

Achieving Self-Reliance through Grassroots Microlending

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Introduction

This paper reports on the authors' field research in Guatemala with over hundred microentrepreneurs from Microcrédito Guatemalteco, an innovative nonprofit organization utilizing new concepts among the poor. We describe the context in which microcredit is provided to poor microentrepreneurs, reporting the data and analyzing the socioeconomic impacts that hold the promise of achieving self-reliance through tiny family businesses.

There is a growing business case for microlending to empower the poor across the world. Major U.S. corporations such as Nike and Hewlett-Packard have begun to channel funding to help fight poverty in the developing world through microlending. Business schools such as Wharton, Harvard, and Fuqua have started courses in microcredit and social entrepreneurship recently. Brigham Young University has developed a number of courses, created the *Journal of Microfinance*, held seven conferences in the past decade on these issues, and sent out some 300 students to do summer internships with microfinance institutions (MFIs). Business media such as the *Wall Street Journal*, *Forbes*, *Fortune*, and *Business Week* have all recently run stories on microfinance. There have been front-page articles in *Reuters*, the *New York Times*, and *Newsweek* as well.

MBA students are pushing for courses and programs that encourage microcredit, social capital, and social entrepreneurship. Net Impact, an MBA group that advocates socially responsible investing, has 7000 members and conducts a large annual gathering to explore these issues.

Governments and multilateral organizations are also jumping on the band wagon. The United States Agency for International Development (USAID) just launched a new program to foster microenterprise in Pakistan as a tool for lifting families out of poverty and lessening anti-American attitudes (USAID, 2004). USAID already gives substantial monies to non-governmental organizations (NGOs) globally to foster grassroots capitalism. Likewise, the United Nations supports microcredit

strategies, and in fact, recently declared 2005 to be the International Year for Microcredit (UNCDF, 2004).

As the microlending movement grows toward becoming an international management phenomenon, a business question has to do with whether or not such a strategy really impacts poverty. Does it improve lives? If so, how, and in what ways? In the past several years, a number of large donors have begun to ask such questions. Poverty assessment tools are becoming ever more important since the recent passing of legislation in both the U.S. House and Senate during 2003. The amended Microenterprise for Self-Reliance Act (H.R. 4073, 192; P.L. 106-309, 108-31) requires all MFIs that wish to obtain USAID funding demonstrate that more than 50 percent of all their assistance goes to the poorest of the poor (U.S. Senate, 2003). The bill H.R. 192 requires USAID to certify two low-cost poverty assessment techniques to be used by MFIs by October 1, 2004. It also demands all organizations applying for governmental microlending funds to have at least one poverty assessment technique certified by October 1, 2005 (GOP, 2003). Hence, poverty assessment tools that can indicate clientele economic status and progress are becoming an essential asset for obtaining future microcredit funding.

This paper addresses these issues by reporting on field research the authors conducted during summer 2003 in Guatemala. After a brief introduction to the country, we describe a nonprofit organization anonymously called *Microcrédito Guatemalteco*, and describe the survey instrument used to collect the data. Next, the data are analyzed and socioeconomic results are discussed. The paper concludes with the survey instrument and references used in this study.

Guatemala

Guatemala is a beautiful region of rich, green jungles, smoldering volcanoes, swirling cloudy mists, and ancient Mayan pyramids. Freed from Spanish rule in 1821, Guatemala has been characterized for the past few decades by ugly military *juntas*, socialist politics, CIA interventions, assassinations, and destabilization. Secret police, leftist insurgencies, scorched earth practices, and the brutal killings of over

200,000 people, mostly indigenous peasants, have exacted a huge social and economic toll. Today America's Watch and the UN Human Rights Commission still keep tabs on the country's potential for human rights violations and the possibilities for more genocide and "the disappeared" symptoms of the past (CIA World Factbook, 2004). In December 2003, the Inter-American Court of Human Rights ruled against the Guatemalan government for covering up an administration-plotted death of an anthropologist who was killed for documenting the military massacre of tens of thousands of indigenous people (Reuters, International, 2003). Because of the human rights treaty Guatemala signed in 1978, the Court's ruling is binding and more international investigations regarding assassinations of foreigners are likely to occur.

Guatemala has one of the most diverse populations in Central America. Of the 14 million people who live in the country, 43 percent are indigenous Amerindians that live over 108,890 square kilometers. Spanish is spoken in 60 percent of Guatemalan houses, while in the remaining 40 percent, over 15 different Amerindian languages are spoken. Some of these larger recognized languages include Quiche, Cakchiquel, Kekchi, Mam, Garifuna, and Xinca. Guatemala's agricultural sector accounts for about one-fourth of its GDP, two-thirds of its exports, and one-half of its labor force. The main products are coffee, sugar, and bananas (CIA World Factbook, 2004).

In recent administrations, former President Arzú (1996-2000) worked to implement a program of economic liberalization and political modernization. The recent president, Portillo, has continued the liberalization program but with more sporadic results. With the implementation of President Arzú's political modernization programs, the distribution of income remains highly unequal, with about 75 percent of the population falling below the poverty line. Moreover, ongoing challenges are seen in efforts to increase government revenues, negotiate further assistance from international donors, upgrade both government and private financial operations, and narrow the increasing trade deficit (CIA World Factbook, 2004).

In 2003, work continued on the proposed U.S.--Central American Free Trade Agreement (CAFTA) that would allow a phasing-out of most tariffs with a commitment to honor intellectual property

rights (Reuters, U.S., 2003). CAFTA would bring hope to Guatemalan textile mills as many are moving out of the country due to augmented costs from regulated minimum wage increases (Hedgpeth, 2003.) However, it is unlikely that CAFTA will be passed without major changes in Congress because of the adverse impacts it may have on U.S. agriculture producers and factory jobs.

With the end of the internal armed conflict signed in 1996, Guatemala has begun to pursue ambitious socioeconomic improvements. The peace accords removed a major obstacle to foreign investment, but numerous corruption scandals associated with the Portillo administration have dampened investor confidence. The needs are considerable since the GDP per capital is only \$3,700. According to World Bank reports, some 60 percent of the people are officially poor, a quarter of whom are in extreme poverty. These numbers consist of indigenous people, women, children and the elderly (World Bank, 2003).

According to reports by the World Bank, four of the six Latin American countries with the highest reporting of HIV-AIDS include the Central American nations Guatemala, Belize, Honduras, and Nicaragua. Guatemala is plagued with orphanages filled with abandoned AIDS babies. These institutions are under-funded and filled beyond capacity. With few resources, the country's AIDS medications eventually reach some of the children through lottery-like processes while the adults are left without any relief (Jordan, 2003).

Great challenges face the Guatemalan people at present. On the one hand, much work needs to be done to sustain the peace process and achieve genuine national reconciliation. On the other, the task is one of improving the quality of life, reducing inequalities while building justice and democracy (Coordinadora, 2000). Microlending that strengthens the informal economy, while helping poor families move toward greater self-reliance, is a significant part of the country's solution.

Research

In summer 2003, our university microfinance research team conducted an impact assessment of a microfinance NGO we shall call Microcrédito Guatemalteco (MG) in Guatemala. The investigation's objective was to observe what impact microfinance may have on poverty. To accomplish the objective, the team measured the socioeconomic and financial status of three groups of participants: new clients, current clients and ex-clients. Their assumption stated that if microfinance helped the poor become less poor, the new clients would likely be the poorest, followed by the current clients, and finally, by the ex-clients. After deciding upon which groups to analyze, the microfinance researchers created a survey instrument and determined the criteria they would use to measure poverty which is discussed in the methodology section.

- **Microcrédito Guatemalteco**

This NGO, MG was founded in 1994 to “promote...sustained economic development among the lower-income working class in both urban and rural areas” (Microcrédito Guatemalteco, Plan, 2003). MG initially began as a consulting agency for small and microbusinesses, mostly informal family enterprises. It later initiated credit lending to those businesses with which it trained and consulted. MG offers two types of credit: individual loans and group loans. Individual credit is divided among four categories which include fiduciary guarantee credit, mortgage credit, seasonal credit, and reoccurring credit. Fiduciary guarantee credit requires two co-signers in addition to the primary signer. These loans are for 24 months. Mortgage credit, as the name infers, requires the loan signers to mortgage some belonging they have to secure a loan. Seasonal credit is offered during the holiday seasons such as Christmas, Holy Week, and Mother's Day, to clients who have a good credit record and show a real opportunity for doing seasonal business during such times. Reoccurring credit with either fiduciary or mortgage guarantee are stepped in nature, and are offered to those clients with a good credit record and a new plan of investment.

Group credit is also known as village banking and resembles the Grameen model, a large MFI that pioneered microlending in Bangladesh (Grameen, 2003). Credit is offered to a group of individuals who usually live in the same area and are engaged in a similar profession. The group size ranges from 4-10 people. The loan is guaranteed by all group members. For example, if one member defaults on his or her loan payment, the other members in the group have to pay for the loan outstanding (Microcrédito Guatemalteco, August, 2003). Thus, social pressure maintains a 98 percent payback rate. MG has grown from its original branch office in Guatemala City, and now extends to the rural areas of Chiquimula and Quetzaltenango. In 2002, it offered \$276,249 in loans to 590 clients, and provided training and consulting services to thousands of microentrepreneurs seeking to start or grow their businesses (Enterprise Mentors International, 2003).

Methodology

A field study conducted in summer 2003 of MG in Guatemala collected the data used in this paper. The field interviewers collected data from three groups of borrowers who had received loans: new clients (those who had been in the program for less than a year and were on their first or second loan); current clients (those who had been in the program for more than a year); and ex-clients (those who were in the program and later left). The research team created a field survey instrument that obtained three types of measures: socioeconomic data, daily per capita expenditure, and daily minimum wage equivalent (Hatch, 2002). These three criteria composed the study's poverty level indicators.

- **Survey Instrument**

The socioeconomic criteria were designed to measure the social impacts of poverty that are usually overlooked when doing economic analyses. Accordingly, this socioeconomic criteria measured important indicators of economic status by using six criteria that affix a rank to their social status: Food Security, Health, Housing, Education, Empowerment (women only), and Social Capital (women only). The six criteria with their definitions were as follows: Food Security assessed the client's food quality and quantity; Health measured the client's access to healthcare; Housing measured the client's living

standards; Education measured the client's children's access to formal schooling; Empowerment captured the female client's ability to voice her opinion in the home, receive respect, and take part in family decisions; and finally, the Social Capital criterion measured the female client's relationships with neighbors and her ability to count on them in emergencies.

The criteria were based on an ordinal scale from 1–4. For example, in Food Security, a 4 meant the respondents reported that they had enough and the kinds of food they wanted, whereas a 1 signified they often did not have enough to eat. Similar ordinal scales were used for Health, Housing, Education, Empowerment, and Social Capital respectively. These six criteria have been established by the World Bank, Consultative Group to Assist the Poor (CGAP), the International Labour Organization (ILO), and the United Nations Development Programme (UNDP) as legitimate poverty indicators. Empirical surveys conducted on the poor have demonstrated that poverty is best described as an absolute and a relative dimension (CGAP, 2003; Henry et al., 2003; UNDP, 2003; Zeller et al., 2003). As the UNDP has declared, “In the absolute sense, the poor are materially deprived to the extent that their survival is at stake. In relative terms, they are also deprived in relation to other social groups whose situation is less constraining.” Hence, the field survey instrument used by the team encompassed both the absolute dimensions of poverty, measured by the Food Security, Health, Housing, and Education criteria, and the relative dimensions of poverty, measured by the Empowerment and Social Capital criteria.

Traditionally, the first and foremost ranking of poverty is defined by how much a person earns daily—the daily per capita income (DPCI). The World Bank and the United Nations have classified “absolute” poverty as those who earn less than \$1 (USD) a day or, in other words, those who have a DPCI of less than \$1 a day. The “universal” poverty line is classified as those who have a DPCI of \$1 – \$2 (USD) a day. Through extensive field-testing by the United Nations, World Bank, and other development institutions, it was found that the poor usually do not know exactly how much they earn, but do know how much they spend in a day, week, or a month (Hatch, 2002; UNFPA, 2002). This is the case because the poor usually have many different sources of income to sustain the family (i.e. from children working, remittances, etc.) which when received, are then turned around and immediately spent on food, education,

housing, and so on. Therefore, to accurately reflect how much money the poor earn, the research team decided to use the daily per capita expenditure (DPCE)—how much a person spends per day—to accurately represent the DPCI.

Since the purchasing power of the dollar differs from country to country, the final economic factor the team members used to gauge poverty was the daily minimum wage equivalent (DMWE). Using expenditures again to represent their earnings, the examiners compared the clients' earnings to the daily minimum wage for the country. Various NGOs in Guatemala affirmed that the minimum wage for all areas studied averaged Q40.9 (Quetzals) or roughly \$5.30 (USD) a day. For people in Guatemala, this was the minimum needed to stay above absolute poverty. The team converted the DMWE into World Bank dollar scales by performing a linear transformation and dividing all the reported amounts by 40.9, and this was divided by the number of individuals per household. Assuming five people per household, this essentially made Q40.9 equal to \$1 a day per person. In this way, the researchers were able to compare the data they received to the DPCE, and observe if there existed significant statistical differences in the criteria among the three types of groups: New, Current and Ex-Clients.

- **Data Collection**

After arriving in the country and making initial contact with the microfinance institution MG, the field investigator team randomly selected groups—capturing both rural and urban areas. They then accompanied the MFI staff representative to the respective borrower group meetings. At the group meetings, the field team conducted one-on-one interviews in a private location, and orally asked the questions in Spanish from the survey instrument questionnaire. Appendix A contains the questions used for the socioeconomic criteria in both English and Spanish. These interviews included members from the New and Current Clients. These group sizes ranged from 15-30 clients. After concluding the interviews at the group meeting, the team members accompanied the MG staff representative to visit with Ex-Clients who were once part of that MFI group and conducted interviews with them at their respective houses or businesses. Total clientele interviewed totaled 130.

Socioeconomic and Economic Findings

The research team used the Kruskal-Wallis one-way analysis of variance test to analyze the socioeconomic criteria. The team found significant differences among New, Current, and Ex-Clients in the Health and Housing criteria as shown in Table 1.

Table 1
Socioeconomic Results

Group	Mean Rank					
Group	Food Security	Health*	Housing*	Education	Empowerment	Social Capital
New Clients	61.3	44.7	57.6	72.9	37.2	35.8
Current Clients	69.6	55.5	60.6	64.5	40.1	40.9
Ex-Clients	64.8	95.5	79.3	62.8	46.1	45.8
F	0.6	39.38	5.71	1.37	2.28	1.42
P	0.5527	0.0000*	0.0042*	0.2573	0.1091	0.2473

* significant at the .05 level

Table 1 displays the six criteria with their corresponding mean rank for each clientele group. The higher the mean rank, the higher the clientele group scored on the socioeconomic scale of 1 to 4. In the Health criterion, Ex-Clients scored significantly higher (79.3) than Current Clients (60.6) and New Clients (57.6). In the Housing criterion, Ex-Clients scored significantly higher (79.3) than Current Clients (60.6) and New Clients (57.6). Empowerment, though not statistically significant, may also be representative of Ex-Clients scoring higher than Current and New Clients.

The research team then conducted a one-way analysis of variance test to analyze the economic criteria. Although the results found in Table 2 contain no significant differences at the .05 level, they are noteworthy for observation.

Table 2

Economic Results

Group	DPCE	DMWE
New Clients	1.724	1.558
Current Clients	1.905	1.628
Ex-Clients	1.675	1.288
F	0.32	1.55
P	0.7284	0.2168

Discussion and Conclusions

Empirical observation studies based on these surveys from this Guatemalan NGO, Microcrédito Guatemalteco, suggest promising results from microlending. As shown in these data, microlending may have had a positive impact on poverty in terms of both Health and Housing socioeconomic criteria. According to the socioeconomic criterion, Ex-Clients who graduated from the program reported that they enjoyed greater health resources and benefited from higher housing standards than Current Clients who had been the program for over a year, as well as New Clients who had just begun. In addition, women who had participated in the microlending program and later graduated from it may enjoy a greater capacity to make choices and influence financial decisions and other major issues in the home (World Bank, 2004). It would appear from these observations that poor microentrepreneurs choose to invest first in Health and Housing before they begin to invest in other socioeconomic criteria.

In conclusion, this article provides observational evidence of the important role that microlending may play in international development. By conducting interviews with this Guatemalan NGO, Microcrédito Guatemalteco, the researchers found significant data that may indicate that microfinance participants’ socioeconomic levels have increased due to their involvement in microlending. Microfinance is based on a hand-up instead of a hand-out policy, and it may offer several positive effects in decreasing poverty. As such it is becoming more popular among developers and donors. Furthermore, microfinance appears to improve the lives of those and lifting them onto a higher economic plane. Hence,

these small loans seem to curb the effects of poverty and promise to improve the lives of the poor in areas of health and housing. It is quite possible that this grassroots development approach to eliminating poverty will continue to receive more attention as more poverty impact studies reveal its effectiveness.

All of this suggests a growing relevance of microenterprise creation for international business and management. Among other things, the case of Microcrédito Guatemalteco is financially viable—perhaps even more so than the traditional U.S. small business start-up, since 98 percent of MG’s clientele pay back their loans on time. Our research also tends to show that even the very poorest can benefit from microentrepreneurship training, not just that done in traditional American business school courses. In receiving microloans, these microentrepreneurs increase their buying power and investing capability, enjoying significantly higher increases in profits than non-borrowers. The concluding implication from our interviews is that microfinance strategies not only help strengthen the informal economy as a whole, but they may lead to greater family self-reliance, women’s empowerment and social capital as well.

References

- Ayau, M. (1989, February 24). The Americas: U.S. Forces Wrong Medicine Down Latin American Throats. *Wall Street Journal*. (Eastern Edition). 1.
- Cevallos, D. (2003, September 3). Labor-Mexico: A Record 20 Million Work in the Informal Sector. *Global Information Network*. Retrieved September 15, 2003 from <http://www.globalinfo.org/eng/reader.asp?ArticleId=24925>.
- CGAP. (2003). Assessing the Relative Poverty of Microfinance Clients. *CGAP*. Retrieved November 3, 2003 from http://www.cgap.org/docs/TechnicalTool_05_overview.pdf.
- CIA World Factbook. (2004). Guatemala. Retrieved November 15, 2003 from <http://www.cia.gov/cia/publications/factbook/geos/gt.html>.
- Coordinadora. (2000). Si, Vamos por la Paz! Plan De Desarrollo Económico y Social. Guatemala City: Coordinadora.
- Enterprise Mentors International. (2003). Partner Foundations. Retrieved December 5, 2003 from <http://www.enterprise-mentors.org/PartnerFoundations.asp>.
- GOP. (2003). H.R. 192 Amending the Microenterprise for Self-Reliance Act of 2000 and the Foreign Assistance Act of 1961. Retrieved December 7, 2003 from <http://www.gop.gov/committeecentral/docs/bills/108/1/bill.asp?bill=hr192>.
- Grameen. (2004). About Grameen. Retrieved November 8, 2003 from <http://www.grameen-info.org>.
- Hatch, J. (2002). Concept Paper: Towards a Cost-Effective System for Measuring the Social Performance of FINCA Programs. Washington D.C.: FINCA International.
- Hedgpeth, D. (2003, December 13). Global Rivalry Hurts Central American Textile Firms. *Washington Post*. Retrieved January 5, 2004 from http://www.washingtonpost.com/wp-dyn/articles/A61202-2003Dec12_2.html.
- Henry, C., Sharma, M., Lapenu, C., and Zeller, M. (2003). Microfinance Poverty Assessment Tool. CGAP. Retrieved January 3, 2004 from <http://www1.worldbank.org/publications/pdfs/15674frontmat.pdf>.
- Jordan, M. (2003, November 16). Hospice Gives Hope to Aids Orphans. *Washington Post*. Retrieved December 20, 2004 from <http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&node=&contentId=A46643-2003Nov15¬Found=true>.
- Maxwell, J., and Westerfield, D. (2002). Technological Entrepreneurism Characteristics Related to the Adoption of Innovated Technology. *SAM Advanced Management Journal*. 67(1), 9.
- Microcrédito Guatemalteco. (2003). *August Guatemala Report Summary*. FUMEG: Guatemala City.
- Microcrédito Guatemalteco. (2003). *Plan de Negocios de FUMEG*. FUMEG: Guatemala City.
- Reuters. (2003, December 19). International Court Condemns Murder. *Washington Post*. Retrieved

- December 21, 2003 from <http://www.washingtonpost.com/wp-dyn/articles/A16723-2003Dec19.html>.
- Reuters. (2003, December 17). U.S., Four Central American Countries Reach Trade Deal. *Washington Post*. Retrieved December 21, 2003 from <http://www.washingtonpost.com/wp-dyn/articles/A8988-2003Dec17.html>
- Ridgeway, S. and Jacques P. (2002). Population-conflict Models: Blaming the Poor for Poverty. *The Social Science Journal*. 39(4).
- Snow, D. and Buss T. (2001). Development and the Role of Microcredit. *Policy Studies Journal*. 29(2), 296-308.
- Stanford, J. (2000). Free Trade in South America: A Tale of Two Countries Economic Growth (or Decline?). *SAM Advanced Management Journal*. 65(1), 6-7.
- UNCDF. (2004). UNCDF Microfinance Overview. Retrieved March 17, 2004 from <http://www.uncdf.org/english/microfinance/year/>.
- UNDP. (2003). Policy Issues: Part I. Retrieved January 4, 2004 from <http://www.undp.org/dpa/publications/choicesforpoor/ENGLISH/CHAP02.PDF>.
- UNFPA. (2002). Measuring Poverty. Retrieved February 1, 2004 from <http://www.unfpa.org/swp/2002/english/ch2/page4.htm>.
- U.S. Senate. (2003). H.R. 192. Retrieved November 4, 2003 from <http://thomas.loc.gov/cgi-bin/query/D?c108:5:./temp/~c108WaZOBT::>
- USAID. (2004). USAID Pakistan. Retrieved March 17, 2004 from <http://www.usaid.gov/pk/>.
- Woller, G., Dunford, C., and Woodworth, W. (1999). Where to Microfinance? *International Journal of Economic Development*, 1(1), 1-29.
- Woodworth, W. (2000). Third World Economic Empowerment in the New Millenium: Microenterprise, Microentrepreneurship, and Microfinance. *SAM Advanced Management Journal*. 65(4), 19-28.
- World Bank. (2003). Central America and the Caribbean: Guatemala: Economy. Retrieved December 1, 2003 from <http://www.nationmaster.com/country/gt/Economy>.
- World Bank. (2004). Empowerment. Retrieved from January 17, 2003 <http://lnweb18.worldbank.org/ESSD/sdvext.nsf/68ByDocName/WhatIsEmpowerment>.
- Zeller, M., Sharma, M., Henry, C., and Lapenu, C. (2003). Operational Method for Assessing the Poverty Outreach of Performance of Development Projects. *ILO*. Retrieved February 8, 2004 from http://www.iaae-agecon.org/conf/durban_papers/papers/004.pdf.

Appendix 1: Questionnaire in English

Questionnaire in English

I. Food Security: On the scale from 1-4, which of the following statements best describes the food eaten in your household?

1. You often do not have enough to eat.
2. You sometimes do not have enough to eat.
3. You have enough but not always what you want to eat.
4. You have enough and all the kinds of food you want to eat.

II. Health: On a scale from 1-4, which of the following statements best describe your household's health situation.

1. You can never afford needed medicine or healthcare
2. You often can't afford needed medicine or healthcare
3. Sometimes you can't afford needed medicine or healthcare
4. You can afford the medicines or healthcare you need to treat sickness.

III. Housing: On a scale from 1-4, which of the following statements best describes your housing situation.

1. Your home has no utilities.
2. Your home has either water, electricity or indoor plumbing.
3. Your home has two of the three (water, electricity, indoor plumbing).
4. Your home has (all three) electricity, water, and indoor plumbing.

IV. Education: On a scale from 1-4, which of the following describes the education situation of the household's members.

1. None of your school-age children (6-18) attend school.
2. Not all of your school-age children attend school, and none are expected to complete secondary school.
3. All of your school-age children attend school, but not all are expected to complete secondary school.
4. All of your school-age children attend school, and you expect all of them to complete secondary school.
5. There are no school-aged children living in your household.

V. Empowerment (for women): On a scale from 1-4, which of the following describes your situation.

1. You never feel respected, never express your opinions, and never participate in major family decisions.
2. You seldom feel respected, usually keep your opinions to yourself, and you seldom participate in major family decisions.
3. You sometimes feel respected, sometimes express your opinions in public, and participate in some major decisions of your family.
4. You always feel respected, express your opinion in public, and participate in all major decisions of your family.

VI. Social Capital (for women): On a scale from 1-4, which of the following describes your household's relationship with other community residents.

1. You barely know anyone in this community, have no friends, and in an emergency you would have to depend entirely on yourselves.

2. You only know a few neighbors, have few friends, and in an emergency it is not likely anyone would help you.
3. You know some of your neighbors, have a few friends, and in case of an emergency, somebody would probably help you.
4. You know many of your neighbors, have many friends, and can count on several for help in an emergency.

Appendix 2: Questionnaire in Spanish

I. Seguridad de alimentación: Según la escala de 1 a 4, escoja la frase que mejor describe la situación de alimentación de la casa.

1. A menudo no hay bastante para comer.
2. A veces no hay bastante para comer.
3. Hay bastante para comer pero no de todo tipo de comida que ustedes quieren comer.
4. Hay bastante para comer y de todo tipo de comida que ustedes quieren comer.

II. Salud: Según la escala de 1 a 4, escoja la frase que mejor describe la situación de salud de la casa.

1. Nunca tienen ustedes los recursos necesarios para comprar medicamentos ni pagar por los servicios médicos.
2. A menudo no tienen los recursos necesarios para comprar medicamentos ni pagar por los servicios médicos.
3. A veces no tienen los recursos necesarios para comprar medicamentos ni pagar por los servicios médicos.
4. Tienen los recursos necesarios para comprar medicamentos y pagar por los servicios médicos.

III. Vivienda: Según la escala de 1 a 4, escoja la frase que mejor describe la situación de la casa.

1. La casa no tiene luz, baño, ni agua.
2. La casa no tiene luz, baño o agua (uno de los tres).
3. La casa tiene luz, agua o baño (dos de los tres).
4. La casa tiene luz, agua y baño (todos los tres).

IV. Educación: Según la escala de 1 a 4, escoja la frase que mejor describe la situación de educación de los miembros de la casa.

1. Ninguno de los niños de edad escolar (6-18 años) asiste a la escuela.
2. No todos de los niños de la casa asiste a la escuela primaria y no se espera que ninguno se graduará de la escuela secundaria.
3. Todos los niños asiste a la escuela primaria pero no se espera que todos se graduarán de la escuela secundaria.
4. Todos los niños de edad escolar asisten a la escuela primaria y se espera que todos se graduarán de la escuela secundaria.

V. Empoderamiento: Según la escala de 1 a 4, escoja la frase que mejor describe la situación la situación.

1. Nunca se siente respetada, no expresa su opinión ni participa en las decisiones grandes de la casa.
2. Casi nunca se siente respetada, casi nunca expresa su opinión o participa en las decisiones grandes de la casa.
3. A veces se siente respetada, expresa su opinión y participa en las decisiones grandes de la casa.
4. Siempre se siente respetada, expresa su opinión y participa en las decisiones grandes de la casa.

VI. Capital Social: Según la escala de 1 a 4, escoja la frase que mejor describe la relación de los miembros de la casa con otros vecinos del vecindario?

1. Conocen apenas nadie en el vecindario, no tienen amigos y tendrían que dependerse enteramente en sí mismos si hubiese una emergencia.
2. Conocen pocos vecinos, tienen pocos amigos y si hubiese una emergencia probablemente nadie les ayudaría.
3. Conocen algunos vecinos, tienen algunos amigos y si hubiese una emergencia probablemente alguien les ayudaría.
4. Conocen muchos de sus vecinos, tienen varios amigos y si hubiese una emergencia podrían contar con la ayuda de los vecinos y amigos.