for the future. The greater self-esteem and self-confidence appear to be related to the clients' increased ability to manage their enterprise, meet the financial demands of the household, and acquire assets. Women usually start their businesses in activities that have

low entry costs and low returns. Access to credit permits them to diversify or change activities and hence increase their net revenue. In turn, this increases their self-esteem and self-confidence. Increased self-esteem and self-confidence seem to be particularly important when their role in the household economy changes and they become solely or primarily responsible for meeting the financial needs of the household.

As a woman's income rises proportionally to that of her spouse, her financial decision-making influence increases. This does not mean that she is solely responsible for decisions related to the money she earns. Given the economic stress in households, the findings tend to point toward married households operating more as a jointly managed economic unit.

4. Impact Paths

Zambuko loans provide clients a lump sum of money. The findings indicate that approximately half of them use the money exclusively for the enterprise, whereas the others use it inside and outside the enterprise, or for the enterprise and savings. Most commonly clients use the funds to capitalize their enterprise. The impact analysis suggests that participation in Zambuko's program is significantly related to increases in the net revenue in the matched enterprise of those that have taken several loans, the repeat continuing clients. Participation appears to be marginally associated with a positive effect on the monthly net revenue in the matched enterprises of the extremely poor continuing clients. In general, however, it appears that it has been difficult for the net revenue of the enterprises to keep pace with the rate of inflation. Since the data on enterprise net revenue involved comparing the month prior to the interviews, they do not capture the variation in levels since 1997 until the month prior to the interview in 1999. This helps to explain why impacts were found in acquisition of specific household durable assets, and, among departing clients, diversification of income sources.

Beyond the enterprise, the findings suggest that the money generated by the enterprise helps extremely poor client households to meet basic needs, such as food. Also, the results suggest that clients save some of their earnings for lump sum expenditures, such as school fees and assisting non-household members with funeral-related expenditures.

Zambuko's program appears to empower clients to better manage their financial resources. Clients are much more likely than non-clients to have personal savings accounts. In addition, clients were much more likely than non-clients to keep financial records, although the gains were greater among the non-clients who started at a lower level. The finding on changes in keeping financial records is probably due to not having a true baseline measure from which to assess change.

Although the analyses of the survey data did not indicate significant differences between the clients and non-clients in regards to respect from household members and confidence in facing the future, the qualitative interviews suggest that indeed the successes achieved through participation in Zambuko's program empowers clients, who are predominately women. The difference in the findings is probably due to the measures used in the survey. The qualitative data support the hypotheses that participation in a microfinance program increases clients' self-esteem and increases the respect for clients by their household members.

The findings suggest that even those who depart Zambuko's program had been positively impacted. The program appears to have enabled departing client households to diversify their income sources and repeat departing clients to have increased the value of their households' enterprise assets. These results, plus the impact of program participation on having an individual savings account, probably account for the rise in the schooling of the male household members aged 6 to 16.

C. The Poor and MFI Participation

Microfinance is often regarded as a poverty reduction strategy. This assessment has shown that Zambuko reaches the poor and retains them as clients. In 1997 approximately two-thirds of its new clients and half of its repeat clients were below the US$2 per capita a day poverty level. This includes 40 percent of the new clients and one-fifth of the repeat clients whose households were below the US$1 per capita a day poverty level.

Movement out of poverty, however, was found to be significantly associated with the size and structure of the household: a decrease in the size of the household, a decrease in the proportion of members who were economically dependent, and an increase in the number of economically active members and the number of income sources. The latter factor is amenable to influence by a MFI program and indeed the impact analysis suggested that participation in Zambuko's program had a positive impact on diversification of income sources among departing client households. The other factors are closely associated with the way poverty was defined. It was defined primarily on the basis of daily per capita income, taking into account purchase power parity.

The impact findings suggest ways that participation in a microfinance program helps clients from extremely poor households, especially those who remain in the program. The results support the general premise that the impacts on the poor will be primarily in terms of improvements in food consumption and other basic needs. Continued participation in Zambuko's program appears to have influenced clients' savings pattern and the frequency with which nutritious food items were consumed in the household. Among the extremely poor households of continuing clients and departing clients, participation was also closely related to sending the household's boys aged 6 to 16 to school. The results also point to the probability that participation is positively related to the level of net revenue in the matched enterprises of extremely poor departing clients.

Thus, the results of the ANCOVA analyses imply that microfinance programs, which offer microcredit associated with business management training, can improve some basic conditions in the households of extremely poor clients. MFI participation is likely to lead to modest improvements in the households and enterprises of the extremely poor. However, the results suggests that in certain environments, such as the 1997-1999 period in Zimbabwe, a reduction in the number of poor households may be beyond the scope of MFIs.

D. MFI Programs and Services.

The assessment's findings and conclusions have implications for MFI programs in Zimbabwe. Some of the implications may be relevant to MFIs in other contexts as well.

1. Influence of the Macroenvironment

The findings have suggested that the high inflationary environment has placed an economic stress on households. The tendency has been for enterprise net revenues to decline relative to other household income sources and for the enterprises to have difficulty increasing their net revenues in inflation-adjusted dollar values.

At the same time, the loan money repaid had a lower real value than the money borrowed and the interest rate had lagged behind the inflation rate. Over time, this leads to an erosion of the MFI's capital base. This suggests that the fees charged in addition to the interest rate need to be increased on a regular basis to keep pace with inflation. The macroeconomic conditions suggest that establishment of new microcredit programs and expansion of existing microcredit programs in Zimbabwe ought to proceed with caution or be put on hold until the economy is in a better state.

2. Financial Products and Terms

The findings highlight that Zambuko's current loan products and terms attract microentrepreneurs from poor households. The criteria for joining appear to be suitable for those from poor households. At the same time, the results suggest a high departure rate, heterogeneity among clients, and a lot of movement into and out of poverty. These findings suggest that there may be limited impact on particular groups of clients because of inherent features in the financial products.

The assessment results suggest that there may be a market for loans of six-month duration or less. Many microentrepreneurs will join an MFI program to determine if credit is appropriate for them. The findings reveal that 60 percent of those who did not seek another loan after 1997 had received only one loan. Since microentrepreneurs often 'test' the appropriateness of credit, for them short loan durations might enhance their ability to repay on time. In addition, nearly half of Zambuko's clients are traders. Traders in particular have rather rapid turn-around times and smaller loans of a short duration appear to be more suitable. The findings reveal that those in manufacturing did not tend to invest their loan funds in enterprise assets, so shorter-term loans might also appeal to them.

The findings indicate that there may be scope for loan products secured by enterprises or wage income that are not designated for use in a microenterprise. The results on timely repayment of loans suggest that use of some funds outside the enterprise may not affect the ability to repay the loan. Also, there may be a niche market for loans especially related to construction of rental units by those who own their residence. These loans would require a repayment period longer than one year and would be more vulnerable to increases in inflation rates. Thus, the latter type of loan product would probably be more feasible when the economy becomes more stable.

Also, there may be a demand for savings accounts that are designated for specific uses, to guard these funds from other financial demands. In general, however, there does not appear to be a lack of access to savings services in the urban areas covered by the assessment. Restricted access accounts might help individuals set aside money earmarked for a limited range of needs requiring lump sum. The case study findings reveal that in spite of high rates of inflation, people do save in cash because they have no other options. They feel that they must have easy access to lump sums of money for

specific needs, such as educational fees, and for emergencies. However, at the moment, many MFIs in Zimbabwe are not permitted to take savings deposits because of their legal status.

3. Business Management Training

The case study and survey findings on business management training point to microentrepreneurs valuing and benefiting from basic business management training. There appears to be an unmet demand for this type of training, appropriate to low-income microentrepreneurs. MFIs may want to pilot a training product focused on this target group to determine if it can be a financially sustainable service. Or, they may wish to form a partnership with an on-going business management training organization that can provide that training appropriate for their clientele.

This assessment was unable to separate the business management training from microcredit, since much of the training consists of advice given informally and because of the changes among the original Trust Bank sample. To better understand the impact of business management training associated with microcredit, it would be helpful to have a specially designed assessment that focused on the difference between receipt of microcredit and receipt of microcredit plus business management training, when the context is the same and credit delivery and terms are similar.

4. Program Leavers

Microfinance programs offer access to services, often targeted at poor microentrepreneurs. Departure from the program may be the result of different factors. Clients may depart due to difficulties repaying the loan and this departure may be voluntary or coerced. They also leave because they have moved and no longer fall within the catchment area. Also, leavers may be satisfied with the program, but want to wait a while before taking another loan, especially during periods of instability in the economy and in the household. Particularly in contexts that present limited options to borrow, microcredit programs open up opportunities for microentrepreneurs.

E. Implications for Future Assessments

A number of key lessons were learned in the conduct of this assessment. They may be applicable not only to the microfinance industry but also other types of programs and ways to measure their results.

1. Household Income

Programs aimed at the disadvantaged and poor often seek to increase household income. However, a number of non-program factors can influence household income levels irrespective of the program. Household income normally comes from a variety of sources and the national context can positively or negatively influence these. Changes in employment due to negative factors, such as retrenchments, and favorable factors, such as new industries, are likely to influence the level of household income. In HIV/AIDS pandemic environments, household members may leave their work due to illness and eventually die. These events will most likely influence the level of household income. Therefore, it might be more reasonable to expect a program to increase a particular source of income, rather than total household income.

As suggested by this and other studies, income is very difficult to measure very precisely. It is likely to ebb and flow over the months. Therefore, a multi-pronged approach, as used in the AIMS assessment, that considers income and indicators of expenditure flows as well as asset accumulation helps to overcome this weakness.

2. Quasi-experimental Design

The survey results from this assessment of Zambuko have indirectly highlighted the importance of using a non-client control group. This group represents changes that occurred without participation in the program. Therefore, it better enables the analyst to identify the specific impacts of program participation. Without a non-client control group, it would have been difficult to interpret the decline in net revenues of the matched enterprises of the clients: was it a negative impact or did it reflect widespread phenomena? The findings from the non-client sample enabled the analyst to conclude the latter. Conversely, on the variables where there was an increase for the client groups, the impacts would probably have been overstated if there had not been a non-client control group.

Practical considerations such as looking beyond new clients and minimizing disruption to the program and clients led to interviewing clients after they had received their loan. Therefore, there was no true pre-program measure against which to measure the impacts and not enough from the non-clients sample joined the program to yield informative pre-program and follow-up data on the key impact variables. The 1997 data for clients on some of the impact variables, such as enterprise revenue, are likely to have reflected use of the loan. In such instances, it would be advisable to include recall questions on those measures that are most likely to be immediately influenced by program participation.

3. The Poor

The analysis of the poor suggests the insights and information that might be gained from looking specifically at whether the program reaches the poor and whether the extremely poor benefit from participation in the program. At the same time, the findings suggest that it is difficult to categorize households on the basis of poverty, given problems in recall and knowledge of the amounts of income earned by household members. The results on changes in the household's poverty status indicate that the definition influences the results. Therefore, it might behoove the microfinance industry to agree on some common approaches to defining and discussing poverty.

ANNEX 1: POVERTY LEVEL CLASSIFICATIONS AND ANALYSIS

A. Calculations for US$ Per Person, Per Day Poverty Lines

		1997	1999
A. $1/day poverty line in 1993 prices (World Bank)	1.08		
CPI for 1993 (base 1990=100)	223.6		
CPI for 1997 (base 1990=100)	483.6		
	483.6 –223.6 = 260 / 223.6 = 116.3% increase		
	1.08 x 2.163 = 2.34		
B. Adjustment to convert from 1993 to 1997	2.34		
Average exchange rate for the 15th of each month, September – December 1997 (Oanda.com)	13.4		
	2.34 x 13.4 = 31.36		
C. PPP conversion ratio for 1997 (its reciprocal)	.33		
	.33 x 31.36 = 10.35		
D. Adjustment for relative price of private consumption (1998 only available data)	1.03		
	1.03 x 10.35 = 10.66		
Proportion of National Income that is consumed, 1997 (To convert to household income data)	.81		
	10.66 / .81 = 13.16		
$1/day poverty line		**Z$ 13.16**	**Z$ 27.48**
$2/day poverty line		**Z$ 26.32**	**Z$ 54.96**
CPI for 1997 (base 1990=100)	483.6		
CPI for 1999 (base 1990=100)	1009.6		
Proportional change between 1997 and 1999 CPIs	1009.6 - 483.6 = 526 / 483.6 = 108.8%		
	13.16 x 2.088 = 27.48		

B. Classification of Households Into Poverty Categories: Extremely Poor, Moderately Poor, and Non-Poor

First, households with complete information on income from all sources were classified on the basis of US$1, US$2 and above US$2 per capita, per day using the formula explained in section A above. Second, a poverty status prediction model was developed for 1997 and 1999 using a general linear model procedure. It considered a number of variables: location; number of income sources; current value of all the household's enterprise assets; value of household income last month; amount expended on household durable assets the past 24 months; economic dependency ratio; ownership of refrigerator, stove, freezer, and home in communal area; the number of times in the last seven days household consumed eggs, meat, and dried fish; renting out rooms; respondent's level of education and participation in a savings club; and enterprise business premise and sector. Variables yielding $p>0.30$ were excluded from the model. Thus the model for 1997 and 1999 poverty status predictions included a smaller number of variables.

Third, all records with the classification resulting from the model being different to that from the US dollars per capita, per day classification were examined. In some cases it become apparent that income had been over or under stated, when compared with the asset base of the household and household size, expenditure on durable assets and food consumption patterns. In 61 cases in 1997 the classification of the household was adjusted no more than by one category. For example, a household classified as between US$1 and $2 a day but with no stove, refrigerator or freezer, enterprise assets of less than Z$100, expenditures on durable household assets of less than Z$1,500 and eating meat only once a week was reclassified as extremely poor. Similarly for 1999 poverty status, the poverty classification was adjusted for 39 respondents by no more than one category. In addition, those households with incomplete income data in 1997 and 1999 were classified into one of the poverty categories based on their predicted category status with incomplete information plus consideration of the other factors (asset base and expenditures, and food consumption patterns) and household size.

C. Approach to Studying Changes in Poverty Status in 1999

Poverty lines were constructed as previously described in A and B above. These resulted in classification of households into three poverty categories - extremely poor, moderately poor and not poor - in each of the two years of survey. The changes in poverty status analysis investigated and thereby identified the factors characterizing respondents who changed poverty categories during the two-year period.

First, an the approach using general linear models was tried but was singularly unsuccessful, with the resulting ANOVA's being far from satisfactory. A logistic regression approach was then tried and resulted in meaningful models. This section summarizes the results. A total of four regressions were completed, accounting for different movements of respondents in respect of poverty categories during the two-year period.

Various explanatory variables were input for possible selection into each model and the method of stepwise selection was utilized, based on a $p=.2$ entry level. Where categorical variables had more than two levels, dummy variables were created. Wherever possible, the variables represented the change in the two-year period. After stepwise selection each model was re-run using those variables identified in the selection plus other levels of the same variable (in the case of dummy variables), and always including the five level characterization of respondents by their 1997 and 1999 loan status. Continuous explanatory variables available for selection were as follows:

- gain score household size,
- intensity index of affectedness (1999),

- gain score in number of income earners,
- gain score in proportion of household income accounted for by enterprise revenue,
- gain score in proportion of household income accounted for by wage earners,
- gain score in number of household income sources, and
- gain score in number of economically active household members.

Discrete, categorical variables available for selection included:

- gain score in economic dependency ratio[1] (+ve = less % econ active),
- gender of 1997 respondent,
- gain score in housing tenure status (+ve = rent 97 to own 99),
- gain score in household experiencing major financial shocks (+ve = shock 97 none 99),
- gain score in household experiencing illness in household (+ve = ill 97 none 99),
- gain score in household experiencing death in household (+ve = death 97 none 99),
- residential area,
- marital status of 1997 respondent,
- widowhood status change 1997-1999, and
- 5 level respondent classification based on 1997 and 1999 loan status.

In each table below, a summary of the interpretation of the effect of the variables on the change in poverty category is provided. Significance levels are given for individual chi-square tests on gain score variables, using the categories negative, same, positive. In addition, significance levels are provided for individual t-tests on differences in means for continuous variables and differences in proportions for dummy categorical variables. Also included in the tables are variables which did not enter the model but do have significance at the individual level.

1. **Movement from not poor or moderately poor in 1997 to extremely poor in 1999 –** (64 respondents moved)

    a) The final model included the following variables: economic dependency ratio, household size, household income sources, household major financial shocks, household illness and housing tenure status.

    b) The Pearson chi square significance level of the final model was 0.83 indicating a satisfactory model, as supported by lack of fit statistics (not given).

[1]The gain score economic dependency ratio was taken to be categorical due to the extremely small range of values and skewness.

Variable	Individual chi-square significance	Individual t-test significance	Variable change implying movement to extremely poor category	In final model?
Household size	0.020	0.017	Increasing size	Yes
# income earners	0.006	0.017	Decreasing number	No
# income sources	0.039	0.009	Decreasing number	Yes
Economic dependency ratio	0.001	-ve 0.00 +ve 0.00	Increasing ratio	Yes
# economically active	0.002	0.034	Decreasing number	No
Tenure status	0.082	-ve 0.43 +ve 0.11	From rent 1997 to own 1999	Yes
Major financial shocks	0.192	-ve 0.045 +ve 0.746	Some in 1997 to none in 1999 or no change	Yes
Household illness	0.034	-ve 0.035 +ve 0.907	None in 1997 to some in 1999	Yes
% household income from enterprise revenue	0.123	0.042	Decreasing proportion	No
5 level loan status	0.516	RC 0.232 NC 0.965 RD 0.830 ND 0.321 Non 0.123	Non-clients highest, repeat continuing lowest	Yes

2. **Movement from not poor in 1997 to moderately/extremely poor in 1999 –**(60 respondents moved)

    a) The final model included the following variables: number of income sources, household size, and proportion of household income deriving from enterprise revenue

    b) The Pearson chi square significance level of the final model was 1.0 indicating a satisfactory model, as supported by lack of fit statistics (not given).

Variable	Individual chi-square significance	Individual t-test significance	Variable change implying movement to poor category	In final model?
Household size	0.002	0.028	Increasing size	Yes
% household income from enterprise revenue	0.544	0.034	Decreasing proportion	Yes
# income sources	0.006	0.001	Decreasing number	Yes
Economic dependency ratio	0.001	-ve 0.007 +ve 0.002	Increasing ratio	No
Change in widow status	0.003	97/99 0.070 99 0.146	Widow 1997 married 1999	No
5 level loan status	0.006	RCC 0.191 NCC 0.259 RDC 0.109 NDC 0.647 NC 0.001	Highest repeat departing clients, lowest non-clients	Yes

3. **Movement from extremely poor in 1997 to not poor or moderately poor in 1999 –**(112 respondents moved)

    a) The final model included the following variables: household size, number of income sources, economic dependency ratio, tenure status, widow status, and geographic area.

    b) The Pearson chi-square significance level of the final model was 0.716, indicating a satisfactory model, as supported by lack of fit statistics (not given).

Variable	Individual chi-square significance	Individual t-test significance	Variable change implying movement to not extremely poor category	In final model?
Household size	0.006	0.006	Decreasing size	Yes
Tenure status	0.269	-ve 0.488 +ve 0.075	Own 1997 to rent 1999	Yes
# income sources	0.024	0.003	Increasing number	Yes
Economic dependency ratio	0.001	-ve 0.002 +ve 0.000	Decreasing ratio	Yes
Change in widow status	0.216	97&99 0.54 99 0.002	Widow 1997 & 1999	Yes
# income earners	0.020	0.016	Increasing number	No
# economically active	0.003	0.002	Increasing number	No
Geographical area	0.001	0.001	Mutare/Bulawayo	Yes
5 level loan status	0.001	RCC 0.011 NCC 0.069 RDC 0.011 NDC 0.000 NC 0.880	New departing highest, repeat departing and repeat continuing lowest	Yes

4. **Movement from extremely/moderately poor in 1997 to not poor in 1999** – (124 respondents moved)

   a) The following variables were included in the final model: proportion of household revenue from enterprises, economic dependency ratio

   b) The Pearson chi-square significance level of the final model was 0.263 indicating a satisfactory model, as supported by lack of fit statistics (not given).

Variable	Individual chi-square significance	Individual t-test significance	Variable change implying movement to not poor category	In final model?
Household size	0.005	0.007	Decreasing size	No
% Household income from enterprise revenue	0.319	0.000	Greater proportion	Yes
# income sources	0.088	0.060	Increasing number	No
Economic dependency ratio	0.001	-ve 0.001 +ve 0.000	Decreasing ratio	Yes
# Economically active	0.145	0.037	Increasing number	No
1997 marital status	0.050	0.036	Married	No
5 level loan status	0.735	RCC 0.417 NCC 0.747 RDC 0.855 NDC 0.573 NC 0.181	Non-clients highest, repeat continuing clients lowest	Yes

ANNEX 2: DESCRIPTIVE DATA TABLES

LIST OF TABLES

ANNEX 2

Table 1. Respondents' Average Age in 1999 and Educational Level

	Continuing Clients	Departing Clients	Non-clients
Average Age, 1999	41	41	41
Average Education	7.8	7.9	7.1

Table 2. Respondents' Marital Status in 1999 and 1997 (number of respondents)

Marital Status 1997	Clients Marital Status 1999		Non-clients Marital Status 1999	
	Married	Not married	Married	Not married
Married	210	23	157	10
Not married	11	72	8	50
Total	221	95	165	60

Note: Same respondent 1997 and 1999.

Table 3. Direction of Change in Respondents' Marital Status

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Total	%
Same Status	123	82	137	83	197	87	457	84
Negative Change	23	15	21	13	20	9	64	12
Positive Change	5	3	7	4	8	4	20	4
Total	151	100	165	100	225	100	541	100

Note: Same respondent 1997 and 1999.

Table 4. Widowhood Among Respondents, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Widow 97 & 99	14	9	18	11	24	11	56	10
New Widow 99	8	6	13	8	9	4	30	6
Other marital status	129	85	134	81	192	85	455	84
Total	151	100	165	100	225	100	541	100

Note: Same respondent 1997 and 1999.

Table 5. Direction of Change in Household Size, 1999 Compared to 1997

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
1999 Size Less Than 1997	56	36	55	30	78	32	189	52
1999 Size Same As 1997	47	30	50	27	75	31	172	30
1999 Size Greater Than 1997	52	34	78	43	88	37	218	38
Total	155	100	183	100	241	100	579	100

Table 6. Proportion of Economically Dependent Members in Household, 1999 Compared to 1997

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
% Higher by 31% +	40	26	61	34	59	25	160	28
% Higher by 6-30%	33	21	31	17	51	22	115	20
% Same within 5%	30	20	27	15	52	22	109	19
% Lower by 6-30%	19	12	15	8	22	9	56	10
% Lower by 31% +	32	21	45	25	53	22	130	23
Total	154	100	179	100	237	100	570	100

Table 7. Household Having a New Member in Last 24 Months That Stayed More Than Six Months, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	68	44	87	47	108	45	263	45
No	86	56	96	53	133	55	315	55
Total	154	100	183	100	241	100	578	100

Table 8. Average Number of New Household Members Since 1997

Continuing Clients N = 60	Departing Clients N = 78	Non-clients N = 97
1.46	1.76	1.74

Table 9. Reasons for New Household Members, 1999 (Multiple Responses)

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Marriage	1	1	6	5	7	5	14	4
New Birth	10	13	20	18	27	20	57	18
Children Due to Illness/Death in Their Household	11	15	9	9	9	7	29	9
Adult Due to Illness/Death in Their Household	2	3	-	-	6	5	8	3
Adults Join Household Marital	2	3	8	7	7	5	17	5
Sick Person Join Household	4	5	15	14	12	9	31	10
Domestic Worker Joined Household	7	9	3	3	4	3	14	4
Person Look Employ Join Household	13	17	22	20	40	30	75	24
Other Reasons	26	34	26	24	21	16	73	23
Total	76	100	109	100	133	100	318	100

Note: 18 in other category joined due to schooling and 6 joined related to illness/death, such as to care for a sick person.

Table 10. Whether One or More New Members Due to Illness/Death

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes*	18	12	23	13	26	11	67	12
No	136	88	160	87	215	89	511	88
Total	154	100	183	100	241	100	578	100

Note: Includes children or adults due to illness or death in previous household, or a sick person.

Table 11. Whether Household Resided at Same Address, 1999 Compared to 1997

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	133	86	150	82	192	80	475	82
No	21	14	33	18	48	20	102	18
Total	154	100	183	100	240	100	577	100

Table 12. Tenure Status of Household Residence, 1999 Compared With 1997

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Own/rent-to-buy 1997 & 1999	91	60	96	53	112	47	299	52
Other 1997 & 1999	41	27	60	33	92	37	193	34
Own/rent-to-buy in 1999, Other in 1997	12	8	20	11	18	8	50	9
Other in 1999, Own/rent-to-buy in 1997	8	5	6	3	18	8	32	5
Total	152	100	182	100	240	100	574	100

Note: Chi-square significant at the .07 level.

Table 13. Illness and Death Affecting Household, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
No	57	37	50	27	72	30	176	31
Yes, at Least One Event	98	63	133	73	169	70	400	69
Total	153	100	188	100	240	100	576	100

Note: Refers to financial crises in the last 24 months due to illness or death of household member, a chronically ill household member, or the household taking in someone affected by illness or death in their household.

Table 14. Households With Member Chronically Ill and Unable to Work in Last Six Months, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	7	5	23	13	18	7	48	8
No	147	95	160	87	223	93	530	92
Total	154	100	183	100	241	100	578	100

Note: Chi-square significant at the .02 level.

Table 15. Households Not Seeking Medical Treatment the Last Six Months Due to Lack of Funds, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	15	10	28	15	29	12	72	12
No	139	90	155	85	212	88	506	88
Total	154	100	183	100	241	100	578	100

Table 16. Relationship Between Chronic Illness and Not Seeking Medical Treatment Due to Lack of Funds

	Yes, Chronically Ill Member		No, Chronically Ill Member		Total	
	Number	%	Number	%	Number	%
Yes, Not Sought Medical Treatment Due to Lack of Funds	18	38	54	10	72	12
No, Not Sought Medical Treatment Due to Lack of Funds	30	62	476	90	506	88
Total Number	48	100	530	100	578	100

Chi-square significant at the .01level.

Table 17. Status of 1997 Matched Enterprise, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Operate in Household	124	83	131	78	189	84	444	82
Operate Out of Household	2	1	1	1	-	-	3	1
Permanently Closed	23	16	31	19	31	14	85	16
Temporarily Closed	0	0	4	2	5	2	9	2
Total	149	100	167	100	225	100	541	100

Table 18. Current Owner of 1997 Matched Enterprise, 1999

	Continuing Clients		Departing Clients		Non-clients		All	
	Number	%	Number	%	Number	%	Number	%
1997 Respondents	124	98	136	94	195	98	455	97
Other	3	2	8	6	4	2	15	3
Total	127	100	144	100	199	42	470	100

Note: Not Applicable: 107

Table 19. Year Matched Enterprise Ceased Operation

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
1997	1	4	5	16	11	35	17	19
1998	15	63	18	56	18	56	51	58
1999	8	33	9	28	3	9	20	23
Total	24	100	32	100	32	100	88	100

Note: Not Applicable: 447

Table 20. Why Matched Enterprise Ceased Operation

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Too Little Profit	10	37	14	37	8	21	32	31
1997 Respondent Ill/Died	3	11	5	13	7	19	15	15
1997 Respondent Regular Job	0	0	3	8	2	5	5	5
Other	14	52	16	42	21	55	51	49
Total	27	100	38	100	38	100	103	100

Note: Not Applicable: 470

Table 21. Number of New Enterprises in Household, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
No New Enterprises	119	80	135	75	200	86	454	81
One New Enterprise	25	17	41	23	28	12	94	17
Two New Enterprises	3	2	1	-	5	2	9	1
Not Stated	2	1	3	2	1	-	6	1
Total	149	100	180	100	234	100	563	100

Table 22. Number of New Household Enterprises by Gender in Bulawayo

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Male Respondents								
No New Enterprises	4	80	4	67	8	80	16	76
One New Enterprise	1	20	2	33	1	10	4	19
Two New Enterprises	0	0	0	0	1	10	1	5
Total	5	100	6	100	10	100	21	100
Female Respondents								
No New Enterprises	16	73	23	82	25	89	64	82
One New Enterprise	6	27	5	18	2	7	13	17
Two New Enterprises	0	0	0	0	1	4	1	1
Total	22	100	28	100	28	100	78	100

Table 23. Number of New Household Enterprises by Gender in Greater Harare (Excluding Trust Bank Clients and Comparative Non-Clients)

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Male Respondents								
No New enterprises	7	88	9	100	18	100	34	97
One New Enterprise	1	12	0	0	0	0	1	3
Female Respondents								
No New Enterprises	38	81	34	64	64	82	136	77
One New Enterprise	7	15	15	28	14	18	36	20
Two New Enterprises	1	2	1	2	-	-	2	1
Not Stated	1	2	3	6	-	-	4	2
Total	47	100	53	100	78	100	178	100

Table 24. Number of New Household Enterprises by Gender in Mutare

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Male Respondents								
No New enterprises	5	100	7	70	9	100	21	88
One New Enterprise	-	-	3	30	-	-	3	12
Total	5	100	10	100	9	100	24	100
Female Respondents								
No New Enterprises	16	85	26	81	24	83	66	83
One New Enterprise	1	5	6	19	5	17	12	15
Two New Enterprises	1	5	0	0	0	0	1	1
Not Stated	1	5	0	0	0	0	1	1
Total	19	100	32	100	29	100	80	100

Table 25. Number of New Household Enterprises, 1997 Trust Bank Clients and Comparative Groups

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
No New Enterprises	29	74	19	70	39	81	87	76
One New Enterprise	9	23	8	30	5	11	22	19
Two New Enterprises	1	3	0	0	3	6	4	4
Not Stated	0	0	0	0	1	2	1	1
Total	39	100	27	100	48	100	114	100

Table 26. Changes in the Household's Number of Microenterprises, 1999 Compared to 1997

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Fewer	30	19	36	20	46	19	112	20
Same	99	64	118	64	161	67	378	65
More	26	17	29	16	34	14	89	15
Total	155	100	183	100	241	100	579	100

Table 27. Received Gifts/Remittances Last Month, 1997 and 1999

	Continuing Clients N=152		Departing Clients N=181		Non-clients N=240		Total N=573	
	Number	%	Number	%	Number	%	Number	%
1997 Gifts/Remittances	35	23	31	17	56	23	122	21
1999 Gifts/Remittances	6	4	17	9	15	6	38	7

Table 28. Households in Which Enterprise Net Revenue Was 95% or More of Total Income Last Month, 1997 and 1999

	Continuing Clients N=120		Departing Clients N=141		Non-clients N=190		Total N=451	
	Number	%	Number	%	Number	%	Number	%
1997 Yes*	36	30	56	40	80	42	172	38
1999 Yes	25	20	31	21	52	27	108	24

Note: Includes only those with complete income information.
*Significant between continuing clients and non-clients (p= 0.05).

Table 29. Distribution of the Total Number of Zambuko Loans Taken by Client Respondents (percentages)

Number of Loans	Continuing Clients N=155	Departing Clients N=183
One	0	64
Two	40	27
Three or More	60	9

Table 30. Average Number of Loans Taken by Client Status

Repeat Continuing Clients N=67	New Continuing Clients N=88	Repeat Departing Clients N=67	New Departing Clients N=116
3.8	2.3	2.3	1

Table 31. Relative Size of Recent Zambuko Loan to Enterprise and Household Monthly Income (percentage)

Size of Loan	Continuing Clients	Departing Clients
1997		
To Matched Enterprise Net Revenue Last Month, 1997	22	24
To All Enterprise Net Revenue Last Month, 1997	18	19
To Total Household Income Last Month, 1997	10	12
1999		
To Matched Enterprise Net Revenue Last Month, 1997	22	NA
To All Enterprise Net Revenue Last Month, 1997	17	NA
To Total Household Income Last Month, 1997	10	NA

Note: NA=not applicable

Table 32. Use of the Most Recent Zambuko Loan, 1997 and 1999 (percentage)

	Continuing Clients	Departing Clients
1997		
Only for Enterprise(s)	63	53
Enterprise and Outside Enterprise	17	16
Enterprise and Savings	20	31
1**999**		
Only for Enterprise(s)	58	NA
Enterprise and Outside Enterprise	28	NA
Enterprise and Savings	14	NA

Note: Outside Enterprise included education, funeral, medical, rental property, home improvements, household rent, food, electricity, household assets and water.
The 2 respondents in 1997 and 7 in 1999 stating "only outside" were included in the "enterprise and outside enterprise" category.

Table 33. Repayment of Last Zambuko Loan on Time and Loan Use, 1997 and 1999 (percentage)

Yes, Repaid on time	Continuing Clients	Departing Clients
1997		
Enterprise and Outside Enterprise*	75	45
Only for Enterprise(s)**	74	55
Savings and Enterprise ***	67	47
1**999**		
Enterprise and Outside Enterprise	70	NA
Only for Enterprise(s)	73	NA
Savings and Enterprise	80	

* Statistically significant differences at 0.01 level.
** Statistically significant differences at 0.01 level.
***Statistically significant differences at the .09 level.

Table 34. Distribution of Last Loan of Continuing Clients (percentage of Zimbabwe dollar values)

	Continuing Clients N=82
Stock/Equipment/Construction/Rent	84
Education	2
Savings	4
Medical	3
Home Repairs	1
Household Rent/Food	1
Other	5

Table 35. What Continuing Clients Would Have Done If Had Not Received Last Loan from Zambuko, 1999

	Continuing Clients	
	Number	Percent
Borrowed Elsewhere	27	22
Delayed Expenditure	7	6
Used Savings	22	17
Continued as Before	60	49
Other	7	6
Total	123	100

Table 36. Among Households Purchasing Household Assets, Those Obtaining One or More Items Through Hire-purchase Arrangement, 1997 and 1999

	Continuing Clients	Departing Clients	Non-clients	Total
1997	N=86	N=104	N=116	N=306
Yes	20%	17%	16%	17%
1999*	N=158	N=179	N=239	N=571
Yes	32%	25%	16%	24%

* Chi-square test significant at the .05 level.

Table 37. Ways Financial Needs for Major Shocks Met, 1997 and 1999 (Multiple Responses)

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
1997								
Earning/Income	36	33	30	21	37	23	103	25
Savings	46	42	59	41	75	48	180	45
Borrowed/Gifts	10	10	21	15	23	15	54	13
Loan	3	3	6	4	0	0	9	2
More Hours	4	4	7	5	12	8	23	6
Took Lodgers	1	-	2	1	2	1	5	1
Delayed Payments	1	-	0	0	0	0	1	-
Less Expenditure	5	5	15	11	6	4	26	6
Sell Assets	1	-	0	0	0	0	1	-
Other	3	3	3	2	2	1	8	2
Total	110	100	143	100	157	100	410	100
1999								
Used Earnings	31	31	64	45	61	36	156	38
Used Savings	48	49	52	37	80	48	490	44
Borrowed Informally	6	6	10	7	13	7	29	7
Loan	2	2	2	1	1	1	5	1
Worked More	1	1	0	0	1	1	2	1
Took in Lodgers	1	1	0	0	0	0	1	-
Delayed Payments	0	0	1	1	1	1	2	1
Reduced Expenditures	1	1	5	4	2	1	8	2
Rented/Sold Assets	2	2	0	0	1	1	3	1
Other	7	7	7	5	8	4	22	5
Total	99	100	141	100	168	100	408	100

Table 38. Financial Shocks, 1999 (Multiple Responses)

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
New Individual Join	2	1	4	2	0	0	6	1
Income Source Departs	1	-	2	1	0	0	3	-
Loss Theft/Fire/Fraud	6	3	6	3	14	5	26	4
Lose Job/Close Business	6	3	10	4	8	2	23	3
Serious Illness	50	25	62	27	86	30	198	28
Death Household Member	25	13	29	13	29	10	83	12
Death/Financial Obligations Non Household	50	26	70	30	81	28	201	28
Other	9	5	11	4	12	4	32	4
None	48	24	38	16	61	21	147	20
Total	197	100	232	100	291	100	719	100

Table 39. Number of Household Income Sources, 1997 and 1999

	Clients N=338		Non-clients N=241		Total N=579	
	Number	%	Number	%	Number	%
1997						
One	65	19	74	31	139	24
Two	152	45	90	37	242	42
Three or more	121	36	77	32	198	34
1999						
One	53	16	51	21	104	18
Two	113	33	86	36	199	34
Three or more	172	51	104	43	276	48

Table 40. Reason for Increase in Number of Income Sources, 1999

	1997 Clients		Non-clients		Total	
	Number	%	Number	%	Number	%
New Enterprise	34	36	19	35	53	36
New Wage Source	32	34	21	38	53	36
Rental Property	13	14	6	11	19	12
Remittances/Other	15	16	9	16	24	16
Total	94	100	55	100	149	100

Table 41. Number of Days Items Consumed in Household the Last Seven Days, 1997 and 1999

	Av. # Days 1997	Av # Days 1999	Pattern of Change, 1999 Compared to 1997		
			Decrease %	No change %	Increase %
Vegetables					
Clients	5.7	5.8	50	25	25
Non-clients	5.7	5.9	27	43	30
Eggs					
Clients	2.2	1,4	42	26	32
Non-clients	2.1	1.9	41	24	35
Milk					
Clients	1.9	1.4	43	33	24
Non-clients	1.9	1.4	42	33	25
Dried Fish					
Clients	.81	.69	32	41	27
Non-clients	.80	.70	31	44	26
Meat/fish/chicken					
Clients	4.2	4.5	34	25	41
Non-clients	4.0	4.2	33	25	42

Table 42. Sold Household Durable Assets, and Reason Why, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Sold Household Durable Assets in Past Months, 1999*								
Yes	43	28	29	16	42	17	114	20
No	111	72	154	84	198	83	463	80
Total	154	100	183	100	240	100	577	100
Reason Why Sold Assets in Past 24 Month								
Upgraded	20	47	12	41	21	50	53	47
Needed Money	16	37	12	41	17	41	45	39
Other	7	16	5	18	4	9	16	14
Total	43	100	29	100	42	100	114	100

*Chi-square test significant at the .01 level.

Table 43. Location of Matched Enterprise, 1997

	Clients		Non-Clients		Total	
	Number	%	Number	%	Number	%
Same as Residence	191	72	123	62	314	67
Residential Area	20	7	31	16	51	11
Out of City`	29	11	27	14	56	12
Industrial Area	6	2	5	3	11	3
City Center	10	4	6	3	16	4
Rural	1	-	1	-	2	-
Mobile	8	3	3	1	11	2
Other	3	1	3	1	6	1
Total	268	100	199	100	467	100

Note: Same matched enterprise.

Table 44. Whether Matched Enterprise Located at Residence, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Some Premise as Residence	96	77	92	63	117	59	305	65
Other	28	23	53	37	82	41	163	35
Total	124	100	145	100	199	100	468	100

Note: Chi-square test significant at the .01 level.
Refers to same matched enterprise in 1997 and 1999.

Table 45. Direction of Change in Location of Matched Enterprise

	Continuing Clients		Departing Clients		Non-clients Clients		Total	
	Number	%	Number	%	Number	%	Number	%
Negative Change	18	14	6	4	15	7	39	8
No Change	95	76	121	84	163	82	379	81
Positive Change	11	9	17	12	21	11	49	11
Total	124	100	144	100	199	100	467	100

Note: Chi-square test significant at the .04 level
Refers to same matched enterprise.
Negative means moving from off-residence to residence.

Table 46. Reason Why Matched Enterprise Premise Changed Since 1997

	1997 Clients		Non-clients		Total	
	Number	%	Number	%	Number	%
Forced to Leave	5	12	2	8	7	10
Moved Residence	252	58	15	58	40	58
Moved to Better Location	10	23	5	19	15	22
Other	3	7	4	15	7	10
Total	43	100	26	100	69	100

Note: Not Applicable: 51 had no enterprise; 60 had no matched enterprise and 396 had not changed their address.

Table 47. Business Management Training in Last 24 Months, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	53	35	22	13	18	8	93	17
No	97	65	145	97	207	92	449	83
Total	150	100	167	100	225	100	542	100

Note: Continuing clients differed significantly from non-clients and from departing clients at the .01 level for each pair-wise comparison. The difference between departing clients and non-clients was marginally significant at the .11 level.

Table 48. Organization Providing the Business Management, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Banks	0	0	1	5	1	5	2	2
Training Institution	18	34	12	57	12	67	42	46
Churches	0	0	1	5	3	17	4	4
Council/Government	1	2	0	0	0	0	1	1
Zambuko	34	64	7	33	2	11	43	47
Total	53	100	21	100	18	100	92	100

Table 49. If Did Anything Differently as Result of Business Training Received, 1999

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Yes	37	71	19	86	13	77	69	76
No	15	29	3	14	4	23	22	24
Total	52	100	22	100	17	100	91	100

Table 50. What Did Differently as Result of Training (Multiple Responses)

	Continuing Clients		Departing Clients		Non-clients		Total	
	Number	%	Number	%	Number	%	Number	%
Better Financial Management	16	29	9	39	5	25	30	31
Improved Records	21	38	12	52	8	40	41	42
Better Marketing	3	6	0	0	2	10	5	5
Customer Care	4	7	1	4	1	5	6	6
Other	4	7	0	0	0	0	4	4
Not Specified	7	13	1	4	4	20	12	12
Total	55	100	23	100	20	100	98	100

Note: Not Applicable. 471

Table 51. Among Those Not Attending Business Management Training, If Knows of Source and Interested in Attending Training

	Continuing Clients N=97		Departing Clients N=145		Non-clients N=207		Total	
	Number	%	Number	%	Number	%	Number	%
Yes, Knows	53	55	85	59	69	34	207	46
Yes, Interested	86	89	126	88	173	84	385	86

.

Table 52. Feel Well Positioned to Deal with Future

	Clients		Non-clients		Total	
	Number	%	Number	%	Number	%
No 1997 & 1999	14	4	15	7	29	5
Yes 1997 & 1999	207	67	24	57	331	63
Yes 1997, No 1999	34	11	27	12	61	12
No, 1997, Yes 1999	55	18	51	24	106	20
Total	310	100	217	100	527	100

Note: Same respondent 1997 and 1999.

Table 53. Changes Among Those Who Were Not Doing Something to Prepare for the Future in 1997

	Clients Number=274		Non-clients Number=157		Total Number=431	
No 1997 & 1999	33	12	34	22	67	15
No 1997, Yes 1999	241	88	123	78	364	85

Note: Chi Square significant at 0.01
Same respondent 1997 and 1999.

Table 54. Changes in Decision Making on Use of Matched Enterprise Revenue Last Month Among Married Respondents By Gender

	Continuing Clients		Departing Clients		Non-clients Clients		Total	
	Number	%	Number	%	Number	%	Number	%
Females	68		92		116		276	
Change to Others	14	20	29	32	29	25	72	26
No Change	44	65	48	52	71	61	163	59
Change to Individual Responsible	10	15	15	16	16	14	41	15
Males	17		18		27		62	
Change to Others	6	35	4	22	6	22	16	26
No Change	8	47	11	61	18	67	37	60
Change to Individual Responsible	3	18	3	17	3	11	9	14

Note: Same respondent 1997 and 1999.

Table 55. Loci of Decision Making on Taking Last Loan Among Married Continuing Clients

	Respondent Only 1999		Other 1999		Total	
	Number	%	Number	%	Number	%
1997 Respondent Only	20	50	26	52	46	51
1997 Other	20	50	24	48	44	49
Total	40	100	50	100	90	100

Note: Same respondent 1997 and 1999.

Table 56. Decision Making on Taking Last Loan Among Married Continuing Clients By Gender

	Females		Males		Total	
	Number	%	Number	%	Number	%
More Involvement of Others	20	22	6	35	26	29
No Change	35	38	9	53	44	49
Less Involvement of Others	18	20	2	12	20	22
Total	73	100	17	100	90	100

Note: Same respondent 1997 and 1999.

Table 57. Decision Making on Spending Last Loan Among Married Continuing Clients

	Respondent Only 1999		Other 1999		Total	
	Number	%	Number	%	Number	%
1997 Respondent Only	49	78	11	41	60	67
1997 Other	14	22	16	59	30	33
Total	63	100	27	100	90	100

Note: Same respondent 1997 and 1999.

ANNEX 3: STATISTICAL TABLES ON THE IMPACT VARIABLES

The tables in this Annex provide the results of the statistical tests on the impact variables and on the economic dependency ratio. The latter was analyzed using ANCOVA to determine if initial differences in the households led to a higher dependency rate in 1999.

Three types of tables are included. First, ANCOVA analyses with covariates are presented. Second, tables with the data for 1997 and 1999 are given together with the results of the t-tests that gave the level of statistical significance when the two groups were compared. These permit the reader to understand if the differences in 1997 and 1999 between the client group and non-clients were significant. The tables also present the gain scores and the results of the ANOVA tests of significance, when the significance was at the .20 level or lower. Third, data on the distribution within the respondent groups are sometimes provided, and when the chi-square tests were significant the level of significance is stated.

In the ANCOVA tables, the intercept column and the row on microcredit provide estimates on the mean difference between each client group and the non-clients. When the difference between the two groups reflects a more favorable status for the non-clients, this is signaled by a negative sign. When the difference between the client groups is significant, the data are presented in a note.

For most of the variables data were also analyzed using the 1997 classification of the clients (new clients and repeat clients) and for five analytic groups (repeat continuing clients, new continuing clients, repeat departing clients, new departing clients and non-clients). These are summarized when the results help inform the results on the continuing clients, departing clients and non-clients. When the notes use the term significant, it is referring to statistical significance. Unless otherwise noted, the analyses group listed first had a higher level. When the data have been analyzed without the outliers, it means that values which were three standard deviations from the mean were excluded from the analysis.

Abbreviations:

CC = Continuing Clients
DC = Departing Clients
NC = Non-clients
NCC = New Continuing Clients
NDC = New Departing Clients
RCC = Repeat Continuing Clients
RDC = Repeat Departing Clients

LIST OF TABLES

ANNEX 3

Table 1. ANCOVA Estimates of Economic Dependency Ratios

Parameter Estimate	ANCOVA Parameter Estimates **Economic Dependency Ratio** Continuing Clients N=155 Departing Clients N=183 Non-clients N=241	
	Intercept	Statistical Significance
Intercept	.40	.01
Microcredit Continuing vs Non-clients Departing vs Non-clients	 .02 .03	 .40 .12
Dependency ratio in 1997	.39	.00
Household mthly income under 2,000 vs all others	-.01	.69
Household mthly income2,000-4,000 vs all others	-.02	.51
Gender	-.06	.01
Marital Status	-.03	.34

Table 2. Average Economic Dependency Ratio and Net Change Analysis

	Continuing Clients N=155	Departing Clients N=188	Non-clients N=241	Statistical Significance
1997 Average	60	59	56	CC vs NC .01 CC vs DC .01
1999 Average	62	62	59	CC vs NC .04 CC vs DC .13
Net Change	2	3	-1	

Table 3. ANCOVA Estimates of Impact on Diversification of Income Sources

Parameter Estimate	ANCOVA Parameter Estimates **Diversification of Income Sources** Continuing Clients N=154 Departing Clients N=183 Non-clients N=241		ANCOVA Parameter Estimates **Diversification of Income Sources Inverse Simpson Index** Continuing Clients N=120 Departing Clients N=141 Non-clients N=190	
	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	1.46	.01	.99	.01
Microcredit Continuing vs Non-clients Departing vs Non-clients	 .10 .19	 .37 .07	 -.01 -.01	 .99 .96
Nu. sources in 1997	.48	.00		
Nu. economically active household members	.01	.82	.08	.06
Geographic area	.11	.31	-.01	.85
Affected illness/death	-.25	.01	-.05	.42
Simpson Index 1997	--	--	.42	.00

Table 4. Average Value of Household Income Last Month and Gain Score, Without Outliers (1999 income deflated to 1997 values)

	Continuing Clients N=115	Departing Clients N=137	Non-clients N=185	Statistical Significance
1997 Average	4,487	3,345	2,674	CC vs NC .00 DC vs NC .03 CC vs DC .01
1999 Average	4,091	4,032	3,555	
Gain Score	-397	686	881	CC vs NC .01 CC vs DC .03

Table 5. ANCOVA Estimates of Impact on Household Income Last Month (Zimbabwe dollars in 1997 constant values)*

	ANCOVA Parameter Estimates **Household Income, with outliers** Continuing Clients N=120 Departing Clients N=141 Non-clients N=190		ANCOVA Parameter **Household Income, without outliers** Continuing Clients N=115 Departing Clients N=137 Non-clients N=186	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	2113.51	.09	1235.64	.06
Microcredit**				
Continuing vs Non-client	-497.89	.55	-313.29	.46
Departing vs Non-client	-141.62	.85	240.13	.55
Amt. income, 1997	.72	.00	.47	.00
Nu. income sources	-497.63	.20	-311.69	.12
Nu. economically active household members	-885.91	.16	-207.03	.54
Nu. income earners	1834.31	.01	1187.06	.01
Extremely poor	-75.74	.92	-411.39	.32
Not poor	-546.52	.54	-356.40	.47
Gender	357.65	.69	387.42	.40
Geographic area	-481.15	.48	263.49	.45
Affected illness/death	-508.42	.43	89.94	.79

Note: ANCOVA analysis with and without outliers on repeat clients, new clients and non-clients indicated no significant differences between the groups. Also, the ANCOVA analysis of the 5 analytic groups did not find significant differences between the client groups and non-clients.

* Those with incomplete income information in 1997 and/or 1999 were excluded from the analysis.

Table 6. ANCOVA Estimates of Impact on Value of Assistance to Non-Household Members Last Month (Zimbabwe dollars in 1997 constant values)

	ANCOVA Parameter Estimates **Value of All Assistance*** Continuing Clients N=155 Departing Clients N=183 Non-clients N=241		ANCOVA Parameter Estimates **Value of Funeral Assistance ** ** Continuing Clients N=155 Departing Clients N=183 Non-clients N=241	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	552.39	.01	70.35	.10
Microcredit				
Continuing vs Non-clients	32.21	.71	85.27	.03
Departing vs Non-clients	27.83	.73	41.34	.26
Value assistance in 1997	-.01	.91	-.01	.61
Geographic area	-133.73	.06	3.21	.92
Gender	45.18	.63	43.93	.30
Affected by illness/death	-77.77	.26	-9.67	.75
Extremely poor	-260.89	.01	-44.01	.22
Not poor	236.20	.01	32.17	.42

Note: For funerals, the analysis of the 5 analytic groups estimated a mean difference of 133.259 between repeat continuing clients and non-clients (p=.01). With outliers removed, it estimated a the mean difference of 62.817 between repeat continuing clients and non-clients (p=.01).

*Analysis without outliers and with the same covariates did not reveal the differences to be significant. Also, the analysis of the 5 analytic groups with and without outliers did not reveal the differences to be significant.

** When outliers were removed, the mean difference of 34.927 between continuing clients and non-clients is significant (p=.05).

Table 7. ANCOVA Estimates of Impact on Proportion of Household's Boys and Girls Aged 6 to 16 in School (among those who had boys and had girls in this age range)

Parameter Estimate	ANCOVA Parameter Estimates **Boys 6 to 16 in School** Continuing Clients N=73 Departing Clients N=88 Non-clients N=97		ANCOVA Parameter Estimates **Girls 6 to 16 in School** Continuing Clients N=79 Departing Clients N=91 Non-clients N=109	
	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	83.653	.01	74.44	.01
Microcredit				
Continuing vs Non-clients	3.76	.11	1.38	.69
Departing vs Non-clients	4.45	.05	-.32	.92
Presence of at least 1 wage earner	.22	.91	1.81	.52
Affected by illness/death	-3.56	.06	-1.56	.57
Total Nu. children aged 6 to 21	.14	.83	-1.23	.19
Geographic area	-.47	.810	.01	.99
Extremely poor	-1.81	.42	-5.40	.09
Not poor	-.43	.86	-9.10	.02
% in sex group aged 6 to 16 in school	.13	.01	.27	.01

Table 8. ANCOVA Estimates of Impact on Proportion of Household's Children in Specified Age Range in School Last Term

	ANCOVA Parameter Estimates **All Aged 6 to 16 in School** Continuing Clients N=112 Departing Clients N=127 Non-clients N=151		ANCOVA Parameter Estimates **All Aged 6 to 21 in School** Continuing Clients N=130 Departing Clients N=147 Non-clients N=169	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	70.50	.01	45.35	.01
Microcredit				
Continuing vs Non-clients	1.81	.38	2.10	.50
Departing vs Non-clients	2.73	.17	-.74	.81
Proportion in 1997	.27	.01	.34	.01
Geographic area	-2.04	.91	2.84	.28
Presence at least one wage earner	1.90	.27	1.83	.48
Total Nu. children aged 6 to 21	.05	.93	.92	.29
Extremely poor	-3.13	.10		
Not poor	-5.16	.02		
Affected illness/death	-3.04	.06		

Table 9. Direction of Change in Proportion of Household's Children Aged 6 to 16 and Aged 6 to 21 in School, 1999 Compared to 1997

	Continuing Clients	Departing Clients	Non-clients	Statistical Significance
All Children Aged 6 to 16				
Negative	11	13	10	
No change	84	72	81	.08
Positive	5	16	9	
All Children Aged 6 to 21				
Negative	28	38	30	
No change	42	37	38	
Positive	29	25	32	

Table 10. ANCOVA Estimates of Impact on Proportion of Household's Boys and Girls Aged 6 to 21 in School, Five Comparison Groups

Parameter Estimate	ANCOVA Parameter Estimates **All Aged 6 to 21 in School, 5 analytic groups** Repeat Continuing Clients N=55 New Continuing Clients N=75 Repeat Departing Clients N=55 New Departing Clients N=92 Non-clients N=169 Intercept	Statistical Significance
Intercept	45.29	.01
Microcredit*		
Repeat Continuing vs Non-clients	6.54	.11
New Continuing vs Non-clients	-1.16	.75
Repeat Departing vs Non-clients	-.79	.85
New Departing vs Non-clients	-.73	.83
% aged 6 to 21 in school, 1997	.34	.01
Geographic area	2.77	.29
Presence of at least 1 wage earner	1.77	.50
Total number children aged 6 to 21	.86	.32

*Significant differences between repeat continuing clients and other client groups: new continuing clients (p=.10), and new departing clients (p=.11).

Table 11. ANCOVA Estimates of the Impact on the Amount Spent on Household Durable Assets the Last 24 Months

Parameter Estimate	ANCOVA Parameter Estimates **Amount Spent on Household Durables Assets, With Outliers** Continuing Clients N=147 Departing Clients N=175 Non-clients N=232* Intercept	Statistical Significance
Intercept	12466.91	.01
Microcredit*		
Continuing vs Non-clients	1929.19	.48
Departing vs. Non-clients	-3118.61	.21
Amount Spent in 1997	.62	.01
Housing Tenure	6535.92	.01
Age of household head	-195.54	.06

Note: The N value is low due to missing data on age of household head in a number of the interviews.
*The mean difference between continuing clients and departing clients is significant (p=.07).

Table 12. Average Amount Spent on Household Durable Assets, Five Comparison Groups

	Repeat Continuing Clients	New Continuing Clients	Repeat Departing Clients	New Departing Clients	Non-clients
With outliers	N=62	N=85	N=64	N=111	N=232
Average Amount 1997	4,490	2,551	2,971	2,476	2,340
Average Amount 1999	16,727	10,306	7,160	7,533	10,983
Gain Score	12,237	7,754	4,189	5,057	8,643
Without outliers*	N=59	N=82	N=62	N=109	N=224
Average Amount 1997	3,233	2,274	2,491	2,252	1,610
Average Amount 1999	12,354	6,735	7,250	7,643	6,856
Gain Score	9,121	4,461	4,759	5,391	5,246

*With outliers removed, the gains score differences between repeat continuing clients and each of the other groups are significant: new continuing clients (p=.02), repeat departing clients (p=.04), new departing clients (p=.05) and non-clients (p=.02). The gain score differences between the other client groups and non-clients are not significant. With outliers, the gain score differences between the groups are not significant.

Table 13. ANCOVA Estimates of Impact on the Average Amount Spent on Household Durable Assets in the Last 24 Months, Five Comparison Groups

Parameter Estimate	ANCOVA Parameter Estimates **Amount Spent on Household Durables Assets, With Outliers** Repeat continuing N=63 New continuing N=85 Repeat departing N=65 New departing N=111 Non-clients N=232		**Amount Spent on Household Durables Assets, Without Outliers*** Repeat continuing N=59 New continuing N=82 Repeat departing N=64 New departing N=109 Non-clients N=224	
	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	12,466.91	.01		
Microcredit				
Repeat Continuing Clients vs NC	5,369.45	.15	4,212.87	.01
New Continuing Clients vs NC	-520.72	.87	-775.33	.60
Repeat Departing Clients vs NC	-2,826.10	.44	48.60	.98
New Departing Clients vs NC	-3,392.35	.25	300.34	.82
Amount spent in 1997	.60	.01	1.46	.01
Housing tenure	6553.34	.01	-144.53	.01
Age of household head	-212.86	.04	3,492.00	.01

*The mean differences between repeat continuing clients and the following client groups are significant: new continuing clients (p=.01), repeat departing clients (p=.05), and new departing clients (p=.01).

Table 14. Direction of Change in Amount Spent on Housing Improvements 1999 Compared to 1997 (percentage)

	Continuing Clients	Departing Clients	Non-clients	Statistical Significance
Negative	17	14	10	
No change	53	61	62	-
Positive	30	26	27	

Table 15. ANCOVA Estimates of Impact on Amount of Money Spent in the Last 12 Months on Housing Improvements

Parameter Estimate	ANCOVA Parameter Estimates **Amount Spent on Housing Improvements** Continuing Clients N=155 Departing Clients N=183 Non-clients N=241	
	Intercept	Statistical Significance
Intercept	2572.84	.20
Microcredit Continuing vs Non-Client Departing vs Non-Client	 -2073.37 -1541.75	 .43 .54
Amount spent in 1997	.24	.03
Housing tenure	6910.92	.01

Note: Analysis with outliers removed does not indicate the differences to be significant. Also the analysis comparing repeat clients, new clients and non-clients and comparing the 5 analytic groups did not reveal any statistically significant differences.

Table 16. Proportion Owning Stoves and Fans and Gain Score

	Continuing Clients	Departing Clients	Non-clients	Statistical Significance
Stove	**N=143**	**N=175**	**N=232**	
1997	43	33	34	CC vs NC .12 CC vs DC .08
1999	60	47	39	CC vs NC .01 DC vs NC .13 CC vs DC .02
Gain Score	17	14	5	CC vs NC .03 DC vs NC .10
Fan	**N=145**	**N=175**	**N=229**	
1997	45	35	31	CC vs NC .01 CC vs DC .07
1999	52	41	36	CC vs NC .01 CC vs DC .05
Gain Score	8	6	5	-

Table 17. Proportion Owning Televisions, Refrigerators and Transport and Gain Score

	Continuing Clients	Departing Clients	Non-clients	Statistical Significance t-tests
Television	**N=145**	**N=174**	**N=229**	
1997	86	72	67	CC vs NC .01 CC vs DC .01
1999	86	78	77	CC vs NC .02 CC vs DC .06
Gain Score	0	6	10	CC vs NC .03 CC vs DC .19
Fridge	**N=145**	**N=175**	**N=228**	
1997	41	38	28	CC vs NC .01 DC vs NC .04
1999	59	41	39	CC vs NC .01 CC vs DC .01
Gain Score	17	3	11	CC vs NC .15 DC vs NC .05 CC vs DC .01
Transport	N=143	N=175	N=231	
1997	12	11	5	CC vs NC .03 DC vs NC .03
1999	16	14	10	CC vs NC .10
Gain Score	4	2	5	-

Table 18. ANCOVA Estimates of Impact on Acquisition of a Stove and an Electric Fan

	ANCOVA Parameter Estimates **Acquired a Stove** Continuing Clients N=143 Departing Clients N=175 Non-clients N=232		ANCOVA Parameter Estimates **Acquired an Electric Fan** Continuing Clients N=153 Departing Clients N=180 Non-clients N=238	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	.024	.77	.28	.01
Microcredit				
Continuing Clients vs Non-clients	.13	.01	.06	.17
Departing Clients vs Non-clients	.06	.15	.02	.58
Owned item in 1997	.32	.01	.57	.01
Extremely poor	-.09	.05	-.02	.55
Not poor	.06	.20	.11	.01
Age household head	.01	.04	-.01	.01
Housing tenure	.21	.01	.14	.01

Note: Additional analysis showed that repeat clients are significantly more likely than non-clients to have acquired a stove (p=.01) and repeat continuing clients were significantly more likely than non-clients to have acquired a stove (p=.02).

Table 19. ANCOVA Estimates of Impact on Acquisition of a Television and Fridge

Parameter Estimate	ANCOVA Parameter Estimates **Acquired a Television** Continuing Clients N=145) Departing Clients N=174) Non-clients N=229)		ANCOVA Parameter Estimates **Acquired a Fridge** Continuing Clients N=153) Departing Clients N=180) Non-clients N=238)	
	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	.57	.01	.23	.01
Microcredit*				
Continuing Clients vs Non-clients	.01	.89	.09	.04
Departing Clients vs Non-clients	-.01	.94	-.04	.27
Owned item in 1997	.42	.01	.62	.00
Extremely poor	-.03	.45	-.10	.01
Not poor	.01	.85	-.01	.99
Age household head	-.01	.05	-.01	.47
Housing tenure	.09	.01	.15	.01

*Between continuing clients and departing clients, for refrigerators, the mean difference of .126 is significant (p=.01).

Table 20. ANCOVA Estimates of Impact on Acquisition of a Means of Transport

Parameter Estimate	ANCOVA Parameter Estimates **Acquired Transport** Continuing Clients N=153 Departing Clients N=180 Non-clients N=238	
	Intercept	Statistical Significance
Intercept	.11	.03
Microcredit		
Continuing Clients vs Non-clients	.01	.90
Departing Clients vs Non-clients	-.01	.88
Owned item in 1997	.67	.01
Extremely poor	-.07	.01
Not poor	.01	.81
Age household head	-.01	.56
Housing tenure	.02	.36

Table 21. ANCOVA Estimates of Impact on Matched Enterprise Net Revenue Last Month (Zimbabwe dollars in 1997 constant values)

Parameter Estimate	ANCOVA Parameter Estimates **Matched Enterprise Net Revenue Last Month** Continuing Clients N=113 Departing Clients N=137 Non-clients N=188	
	Intercept	Statistical Significance
Intercept	-349.32	.69
Microcredit Continuing vs Non-clients Departing vs Non-clients	 450.60 189.75	 .32 .66
Matched net revenue in 1997	.61	.01
Geographic area	236.69	.54
Gender	1396.97	.01
Manufacturing compared to all others	939.18	.24
Trade compared to others (manufacturing and services)	926.26	.25
Affected by illness/death	-89.87	.80
Extremely poor	-37.06	.93
Not poor	-788.90	.11

Note: Includes the same matched enterprise in 1997 and 1999 with income last month.
With outliers removed, the differences between the comparison groups are not significant.

Table 22. ANCOVA Estimates of Impact on Matched Enterprise Net Revenue Last Month, Five Analytic Groups (Zimbabwe dollars in 1997 constant values)

Parameter Estimate	ANCOVA Parameter Estimates Repeat Continuing Clients N=51 New Continuing Clients N=62 Repeat Departing Clients N=54 New Departing Clients N=83 Non-clients N=188	
	Intercept	Statistical Significance
Intercept	-234.04	.79
Microcredit Repeat Continuing vs Non-clients New Continuing vs Non-clients Repeat Departing vs Non-clients New Departing vs Non-clients	 1378.87 -283.03 139.70 236.73	 .02 .61 .81 .64
Matched net revenue in 1997	.60	.01
Geographic area	268.99	.48
Gender	1379.909	.01
Manufacturing compared to all others	843.75	.29
Trade compared to all others	809.97	.31
Affected by illness/death	-150.62	.68
Extremely poor	-11.72	.98
Not poor	-806.79	.10

Note: Includes the same matched enterprise in 1997 and 1999, with income last month.
When the outliers were removed, none of the differences between the pairs are significant.
*The mean difference of 1661.894 between repeat continuing clients and new continuing clients is significant (p=.02); the mean difference of 1239.163 between repeat continuing clients and repeat departing clients is significant (p=.10); and the mean difference of 1142.138 between repeat continuing clients and new departing clients is significant (p=.10).

Table 23. ANCOVA Estimates of Impact on Average Net Revenue in Up to Three Enterprises (Zimbabwe dollars in 1997 constant values)

	ANCOVA Parameter Estimates **Net Revenue in Up to Three Enterprises the Month Prior to the Interview** Continuing Clients N=135 Departing Clients N=159 Non-clients N=207	
Parameter Estimate	Intercept	Statistical Significance
Intercept	2324.00	.01
Microcredit Continuing vs Non-clients Departing vs Non-clients	 163.13 186.86	 .77 .72
Net revenue from up to 3 in 1997	.50	.01
Geographic area	-192.52	.67
Number enterprises	-675.35	.12
Affected by illness/death	210.29	.63
Extremely poor	148.72	.78
Not poor	-201.56	.74

Notes: Includes the same matched enterprise in 1997 and 1999,with income last month.
The analysis of the 5 analytic groups revealed no significant differences, except the mean difference of 1470 between repeat continuing clients and new continuing clients (p=.09).
When outliers were removed, none of the differences are statistically significant at the .10 level or below when analyzing the three and then the five analytic groups.

Table 24. ANCOVA Estimates of Impact on Value of Matched Enterprise Fixed Assets (Zimbabwe dollars in 1997 constant values)

	ANCOVA Parameter Estimates **Value of Matched Enterprise Fixed Assets** Continuing Clients N=124 Departing Clients N=145 Non-clients N=199	
Parameter Estimate	Intercept	Statistical Significance
Intercept	2,837.65	.01
Microcredit Continuing vs Non-clients Departing vs Non-clients	 -889.31 -312.03	 .23 .66
Enterprise asset value in 1997	.74	.01
Gender	2,509.19	.01
Geographic area	-532.90	.39
Affected illness/death	-501.12	.40
Extremely poor	-1,670.29	.02
Not poor	-111.17	.89

Note: Same matched enterprise in 1997 and 1999.

Table 25. ANCOVA Estimates of Impact on Value of All the Household's Enterprise Fixed Assets (Zimbabwe dollars in 1997 constant values)

Parameter Estimate	ANCOVA Parameter Estimates **Value of All the Household's Enterprise Fixed Assets** Continuing Clients N=144 Departing Clients N=168 Non-clients N=216	
	Intercept	Statistical Significance
Intercept	12546.74	.02
Microcredit*		
Continuing vs Non-clients	-1650.32	.67
Departing vs Non-clients	4987.28	.18
Enterprise asset value in 1997	1.15	.01
Nu. enterprises covered	-4181.45	.15
Geographic area	-5638.81	.08
Affected illness/death	-2666.02	.39
Extremely poor	-3856.94	.29
Not poor	3629.03	.37

Note: The analysis with outliers removed did not reveal the differences between the groups to be significant.
*The mean difference of –6637.6 between continuing clients and departing clients is marginally significant (p=-0.11), indicating that departing clients had a higher value than continuing clients.

Table 26. ANCOVA Estimates of Impact on The Value of All the Household's Enterprise Fixed Assets, Five Analytic Groups (Zimbabwe dollars in 1997 constant values)

Parameter Estimate	ANCOVA Parameter Estimates **Value of Enterprise Assets in the Household, 5 Analytic Groups** Repeat Continuing Clients N=62 New Continuing Clients N=82 Repeat Departing Clients N=63 New Departing Clients N=105 Non-clients N=216	
	Intercept	Statistical Significance
Intercept	13140.59	.01
Microcredit		
Repeat Continuing vs Non-clients	-2169.45	.68
New Continuing vs Non-clients	-853.58	.85
Repeat Departing vs Non-clients	13421.23	.01
New Departing vs Non-clients	-51.65	.99
Enterprise asset value in 1997	1.15	.01
Number enterprises covered	-4632.30	.11
Geographic area	-5932.30	.07
Affected illness/death	-3166.67	.31
Extremely poor	-2879.48	.44
Not poor	3606.79	.37

Note: When the outliers were removed, none of the differences between the 5 analytic groups are statistically significant.

Table 27. ANCOVA Pairwise Comparison of Repeat Departing Clients with the Other Analytic Categories (Zimbabwe dollars in 1997 constant values)

Pairwise Comparison	Mean difference	Statistical Significance
RDC vs RCC	155590.679	.01
RDC vs NCC	14274.812	.02
RDC vs NDC	13472.881	.02
RDC vs NC	13421.231	.01

Note: When the outliers were removed, none of the differences are statistically significant at the .10 level or below.

Table 28. Average Value of Household's Enterprise Fixed Assets and Gain Score for Five Analytic Groups (Zimbabwe dollars in 1997 constant values)

	Repeat Continuing Clients N=12	New Continuing Clients N=82	Repeat Departing Clients N=63	New Departing Clients N=105	Non-clients N=216	Statistical Significance*
1997 Average*	8,090	2,697	5,557	3,683	2,197	RCC vs NC .07 RDC vs NC .01
1999 Average*	9,123	4,491	2,1621	6,887	4,206	RCC vs NC .04 RDC vs NC .17
Gain Score**	1,033	1,793	1,6064	3,204	2,009	RDC vs NC .01

Note: When the outliers were removed, the gain score mean difference of 5,545 between the repeat continuing clients and new departing clients is significant (p=.06).

*In 1997 the difference between new continuing clients and repeat departing clients is significant (p=.02). For 1999 the difference between the repeat continuing and new continuing is significant (p=.06). Otherwise, for 1997 and for 1999, none of the pairwise differences are significant at the .10 level or below.

**The gain score analysis revealed that differences between the repeat departing clients and other client groups are significant at the .05 level or below.

Table 29. ANCOVA Estimates of Impact on Employment in Matched Enterprise Last Month, Including and Excluding Respondent

	ANCOVA Parameter Estimates **Number Employees working more than one Day Last Month** Continuing Clients N=113 Departing Clients N=137 Non-clients N=188		ANCOVA Parameter Estimates **Number of employees working more than one day last month excluding respondent** Continuing Clients N=113 Departing Clients N=137 Non-clients N=188	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	1.41	.01.	-4531.21	.01
Microcredit				
Continuing vs Non-clients	-.08	.56	.07	.29
Departing vs Non-clients	-.09	.43	.03	.59
Number working in 1997 excluding respondent	.43	.01	.10	.01
Gender	.58	.01	.05	.46
Manufacturing compared to all others	-.37	.12	.06	.61
Trading compared to all others	-.38	.10	-.06	.62
Chemically ill household member			-.13	.17
Number days worked last month			.01	.01

Notes: Includes only those 1997 matched enterprises that were in existence and earned income the previous month.
The difference between new clients and non-clients is significant (p=.58), with non-clients having more. Also the following differences are significant: repeat clients compared to new clients (p=0 .01); repeat departing clients compared to new departing clients (p=.02) and new departing clients compared to non-clients (p=.06). For the latter, the non-clients had a higher level.

Table 30. ANCOVA Estimates of Impact on Paid Employment in Matched Enterprise Last Month

	ANCOVA Parameter Estimates **Number of Paid Employees Last Month** Continuing Clients N=113 Departing Clients N=137 Non-clients N=188	
Parameter Estimate	Intercept	Statistical Significance
Intercept	.29	.09
Microcredit		
Continuing vs Non-clients	-.06	.54
Departing vs Non-clients	.03	.78
Number in 1997	.68	.01
Gender	-.12	.47
Manufacturing compared to all others	-.27	.11
Trading compared to all others	.27	.02
Geographic area	.01	.86

Note: Includes only those 1997 "matched" enterprises that were in existence and earned income the previous month.

Table 31. ANCOVA Estimates of Impact on Person-hours Worked Last Week and Person-days Worked Last Month in Matched Enterprise

	ANCOVA Parameter Estimates **Average Person-hours Worked Last Week in Matched Enterprise** Continuing Clients N=113 Departing Clients N=137 Non-clients N=188		ANCOVA Parameter Estimates **Average Person-days Worked Last Month in Matched Enterprise** Continuing Clients N=113 Departing Clients N=137 Non-clients N=188	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	36.19	.01	20.02	.01
Microcredit				
Continuing vs Non-clients	-9.26	.17	-4.06	.23
Departing vs Non-clients	-5.28	.41	-2.20	.49
Number hrs or days in 1997	.56	.01	.52	.01

Note: Includes only those 1997 matched enterprises that were in existence and earned income the previous month.

Table 32. ANCOVA Estimates of Impact on Number of Paid Employees in Up to Three Household Enterprises

	ANCOVA Parameter Estimates **Average Number Paid Employees Last Month** Continuing Clients N=135 Departing Clients N=159 Non-clients N=207	
Parameter Estimate	Intercept	Statistical Significance
Intercept	.18	.51
Microcredit		
Continuing vs Non-clients	.01	.95
Departing vs Non-clients	.13	.30
Average Number in 1997	.71	.01
One enterprise	.12	.64
Two enterprise	-.11	.70
Geographic Area	-.06	.58

Note: Includes only those 1997 matched enterprises that were in existence and earned income the previous month.

The analysis of the five analytic groups and of new clients, repeat clients and non-clients did not reveal the differences to be statistically significant

Table 33. Direction of Change in Number of Paid Employees in up to Three Household Enterprises, 1999 Compared to 1997 (percentages)

	Continuing Clients	Departing Clients	Non-clients	Statistical significance chi-square
Negative	12	10	4	
No change	73	76	80	.17
Positive	15	14	15	

Table 34. ANCOVA Estimates of Impact on Whether or Not Respondent Insists on Deposit Prior to Extending Credit to Matched Enterprise Customers

	ANCOVA Parameter Estimates **Proportion that Insist on a Deposit** Continuing Clients N=100 Departing Clients N=93 Non-clients N=135	
Parameter Estimate	Intercept	Statistical Significance
Intercept	.42	.01
Microcredit* Continuing Clients vs Non-clients Departing Clients vs Non-clients	 .08 .13	 .20 .03
Yes 1997	.15	.01
Gender	-.09	.26
Extremely poor vs all others	.02	.99
Non-poor vs all others	.02	.80
Manuf. compared to all others	.21	.05
Trade compared to all others	-.09	.42

Note: Same matched enterprise 1997 and 1999, and extended credit both years.

Table 35. ANCOVA Estimates of Impact on Having An Individual Savings Account

	ANCOVA Parameter Estimates **Proportion With an Individual Savings Account** Continuing Clients N=151 Departing Clients N=165 Non-clients N=225	
Parameter Estimate	Intercept	Statistical Significance
Intercept	.54	.01
Microcredit* Continuing Clients vs Non-clients Departing Clients vs Non-clients	 .19 .01	 .01 .04
Had in 1997	.26	.01
Gender	-.02	.66
Marital status	-.01	.88
Household income under $2,000	-.08	.06
Household income 2,000-4,000	-.02	.60

Note: Same respondent 1997 and 1999.

*The mean difference of .11 between continuing clients and departing clients is significant (p=.02).

Table 36. Direction of Change of the Number of Income Sources in Extremely Poor Households, 1999 Compared to 1997 (percentage)

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-clients N=80
Less	31	39	25
Same	46	39	41
More	23	23	34

Note: Chi-square test result is not significant.

Table 37. ANCOVA Estimates of Impact on Diversification of Income Sources in Extremely Poor Households

Parameter Estimate	ANCOVA Parameter Estimates **Nu. Household Income Sources** Extremely Poor Continuing Clients N=35 Extremely Poor Departing Clients N=44 Extremely Poor Non-clients N=80 Intercept	Statistical Significance
Intercept	1.72	.01
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	.02	.91
Extremely Poor Departing Clients vs Extremely Poor Non-clients	.02	.92
Number sources in 1997	.32	.01
Number economically active household members	-.03	.76
Geographic area	.07	.69
Gender	-.50	.05
Affected by illness/death	-.34	.04

Table 38. ANCOVA Estimates of Impact on Value of Funeral-related Assistance to Non-household Members Last Month in Extremely Poor Households (Zimbabwe dollars in 1997 constant values)

Parameter Estimate	ANCOVA Parameter Estimates **Average Value of Funeral-related Assistance** Extremely Poor Continuing Clients N=35 Extremely Poor Departing Clients N=44 Extremely Poor Non-clients N=80 Intercept	Statistical Significance
Intercept	27.92	.31
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	23.93	42
Extremely Poor Departing Clients vs Extremely Poor Non-clients	-13.82	.62
Average Z$ funeral assistance in 1997	.01	.92
Geographic area	20.40	.40
Gender	-7.27	.85
Affected illness/death	6.80	.78

Table 39. Average Amount of Funeral-related Assistance Given by Extremely Poor Households to Non-household Members Last Month and Gain Score (Zimbabwe dollars in 1997 constant values)

Average Z$ Value 1997 constant values	Ext Poor CC N=35	Ext Poor DC N=44	Ext Poor NC N=80	Statistical Significance
1997 Average	45	93	15	-
1999 Average	67	29	44	-
Gain Score	21	-64	29	DC vs NC .10

Table 40. ANCOVA Estimates of Impact on Proportion of Household's Boys and Girls Aged 6 to 16 in School Last Term, Extremely Poor Households

	ANCOVA Parameter Estimates **Boys Aged 6 to 16** Extremely Poor Continuing Clients N=20 Extremely Poor Departing Clients N=27 Extremely Poor Non-clients N=34		ANCOVA Parameter Estimates **Girls Aged 6 to 16** Extremely Poor Continuing Clients N=23 Extremely Poor Departing Clients N=26 Extremely Poor Non-clients N=30	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	63.47	.01	55.66	.01
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	9.69	.10	-3.63	.55
Extremely Poor Departing Clients vs Extremely Poor Non-clients	9.25	.08	-7.80	.18
Proportion in 1997	.27	.02	.46	.01
Total household members 6 to 21	.90	.55	.21	.92
Geographic area	-.05	.99	-6.43	.20
Presence of a wage earner	.74	.88	.22	.97
Affected by illness/death	-4.98	.27	1.04	.828

Table 41. Proportion of Household's Boys and Girls Aged 6 to 16 in School Last Term, Extremely Poor Households

	Ext Poor CC	Ext Poor DC	Ext Poor NC	Statistical Significance
Boys Aged 6 to 16	**N=20**	**N=27**	**N=34**	
1997 Percentage	97.5	91.4	97.1	-
1999 Percentage	100	98.2	89.7	CC vs NC .05 DC vs NC .13
Gain Score	2.5	6.8	-7.4	CC vs NC .05 DC vs NC .03
Girls Aged 6 to 16	**N=23**	**N=24**	**N=37**	
1997 Percentage	93.8	96.4	93.9	CC vs DC .19
1999 Percentage	83.3	90.8	91.9	CC vs DC .10
Gain Score	-10.4	-5.6	-2.04	-

Table 42. Direction of Change in Proportion of Household's Boys and Girls Aged 6 to 16 in School, Extremely Poor Households (percentage)

	Extremely Poor Continuing Clients	Extremely Poor Departing Clients	Extremely Poor Non-clients
Boys	**N=20**	**N=27**	**N=34**
Negative	0	4	9
Same	95	85	91
Positive	5	11	0
Girls	**N=23**	**N=24**	**N=37**
Negative	9	21	11
Same	91	71	86
Positive	0	8	3

Note: Chi-square test results were not significant.

Table 43. Direction of Change in Number Days Meat/Chicken/Fish and Milk Consumed in Extremely Poor Household, 1999 Compared to 1997 (percentage)

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-clients N=79
Meat/Chicken/Fish			
Less	40	52	41
Same	17	14	28
More	43	34	32
Milk			
Less	40	52	44
Same	31	27	38
More	29	21	18

Note: Chi-square test results were not significant.

Table 44. ANCOVA Estimates of Impact on Meat/Chicken/Fish and Milk Consumption in Extremely Poor Households, Number of Days Last Week Household Consumed Item

	Ancova Parameter Estimates **Meat/Chicken/Fish** Extremely Poor Continuing Clients N=35 Extremely Poor Departing Clients N=44 Extremely Poor Non-clients N=79		Ancova Parameter Estimates **Milk** Extremely Poor Continuing Clients N=35 Extremely Poor Departing Clients N=44 Extremely Poor Non-clients N=78	
Parameter Estimate	Intercept	Statistical Significance	Intercept	Statistical Significance
Intercept	2.36	.01	.60	.07
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	.95	.03	.54	.12
Extremely Poor Departing Clients vs Extremely Poor Non-clients	.30	.46	.23	.47
Number times in 1997	.19	.03	.08	.27
Children under 10 years old	.07	.85	.09	.76
Gender	-.02	.97	-.01	.99
Affected by illness/death	-.23	.51	.01	.99

Table 45. Direction of Change in Number of Days Extremely Poor Households Consumed Eggs Last Week, 1999 Compared to 1997 (percentage)

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-clients N=78
Less	49	40	42
Same	31	30	32
More	20	30	26

Note: Chi-square test results were not significant.

Table 46. ANCOVA Estimates of Impact on Egg Consumption in Extremely Poor Households, Number of Days Last Week Household Consumed Item

	Ancova Parameter Estimates **Eggs** Extremely Poor Continuing Clients N=35 Extremely Poor Departing Clients N=44 Extremely Poor Non-clients N=78	
Parameter Estimate	Intercept	Statistical Significance
Intercept	.90	.01
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	-.17	.61
Extremely Poor Departing Clients vs Extremely Poor Non-clients	.03	.93
Number times in 1997	.12	.08
Children under 10 years old	.10	.72
Gender	-.37	.36
Affected by illness/death	-.16	.55

Table 47. Average Amount Spent by Extremely Poor Households on Household Durable Assets

Average Amount Spent	Ext Poor CC N=35	Ext Poor DC N=44	Ext Poor NC N=80	Statistical Significance
1997 Average	1,423	1,056	1,418	-
1999 Average	2,888	1,750	1,469	CC vs NC .15
Gain Score	1,465	695	51	-

Note: No significant differences were found in the gain score results when outliers were removed.

Table 48. ANCOVA Estimates of Impact on Amount Spent by Extremely Poor Households on Household Durable Assets

	ANCOVA Parameter Estimates **Amount Spend on Household Assets** Extremely Poor Continuing Clients N=35 Extremely Poor Departing Clients N=44 Extremely Poor Non-clients N=80	
Parameter Estimate	Intercept	Statistical Significance
Intercept	299.37	.85
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	1231.21	.16
Extremely Poor Departing Clients vs Extremely Poor Non-clients	358.87	.65
Amount spent in 1997	.10	.14
Age of household head	1.92	.96
Affected by illness/death	1454.87	.04

Note: No significant differences were found when outliers were removed.

Table 49. Direction of Change in the Amount Spent by Extremely Poor Households on Household Durable Assets, 1999 Compared to 1997 (percentage)

	Extremely Poor Continuing Clients N=35	Extremely Poor Departing Clients N=44	Extremely Poor Non-clients N=80
Less	20	41	22
Same	26	18	39
More	54	41	39

Note: Chi-square test result is significant at the .04 level.

Table 50. ANCOVA Estimates of Impact on Matched Enterprise Net Revenue Last Month, Extremely Poor Households (Zimbabwe dollars in 1997 constant values)

	ANCOVA Parameter Estimates **Matched Enterprise Net Revenue** Extremely Poor Continuing Clients N=27 Extremely Poor Departing Clients N=29 Extremely Poor Non-clients N=56	
Parameter Estimate	Intercept	Statistical Significance
Intercept	601.27	.02
Microcredit Extremely Poor Continuing Clients vs Extremely Poor Non-clients	96.49	.40
Extremely Poor Departing Clients vs Extremely Poor Non-clients	162.21	.15
Average matched net revenue in 1997	.11	.01
Geographic area	-45.52	.64
Gender	61.89	.68
Manufacturing compared to all others	-143.24	.55
Trade compared to all others	76.91	.75

Note: Includes the same matched enterprise in 1997 and 1999, and only those with income last month.

Table 51. Average Value of Matched Enterprise Net Revenue Last Month and Gain Score Analysis, Extremely Poor Households (Zimbabwe dollars in 1997 constant values)

	Ext Poor CC N=35	Ext Poor DC N=44	Ext Poor NC N=80	Statistical Significance
1997 Average	1,367	1,292	1,476	-
1999 Average	788	837	710	-
Gain Score	-579	454	766	-

Table 52. Direction of Change of the Matched Enterprise Net Revenue of Extremely Poor Households (percentage)

	Extremely Poor Continuing Clients N=27	Extremely Poor Departing Clients N=29	Extremely Poor Non-clients N=56
Less/Same	63	62	66
More	37	38	34

Notes: Chi-square test result is not significant: (p=.92).
Includes the same matched enterprise in 1997 and 1999, and those with income last month.

Table 53. ANCOVA Estimates of Impact on Number of Ways Respondent Saves, Extremely Poor Households

	ANCOVA Parameter Estimates **Number Ways Respondent Saves** Extremely Poor Continuing Clients N=33 Extremely Poor Departing Clients N=41 Extremely Poor Non-clients N=76	
Parameter Estimate	Intercept	Statistical Significance
Intercept	1.06	.01
Microcredit* Extremely Poor Continuing Clients vs Extremely Poor Non-clients	.78	.01
Extremely Poor Departing Clients vs Extremely Poor Non-clients	.04	.82
Number ways in 1997	.29	.01
Geographic area	-.02	.89

Note: Same respondent both interviews.
*The mean difference of .740 between extremely poor continuing clients and departing clients is significant (p=.01).

Table 54. Direction of Change of the Number of Ways Respondent Saves, 1999 Compared to 1997, Extremely Poor Households (percentage)

	Extremely Poor Continuing Clients N=33	Extremely Poor Departing Clients N=41	Extremely Poor Non-clients N=76
Less	22	37	29
Same	39	37	41
More	39	26	30

Note: Chi-square test result is not significant.
Same respondent both interviews.

BIBLIOGRAPHY OF KEY SOURCES

Barnes, Carolyn. 1981. Identification and Analysis of the Poor. Background Paper for USAID Zimbabwe Country Development Strategy Statement of 1982.

Barnes, Carolyn. 1996. Assets and the Impact of Microenterprise Finance Programs. AIMS Paper. Washington, D.C.: Management Systems International.

Barnes, Carolyn. 1997. Empowering Women and Coping with Financial Crises: An Exploratory Study of Zimbabwean Microentrepreneurs. AIMS Paper. Washington, D.C.: Management Systems International.

Barnes, Carolyn. 2001. Microfinance and Households Coping with Illness and Death in Zimbabwe: An Exploratory Study. Horizons Project. Washington, D.C.: Population Council.

Barnes, Carolyn and Erica Keogh. 1999. An Assessment of the Impact of Zambuko's Microenterprise Program in Zimbabwe: Baseline Findings. AIMS Paper. Washington, D.C.: Management Systems International.

Barnes, Carolyn, Gary Gaile, and Richard Kibombo. 2001. The Impact of Three Microfinance Programs in Uganda. AIMS Paper. Washington, D.C.: Management Systems International.

Biljmakers, Leon, M. Basset and D. Sanders. 1995. Health and Structural Adjustment in Rural and Urban Settings in Zimbabwe IN editor Peter Gibbon, Structural Adjustment and the Working Poor in Zimbabwe. Uppsala: Nordiska Afrikainstitutet.

Brand, Veronica, R. Mupedziswa, P. Gumbo. 1992. Women Informal Sector Workers Under Structural Adjustment in Zimbabwe. A State of the Art Paper written as part of the Research Program on the Political and Social Context of Structural Adjustment in sub-Saharan Africa. Harare.

Brand, Veronica, R. Mupedziswa and P. Gumbo. 1995. Structural Adjustment, Women and Informal Sector Trade in Zimbabwe IN editor Peter Gibbon, Structural Adjustment and the Working Poor in Zimbabwe. Uppsala: Nordiska Afrikainstitutet.

Bryceson, Deborah F.and Vali Jamal. 1997. Farewell to Farms: De-Agrarianization and Employment in Africa. Aldershot: Ashgate, U.K.

CGAP. May 2000. Those Who Leave and Those Who Don't Join: Insights from East African Microfinance Institutions. Focus Note No. 16.

Chen, Martha Alter. 1997. A Guide for Assessing the Impact of Microenterprise Services at the Individual Level. AIMS Paper. Washington, D.C.: Management Systems International.

Chen, Martha Alter and Donald Snodgrass. 2001. Managing Resources, Activities, and risk in Urban India: The Impact of Microfinance. AIMS Paper, Washington, D.C.: Management Systems International.

Chen, Martha Alter and Elizabeth Dunn. 1996. Household Economic Portfolios. AIMS Paper. Washington, D.C.: Management Systems International.

Commercial Bank of Zimbabwe. CBZ's Community Banking is a First for Zimbabwe's Informal Sector. CDZ Supplement to The Herald: Countdown to Vision 2000, Friday Aug 22, 1997, p 2.

Daniels, Lisa. 1994. Changes in Small-Scale Enterprise Sector from 1991 to 1993: Results of a Second Nationwide Survey in Zimbabwe. GEMINI Technical Report No. 71. Bethesda, Maryland: Development Alternatives.

Dengu-Zvogbo, Kebokile, B. Donzwa, E. Gwaunza, J. Kazembe, W. Ncube and J. Stewart. 1994. Inheritance in Zimbabwe: Law, Customs and Practice. Harare: Women and Low in Southern Africa Research Trust.

Dunn, Elizabeth and J. Gordon Arbuckle, Jr. 2001. The Impacts of Microcredit: A Case Study from Peru. AIMS Paper. Washington, D.C.: Management Systems International.

Gaile, Gary and Jennifer Foster. 1996. Review of Methodological Approaches to the Study of the Impact of Microenterprise Credit Programs. AIMS Paper. Washington, D.C.: Management Systems International.

Gibbon, Peter. 1995. Introduction: Structural Adjustment and the Working Poor in Zimbabwe IN editor Peter Gibbon Structural Adjustment and the Working Poor in Zimbabwe. Uppsala: Nordiska Afrikainstitutet.

Government of Zimbabwe. December 1993. Quarterly Digest of Statistics.

Hawkins, A. M., P. J. McBurney, M. A. Shadur, and W. Clatanoff. 1988. Formal Sector Employment Demand Conditions in Zimbabwe. Harare: University of Zimbabwe.

Horn, Nancy. 1994. Cultivating Customers: Market Women in Harare, Zimbabwe. Boulder, Colorado: Lynne Rienner.

Hulme, David and Paul Mosley. 1996. Finance Against Poverty. New York: Routledge.

International Monetary Fund. November 2000. Zimbabwe Recent Economic Developments, Selected Issues and Statistical Appendix. Washington, D.C. International Monetary Fund.

Little, Peter. 1997. Income and Assets as Impact Indicators. AIMS Paper. Washington, D.C.: Management Systems International.

Machipisa, Lewis. July 21, 1999. Debts, Inflation, Interest Rates Keep Rising in Zimbabwe. Daily Mail and Guardian. Johannesburg.

Mayoux, Linda. 2000. Enabling Environments for Women's Enterprise. Geneva: International Labor Organization.

McPherson, Michael A. 1998. Zimbabwe: A Third Nationwide Survey of Micro and Small Enterprises. Report prepared for USAID/Zimbabwe by Price Waterhouse Coopers.

Mhone, Guy. C.Z. 1993. The Impact of Structural Adjustment on the Urban Informal Sector in Zimbabwe. A survey report prepared for the Employment and Development Department, International Labor Organization, Geneva.

Monitoring and Evaluation Unit. November 1998 and 1999. HIV,AIDS, STD and TB Fact Sheet. National AIDS Coordination Program.

Mutangadura, Gladys Bindura. 2000. Household Welfare Impacts of Mortality of Adult Females in Zimbabwe: Implications for Policy and Program Development. Carolina Population Center, University of North Carolina at Chapel Hill.

Peters-Berries, Christian. 1993. The Urban Informal Sector in Zimbabwe: From Insignificance to the Employer of the Last Resort. Working Paper. Geneva: Urban and Informal Sector Program, World Employment Program, International Labor Office.

Rakodi, Carole. 1994 Urban Poverty in Zimbabwe: Post-Independence Efforts, Household Strategies and the Short-term Impact of Structural Adjustment. Journal of International Development: Vol. 6, No. 5, p 655-663.

Reichardt, Charles S. 1979. The Statistical Analysis of Data from Nonequivalent Group Designs. IN editors Thomas D. Cook and Donald T. Campbell, Quasi-Experimentation: Design and Analysis Issues for Field Settlings. Chicago: Rand McNally College Publishing Company.

Reichardt, Charles S. and Melvin M. Mark. 1998. Quasi-experimentation. IN editors Leonard Bickman and Debra J. Rog, Handbook of Applied Social Research Methods. Thousand Oaks, CA: SAGE Publications.

Reserve Bank of Zimbabwe. Monthly Review, October 2000.

Rossi, Peter H. and Howard Freeman. 1989. Evaluation: A Systematic Approach, 4th edition. Newbury Park, CA: SAGE Publications.

Sachikonye, Lloyd 1995. Industrial Relations and Labor Relations under ESAP in Zimbabwe IN editor Peter Gibbon, Structural Adjustment and the Working Poor in Zimbabwe. Uppsala: Nordiska Afrikainstitutet.

Sayagues, Mercedes. August 16, 1999. How AIDS is Starving Zimbabwe, in The Daily Mail and Guardian, Johannesburg. www.mg.co.za/mg/news/99aug2/16aug-zim_aids.html

Schoofs, Mark. AIDS: The Agony of Africa. Village Voice Pulitzer prize winning series published November 3, 1999- January 4, 2000. Village Voice.

Sebstad, Jennefer and Monique Cohen. 2000. 'Microfinance, Risk Management, and Poverty.' AIMS paper for *World Development Report 2001*. Washington, D.C.: Management Systems International.

Tripp, Aili Mari. 1997. Changing the Rules : The Politics of Liberalization and the Urban Informal Economy in Tanzania. Berkeley: University of California Press.

UNAIDS and WHO. 2000. Zimbabwe Epidemiological Fact Sheet on HIV/AIDS and Sexually Transmitted Diseases: 2000 Update.

UNICEF. 1994. A Situational Analysis of Women and Children in Zimbabwe. Harare: UNICEF.

USAID. No date. Microenterprise Development Policy Paper. Washington, D.C.: U. S. Agency for International Development.

USAID/Zimbabwe. Aug. 1997. Zimbabwe Country Strategic Plan: Economic Analysis Section.

U. S. Census Bureau. June 2000. HIV/AIDS Surveillance Data Base. International Programs Center, Population Division.

World Bank. 1990. The Informal Sector in Zimbabwe: The Role of Women. Washington, D.C.

World Bank. 2001. World Development Report, 2001. Washington, D.C.

Yin, Robert K. 1994. Case Study Research: Design and Methods. Second edition. Thousand Oaks, CA: Sage Publications.

Zimbabwe Donor Consortium for Microfinance. July 1999. Status Report of Donor Support for Microfinance.