

# Outcomes of an Ethiopian Microfinance Program and Management Actions to Improve Services

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**Abstract:** Management decision making in MFIs is becoming increasingly tied to collecting information about social performance. This paper examines the impact of participation in an Ethiopian microfinance program on indicators of socioeconomic status including wealth, income, and home or land ownership. A survey assessing these outcomes was conducted in May 2003 in two predominantly rural sites in Southern Ethiopia and included 819 households. The article discusses management decisions made as the result of survey findings about socioeconomic status and food security to increase retention rates and to facilitate client savings. Additionally, the management was prompted to increase the number of female clients and raise the proportion of female loan officers. This paper illustrates how data from routine monitoring and evaluation can be linked to MFI management decision making, which ultimately results in providing better microfinance services.

**M**icrofinance programs focus on expanding local economic activities and improving the standard of living of their clients by providing financial services needed to establish small businesses. Microfinance can be defined as “the provision of banking services such as savings, credit and money transfer to poorer

people who cannot access ordinary mainstream banking services” (Wilson, 2003). While the primary goal of most microfinance institutions (MFIs) is improving the economic status of poorer segments of the population, most service providers aim for a broader impact of enhanced well-being. Because households function as social and economic units, microenterprise programs have a unique opportunity to impact the economic, social, and general well-being of households.

Microfinance is typically viewed as an economic development strategy, and it is a particularly relevant approach in countries where disadvantaged groups tend not to benefit from involvement in the formal economy. In most developing nations, the majority subsists on income from microenterprise activities; the microenterprise sector is estimated to account for 20% to 70% of all employment in many developing countries, illustrating the importance of the informal economy in the subsistence of impoverished populations throughout the world (Wilson, 2001; Waters, 2001). Microfinance is a logical approach to development because it functions at the grassroots level, can be sustainable, is capable of involving large segments of the population, and builds both human and productive capacity.

This paper assesses the outcomes of an Ethiopian microfinance program in terms of household income, wealth, and food security. If microfinance programs operating in Ethiopia and similar contexts are successful at increasing household wealth and incomes, then it is likely that the livelihoods of poor populations can gradually be improved in many locations. Additionally, the paper explores data from an impact evaluation and discusses management actions taken by the MFI in light of the evaluation results.

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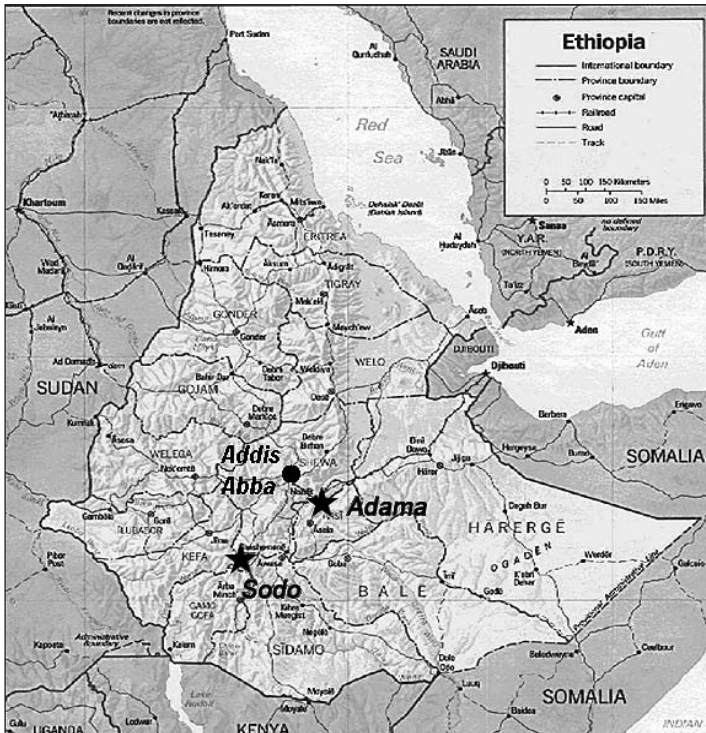
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***WISDOM Microfinance Institution and Survey Sites***

The World Vision microfinance affiliate in Ethiopia, known as WISDOM, was established in 1999. The institution is headquartered in Addis Ababa and currently operates 15 branch offices throughout the country. In the 2003 fiscal year, WISDOM had US\$2,055,873 in disbursed loans and 12,157 active clients; 25% (N=2999) of clients were women. The average outstanding loan size during the period was US\$141. In May, 2003, an assessment of the WISDOM lending program was conducted to examine its impact on clients in the context of prolonged drought and food insecurity. The Adama and Sodo branches of WISDOM were selected to participate in the assessment because (1) they serve regions that are among the most drought-affected in Ethiopia, and (2) the branches were relatively

**Figure 1: Map of Ethiopia & Survey Sites**



mature, having been operational for more than four years, which allowed for the inclusion of clients that have been borrowing from the institution for longer periods of time (Figure 1).

The Sodo branch is located in Wolayita, in the State of Southern Nations, Nationalities, and Peoples Region. The Sodo branch had 2,517 clients when the survey was implemented; as a result of differences in branch size, three quarters of the sample (N=614) was concentrated in the Sodo survey site. The remaining sample (N=205) was drawn from the areas served by the WISDOM branch in Adama. The Adama branch of WISDOM is located in the East Shewa Zone of the Oromiya Regional State, approximately 100km southeast of Addis Abba. At the time of the assessment, the Adama branch had 745 active clients. The branch serves the Districts of Adama and Boset and the city of Nazreth.

### **Methods**

A survey of 819 households was conducted in May 2003 in two predominantly rural sites in Ethiopia. The survey was primarily intended as an assessment of microfinance program outcomes and coping capacity, primarily in terms of measures of socioeconomic status. This study compared two groups of clients that received loans (incoming clients who had completed one loan cycle or less and had been participating in the program for no more than ten months, and established clients who had completed two or more loan cycles) and one group of community controls who were eligible to participate in the WISDOM lending program but had not received a loan within the past year and were not seeking a loan.

A total of 408 established clients, 205 incoming clients, and 206 community controls participated in the survey. The sample was stratified by survey site and client sex, and participants were systematically selected from client lists of the microfinance institution. Neighborhood residents were used as community controls; they were matched by sex and selected by proximity of residence to established clients participating in the study. Indicators of socioeconomic status included monthly household income, per capita monthly household income, household asset and livestock value, and

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household asset and livestock index score. In addition, food security was assessed by a variety of indicators including household diet, child nutrition status, and food aid receipt.

Wealth was estimated based on currently owned household and productive assets. Nineteen types of assets were included in the index. Items were those commonly included in asset indices used to estimate wealth in rural Africa and were established based on previous studies (Morris, Carletto, Hoddinott, & Christiaensen, 2000; Schellenberg, Victora, Mushi, Savigny, Schellenberg, Mshinda, et al., 2003) and preparatory work in the survey region that identified locally important assets. Two measures of household wealth based on assets were developed using a methodology developed by Morris (2000) that combined asset ownership and data from market surveys. Asset-based indicators of wealth included the total value of household assets and livestock and a household asset and livestock index. The asset and livestock index was derived based on the assumption that households with greater resources will purchase and own a greater volume of durable goods; thus asset ownership and household wealth should be related.

Income was assessed using two indicators, monthly household income and per capita monthly household income. Monthly household income was estimated by asking the respondent about all of the economically active members of their household and the money or product generating activities they are engaged in. The monetary value of products produced for barter was used when goods produced were traded and not sold. In the case of agricultural households where income is largely seasonal, the total harvest income was divided by twelve to obtain an estimate of average monthly income from seasonal sources. Per capita monthly household income was also calculated as a measure of socioeconomic status because it incorporates household size, which is often related to socioeconomic status.

The survey used questionnaire-based interviews. The questionnaire was developed in English and was approved by WISDOM and World Vision. The questionnaire was piloted by WISDOM staff in the Adama branch to ensure it was culturally and linguistically appropriate before it was finalized. The survey was translated into

Amharic by a translation agency in Addis Abba that was selected by WISDOM. Back translation was performed by the WISDOM staff. Trained local interviewers were used to ensure knowledge of languages spoken in rural areas.

Data analysis was performed using SPSS version 10.0 and STATA version 8.0. Income and asset values were originally reported in Ethiopian Birr and later converted to the US dollar at a rate of 8.60 birr per US dollar (Universal Currency Converter, 2004). Regression models were employed to determine if outcomes were a result of differences in characteristics of the comparison groups or were attributable to program participation. All significant differences between comparison groups and location of residence (by district or survey site) were considered in linear regression models along with other potentially significant predictors. Variables with a p-value less than 0.05 in univariate regression were considered for best-fit multivariate models using stepwise methods. The “best-fit” model that was selected included predictors with p-values less than 0.05, minimized the residual sum of squares, and maximized the F-statistic.

The study was approved by Johns Hopkins Bloomberg School of Public Health Committee of Human Research and by local authorities in Ethiopia.

## Results

### *Wealth*

Household asset and livestock value and index scores were used to estimate wealth. Mean asset and livestock values were US\$635 (95 CI: 579–692) in Adama and US\$646 (95 CI: 615–677) in Sodo. Incoming clients had the greatest mean asset and livestock value (US\$711), followed by established clients (US\$642) and community controls (US\$588). Mean asset and livestock values among the three comparison groups were significantly different in Sodo ( $p=.024$ ) and similar in Adama. No significant differences were observed in the mean asset and livestock index score for the three groups in Adama or Sodo.

Change in asset value over time was compared among WISDOM clients using current asset value and asset value at entry to the lending

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program. Unfortunately, similar data were not available for community controls. Of established and incoming clients, 69.9% reported a positive change in asset value since enrolling in the WISDOM lending program, 23.3% reported no change in asset value, and 6.8% reported a decrease in asset value. No significant difference in asset change was observed between incoming and established clients. No significant differences in frequency of productive asset sales were found between the three participant groups in Adama or in Sodo, with less than 2.0% of households reporting the sale of productive assets (as a coping mechanism) in the past year. These results suggest that negative change in asset value is likely to be similar among community controls and program participants.

Change in asset value over time was assessed to determine if program participation resulted in a continued increase in household wealth. Length of participation in the lending program and number of loan cycles completed was compared with two measures of change in asset value: (1) the change in estimated asset value since enrolling in the lending program, and (2) the proportional change in asset value since enrolling in the lending program (current assets/entry assets). No significant correlations were observed between length of program participation (time in months or loan cycles) and either measure of change in asset value suggesting that participation in the lending program is not associated with an increase in client wealth.

### *Income*

No significant difference in average monthly household income was observed between the three participant groups in Adama or Sodo; mean monthly household income was US\$32 (95 CI: 28–37) and US\$39 (95 CI: 36–42) in the two sites, respectively. Per capita household income was also similar among the three groups in both survey sites, with a mean value of US\$9 (95 CI: 8–10). When the established client sample was assessed, a small but statistically significant negative correlation between income and length of participation were observed when comparing monthly household income to length of participation in months and the number of loan cycles completed. This is likely a result of declining income trends among

the population as a whole during the prolonged drought and is probably not attributable to participation in the WISDOM program.

Established clients had significantly more income sources than incoming clients and community controls. On average, established clients had 1.4 income sources as compared to 1.2 income sources for incoming clients and community controls ( $p < .001$  by ANOVA). After adjusting for the number of economically active individuals in a household, client households still had significantly higher numbers of income sources. These results suggest that extended participation in the WISDOM lending program results in diversification of income, which is most likely due to the establishment of new enterprises that are facilitated by program participation and the resultant access to loans. Household income increased 1.23 times or 23% for each additional source of household income, indicating that diversification of income sources has a positive affect on household income. These findings suggest that participation in the WISDOM microfinance program gave people the funds to expand existing businesses or start other microenterprises, resulting in the diversification of income sources and the spread of the risk of financial difficulty over an increased number of microenterprises.

When other variables were held constant, literate respondents had household incomes that were, on average, 1.15 times or 15% greater than that of illiterate respondents. Household income increased 1.03 times or was 3% greater for each additional year of formal education attained by the household head. Landowners had lower average incomes than nonlandowners, at 0.88 times or 12% less than nonlandowners, when adjustments were made for other covariates. Households with primarily nonagricultural incomes had, on average, incomes that were 1.39 times or 39% greater than households with agricultural incomes. Residents of rural districts had smaller incomes than those of urban districts: rural district incomes were, on average, 0.85 times or 15% less than incomes in urban districts.

### ***Home and Land Ownership***

The study found significant differences in land and home ownership patterns among the three participant groups. Established client



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households reported the greatest levels of home ownership, at 84.5%, as compared to 77.2% of incoming clients and 74.6% of community controls ( $p < .001$  by ANOVA). Land ownership was reported by 45.6% of established clients as compared to 30.5% of incoming clients and 41.6% of community controls ( $p = .002$  by ANOVA). The observed relationship among the three comparison groups—where established clients were most likely to own a home, community controls were least likely to own homes or land and incoming clients were intermediate—suggests that the likelihood of home or land ownership increases with participation in the lending program. Definitive conclusions, however, cannot be made because of the cross-sectional survey design. Client loan use patterns may provide some insight into the interpretation of home ownership information, where a large portion of loan funds were reportedly used toward purchasing or leasing land and homes. Comparison of home and land ownership rates in clients and incoming clients suggest that home and land ownership may be facilitated through the WISDOM lending program.

### Discussion

While the majority of WISDOM clients reported an increase in asset value since enrolling in the lending program, differences in household asset data between clients and community controls were statistically insignificant. Findings from this study indicate that participation in the WISDOM microfinance program did not result in increased household wealth. Comparison of household asset value in Adama revealed an interesting (though statistically insignificant) pattern between participant groups where clients were the wealthiest, incoming clients were intermediate, and community controls were the least wealthy. In Sodo, this trend was not observed: incoming clients were the wealthiest, followed by established clients and community controls. Significant correlations between measures of asset change and program participation were not observed, further indicating that participation in the lending program was not related to greater accumulation of assets or an increase in wealth.

Efforts to increase the proportion of female clients resulted in targeting women (mostly from urban areas). Because wealth and incomes in urban areas were greater than in rural areas, the gradual shift to a more urban clientele in later years resulted in increased wealth among new clients at enrollment. Consequently, comparison of wealth between the different groups is not possible, because of the lack of baseline data, and only limited conclusions about changes in wealth and microfinance participation can be made. Ideally, the correlation between income and the length of participation could be examined based on multiple observations of each client over an extended period; however, a longitudinal study design was not pursued because of time and resource limitations. As a result of the cross-sectional study design, the comparison relies largely on reported monthly incomes of clients that enrolled at different points in time. Because of the trends in the characteristics of clients that enrolled at different periods of time, the results of this comparison should be interpreted with caution.

While some correlations between the measures of income and the length of participation were statistically significant, the coefficients were small ( $r < .40$ ), indicating that strong conclusions cannot be drawn. Coefficients were negative for the comparison of income and the length of participation in the program (by both month and loan cycles), indicating that income may have decreased slightly per each additional month of participation in the lending program. One potential explanation for the weak correlation coefficients is the ongoing drought that is thought to have resulted in a gradual decline in household incomes over several years.

Client status was not a significant predictor of income in the model presented, indicating that participation in the program did not have measurable impact on monthly household income. Significant predictors of household income in multivariate models that are of particular interest include those that may have been influenced by development programs. While the district of residence or agricultural versus nonagricultural income category are client characteristics that are unlikely to be changed, other traits such as literacy, the education level of the household head, and the number of sources

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of household income are potential areas, which if targeted by development programs, could result in increases in household income.

The number of household income sources was a significant predictor of household income, indicating that having a greater number of income sources was associated with higher levels of monthly income. Significant differences in the number of income sources for each client group suggest that participation in lending programs may result in the diversification of household income. The observed relationship between enrollment and income sources, where established clients have the greatest diversity in income, followed by incoming clients, with community controls having the least diversity of income sources, suggests that extended participation in the lending program leads to diversification of income. The relationship between the number of household income sources and monthly household income indicates that diversification of income via lending programs may be an effective strategy to increase household incomes.

### ***Study Limitations***

The inability to randomly assign participants to experimental and control groups is a problem common to all microfinance evaluations, and thus it cannot be viewed as a primary limitation of the study; nearly all microfinance research is based on quasi-experimental designs. The principal limitation of this study is the cross-sectional design. An important drawback of cross-sectional studies is the inability to control for trends or directional changes in the characteristics of the population over long periods of time. Because WISDOM clients enrolled in the organization over an extended period of time and no baseline data is available, it is difficult to establish whether clients enrolling during different periods are similar; consequently, the comparability of incoming and established client groups is drawn into question. Study findings suggest that changes in enrollment practices meant that incoming clients had higher socioeconomic status than established clients. In the context of the Ethiopian drought, declines in the income of agricultural populations are probable; the cross-sectional study design is also unable to account for these trends. Consequently, it is not possible to determine whether

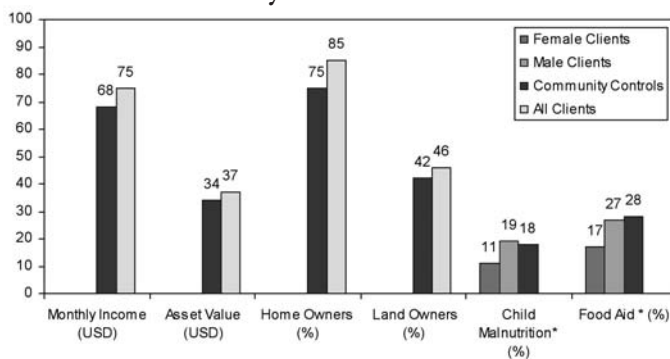
declines in income over time are attributable to the prolonged drought or how participation in the WISDOM lending program may have modified household income.

The cross-sectional design clearly limited the ability of the study to adequately measure changes in income, wealth, and the relationship between asset accumulation and program participation. The inclusion of wealth and income indicators in program monitoring or in cross-sectional surveys that are administered at multiple points in time is a better approach for MFIs to measure client wealth and determine if changes in wealth and income are in fact a result of participation in a lending program.

### *MFI Management Actions*

WISDOM and World Vision undertook the study with the aims of (1) understanding the impact of WISDOM microfinance services on the well-being of their clients, and (2) improving the financial products and services that WISDOM offers its clients. This impact survey and the desire on the part of WISDOM management to use the impact assessment data to improve their services is part of a growing trend in the microfinance industry. As one author maintains, “there is a growing movement towards practitioner-focused impact assessment and client assessment. This takes as its starting point management’s need for information to improve practice. Practitioner

**Figure 2: Socioeconomic and Food Security Indicators by Clients’ Status and Sex**



**Table 1: Summary of Evaluation Findings and Corresponding Management Implications**

Findings	Management Implication
Increased income reported by clients	Increase outreach to allow for more beneficiaries
Greater rates of home and land ownership among clients as compared to community members	Improve the client retention rate and promote savings as a means of facilitating the purchase of homes and land
Lower prevalence of malnutrition among children of female clients (as compared with children of male clients)	Increase the number and proportion of female clients and loan officers
Lower rates of food aid receipt among female clients as compared to male clients	Increase the number and proportion of female clients and loan officers
High proportion of clients that report a decreasing quality of diet	Facilitate savings for all clients

impact assessments aim to gather information about clients which is credible enough to allow for good decisions to be made” (Simanowitz, 2004). WISDOM management took a number of actions based on the findings of the survey. The WISDOM Market Research and Product Development Officer met with the WISDOM General Manager and senior staff regarding the evaluation. Table 1 outlines key survey outcomes and resulting management actions that were intended to improve WISDOM’s products and services.

With the increase of income reported by clients (though not confirmed by the study results), WISDOM management remained committed to increasing outreach to more clients. WISDOM had fallen short of its annual outreach targets but committed to increase outreach to exceed the goal of 18,000 clients by the end of December 2004. As of September 30, 2004, WISDOM had 17,782 active clients and was well on its way to meeting its target. With the finding that 85% of clients own houses, WISDOM management worked to improve retention rates. Management’s rationale was that if WISDOM can retain clients, then clients will slowly be able to build more assets, including houses, a key asset for wealth creation. WISDOM’s retention rate as of September 30, 2004, was 77%.

In the primary survey site Sodo, female clients and their families reported better food security and nutritional status according to a variety of measures.<sup>1</sup> The prevalence of global acute malnutrition was 18% among children of male clients as compared to 10% among female clients. Female client households were also significantly less likely to have received food aid during the past year: 16.5% of female clients reported receipt of food aid as compared to 26.9% of male clients. As compared to female clients, male clients were 2.0 times as likely to have received food aid in the past year, and the children of male clients were 1.9 times as likely to be malnourished as the children of female clients. The lower rates of child malnutrition and food aid receipt among female clients convinced management that it needed to increase its efforts to improve the percentage of female borrowers. As of September 30, 2004, only 41% of active borrowers were female, as compared to a business plan target of 50% and the World Vision Microfinance Operating Standard of 60%. While the actual percentage of female borrowers fell below targets, it is a substantial improvement from the quarter prior to the survey (second quarter of 2003) when females accounted for only 27% of all clients.

Two additional changes were made by WISDOM management in response to survey findings. Survey findings indicated poor food security in a large portion of households surveyed: 26% of households reported a decrease in dietary quality during the past year. WISDOM management responded with a plan to increase savings services for clients. The management's rationale was that with greater savings, household diets and food security would improve. The final change initiated by WISDOM management was to increase the number of female loan officers as a means of better reaching out to female clients.

Changes initiated by WISDOM management as a result of the evaluation fit into a broader effort within microfinance. For microfinance practitioners, monitoring and evaluation is increasingly tied to the management decision making of the MFI. The SEEP (Small Enterprise, Education, and Promotion) Network Client Assessment Working Group is developing a Social Performance Management

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System that aims to tie monitoring and evaluation findings to management actions in an effort to strengthen MFIs. Social Performance Management is a framework to assess social performance and use assessment findings to make decisions regarding both financial and social performance of MFIs (Imp-Act, 2004).

### Conclusion

Household asset data indicates that participation in the WISDOM microfinance program did not result in increased household wealth. Significant differences in household income were not observed between participant groups in either survey site and client status was not a significant predictor of income in univariate or multivariate regression models. Significant differences in the diversification of income (according to multiple measures) were observed between participant groups, where established clients had the most income sources, followed by incoming clients and community controls, respectively. Diversification of income (i.e., the number of income sources) was significantly associated with monthly income in multivariate regression models. These findings suggest that participation in the lending program leads to diversification of income.

WISDOM management utilized research findings to make management decisions to improve the financial services that WISDOM offers to its clients. WISDOM management made efforts to increase the percentage of female clients, expand savings services, improve the retention rate, and increase outreach. Tying management decision making to the collection of social performance information is clearly a trend in microfinance. Through this linking of data and MFI management decision making, microfinance clients can be better served.

### Notes

1. For a detailed report of nutrition findings, see Doocy, Teffera, Norell, & Burnham (2005) and Doocy, Norell, & Burnham (2004).

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