

FIELD BRIEF No. 11

Exploring the Linkages between Food Security and Microfinance

A Study by FINCA in Zambia and Guatemala

This FIELD Brief is the eleventh in a series produced by the Financial Integration, Economic Leveraging and Broad-Based Dissemination (FIELD)-Support Program. This Brief discusses FINCA's recent study which explored the connections between food security and microfinance in two countries.

*Managed by AED, FIELD-Support represents a consortium of leading organizations committed to advancing the state-of-the-practice of microfinance and microenterprise development through innovation, learning and exploration. FIELD Briefs support this objective by sharing what we have learned and fostering dialogue on key issues. This brief was written by Paul Hamlin of **FINCA International**. For more, visit www.microlinks.org/field.*

Introduction

Food insecurity, as a dimension of poverty, is one metric by which FIELD-Support partner FINCA may measure the social impact of its programs. A global network operating in 21 countries, FINCA provides financial services to low income and underserved populations and as of the end of 2010, had over 700,000 active clients and a total active loan portfolio of over \$300 million.

Over the next five years, FINCA expects to expand outreach to rural areas where agriculture is the primary economic activity and where food insecurity is a pressing concern. Therefore, in 2010 FINCA launched a Strategic Learning Initiative (SLI) to better

understand the link between access to microfinance and food security by surveying its new and continuing clients in Zambia and Guatemala. For this study, FINCA engaged TANGO International, specialists in providing institutional support to organizations trying to alleviate hunger and poverty, to conduct the year-long study in 2010 and 2011.

The FINCA study looked at various measures of food security and explored the connections between food security, livelihoods, and access to finance. As discussed in this Brief, it served as a learning exercise for FINCA since food security strengthening has not traditionally been a focus within the organization but is an important outcome of sustainable economic development programs and an indicator of enhanced client well-being.

The findings of the study, presented below, indicated that access to financial services is correlated with improved dietary diversity and indicated some ways in which their food security could be enhanced. By understanding the various dimensions of food security and how they are quantified, FINCA is now in a position to incorporate food security into its programming and social performance framework and to improve the food security outcomes of its activities. Specifically, FINCA is seeking to incorporate food security metrics into its social performance system and it will use insights gained from the study as it expands lending, particularly in rural areas.



Methodology

The study was situated in Guatemala and Zambia, two countries where populations are affected by food insecurity. FINCA has been operating in each country for ten years or more and had a combined client base of over 41,000, as of the end of 2010. The average loan size in Guatemala was US\$415 and in Zambia US\$315.

Two random samples of approximately 300 clients were taken in each country. The first sample were new clients (those who were on their first loan with FINCA) and the second sample were continuing clients (those who had taken three or more loans from FINCA) to evaluate if there were statistically significant differences between the two groups. Reflecting the focus of the study, the samples were drawn from areas where donors and multilateral organizations report higher incidence of poverty and food insecurity. Survey results were analyzed and also compared with existing data from FINCA's client research surveys conducted in prior years. The following table indicates the number of clients surveyed in each country:

Metric	Guatemala	Zambia	Total
Sample Size	603	579	1,182
New Clients	306	224	530
Continuing Clients	297	355	652
Focus Group Participants	74	30	104

In addition to the quantitative study, qualitative research was conducted using focus groups. Finally, a literature review was conducted to review research that examined linkages between access to financial services and food security.

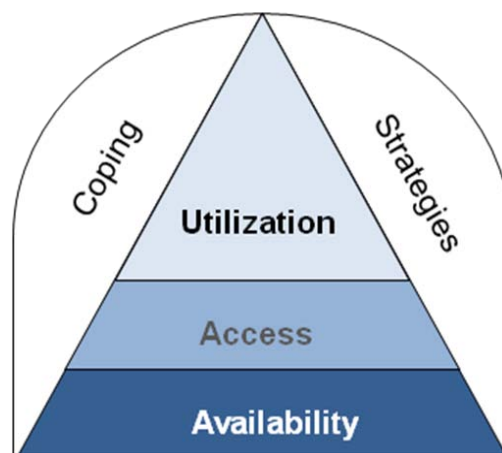
The study did contain some limitations that should be mentioned. New clients, while new to FINCA, may have borrowed before from other organizations. This was a non-longitudinal study, so drawing conclusions about impact over time is difficult and some self-selection over time is likely to differentiate the two groups in important ways. Nutritional status was not fully explored with anthropometric indicators, meaning that the diet of clients was not observed directly but instead analyzed based on self-reported information. Finally, numerous factors other than access to finance can influence food security, particularly among those clients who cultivate crops or have livestock, and these factors were not controlled.

Food Security Analytical Framework

As the figure below illustrates, food security encompasses several dimensions, including the availability of food, access and utilization, as well as coping mechanisms employed by households to manage changes over time in these factors. Availability of food is the foundation of food security—it concerns the production of food, imports and exports of food and the structure of markets and their proximity to communities. Trade policy and physical barriers also affect availability. Such restrictions could include degradation of transportation means such as road and rail links or barriers to trade across borders imposed by governments attempting to restrict food exports of imports, or production shortfalls due to weather.

While availability is viewed at the regional or local level, access is focused on the household unit's ability to obtain food. Access is mainly a function of income and price and can also be changed through government or donor food distribution systems or household level food production. It is this area of food security where microfinance can have the largest direct impact by supporting increases in incomes.

Once availability and access have been considered, how households utilize food is also critically important. Utilization is itself multi-dimensional and looks at issues such as dietary preference and food purchase choices, access to clean water and non-food inputs such as sanitation and storage facilities, as well as health care which can influence the body's ability to derive nutrition from the food. Clean water and sanitation help ensure that food is prepared without contamination and household members are not at increased risk of water borne diseases, and proper storage prevents spoilage.



There are two main ways practitioners measure key factors of food security, looking at a combination of availability, access and utilization. The first is the Dietary Diversity Score (DDS) which looks at the variety and quality of diet based on 12 different food groups and is a function of both what is available and what a household can access, in addition to what a shopper chooses to buy. The second is the Food Consumption Score (FCS) which is a proxy of dietary quality and is a calculated composite score based on dietary diversity, food frequency, and relative nutritional importance of different food groups. Both measures are typically based on consumption over the previous 24 hours and both measures were key in FINCA's analysis.

In addition, measuring food security includes looking at how households manage or cope when either availability or access are compromised which can in turn impact utilization. By looking at the type of coping strategies available, which methods households employ, and how often they are employed, one may gain a more complete picture of food insecurity at the household level. Higher coping strategy scores indicate more frequent use of coping mechanisms which in turn indicates lower levels of food security. The type and variety of strategies are directly linked to the diversity of livelihoods and income sources, access to natural resources, ownership of assets, as well as household "social capital," which may enable households to borrow food from friends or neighbors or obtain food on credit. Drawing on social capital is a common coping strategy when food access is limited and as such it can be considered as a non-financial form of savings.

It should be noted that coping strategy scores measure the reported use of coping strategies, not the number of strategies available. Although higher coping scores indicate more food insecurity, having access to a larger number of strategies is a positive indicator that households will more easily and appropriately adapt to changes in access or availability and presumably face less food insecurity.

Research Findings and Lessons Learned

For both countries, FINCA found that, with their varied sources of income, the vast majority of both its new and continuing clients are food secure according to most metrics, although the continuing clients were much less likely to have to resort to coping strategies (such as borrowing food from neighbors) during times of distress. In Zambia, 87% of households reported always having food and in Guatemala 95% always have food in the house. Only 1.5% of clients in Guatemala and 2.4% of clients in Zambia reported often having no food. However, signs of vulnerability to food insecurity appear in the type and frequency of coping strategies employed and for all groups there remain opportunities to increase dietary diversity and the quality of food. The following table indicates the mean food security statistics for Guatemala and Zambia.

	GUATEMALA		ZAMBIA	
	New	Continuing	New	Continuing
<i>Number of months with adequate food</i>	11.6	11.7	11.1	11.1
<i>Dietary Diversity Score</i>	9.6	10.0	7.9	8.5
<i>Food Consumption Score</i>	13.8	14.1	n/a	n/a
<i>Coping Strategy Index Score</i>	4.3	3.7	7.7	4.7

In focus groups discussions, clients often cited a range of factors that can affect their household diets, including a major illness or death in the family, and loss of employment. This qualitative data indicates that a portion of clients have *vulnerability* to food insecurity. Some indicators of this vulnerability include the finding that 42% of households reporting a major illness or accident in Guatemala and 43% in Zambia. Loss of employment was reported by 23% in Guatemala and death of a household member was reported by 27% in Zambia. Unemployment, illness or death in the household are severe shocks and can easily cause a household to become food insecure. When faced with these challenges, households resort to coping strategies that may not completely overcome the increase in food insecurity.

As shown in the table, in Zambia, new clients exhibited higher coping scores (7.7 versus 4.7 for continuing clients). The higher coping scores indicate that the new clients used coping mechanisms more often during the reporting period to adjust to food shortages. Similarly, continuing clients in Guatemala exhibited lower coping scores (4.3 versus 3.7), although the difference was not statistically significant. These findings suggest that households who are continuing borrowers may use access to finance to rely less on coping mechanisms, however does not indicate whether this is because the loan capital contributes to stabilized incomes so that they do not need to consider having to cope or that the households are using the capital to purchase food or offset the impact of using other potentially damaging coping mechanisms, for example taking children out of school to work or selling productive assets.

The study also revealed modest increases in per capita income for continuing clients. In Guatemala continuing clients averaged 25% more income than new clients and in Zambia the corresponding figure was 18% more. Increased incomes benefit food purchases with 83% of Guatemalan clients reporting using additional income to purchase food and 80% of Zambian clients reporting being more able to meet food needs. Finally, the regression analysis showed that increased income contributes to improved dietary diversity scores: the increased incomes led to higher quality food consumption through a more diverse diet rather than just an increase in staple foods. This means that once households are able to meet their basic caloric requirements they are able to diversify

their diet or purchase higher quality foodstuffs. In addition, dietary diversity has been found to be a strong indicator of overall food security and improvements in nutrition are critical to address common ailments found among the poor.

Food Security and Microfinance: Key Trends

- **Many clients meet basic criteria of food security, but show signs of vulnerability.**

Due to the need for clients to have some existing economic activity as a basis for loan repayment, most microfinance clients already generate income that supports food security, however there are signs that they continue to be vulnerable to external shocks.

- **Continuing clients have higher incomes.**

The study showed that continuing clients had on average 25% higher incomes than new clients in Guatemala and 18% higher than new clients in Zambia.

- **Increased incomes lead to improvements in food security.**

Having access to financial services increases incomes for many clients. This leads to better access to food and increases in dietary diversity.

Conclusions

For microfinance clients, food security itself is not a binary issue—families are at different levels of vulnerability during different periods of the year, and even relatively food secure households demonstrate clear signs of vulnerability to food shortages at certain times. The findings also confirm that any positive or negative change in income has a direct impact on food security. Higher incomes are correlated to increased dietary diversity and lower coping strategies index results.

The study showed that food security is a significant issue in both urban and rural areas, although access to financial services is higher for urban populations. Financial institutions are often reluctant to lend for agriculture for numerous reasons including the challenges of managing risks of weather and market price fluctuations. Expanding access to rural and agricultural finance would target those populations that are vulnerable to food insecurity and have lower access to financial services. FINCA intends to pursue growth in rural areas where the main economic opportunity is agriculture. This will take FINCA beyond its traditional focus on trade and micro-industry and make its services more suited to the needs of agriculturally-based households.

The study recommended additional steps that would target food insecure groups and potentially improve their food security including partnering with organizations that focus on health and nutrition as a way to better address utilization and access. The study also highlighted the importance of non-credit products, particularly savings to smooth changes in income and insurance products to minimize risk. It should be noted that FINCA has not intentionally worked to target food insecure populations. Although a small portion of the surveyed clients are food insecure or vulnerable to insecurity, for FINCA, the focus has been on increasing incomes, which appears to have enabled improvements in food security for continuing clients.

In addition to making programmatic changes, FINCA will incorporate an improved understanding of food security into its social performance and impact assessment. This effort will give greater visibility to food security as an important dimension in the welfare of FINCA's clients and their families.