

**The Power of Microenterprise: An Analysis of the
Economic and Social Impact of a Weaving Collective in
Rural Nicaragua**

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EXECUTIVE SUMMARY

Research Questions:

Examining the data from the Nicaraguan Rural Development Impact survey, what are the economic and social impacts of the weaving microenterprise, established in 2009, on the families of the 15 participating women?

What lessons can be learned from the impact analysis of the weaving enterprise and how might those lessons inform current rural development and poverty reduction strategies that target the female head of household?

Introduction

This paper explores the potential economic and social impacts of a weaving microenterprise located in a small rural Nicaraguan village. First, I examine the determinants of a female head of household's decision to join the weaving collective. Based on the decisions to join the weaving collective or not, I test if joining the collective impacts key economic indicators and levels of female empowerment.

Over 840,000,000 women, 12 percent of the world population, live in extreme poverty on less than a dollar a day¹. Understanding the factors that contribute to a female head of household becoming involved in the development of a microenterprise has implications for the design of female targeted development programs. The ability to quantify the benefits of microenterprise will assist policy makers in allocating scarce resources for microenterprise development, and justifying microenterprise development to funders.

With the continued growth of female targeted development initiatives particularly in regards to conditional cash transfer and microfinance initiatives, there is a need for a better understanding of the benefits of microenterprise development, to be able to present it as a viable alternative to these other initiatives. To justify additional funding for the development of more female targeted microenterprise initiative there is a need for more rigorous impact evaluations, linking them to improved family well-being and female empowerment.

Data and Methods

The data used to answer my research question comes from the Nicaraguan Rural Development Impact Survey; a survey that I designed and conducted the summer of 2011. I interviewed two groups of subjects, those who participated in the weaving project and those who had chosen not to, for total of 39 households. This number of households represents the entire community. Each subject participated in an interview, answering questions regarding household demographic characteristics, income, consumption, education levels, community project participation, and decision making. Each interview took approximately one and a half hours to complete. The response rate was 95.3 percent.

My analysis involved using OLS regressions to examine how the variables of economic well-being as measured by consumption, education spending (total and per capita), and health spending (total and per capita), were impacted by participation in the weaving project. I also examined the impact of weaving group participation on female head of household decision making power. The 15 women who are currently participating in a weaving project serve as the 'treatment' group, with the rest of the community serving as the 'control' group. All women in the village were given an equal

opportunity to participate in the weaving group but they did self-select in terms of whether they participated or not. The second half of the paper is a qualitative analysis of semi structured and informal interviews with the 15 weavers in November 2009 and in November 2011. The interviews enrich the quantitative analysis by bring the women's voices to the case study. The women discuss how they feel the project has impacted their lives and their plans for the future.

Results and Interpretation

Per capita total consumption, protein consumption, food to total consumption, spending on ceremonies, total and per capita health spending and total and per capita education spending where not significantly impacted by the female head of household's participation in the weaving collective. In the first model of the regression analysis empowerment is statistically significant at the 5% level. In model 2 it is significant at the 12% level and in model's 3 and 4 it is no longer statistically significant.

The results from this analysis disprove my initial hypothesis which was that participation by the female head of household in the weaving group would result in significant increases or changes in family level consumption patterns. Additionally there does not appear to be any significant improvements in child welfare as represented by per capita spending in education and health. A potential reason for the lack of significant difference could be that since the project has only been fully functional a year and a half and the weavers may not have been able to build up a sufficient amount of capital that would allow them to significantly increase their consumptions or spending on health and education while at the same time cover the investment costs that are incurred from the weaving business. Even though the women have significantly increased their product quality they have not found a wide range of markets for their products which greatly limits their ability to scale of production and to reap the economic benefits increased sales and production would bring. It also appears I underestimated degree of impact the opportunity to learn to weave would have on the mental state of the women and on their relationship with their spouse.

Conclusions and Policy Implications

The weaving microenterprise initiative has yet to have a significant overall impact on the economic indicators so I cannot claim that it has had a positive impact on the economic well-being of the women and households that are participating in the weaving project. One of the main limitations of this analysis is the very small number of observations. More rigorous analysis over a longer period of time with a larger dataset is likely to generate evidence to strengthen microenterprise development and provide support for microenterprise projects that have already taken place. Even though the weaving project has not had clear short term economic impacts, in developing a specific skill and a new type of knowledge, the weavers have begun to believe in themselves as actual business women, to be creative and innovative and to involve their families in that process. This impact is evidenced by the relative statistical significance of the empowerment variable. The weaving enterprise is building a sustainable framework that will hopefully continue to propel the women, their families, and the community forward into the future. Even if the weaving enterprise is not a long term venture the women who participated in it will have a much greater belief in their capabilities as individuals and as a group, and that sense of empowerment is not something that can be provided by handouts or taken away by any individual.

The Power of Microenterprise: An Analysis of the Economic and Social Impact of a Weaving Collective in Rural Nicaragua

INTRODUCTION

It is estimated that over 840,000,000 women, 12 percent of the world's population, live in extreme poverty on less than a dollar a dayⁱⁱ. This number is slightly less than the entire population of Europe. Although "women perform two-thirds of the world's unpaid labor and grow more than half the world's food; they represent 70 percent of those living in poverty" (Grumm 2008). Given these figures it is not surprising that the international development community has for years been developing and implementing gender specific projects and programs. Approaches to this type of targeted development have varied; from conditional cash transfers and microfinance to job training and small business development. However, all of these approaches typically have the same stated goals; help increase the wellbeing of the family and women's economic productivity as well as gender equality and empowerment.

The purpose of this paper is to explore the question of how development projects that target the female head of household impact the economic and social well-being of the household using a case study from rural Nicaragua. The community being studied is a small village in the impoverished Nicaraguan countryside, where I served as a Peace Corps volunteer from 2007-2010. Nicaragua is the second poorest country in the Western hemisphere. According to the World Bank, Nicaragua's total population is 5.8 million, 46.2 percent of whom live at or below the poverty line. 5 percent of the 2.3 million people in the labor force are unemployed while, as of 2008, nearly half the population, 46.5 percent, was under employed (World Bank Indicators, 2012). The rural populations of Nicaragua are the poorest (INIDE, 2011). 63.3 percent of people living in rural communities are poor while 26.6 percent live in extreme poverty. In comparison only 26.6 percent of the urban population lives in poverty and 5.6 percent live in extreme poverty (INIDE, 2011). 35.3 percent of women over the age of 18 live in poverty while 10.6 percent live in extreme poverty. The numbers for men are relatively similar with 37.3 percent living in poverty and 10.3 percent living in extreme poverty (INIDE, 2011). According to World Bank data, as of 2010, the average per capita annual gross income was \$1,110. For the central rural region, where El Ocotal is located, the annual per capita income was \$567 as of 2009 (INIDE, 2011). In the village where I was serving as a volunteer, in 2011, the average annual per capita income was \$332, less than a dollar a day. This level of income is slightly above the average, \$320, for levels of extreme poverty in the central rural region (INIDE, 2011). 10.7 percent of the rural population in the central region lives on less than \$1.25 dollars a day, the highest percentage of all Nicaragua (INIDE, 2011). So this is a case study of a very poor community in an already poor country.

One of the projects I developed as a volunteer was the organization and training of 15 women into a small weaving collective. In the summer of 2011 I returned to the village and conducted a community wide household level survey. I collected data on household consumption, income, assets, child well-being, decision making, and participation in community projects. Using the data from this survey, the Nicaraguan Rural Development Impact (NRDI) study, I hope to establish the determinants of a woman's decision to join the weaving group. Additionally I will be examining how being in the weaving group may or may not have impacted respondents feelings of empowerment, household total per capita consumption, household spending on education (total and per capita) and household spending on health (total and per capita). The second half of the paper is a qualitative analysis of semi structured and informal interviews with the 15 weavers in 2009 and in 2011. The interviews

enrich the quantitative analysis by bring the women's voices to the case study. The women discuss how they feel the project has impacted their lives and their plans for the future. The policy implications section of this paper examines the results from the Nicaraguan microbusiness case study analysis alongside other forms of predominantly female targeted interventions such as conditional cash transfers and microfinance. The goal is to see where microbusiness and skills development fits in the current international development context, what lessons can be learned for the case study analysis and how those lessons can be incorporated into future international development policy regarding poverty reduction strategies of development projects that target the female head of household.

CONTEXT

This project is rooted in personal curiosity and the primary question I hope to explore, how a microenterprise development project that targets the female head of household impacted the economic and social well-being of the household, has its origins in a small, rural and impoverished community. In August of 2007 I joined the Peace Corps. I was fresh out of undergrad and eager to immerse myself in something completely foreign. My experience began the moment I walked out of the air-conditioned airport and into the sweltering heat, dust and noise of Managua, the capital city of Nicaragua. After receiving three months of intensive training I was sent to El Ocotal.

El Ocotal, a small village of 250 people in the mountains of Matagalpa, is a place of great beauty and great hardship. For the two and a half years of my Peace Corps service, El Ocotal was my home. Life there is tied to the land. When it rains too much, beans and corn are washed down the mountainside, and when it doesn't rain enough, seeds shrivel and die in the increasingly dust-like soil. Yet the people persevere, with quiet, inspiring determination.

During my service, I developed projects ranging from soil conservation and community micro banks to chicken coops and improved cook stoves. For the majority of these projects, I worked with the same group of 28 self-selected women. The goal was to lessen the family's dependence on planting and harvesting and help the women gain financial independence.

My mother, Carol Blackmore, is a skilled rug weaver with years of experience. She visited El Ocotal in January 2009 and suggested weaving as an enterprise. With a financial donation from the *Triangle Weavers Guild* of Chapel Hill, NC, she delivered a rug loom in June. 14 of the 28 women cautiously decided they wanted to learn to weave rugs using recycled clothing. In July I began giving classes every afternoon, two women per week. By the end of the seven-week cycle, the women had learned the basics of weaving, warping, and quality control. After more than two year of experience, 15 women are producing small rugs, placemats, and handbags, and selling them at regional retail craft outlets and in the U.S. The profits provide previously unaffordable health care, school fees, and basic tools. All proceeds are returned to the group, and a percentage is saved for the construction of an independent workspace and upkeep of the looms. In March, 2010, my Peace Corps service ended. The weavers of El Ocotal continue to function as a self-regulating unit, which is a profound change for women accustomed to male dominance and living in relative isolation from one another. They have written about the sense of unity weaving has helped create and the pride they feel in being able to better provide for their children:

"We have learned to be organized, to be supportive, and we have learned to live together socially which is for us, of great benefit." *Women Weavers of El Ocotal*

The idea of earning money was not new to the women of El Ocotal. Several women kept small convenience shops in their homes where they sold basic goods like sugar, rice, soap, and

cooking oil. However, due to difficulties and costs of transportation and the fact that many people in the bought on credit but never ended up paying, it was not uncommon to walk up to one of the shops and find the shelves empty. Several other women were known for selling eggs when they had a few to spare or cuajada, a soft cheese, during the rainy season when the usually undernourished cows finally had enough to eat to produce a few liters of milk. Three older women in the village had small mud ovens in their back patios. When enough firewood could be spared and a little extra money was available to buy the necessary ingredients, the women could be found making rosquillas and rosquetes, sweet bread made from corn and cuajada. However, they were usually only able to sell them at a breakeven price, as most the villagers do not have a lot of extra change and are accustomed to buying baked goods at the price their grandparents paid. So the women of the village had had experience and exposure to income generating activities before my arrival in the village. Even though they might not have been that successful, at least they had started thinking about some basic business management.

What sets the development of the weaving collective apart from women's attempts to generate a little additional income in the past was that they were learning an entirely new skill, instead of repeating the same minimally effective activities they had been doing for generations. When I first brought up the idea of teaching the women to weave, none of them had any idea what I was talking about. After 3 months of training one of the would be weavers stated that "when she (Ivy) told me that I had to prepare clothes that I now was not using because you wanted to teach a beautiful work, I said in my mind, how is this work? Now I am seeing the great results we have received." Another important difference, highlighted by the *Women Weavers of El Ocotal* quote is that for the first time, the women were learning how to develop a business as a group. The domain of the woman is usually the home and any income generating activity was typically completed in and around the home, by the woman with other female family members. All the other development projects that had been brought to the community were of a similar nature. The women met for several weeks for group instruction but after they received their materials each one retreated to her home to have her husband help build her chicken coop and to raise her chickens on her own. The collective nature of the weaving project brought the women out of their homes into a common working environment where they were forced to collaborate and problem solve as a group.

LITERATURE REVIEW

There is a growing fragmentation in development literature and amongst development professionals as to the best way to target the poor, specifically poor women and the type of impact those programs have on the women and their families. In an interview, Robert Zoellick, former president of the World Bank, stressed the importance of providing women with land titles and access to credit (thedianerehms.org/shows/2011-09-20/). This stems from the idea that if you give women money (similar to cash transfer programs, micro lending, and targeted agricultural projects) they will decide how to best use and 'invest' that money in their families. Economically speaking this approach has proven to be successful. According to a discussion paper produced by the International Food Policy Research Institute, the reason to focus on women is that "women's economic advancement has multiplier effects for household food security" (Pena, 1996). Literature provides numerous studies from around the globe which support this assertion. A study in Kenya found that when women controlled the income household calorie consumption increased significantly while "off-farm income shares" that are typically controlled by men had a negative effect (Kennedy, 1991). Another study in the Cote d'Ivoire showed a family's budget share for food is higher when women have higher household cash income (Haddad and Hoddinott, 1994). In the Philippines, Garcia (1991) found that "the female cash income share is positively and significantly associated with household calories." Finally, a Guatemalan study found that there was a stronger correlation between

preschooler weight-for-age and height-for-age and their mother's income verse correlations between the fathers income (Engle, 1991).

All of these studies point to the widely accepted concept that women are more likely to invest in their families than men. One conclusion that can be drawn from these studies is that women do not contribute to their family because they do not have money so giving women money or the opportunity to earn money enables them to contribute. If the focus is just on improving the short term economic wellbeing of children and families then this approach is a very practical one. However, it fails to evaluate how the women themselves are impacted, either positively or negatively, and whether improved economic wellbeing has a positive effect on gender equality and family level decision making. What good does it do to provide a woman with cash or credit to buy and raise a cow when in the end she doesn't have the power to decide when and how she will sell it? Additionally, the long term sustainability of providing women with capital to invest in their families is questionable. Even though a woman has access to credit there is no guarantee she will be able to manage and or invest it in a way that promotes sustainable growth for her family in the long run.

This micro level analysis mirrors the bigger picture approach taken by many international finance institutions in the past two decades towards development in poor countries. The idea is that there is a financing gap which is preventing countries from increasing their savings, so donors fill that gap with foreign aid (Easterly 2002:13) just as promoters of microfinance view the lack of development as poor people not having access to credit so providing them with credit will be the stimulus needed to propel them out of poverty. However, as Easterly points out, the sizable investments made by donors in poor countries over the past two decades have had little to no impact. He notes that "there is no reason to think that aid given just because the recipient (country) is poor changes the incentives to invest in the future. Aid will not cause its recipients to increase their investment; they will use aid to buy more consumption goods (Easterly 2002:38). A similar pattern can be seen at the micro level. As noted in a recent book on the economics of the poor "most people living with less than 99 cents a day do not act as if they are starving (Banerjee and Duflo, 2011:22). A traditional belief in development is that when poor people get a little more money they will spend it all on food (they lack calories so the sole focus will be on getting as many calories as possible). However, Banerjee and Duflo found that the poor "don't put everything into getting more calories" but instead "buy better-tasting, more expensive calories" (2011:23). Another way to explain spending patterns among the poor is "that other things are more important in the lives of the poor than food" (Banerjee and Duflo, 2011:35). There has been wide documentation "that poor people in the developing world spend large amounts on weddings, dowries, and christenings, probably in part as a result of the compulsion not to lose face" (Banerjee and Duflo, 2011:35). In conclusion, in any development project there is the potential that the poor aren't going to spending money in a way that in the long run is in their best interest or in a way that helps them build their personal capacity to be self-sustaining and progress out of poverty.

In terms of lending Easterly found in many cases that "indiscriminate lending created poor incentives for making the reforms necessary for growth" (2002:104). This issue is echoed on the micro level in a report produced for the UK government regarding the role of microfinance in fighting poverty. The report found that "where the only product available is a loan, customers will take a loan even if it is not the most appropriate solution to their financial needs (Brooke 2011:8). A prime example of the dangers of lending without providing targeted business training and oversight is that story of a woman in Bangladesh who eventually committed suicide due to her amount of debt. "At the time of her death, she had loans outstanding from eight different microfinance institutions totaling Rs. 160,000 (US\$3,500).¹ She had no regular income, just odd jobs in town paying about Rs. 600 (\$13) a week. She used most of the loan money for her daughter's wedding" (Brooke, 2011: pg 7).

Many conditional cash transfer programs reward women for sending their children to school but the benefits of having more highly educated children are unlikely to be realized until 10 to 15 years down the road. There is also no guarantee that those more educated children will find a job or send back remittances. On a macro level Easterly highlights the fact that “there is a lack of association between growth in schooling and GDP growth”(2002:73) and that “enrollment on formal schooling maybe a poor measure of creation of skills”(2002: 84), skills that are needed for people to respond “to incentives to invest in the future”(2002:84). So instead of just giving women money to send their kids to school or providing them with micro loans and little guidance maybe there needs to be a refocusing on building capacity and skills, providing them with the exposure and technological knowhow to make something of themselves. Exposure to new ideas and technologies leads to knowledge sharing and long-term growth (Easterly, 2002).

Much of the literature on female targeted development projects has focused on the potential economic impact of the intervention. Ritu Sharma co-founder of Women Thrive Worldwide, has raised concerns as to whether a strict economic analysis may be an over simplification of the female targeted development issue. Sharma points out that even though there is a heightened awareness amongst advocates, academics, and development practitioners of the importance of addressing gender roles in development projects “U.S. international assistance programs and policy have not caught up with the facts”(Sharma, 2001). This suggests that the development status quo continues to focus on providing monetary funds to women without addressing gender inequalities and family decision making structures that limit the ability of women to develop their personal capacities and have the power to decide how they use their time and money. A recent ethnographic study of women’s involvement microcredit programs in Honduras showed that “male partner’s behavior can both facilitate and limit women’s use of loans and repayment strategies” (Vonderlack-Navarro, 2010). As Brooke (2011:9) notes “simply because money is loaned to a woman does not mean that it gives her more power in the household or indeed that it was her that wanted the loan.” This conclusion is supported by a study in Bangladesh found “that 50% of loans taken out by women were used for men’s productive activities (White, 1991). Another article highlighted similar issues of microcredit programs that target women. Family survival is being placed on women alone and not enough attention is being focused on the issue of broader family relations which impact women’s financial stability (Markowitz & Tice, 2002). The overarching recommendation coming out of the literature is that the relationships between the male and female head of household and general family dynamics need to be taken into consideration when designing economic development programs and projects. There is a growing consensus that in order for microfinance to truly empower women there is a need to support the growth of “small and medium-sized enterprises” (Brooke, 2011:9).

PART I: Quantitative Analysis using the Nicaragua Rural Development Impact (NRDI) data

STUDY DESIGN

Research Questions

Examining the data from the Nicaraguan Rural Development Impact survey, what are the economic and social impacts of the weaving microenterprise, established in 2009, on the families of the 15 participating women?

What lessons can be learned from the impact analysis of the weaving enterprise and how might those lessons inform current rural development and poverty reduction strategies that target the female head of household?

Hypotheses

I have formulated two hypotheses to test the economic and social impact of the weaving collective on households that were part of the project.

1. Participation by the female head of household in the weaving group results in significant increases in family per capita consumption and improvement in child welling as measured by increases in the health and education spending.
2. There will be no significant difference in female head of household decision making power between those who participate in the weaving project and those that do not.

My first hypothesis is based in my knowledge, given my oversight of sales, that the women in the weaving group are making a supplemental, if infrequent, income that none of the other women in the village have and the assumption that, though a small, the money would be put towards the family's pressing consumption needs.

The second hypothesis is based on my experience living with these families and seeing firsthand the degree to which subordination towards the husband is ingrained in women's behavior. Nicaragua is known for having a very 'machismo', or male dominated society. The roles of males and females are established and reinforced as soon as a child is able to do chores. The sister typically washes her brother's clothes, brings him his food, and gives up her chair for him. So when the brother grows up and takes a wife he is expecting to be served and the woman who becomes his partner likely had brothers or a father that she spent most of her time serving, so that is the role she takes because it is all she knows and what society expects her to do. Due to the general societal acceptance of 'machismos' I expect that the process of women truly feeling empowered will be very incremental and there will not have been much change over the past two years of the project.

DATA

Nicaraguan Rural Development Impact (NRDI) study

The purpose of the study was to perform a comparative analysis of the economic and social impact of small scale rural development projects in El Ocotal, Nicaragua. In the past three years the community has received extensive agricultural extension support as well as the development of a small scale weaving business. The main source of income for the subjects is subsistence farming. In July 2011 I interviewed two groups of subjects, those who participated in the weaving project and those who had chosen not to, for a total of 39 households. This number of households represents the entire community. The goal of the research is to make comparisons between subjects in the weaving project and those who are not. The primary subject was the female head of household with the inclusion of two male heads of household as the female head of household was not available to respond at the time of the interview. Each subject participated in an interview, answering specific survey questions regarding household size, in kind resources, income generation activities, household consumption, education levels, child welfare, decision making, and community project participation. Each interview took approximately one and a half hours to complete. The response rate was 95.3 percent.

Upon returning from Nicaragua this summer, I entered the NRDI data from the paper questionnaires into Excel. From Excel I imported the data into STATA where I cleaned, labeled, and

created the explanatory and outcome variables. Using this data I examine the differences between participants and non-participants of the weaving project in terms of background and outcomes after the weaving program began. The second stage of my analysis involved using OLS regressions to examine how the variables of economic well-being as measured by consumption, education spending (total and per capita), health spending (total and per capita), were impacted by participation in the weaving project. I also examined the impact of weaving group participation on female head of household decision making power. The 15 women who are currently participating in a weaving project serve as the ‘treatment’ group, with the rest of the community serving as the ‘control’ group. I have no baseline data so time series analysis of panel data is not possible and membership in the weaving group was not random. All women in the village were given an equal opportunity to participate in the weaving group but they did self-select in terms of whether they participated or not.

Caveats: Principle Threats to Validity

Internal

The main threat to validity from the NRD I study is that the weaving and non-weaving groups were not randomly selected. All of the women that ended up in the weaving group came from a larger group of 28 women who had participated in two small livestock infrastructure projects I had organized and implemented the year before. All women of the village were given a one month window to decide if they wanted to participate in the group or not. After the one month period I needed to have a set group to facilitate effective instruction. It is very possible that the women in the weaving group are the more motivated women in the village and would have been economically better off even if the weaving project had not taken place. Or it could be that they were poorer than the rest of the women in the village and were really in need of a way to increase their families’ economic situation prior to the start of the project. There is also the possibility that other confounding factors may have been influencing the dependent variables during the time of the study. Such factors could include changes within the family structure during the survey or family members getting or losing job. An increase or decrease in other forms of income generation could affect weekly consumption. All information recorded in the survey was self-reported and the accuracy of some of the respondent’s information was questionable either because they did not know or they did not quite understand what information the question was asking for. Finally this was not a double blind experiment; I led the intervention and conducted the majority of the interviews. Despite my best efforts to maintain neutrality there is always the possibility of experimenter bias.

External

The Nicaraguan NRD I survey has a very small number of observations. It covers every household in the community but there are only thirty-nine. Such a limited number of observations clearly restrict the generalizability of any findings in relation to the research question. I have no baseline data so the comparisons that I am able to make are purely between the ‘treatment’ and ‘control’ groups. I do not have the ability with the current data set to do any panel regressions which would help with the general applicability of findings.

Construct.

This project is focused on the outcome variables of economic well-being, child welfare, and decision making as impacted by participation in the weaving group. There are potentially other

outcome variables that could be of interest or other explanatory variables which might be impacting results.

METHODS

My main question is the relationship between participating in the weaving program and measures of power and of economic outcomes. I assess this by estimating models of the form:

$$\sigma_i = \alpha + \beta w_i + \gamma x_i$$

The variable 'w' is a dichotomous indicator of weaving participation ($w_i=1$ if i is a weaver). I control for various characteristics of the woman and her household (x represents this set of characteristics). I describe the different dependent variables (σ) below.

Female head of house hold decision making power

The decision making power variable was created as an index of a series of questions related to the respondent's relation to their spouse. The questions that were asked included "How regular is the money you receive in comparison to the money your spouse receives?, If you needed money and your spouse was not at home, would you feel comfortable taking money from your spouse's wallet/purse? And if your spouse needs money and you are not at home, has your spouse ever taken money from your wallet/purse? Each question allowed the respondent to answer either 'many times' 'sometimes' 'rarely' or 'never'. These answers were then assigned values ranging in a scale of 0 to 3. The answer of 'never' was assigned a 0 and the answer of 'many' was assigned a 3. Other questions were either 'yes' or 'no' and were either assigned a 0 for no or a 3 for yes. The points for the various questions were aggregated for each unique household id. The sum of all these points become the power variable. The respondent female head of household with a high power number are assumed to have a higher level of empowerment while those with a lower score have lower empowerment. The power variable allows me to take the analysis beyond the economic and physical well-being of the household and examine the social dynamics between the respondent and spouse, as perceived by the respondent.

Household Per Capita Consumption

This variable includes data collected in the household weekly consumption of basic food goods such as beans, cereals, oil, and sugar as well as household monthly expenditures on health, school, and durable goods. Amounts of consumption related to food were aggregated and nonfood consumption such as spending on health, education, and house improvements were aggregated in a similar manner. Food and nonfood spending were then aggregated for a total household level per capita consumption. Creating this outcome variable allowed me to examine the degree to which economic well-being as measured by consumption levels differs between the groups of women that are in the weaving group and those that are not.

Household Spending on Education

As a way to try to gain a better understanding of wellbeing as measured in a families ability to provide the necessary resources for their children to go to school I created a variable that specifically captures the households spending on education. This spending includes entry/registration fees, tuition,

and the cost of transportation to school, books, and supplies. I ran OLS regressions using both a variable for total household spending on education and an additional variable that looked captured the per capita spending on education.

Monthly Household Spending on Health

The goal of this dependent variable is similar to that of spending on education, to break down the total consumption variable and whether participation in the weaving group has allowed the women to provide better healthcare for their children. Again I looked at both total health spending per household and per capita health spending. The health spending variable includes spending on travel to the hospital, private clinics, traditional healer, medicines, etc.

Monthly Per Capita Spending on Ceremonies, Festivals, Weddings

By including this dependent variable in the regression analysis I hope to determine if there is any significant difference in spending patterns for what can be considered non vital consumption. In the survey the respondents were asked to report their level of spending on weddings, birthday's religious festivals and traditional ceremony's, in the past month and in the past year.

Ratio of Monthly Per Capita Food Spending to Per Capita Consumption

The goal of including this variable it to test whether there is any significant difference on the ratios of food consumption to total consumption between the weavers and the non-weavers. The variable was created by aggregating the total per capita food spending and then dividing it by the total per capita consumption for each unique id.

Monthly Per Capita Protein Consumption

This variable represents an aggregation of the households per capita consumption of fish, meat (beef, goat, pork, chicken, intestines) eggs and milk. As with the previous variables I am interested in analyzing whether there are any significant differences in the quantities protein that are consumed by the weaving and non-weaving groups.

Control Variables

These variables were selected because of their potential to limit women's physical involvement in the weaving project and impact a woman's decision making as to whether she felt that she needed to find a way to support her family. For example, having a very young child at the time the weaving project was started could have limited a woman's ability to join the work. If a woman's husband has a secure job then the woman might not feel as much pressure to find an alternative income source. Additionally, a woman with at least a basic education might be open to new ideas and see the potential in a project like weaving that is introducing a completely foreign concept.

- Years of schooling: total years of schooling of the survey respondent
- Age: Age in years of the respondent
- Having 3 to 4 children: The respondent caring for 3 to 4 children at or under the age if 13
- Having 1 to 2 children: The respondent caring for 1 to 2 children at or under the age if 13

- Having 0 children: The respondent has no children at or under the age of 13 (omitted from the regressions to prevent collinearity)
- Age of youngest minor: The age of the youngest person in months at or under the age 18 living in the household. In the case that there were no persons at or under that age of 18 the unique identification for that household was assigned the average age in months based in the other households.
- Husband work: whether or not the respondents spouse has worked earning an in the past 6 months

FINDINGS

Table 1 presents summary statistics of the control and household demographic variables based on weaving and non-weaving group participation. Of the total sample size, 40.5 percent of the respondents participate in the weaving program.

The most significant differences between in the weaving group and the non-weaving group is in years of education. As can be seen in Table 1, women in the weaving group have on average 5.33 years of schooling, almost a complete primary school education. Women not in the weaving group only had an average of 2.73 years of schooling. It is interesting to note that the maximum number of years of schooling for women not in the weaving group, 6 years, is just above the average for women in the weaving group. 40 percent of the women in the weaving group have a complete primary school education while only 27.7 percent of the women not on the weaving group have achieved the same level of education. The only woman in the village to have gotten more than a primary school education is in the weaving group.

There is also a significant difference between the two groups in terms of whether the woman's spouse is working or not. 93 percent of the women in the weaving group had spouses that had worked in the last 6 months while only 63.3 percent of women not in the weaving group reported similar work patterns for their husbands.

The two groups appear to be relatively similar in the rest of the household demographic characteristics that were tested. Both groups had an average of three rooms in their homes. The average size of the homes only differed by about 10 square meters. The mean for the weaving group was 74.7 m² while the average for non-weavers was 66.7 m². Only a small percentage of both households own refrigerators while a much larger percentage of both groups, between 60 to 73 percent, own televisions. The majority of the homes in El Ocotal have zinc sheet roofing, brick walls, and dirt floors. Though just over 50 percent of all households have brick walls it is important to note that around another 35 percent of the total households have mud walls, these tend to be the poorest households of the community, along with the houses that have wood walls. The only difference in characteristics that was marginally significant was wood wall types. 13.3 percent of women in the weaving group lived in a house with wooden walls while none of the women not in the weaving group reported having wooden walls.

Table 1

SUMMARY STATISTICS FOR WEAVING AND NONWEAVING GROUP PARTICIPATION

| Variable | Weaving Participation | | | No Weaving Participation | | |
|---------------------------------|-----------------------|---------|-----------|--------------------------|-------|-----------|
| | Obs. | Mean | Std. Dev. | Obs. | Mean | Std. Dev. |
| Years of schooling | 15 | 5.3*** | 2.9 | 22 | 2.7 | 2.4 |
| Age | 15 | 35.6 | 12.6 | 22 | 41.7 | 18.3 |
| Have 3 to 4 children | 15 | 33% | .484 | 22 | 22.7% | .429 |
| Have 1 to 2 children | 15 | 60% | .507 | 22 | 59.1% | .503 |
| Have 0 children | 15 | 6.6% | .258 | 22 | 18.2% | .395 |
| Age of youngest child in months | 15 | 96.3 | 71.3 | 22 | 81.1 | 55.6 |
| Husband working | 15 | 93.3%** | .258 | 22 | 63.6% | .492 |
| Monthly Income | 15 | 1269 | 2016 | 22 | 582 | 997.9 |
| HH Characteristics | | | | | | |
| Number of Rms. in house | 15 | 3.1 | 1.2 | 22 | 3.3 | .7 |
| House size in meters squared | 15 | 74.7 | 53.5 | 22 | 66.8 | 35.1 |
| Own Refrigerator | 15 | 26.7% | .457 | 22 | 9.1% | .294 |
| Own TV | 15 | 60% | .507 | 22 | 72.7% | .456 |
| Cook with gas stove | 15 | 0 | 0 | 22 | 4.5% | .213 |
| Roof type clay tile | 15 | 13.3% | .352 | 22 | 18.2% | .395 |
| Roof type metal zinc | 15 | 86.7% | .352 | 22 | 81.8% | .395 |
| Wall type mud | 15 | 33.3% | .488 | 22 | 36.4% | .492 |
| Wall type wood | 15 | 13.3%* | .352 | 22 | 0 | 0 |
| Wall type brick | 15 | 53.3% | .516 | 22 | 59.1% | .503 |
| Wall type other | 15 | 0 | 0 | 22 | 4.5% | .213 |
| Floor type dirt | 15 | 80% | .414 | 22 | 77.3% | .429 |
| Floor type cement | 15 | 6.7% | .258 | 22 | 9.1% | .294 |
| Floor type tile | 15 | 13.3% | .352 | 22 | 13.6% | .351 |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. t-tests for differences between weavers and non-weavers significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$) level. $n=37$.

Even though the difference in income between the two group of women was not statistically significant I think it is important to note that the average monthly income reported by the women in the weaving group, 1269.2 with a standard deviation of 2017 córdoba's, is more than double the monthly income of women not in the weaving, which is 582.36. 36.4 percent of women in the non-weaving group report not having an income, while only 13.3 percent of weaving participants report to have no income. Assuming a 30 day month and an exchange rate of 21.5 córdoba's to the dollar, 80 percent of the weavers are earning a minimum of .76 cents a day. Only 31.9 percent of the non-weavers fall into a similar category. I note these statistically insignificant differences because there actually is a difference and having lived in the village I know that having even a little bit of extra money is highly valued and quickly put to use. All of the women in the weaving should, in theory be reporting an income, as all women have been receiving payment for the products that they have been making over the past 2 years. The fact that 2 weavers did not report an income is a little perplexing. It

is possible since the payment for the products is not on regular monthly basis that they don't consider it technically as being an income. All professionals in Nicaragua, such as teachers, health workers, and other government employees that these women interact with are paid monthly

Analysis

The first step in the analysis was determining what factors played a role in a woman's participation in the weaving group. To explore this I ran a simple OLS regression with the weaving participation variable as the dependent variable and then a series of explanatory variables that will become the control variables in later regressions. The results of this analysis can be seen in Table 2.

Table 2

OLS REGRESSION ANALYSIS OF THE PREDICTORS FOR BEING A MEMBER OF THE WEAVING GROUP

| Predictor | Mean |
|---------------------------------|---------------------|
| Years of schooling | .0924*** (.0209) |
| Age | .0077 (.0074) |
| Having 3 to 4 children | .4540** (.2010) |
| Having 1 to 2 children | .3060* (.1912) |
| Having 0 children | omitted |
| Age of youngest minor in the HH | .0000 (.0014) |
| Husband working | .3799* (.2364) |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

As can be seen in Table 2 the most significant determinant as to whether the woman joined the weaving group was years of schooling. The variable years of schooling was significant at the 1% level with women in the weaving group having more years of schooling. Having more exposure to education may have allowed the women who decided to join the weaving group to more readily connect learning a skill to potential income generation. It could also be that they are the more motivated women of the community and from a young age they having been trying to take advantage of the opportunities to learn and develop.

Another variable that is statistically significant is women having 3 to 4 children. It appears that having 3 to 4 children makes it more likely for women to participate in the weaving group. 33.7 percent of women in the weaving group have 3 to 4 children while 66.7 percent, do not. For those women not in the weaving group 22.7 percent have 3 to 4 children but 77.3 percent do not. Potentially having more children meant that there were older children who could take care of the young ones or complete the necessary house work, therefore giving the woman some freedom in how she was able to use her time. It is also possible that with more children to care the woman had higher motivation to try a potential income generating activity. Having 1 to 2 children was marginally significant at the 12% level. This effect is positive in favor of women in the weaving group. In the weaving group 60

percent of the women have at least 2 children while 59 percent of the women not in the weaving group have a similar amount of children. I find it interesting that in the Table 1 of the summary statistics the differences in the averages of these two variables in the weaving and non-weaving groups were not statistically significant but they do seem to be significant in determining weaving group participation.

The final variable that was marginally significant was whether the woman’s spouse had worked in the past 6 months. Women with husbands who had worked were slightly more likely to participate in the weaving group. As described in the summary statistics, 93.3 percent of the women in the weaving group had husbands who worked while only 63.6 percent if the women not in the weaving group had husbands that worked. Potentially having a husband with income allowed the women a degree of flexibility and ability to take some risks in how they used their time.

The following section details the result from the analysis as to weaving participations impact on the women’s feeling of empowerment, household’s per capita consumption, total and per capita spending on education and total and per capita household spending on health. The first outcome variable I will examine is the power variable.

Table 3

OLS REGRESSION ANALYSIS OF EMPOWERMENT

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|----------------|-----------------|----------------|----------------|
| Weaving group participation | 4.2** (1.8) | 2.8* (1.8) | 2.4 (1.8) | .7 (1.7) |
| Years of schooling | | .2 (.4) | .3 (.4) | .5 (.4) |
| Age | | -.2*** (.05) | -.2** (.06) | -.07 (.07) |
| Having 3 to 4 children | | | 3.2 (2.7) | 4.4* (2.4) |
| Having 1 to 2 children | | | .7 (2.8) | 1.2 (2.4) |
| Age of youngest minor in the HH | | | -.01 (.01) | -.02 (.02) |
| Husband working | | | | 5.5** (1.6) |
| Constant | 8.3 (1.2) | 15.2 (2.9) | 13.3 (4.9) | 5.9 (5.1) |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level (p < 0.01 level), ** 5% significance level (p < 0.05 level) and *12% significance level(p < 0.12) level. n=37.

Table 3 shows the overall trend for the power variable as decreasing in significance as more control variables are added to the different models. In the first model when only power and weaving participation are included in the regression the coefficient is significant at the 5% level indicating that participation has a significant positive impact on the level of the woman’s level of empowerment. In model 2 the weaving participation coefficient is still significant but at the 12% level. In the final model the weaving participation coefficient is no longer significant but the impact on power is still positive. Two of the control variables, years of schooling and the husband working are significant and relatively large in the fourth model indicating that they might have more of an impact on the level of empowerment of the women than participation in the weaving group.

Even though the weaving variable lost its statistical significance by model 4 it is important to note that the average power score for the women in the weaving group was 4.3 points higher than for women not in the weaving group. The mean for women not in the weaving group was 8.3 with a standard deviation of 5.7. Weaving participants had an average of 12.6 and a standard deviation of 5.3. 80 percent of those same women scored 10 points or higher for empowerment while only 45.5 percent women not participating in the group had similar scoring.

Table 4 illustrates that weaving participation does not seem to have had any significant impact on the total monthly per capita household consumption. In the models with additional controls the impact is positive even though it is not significant. So consumption in the weaving group did increase but the amount of increase was not that much more than the average monthly consumption of women not in the weaving group. In terms of significance, the amount of per capita consumption appears to be more closely correlated with the number of children each woman has and to some degree whether her husband works or not.

Table 4

OLS REGRESSION ANALYSIS OF TOTAL MONTHLY PER CAPITA HH CONSUMPTION

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|-----------------|------------------|----------------------|--------------------|
| Weaving group participation | 77.5 (91.1) | -17.4 (63.02) | 43.9 (60.3) | 13.2 (68.1) |
| Years of schooling | | 45.5* (25.6) | 25.2* (16.1) | 29.1* (16.2) |
| Age | | 3.8** (1.8) | -.4 (3.6) | 1.01 (3.5) |
| Having 3 to 4 children | | | -404.6** (201.02) | -381.9* (203.2) |
| Having 1 to 2 children | | | -326.2* (205.5) | -316.5 (208.2) |
| Age of youngest minor in the HH | | | .7 (.6) | .6 (.6) |
| Husband working | | | | 98.4* (58.2) |
| Constant | 331.9 (38.2) | 46.8 (130.7) | 505.2 (305.2) | 374.3 (305.9) |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

The lack of weaving participation's significant impact on per capita consumption is reflected in the averages for the each of the two groups. Weaving participation had an average per capita consumption of 409.4 córdoba while the non-weaving group was not far behind with a per capita consumption of 331.9 córdoba's. At an exchange rate of 21.50 córdoba's per dollar that is \$19.04 per capita for weavers and \$15.43 per capita for non-weavers. The only difference between these two groups for this variable is that the weaving group had a standard deviation of \$14.99 while the standard deviation for the non-weavers is only \$8.30. The following two tables show the potential impact of weaving group participation on total education spending and per capita education spending. I singled out education spending to have a better understanding of potential differences within specific areas of spending. I was trying to have a more specific gauge of child and family well-being and I

hypothesized that, since a greater spending in education indicates that children are going to school and have the materials to do so, then if weaving participation was having a significant positive impact on total household spending then children from those households are potentially better off than children not from weaving households. However, based on the regression analysis found in Table 5, it does not appear that weaving group participation has had any significant impact on education spending.

Table 5

OLS REGRESSION ANALYSIS OF TOTAL MONTHLY HH SPENDING ON EDUCATION

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|----------------|-------------------|-------------------|-------------------|
| Weaving group participation | 99.3 (85.8) | 38.1 (68.3) | -22.7 (60.4) | -65.6 (62.1) |
| Years of schooling | | 31.7 (21.8) | 37.7* (20.1) | 43.1** (20.7) |
| Age | | 3.5 (2.5) | 3.1 (2.1) | 5.1** (2.5) |
| Having 3 to 4 children | | | 248.6* (131.4) | 280.2 (124.03) |
| Having 1 to 2 children | | | 73.7 (115.3) | 87.3 (107.7) |
| Age of youngest minor in the HH | | | 1.04* (.6) | .8* (.6) |
| Husband working | | | | 137.2* (75.9) |
| Constant | 84.7 (26.4) | -145.9 (147.9) | -331.3 (230.1) | -513.7 (248.9) |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

The effect is positive in models 1 and 2 but it actually become negative in models 3 and 4. In the final model, model 4, years of schooling and age of the respondent become statistically significant. It could be hypothesized that women with more years of schooling are more likely to value schooling for their children and would therefore be more willing to invest in the education. The significance of the age variable is more difficult to explain, though older women are likely to have older children who would require a greater degree of investment in education, especially for children who are in high school and have to travel each Saturday, buy more notebooks, and potentially travel into the city of Matagalpa during the week to complete assignments. Patterns similar to those found in Table 5 can be seen in Table 6, which shows the impact of weaving participation on per capita spending on education.

The reasoning for analyzing the potential impact of weaving group participation on health spending is similar to that used for analyzing education spending. I wanted to have some sort of measure for child well-being. In the village of El Ocotal, and I believe in many other small rural villages in Nicaragua, children become sick with the greatest frequency and are likely to be the ones necessitating either medical attention or a trip to the pharmacy. Therefore if weaving participation had a significant positive impact on health spending, signifying that households are investing more resources into health, then children in those households could potentially be considered better off in regards to health than from non-weaving households. However, as can be seen on Tables 7 and 8,

weaving participation does not seem to have had any significant impact on total and per capita health spending.

. Even though weaving participation did not have a significant impact on education spending it is interesting to note that the average per capita spending on education for all observations was 7 percent of per capita consumption. This is 2.5 percentage points higher than the average per capita spending of education as a percentage of per capita consumption reported by the Nicaraguan National Institute of Development Information (Instituto Nacional de Información de Desarrollo) in their 2011 report in development indicators. For weavers per capita spending on education made up 7.8 percent of per capita spending while for non-weavers it was 6.5 percent.

Table 6

OLS REGRESSION ANALYSIS OF MONTHLY PERCAPITA SPENDING ON EDUCATION

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|----------------|-----------------|-----------------|------------------|
| Weaving group participation | 19.9 (18.5) | 5.6 (12.7) | -5.4 (12.2) | -15.4 (14.04) |
| Years of schooling | | 7.3 (5.5) | 7.9* (4.9) | 9.2* (5.1) |
| Age | | .8 (.6) | .5 (.5) | 1.0* (.6) |
| Having 3 to 4 children | | | 35.4 (27.2) | 42.8* (25.5) |
| Having 1 to 2 children | | | 14.1 (28.1) | 17.3 (26.4) |
| Age of youngest minor in the HH | | | .3* (.6) | .2 (.2) |
| Husband working | | | | 31.8* (16.1) |
| Constant | 17.3 (5.5) | -34.5 (37.3) | -65.3 (56.6) | -107.6 (60.4) |

The data was sourced from the NRD dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level (p < 0.01 level), ** 5% significance level (p < 0.05 level) and *12% significance level (p < 0.12) level. n=37.

The only partially significant variables in Table 7 are the age of the youngest child, which can be explained by the fact that younger children are more susceptible to bacteria, viruses and other types of illness and would likely require a greater amount of invest from the woman or the spouse in order to stay healthy

Weaving participation did not have a significant impact on per capita health spending. However, it should be noted that the average per capita spending on health for all observations was 4 percent of per capita consumption. This is 2 percentage points lower than the average per capita spending on health as a percentage of per capita consumption reported by the Nicaraguan National Institute of Development Information (Instituto Nacional de Información de Desarrollo) in their 2011 report in development indicators. For weavers per capita spending on education made up 5.1 percent of per capita spending while for non-weavers it was 2.9 percent.

Table 7

OLS REGRESSION ANALYSIS OF TOTAL MONTHLY HH SPENDING ON HEALTH

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|----------------|-----------------|-----------------|------------------|
| Weaving group participation | 38.1 (51.9) | 36.4 (52.6) | 48.5 (64.2) | 55.1 (65.5) |
| Years of schooling | | -3.3 (6.3) | -.5 (8.1) | -1.3 (7.7) |
| Age | | -1.7 (1.4) | -.2 (1.2) | -.5 (1.6) |
| Having 3 to 4 children | | | 11.8 (77.9) | 6.9 (72.3) |
| Having 1 to 2 children | | | 30.0 (50.9) | 27.9 (50.3) |
| Age of youngest minor in the HH | | | -.8* (.5) | -.8* (.5) |
| Husband working | | | | -21.3 (70.7) |
| Constant | 53.4 (25.8) | 132.3 (81.3) | 108.8 (87.4) | 137.0 (129.2) |

The data was sourced from the NRD dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

Table 8

OLS REGRESSION ANALYSIS OF MONTHLY PER CAPITA SPENDING ON HEALTH

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|---------------|----------------|----------------|-----------------|
| Weaving group participation | 8.6 (11.2) | 8.6 (10.9) | 12.7 (13.5) | 13.02 (14.2) |
| Years of schooling | | -.6 (1.3) | -.3 (1.5) | -.3 (1.5) |
| Age | | -.2 (.3) | .02 (.3) | .01 (.3) |
| Having 3 to 4 children | | | -6.3 (13.6) | -6.6 (13.4) |
| Having 1 to 2 children | | | 2.2 (11.6) | 2.1 (11.7) |
| Age of youngest minor in the HH | | | -.2 (.1) | -.2 (.1) |
| Husband working | | | | 26.3 (25.7) |
| Constant | 11.0 (4.3) | 22.3 (17.1) | 24.9 (18.6) | 26.3 (25.7) |

The data was sourced from the NRD dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

After the analyzing weaving participations impact on empowerment and the economic indicators of total per capita consumption, education spending and health spending it is still not clear how women in the weaving group are using extra income they are receiving. To explore the issue further I analyzed two ideas proposed by Banerjee and Duflo regarding the spending patterns of the poor. The first theory is that “that poor people in the developing world spend large amounts on weddings, dowries, and christenings, probably in part as a result of the compulsion not to lose face” (Banerjee and Duflo, 2011:35). Table 9 shows the results from my analysis of weaving participations impact on per capita monthly spending on ceremonies, festivals and weddings.

Table 9

PER CAPITA MONTHLY SPENDING ON CEREMONIES, FESTIVALS, WEDDINGS

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|---------------|---------------|---------------|---------------|
| Weaving group participation | -4.1 (2.8) | -4.6 (3.4) | -2.7 (3.2) | -3.9 (4.5) |
| Years of schooling | | .6 (.5) | .3 (.7) | .4 (.8) |
| Age | | .3* (.1) | .1 (.1) | -.2 (.2) |
| Having 3 to 4 children | | | -9.0 (8.2) | -8.2 (8.0) |
| Having 1 to 2 children | | | -4.8 (8.6) | -4.4 (8.3) |
| Age of youngest minor in the HH | | | -.01 (.03) | -.01 (.02) |
| Husband working | | | | 3.5 (5.4) |
| Constant | 6.4 (2.5) | -2.4 (4.2) | 5.9 (10.4) | 1.2 (11.8) |

The data was sourced from the NRD dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

As can be seen in the table, weaving participation has not had a significant impact on spending for ceremonies. There was only a small negative impact. Monthly spending on ceremonies etc. is quite small for both groups. The mean for weavers was 2.4 córdoba’s with a standard deviation of 5.2. For non-weavers the mean was a little higher at 6.4 córdoba’s and a standard deviation of 11.7. Reporting on spending for ceremonies could potentially depend on when the question is asked. Typically the months of November and December have the highest frequency of celebrations and festivities in the village due to graduations and Christmas. Survey participants were asked to report their spending on ceremonies in the past month and in the past twelve months but given that the survey was conducted in June and July it could be that that type of spending was not as prevalent on people’s minds.

After more than eighty empirical studies in developing countries, Banerjee and Duflo (2011) found that the commonly held belief that the food budget of a poor family should go up proportionally faster than total spending, was often not true. Curious, I wondered whether participation in the weaving group could have any significant impact on the ratio of per capita food spending to per capita consumption.

Table 10

RATIO OF MONTHLY PER CAPITA FOOD SPENDING TO MONTHLY PER CAPITA
CONSUMPTION

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|-------------|-----------------|----------------|----------------|
| Weaving group participation | -03 (.1) | .04 (.1) | .03 (.1) | .1 (.1) |
| Years of schooling | | -.03** (.01) | -.02* (.01) | -.03* (.01) |
| Age | | -.00 (.00) | -.00 (.00) | -.00 (.00) |
| Having 3 to 4 children | | | .02 (.1) | -.00 (.1) |
| Having 1 to 2 children | | | .1 (.1) | .7 (.1) |
| Age of youngest minor in the HH | | | .00 (.00) | .00 (.00) |
| Husband working | | | | -.1 (.1) |
| Constant | .6 (.04) | .7 (.1) | .6 (.1) | .7 (.2) |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

Table 10 shows that weaving participation has no significant impact on the ratio of monthly per capita food spending to monthly per capita consumption. For women in the weaving group the mean is 190 córdoba's with a standard deviation of 93 and for non-weavers the mean is 175 córdoba's with a standard deviation of 85. It appears that the years of schooling of the respondent has greater impact than weaving participation.

As can be seen in Table 11 weaving participation has not had a significant impact on the monthly per capita protein consumption of the household. The reason for running this regression was to explore the idea that when very people get a chance to spend a little more money they will buy more expensive better-tasting items (Banerjee & Duflou, 2011). Based on the fact protein such as meat and cheese is more expensive in theory better tasting, the conclusion proposed by Banerjee and Duflou does not seem to apply to the village of El Ocotal. The women in the weaving actually have a lower per capita protein consumption than those not on the weaving group. The mean for weaving participation is 147 córdoba's with a standard deviation of 161.79. Those not in the weaving group had a mean of 175.8 and a standard deviation of 119.2. Even though the women in the weaving group are earning more a little more income they do not appear to be spending a significant portion of that money on protein consumption.

Table 11

MONTHLY PER CAPITA PROTEIN CONSUMPTION

| Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|-----------------|-----------------|------------------|------------------|
| Weaving group participation | -28.9 (48.7) | -28.6 (38.0) | -9.6 (36.0) | -12.0 (43.5) |
| Years of schooling | | 5.1 (14.8) | .2 (15.9) | .5 (16.5) |
| Age | | 2.2 (1.8) | 1.3 (1.8) | 1.4 (2.0) |
| Having 3 to 4 children | | | -132.3 (63.7) | -130.5 (66.2) |
| Having 1 to 2 children | | | -38.7 (69.5) | -38.0* (70.7) |
| Age of youngest minor in the HH | | | .2 (.5) | .1 (.5) |
| Husband working | | | | 7.7 (49.5) |
| Constant | 175.8 (.04) | 71.4 (125.5) | 162.5 (184.9) | 152.2 (202.3) |

The data was sourced from the NRDI dataset. Standard errors are listed in parentheses below the means. Individual coefficients are statistically significant at the ***1% significance level ($p < 0.01$ level), ** 5% significance level ($p < 0.05$ level) and *12% significance level ($p < 0.12$ level). $n=37$.

DISCUSSION

The results from this analysis disprove my initial hypothesis which was that participation by the female head of household in the weaving group would result in significant increases or changes in family level consumption patterns. Additionally there does not appear to be any significant improvements in child welfare as represented by per capita spending in education and health. A potential reason for the lack of significant difference could be that since the project has only been fully functional for a year and a half and the weavers may not have been able to build up a sufficient amount of capital that would allow them to significantly increase their consumption or spending on health and education while at the same time cover the investment costs that are incurred from the weaving business. Even though the women have significantly increased their product quality they have not found a wide range of markets for their products which greatly limits their ability to scale of production and to reap the economic benefits increased sales and production would bring.

The analysis also disproves the second part of my hypothesis which was that there would be no significant difference in female head of household decision making power between those who participate in the weaving project and those that do not. The power variable was in fact the only outcome variable that proved to have any level of significance across the four models in regards to weaving participation. It seems I underestimated that degree of impact the opportunity to learn to weave would have on the mental state of the women and on their relationship with their spouse. I also had not really considered some of the positive externalities of the project such as opportunity to travel, the potential of building new friendships, and the development of negotiating skills and the feeling of independence that this would give the women. Part II of this analysis explores these themes more thoroughly

It is important to remember that this is the first survey of its kind in this village so there was no baseline information to compare the results to. Additionally, there are various different factors outside of the weaving project that can impact the income generation and economic well-being of families prior to the creation of the weaving group. Given these considerations I cannot show that participation in the weaving group per se made the weavers better off than non-weavers. The significance of the husband works and education variables in many of the regressions suggest many women were better off on some dimensions before joining the weaving group. I also cannot test whether the weaving project made the weavers better off than they were before (relative to themselves before the weaving project started) because I do not have the comparison data.

PART II: Qualitative Interviews with weaving participants

In November of 2009, before returning to the US with the first batch of rugs, I asked the women to describe how they felt about the project and to reflect on what they had learned and what goals they might have for the future. This was the first time I had asked the women to write anything about the project and many were very hesitant or unsure of how to express themselves. Paula, who did not know how to write, took her 10 year old daughter out behind my house so that she could dictate her answers without anyone overhearing her. I wanted to have written testimony from the women so I could more accurately describe their view on the project to the various groups I anticipated talking to back in the US.

Based on their responses I created seven different categories of views/feeling/beliefs that they expressed the most frequently in their writing. The seven different categories are:

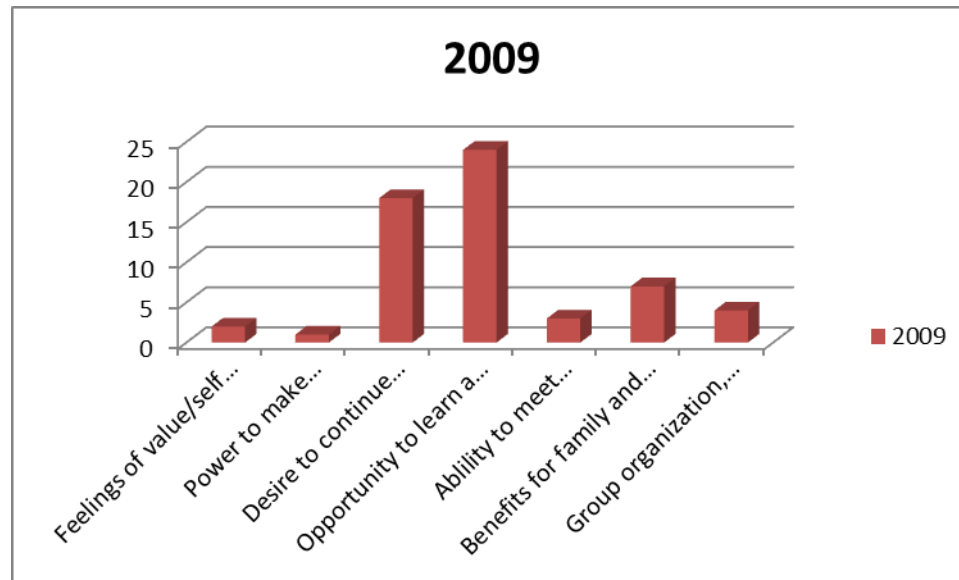
- Feelings of value/self-worth
- Power to make decisions, personal freedom
- Desire to continue learning, expressing plans for the future
- Expressing appreciation for the opportunity to learn a new skill
- Ability to meet personal needs
- Benefit for the family/better relations with the family
- Weaving group organization, unity and mutual understanding

As can be seen in Diagram 1, in this initial interview, the majority of the women were mainly concerned about that fact that they had learned a new skill and the opportunities that having that knowledge and ability would open up to them.

Having the opportunity to learn a new skill was mentioned 24 times and the desire to continue learning and planning for the future was mentioned 18 times. The rest of the categories only made up a very small portion of the answers. This is likely due to the fact that the women had not as yet received any money from their work. There was still a lot of uncertainty as to whether the business would be sustainable or even if I would be able to sell any of their rugs in the US. The potential benefits to their families and the community was also mentioned with a relative amount of frequency. At this point in the project the benefits were more that the women were able to make products for household use, such as saddle blankets, covers for the beds, room dividers, and in one case a hammock.

Diagram 1

RESULTS FROM NOVEMBER 2009 INTERVIEWS



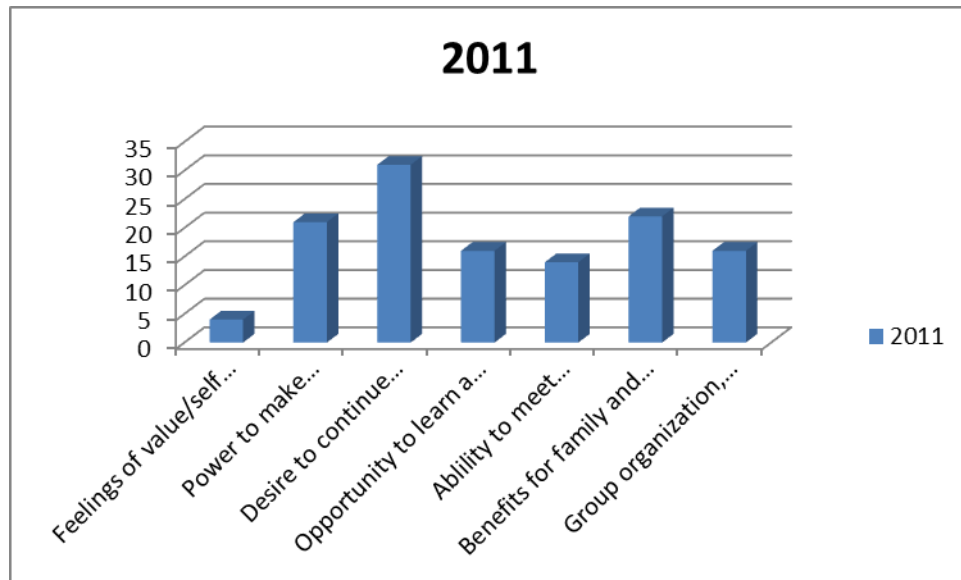
See Appendix for interview questions and answers

Several women also noted that they no longer had to burn all the families' old clothes since at that point they were still using clothes from their household. Themes such as decision making power, freedom to travel away from the home and ability to meet personal financial needs were hardly mentioned. Decision making was only mentioned by one of the women in the group who had had the opportunity to travel and work outside the community. The idea of group organization and unity was also hardly mentioned. This is likely because up to this point most of the women had been coming to work in my house by themselves or in group of two or three. The possibility that this could be a successful group business had not really been considered seriously by the majority of the women in the group.

Diagram 2 shows much more balanced answers across the seven different categories. A feeling of gratitude for having the opportunity to learn a new skill was still mentioned frequently but categories such as the importance of group organization and benefits to the family were of equal or greater frequency. The desire to keep working and development plans for the groups future development was mentioned the most, over thirty times. This reflects the women's optimism about the business's development so far and the recent success that they have had making contacts to sell their products in Nicaragua and other outlets in the Unites States.

Diagram 2

RESULTS FROM NOVEMBER 2011 INTERVIEWS

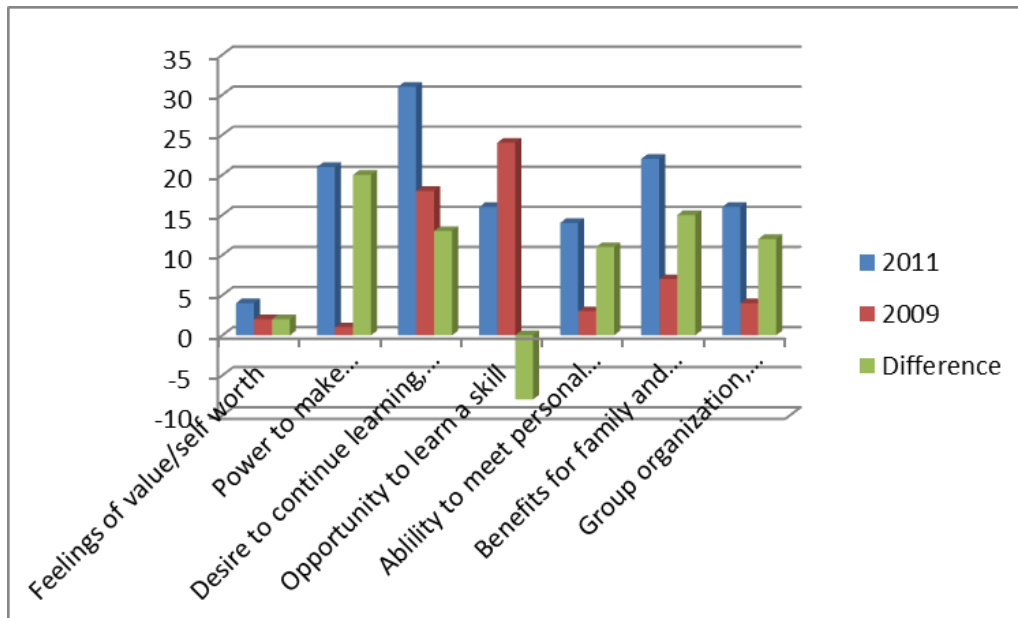


See Appendix for interview questions and answers

Diagram 3 shows the difference between the frequency of the answers across the seven categories in 2009 and 2011. The most drastic change was the frequency with which the themes of power/decision making /and personal freedom was mentioned. In 2009 it was only mentioned and in 2011 it was mentioned over twenty times. The responses from the 2011 interview are a testament to the growing sense of empowerment and freedom the women are beginning to feel. One of the weavers mentioned that “with my family there is more communication, I have more freedom to leave, even though it is only here in the community, but now I am not just in the house.” Another weaver expressed that she feels she had changed “mentally because the thoughts of the routine of the work of a rural woman has changed. I am appreciating very much the opportunities that we did not have before this beautiful experience which I feel that I am definitely able to take advantage of, having new friendship, and know new places that before I did not know.” This result supports the finding from the quantitative analysis, that the power variable, which was composed of questions regarding decision making, was the one variable that was significantly impacted by participation in the weaving group.

Diagram 3

COMPARISON OF INTERVIEW ANSWERS FROM 2009 AND 2011



The women appear to have gained a strong sense of their right to make decisions for themselves, a right that is aided by the fact that the women are contributing financially to the well-being of the family. Many women in the weaving group expressed that their husbands were now helping them with tasks such as cutting the strips of cloth and winding the balls of yarn for the warp. One weaver highlighted that “we share the work of the home and of the weaving. He helps me fix products and wind warp string, and doing the house work (cooking).” Another weaver noted that “we have changed in the way that now all the family is helping in all the work that needs to be done for the weaving and other work is shared with all like, taking care of the animals. We all come to an agreement about the work that needs to be done and we understand each other better.” This suggests that in such dire economic situations any income is viewed as beneficial income and the family is willing to shift some of its traditional roles to make it possible for the woman to work.

POLICY IMPLICATIONS

So what do the results of the case study tell us about the impact of microenterprise projects? And how do the results add to the growing knowledge and literature surrounding female targeted poverty reduction projects and the likelihood of sustainable impact? Before diving into this discussion it is important to acknowledge that when it comes to poverty reduction strategies there is clearly no silver bullet. Each country, culture, and community is different so it is necessary to cater each development project to the context in which it will be taking place. Another key point that came out of my Peace Corps experience is that mutual trust and confidence is imperative. Before committing to such a potentially risky and uncertain endeavor it is important to have already established a strong working relationship.

The Nicaraguan weaving enterprise analysis has raised some questions in my mind about the other female/household targeted poverty reduction interventions that are common in many developing countries. As noted in the literature review, conditional cash transfers have been shown to have a

positive impact in increasing school attendance. However, is this approach sustainable? or will governments and multilateral/bilateral agencies have to keep subsidizing these types of projects? Micro-finance initiatives help women get access to capital that they might not otherwise have had, but do they have the capacity to manage it and actually turn it into an income generating business as many micro finance institutions claim? Have these women been exposed to new types of businesses, or are they all trying to set up small shops in their homes, selling basic goods, and putting each other out of business? And even if they are able to buy and raise a cow do they actually have the power within the family to decide when to sell it and have control over how that money is spent? The micro enterprise initiative has yet to have a significant overall impact on consumption so I cannot claim that it has had a positive economic impact on the women and households that are participating in the weaving project. This is potentially due to the fact that it is still a relatively new business and income that is generated is potentially being reinvested back into the business as they haven't been able to generate enough capital to either save or use in the household. However, in developing a specific skill and a new type of knowledge, the weavers have been able to start to believe in themselves as actual business women, to be creative and innovative and to involve their families in that process. This experience is building a sustainable framework. Even if the weaving enterprise is not a long term venture the women who participated in it will have a much greater belief in their capabilities as individuals and as a group, and that sense of empowerment is not something that can be provided by handouts or taken away by any individual.

Despite the fact the microenterprise development does not appear to have the more immediate economic impacts reported by conditional cash transfers and micro credit programs, it does show strong potential for helping poor women develop the decision making skills and feelings of empowerment that can lead to a more sustainable path out of poverty. The lack of literature and rigorous analysis of microenterprise projects suggests a need for an increased focus on the potential of this area of development. The deficiency of studies is possibly due to the difficulties of tracking microenterprise inputs and outputs as well as quantifying empowerment. Given that the quantifiable impacts of microbusiness development may not be seen for a generation, aid organizations might be reluctant to provide funding due to pressure from their donors to demonstrate short term results and impact to validate continued expenditure. Poverty reduction measures should not be examined or implemented in isolation and the potential for a combination of all three should be explored to cover both the short and long term needs of poor rural populations, particularly women.

Bibliography

AUSAID. *Microfinance, gender and aid effectiveness.*

<http://www.ode.usaid.gov.au/publications/documents/microfinance-issues-note.pdf>, 2008.

Banerjee, Abhijit and Esther Duflo. *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty.* PublicAffairs, 2011.

Brooke, Annette. *Helping or hurting: what role for microfinance in the fight against poverty?* Report on the All-Party Parliamentary Group on Microfinance's inquiry into the UK's role in supporting the microfinance sector worldwide, London: All-Party Parliamentary Group on Microfinance, 2011.

Easterly, William. *The Elusive Quest for Growth; Economist's Adventures and Misadventures in the Tropics.* Cambridge: The MIT Press, 2002.

Engle, P.L. "Maternal Work and Child Care strategies in peri-urban Guatemala: Nutritional effects ." *Child Development*, 1991: 954-965.

Garcia, M. "Impact of female sources of income on food demand among rural households in the Philippines." *Quarterly Journal of International Agriculture*, 1991: 109-124.

Grumm, Christine. "Help Eliminate Poverty - invest in women." *Christian Science Monitor*, October 17, 2008.

Haddad L., and J.Hoddinott. "Women's income and boy-girl nutrition outcomes in the Cote d'Ivoire." *World Development*, 1994: 543-553.

Instituto, Nacional de Información de Desarrollo (INIDE). *Encuesta de Hogares sobre Medicion del Nivel de Vida 2009 (EMNV 2009) Principales Resultados: Pobreza, Consumo, Ingreso.* Managua: INIDE, 2011.

Kennedy, E. "Income sources of the rural poor in southwestern Kenya. In income sources of malnourished people in rural areas: Microlevel information and policy implications." *International Food Policy Research Institute*, 1991.

Markowitz, L., & Tice, K.W. "Paradoxes of professionalization: Parallel dilemmas in women's organizations in the Americas." *Gender and Society*, 2002: 941-958.

Pena, Christine. "Women's Economic Advancement Through Agricultural Change: A Review of Donor Experience." *International Food Policy Research Institute*, 1996: 1-42.

Sharma, Ritu R. "Women & Development Aid." *Columbia International Affairs Online*. September 2001. <http://www.ciaonet.org.proxy.lib.duke.edu/pbei/fpif/shr01/index.html> (accessed September 23, 2011).

The Diane Rehm Show. September 20, 2011. <http://thedianerehmshow.org/show/2011-09-20/economic-gain-through-gender-equality> (accessed September 22, 2011).

Vonderlack-Navarro, Rebecca. "Targeting Women Versus Addressing Gender in Microcredit: Lessons From Honduras." *Journal of Women and Social Work*, 2010: 123-134.

White, S. "'NGOs and the State in Bangladesh: Resolving the Contradiction?'" *Paper for the DSA Conference 11-13 September*. University of Edinburgh, 1991.

World, Bank. *The World Bank Indicators*. April 20, 2012. <http://data.worldbank.org/indicator> (accessed April 20, 2012).

Appendix: A

PART II: Qualitative Interview Questions

Qualitative Interviews: November 2009

1. How do you feel about the experience of learning to weave and forming a small business?
2. What are your personal goals and what is a goal that you have for the group in terms of the development of the business?

| | | | | | | |
|------------------------------|---|---|------------------------------|--------------------------------|-----------------------------------|---|
| Feelings of value/self worth | Power to make decisions/Decisions making skills, personal freedom | Desire to continue learning, plans for the future | Opportunity to learn a skill | Ability to meet personal needs | Benefits for family and community | Group organization, unity, mutual understanding |
| 2 | 1 | 18 | 24 | 3 | 7 | 4 |

Responses to interview questions:

1. "Receive our most sincere greetings in union with your family. The motive of the present is to express to you the contentment that I feel in having known Ivy because through her we have obtained great benefits in the family and in the community. Our goals are to learn more with more practice in the loom, to maintain our organizational conviction and unity in the group. The presence of Ivy will for us be a vacuum in our hearts but she has taught us to make decisions and to maintain this position to continue forward in life. And I want to say thank you for the photograph that you sent me of the person who bought my rug because this has made me feel that my work is valued and to animate our improvement of the weaving. Also a goal for us is one day to have our own little house to keep the loom and learn to make bags with the design you sent us. I feel many things in my heart that I do not know how to express, you are remembered and you are loved by God. Blessings and see you soon"

2.

"I give thanks to God in the first place for giving me life and health and thanks to all those who have given me the opportunity and who have had the friendship to teach me this beautiful experience of weaving rugs. It has helped us develop love and caring and patience above all among the women of the group and the families. We hope to continue working always in the community of El Ocotal."

3.

"The motive to write these words is for you to receive a brotherly greeting from Paula and my three children Jessica, Sergio, and Mayeris, all with the last name of Lopez Escoto.

Now I wish to explain about my experience that I have learned with the grand intelligence that God has given every one of us. I wish to say that I feel very content, and I am very grateful for the aid that has been given all the women that have learned to weave. For me it has been of great importance that I have learned to weave. With your help and the help of Carol and Ivy I have learned to make rugs and the idea is to not just make rugs but also many other things, like bags and pillow cases.

These are all of my few words, from the part of Paula Escoto I send you many greetings and to all your family a hug of friendship. I don't say good bye, but until next time soon, thank you.

4.

"I feel very content having learned to weave rugs because they can be used for so many things in the house, to cover a bed, to put in the seat of a chair, as a divider in rooms. Also, I feel very thankful, and I give thanks to all those who gave us help and I give thanks for the aid that will help us continue forward, all the women from the group that work with Ivy. It is a beautiful experience for me and my family."

5.

"I feel very satisfied in having learned to weave with the opportunity we have had, us, the women. It is something beautiful because before we did not know how to make a rug. With outside help, we have a loom to keep making more rugs. It is very important for me to learn to weave. We need more help to keep weaving, and, all this time, we are grateful for the opportunity given to all the women."

6.

"First, I give thanks to God for giving me life and health and all that I possess in this life. Also, I give thanks for having been given the opportunity to learn this beautiful experience, weaving rugs, something new that we have learned. Thank you to all that have had such friendship and knowledge and patience with us and shared your love, caring and compassion."

7.

"I wish to express my contentment and happiness I feel for your aid. I am one of the youngest of the weavers, but with a great experience, because now I am able to continue forward in my studies and teach other youth how to weave. I have liked a lot the ideas and experiences we have learned. We wait for you with open arms. Thank you for helping us the women. Until sometime soon!"

8.

"The experience that I have had making rugs is of much importance because it serves us in our homes and had helped us develop many abilities that I did not have any experience in. Today I feel very thank full to everyone who had the ability and patience to share with me and the other women weavers.

This knowledge will serve me in the future, to continue making more and to improve to sell and to help my family and to teach the other women that wish to learn and to continue developing more abilities to make more rugs many more things."

9.

"I am writing my experience about the learning of weaving with cloth that we are not able to use. It was been great to know that we are able to use and take advantage of this cloth. For me it has been very important to weave rugs and to think that we might be able to begin a business, not in large quantities, but small. We know that to sell the idea and work is not easy. We can begin showing the work at farmers' fairs that take place in our department Matagalpa."

10.

“For me it is a very beautiful experience to learn to weave rugs and to learn a handcraft that serves to decorate our homes. I give thanks to all those who had the patience with me and with the group of women, to teach us to weave rugs. Little by little we are learning. At the same time it is something very important because we are able to continue working with the weaving of rugs and we are able to sell them to help improve our families.”

11.

“The motive in writing these words is for you to receive a fraternal greeting from Aura Esther Orozco. I hope that when you receive this greeting you are encountering very good health at the side of your dear children and family. I wish to describe the experience that I have learned with the grand intelligence God has given every one of us. I wish to say that your experience and your grand valiant aid has served me a lot because I never would have imagined this beautiful intelligence that God has given and you have known to share with us Nicaraguan women. For me it is something admirable because I never would have hoped for this grand experience. I told Ivy that when she told me that I had to prepare clothes that I now was not using because you wanted to teach a beautiful work, I said in my mind, how is this work? Now I am seeing the great results we have received. There is nothing more but to thank you for your valiant help in the first place. For to be a woman and a wife, you have known how to understand and consider like a woman as well, which we are. I wish to say that the little I have worked to learn I have put in practice and I am very content and very happy for this rich experience you have given us. To be able to convert our work into money has been a huge advantage because with the money one is able to buy what one needs, such as emergency needs. Without being able to be more content than I am I thank you again for your great sacrifices that you have made to bring us the loom, the instrument (warping board), and your experience and your very important intelligence from your country to the country of Nicaragua, sincerely I have written.”

12.

“I write to say that I am very thankful for the unconditional help that we have received from the women that have given aid. For we have obtained this machine to weave that for us has been and will be of much benefit for us socially and economically, proportionally in the improvement or well-being in the family. Now our goal is to continue in our efforts and to continue forward giving maintenance to the women’s group and directive like organized women to maintain this great work, valuing all the work that Ivy has come developing in our community. Another goal is to everyday improve our knowledge, practicing making the rugs and to learn to weave bags that can also generate income. Allowing that our work has great value not only nationally but also internationally, because the photo that you sent us with the people that bought our rugs has made us feel more enthusiastic to continue improving and fine tuning the weavings. I say good bye thanking you”

13.

“My motive in writing this note is to tell of my experience learning to make rugs and I am going to keep making more to learn more than what I have learned and in the future with the design of improving my life. If we make rugs to sell it helps us a lot in our economic needs and the goal that I have is to learn to make many things more with the techniques that we have learned. I feel happy with what we have learned because we are working to obtain our own businesses and our own money to buy what we need for our homes. I do not have more to say, only that I feel very content and to thank the group of women weavers from North Carolina and Carol Blackmore hoping they have good health in their daily work.”

14.

“The experience that I have had in the making of rugs is for me very important because they serve for personal use and also you are able to make them to sell. I think that it is not difficult, it is easy, always and when we put in practice and we dedicate the time to make them.

For me it is very important and I am very thankful for the help we have received with the loom. It is something new for me because before we didn't know what to do with the clothes that we no longer used, so we burned them. Now that we know we are therefore able to use them to make rugs. Thank you for teaching us and giving us good ideas. I have the ideas to make various rugs to show in the fairs that are held in the department.”

Qualitative Interviews: November 2011

Questions:

1. How do you feel about the experience of learning to weave and forming a small business? Have you developed opportunities that you did not have before the weaving project?
2. In what way has your relationship with your spouse/partner and your family changed?
3. What is a goal that you have for your personal development, and what is a goal that you have for the group in terms of the development of the business?

| | | | | | | |
|------------------------------|---|---|------------------------------|--------------------------------|-----------------------------------|---|
| Feelings of value/self worth | Power to make decisions/Decisions making skills, personal freedom | Desire to continue learning, plans for the future | Opportunity to learn a skill | Ability to meet personal needs | Benefits for family and community | Group organization, unity, mutual understanding |
| 4 | 21 | 31 | 16 | 14 | 22 | 16 |

Responses to interview questions:

1.
 1. I feel very content with this little experience to be learning every day to weave more. Thanks to you and your mother that we have developed this opportunity that before we did not have and little by little we are improving.
 2. I have a very good relationship with my spouse and my family because with the money that you send from the woven products it helps us in some aspect of the family, especially for my children with their studies.
 3. The goal that I have is to keep improving in my weaving and eventually have a large business and as a group that we work hard so that we rise up and continue forward with the business to be able to arrive at the goals that we have individually and as a group.
2.
 1. The experience has been very good in that it has been like a small business for me and learning how to administer my own income to be able to continue to reinvest in every sale of

products. I am continuing to improve covering some of the necessities of the family, this is not an opportunity that I did not have, having the means to help the family and help with certain expenses.

2. We share the work of the home and of the weaving. He helps me fix products and wind warp string, and doing the house work (cooking).

3. The goal is continuing to weave, investing in yarn and cloth to produce more and to have products ready to sell even though in some cases buyers say that yes they will buy but later they say no. As a group the goal is to continue helping and giving ideas to be able to continue increasing the fund and to administer the fund the best way possible. To continue insisting with those that don't have ideas to reinvest for their work that they need to be able to continue forward. It is difficult to be able to want to solve internal problems but I try my best to be able to continue forward with the whole group to reach the goal of \$1000 dollars in this year 2011/2012.

3.

1. The experience that I feel is unique because no one has helped us in the way that you all have helped us and for this I give thanks to God to your family for the opportunity that you have given the group of weavers and others. I have not had the same opportunity in other projects.

2. I have not had any change in my relation with my family or with my husband in the case of the weaving. More than anything they help me continue forward with the weaving group.

3. My goal is to continue forward with the weaving to be able to have an expanded business. The goal as a group is to continue developing the weaving to be able to have a larger business so that we can export the weaving to other countries, national and international.

4.

1. I feel good in that before I did not have an opportunity like this where we have learned to be together, to share, and to know that we are working for the good of our family.

2. Yes we have changed in a large way, in that now I feel independent because with my earnings I help my home and I have money to be able to reinvest on the work.

3. My goal is to improve the quality of the products and find a better place to sell the products with better earnings. The goal of the group is to have unity and greater communication and greater willingness to help each other and always have the urge to collect money for the maintenance of the weaving house.

5.

1. Thankful to you and your family to have left planted and harvested this idea and for having shared your important experiences and knowledge because I have developed abilities in the practice of making crafts that before I did not know.

2. It has changed because now we know to value our investment in our work, as a partnership and as a family.

3. The goal that I have is to work to have more sales of my products to be able to buy my own things that I need. The goal for the group is that we know to try to understand each other so that we are able to help our business and we are able to achieve other projects directly as rural business women.

6.

1. I feel very good to have learned to weave and very happy to have learned different styles of design of woven products and to have the opportunity to sell the products.

2. It has changed in that now we have economic income and I have a new work which is very beautiful and I have a lot of fun weaving.

3. For me I have my goal to continue working and make my own personal business, to make a large business with the group and to continue investing in the business and to continue working.

7.

1. With a great change physically, mentally, and economically. Physically because we know the styles and designs of the woven products. Mentally because the thoughts of the routine of the work of a rural woman has changed. I am appreciating very much the opportunities that we did not have before this beautiful experience which I feel that I am definitely able to take advantage of, having new friendship, and know new places that before I did not know. Before I did not have the opportunity to weave and today thanks to God, Ivy, and Carol, I have it.

2. In one way domestically sharing the work and having good communication with my partner and with all of the family and sharing our income that we get from our small business.

3. The goal that I have for myself is to keep working and struggling with our work to be able to help my family and myself and to be able to make decisions with my own money. The goal as a group is to be able to value, esteem, and appreciate the base and tools that we have in our hands so that we are able to expand our business as a group.

8.

1. I feel good because we have income to be able to help ourselves and I feel that it is easy to weave and I have improved my work to you and your mother who have helped us in this small business. I feel that I have developed with this project something that before I did not have, which is this great opportunity of weaving and now I have it and I feel working for our development.

2. We have changed in the way that now all the family is helping in all the work that needs to be done for the weaving and other work is shared with all like, taking care of the animals. We all

come to an agreement about the work that needs to be done and we understand each other better.

3. The goal that I have is to invest in to business and to have a better income and to get a bank account. The goal that I have for the group is that we all make a good inversion in the business and that we have points of sale so that we have greater sales of products.

9.

1. I feel content because I did not have the idea before how this type of product, and I feel grateful because I have the experience and I am able to sell for the income of my home.
2. It has changed a lot because my family has helped me, my husband helps me keep moving forward with the help of work and the work that he has given to be able to obtain this small business.
3. The goal is to keep moving forward to help myself and as a group that we help each other to have more income and that we benefit from this project so that we develop abilities and we learn to make other types of products.

10.

1. First I feel good, and above all I feel thankful to you and your mother because thanks to you and your mother this project was developed. Even though in the beginning we did not think that it was going to be something so marvelous, we thought that at the most it would be only be an opportunity to learn to weave and not that it would be a business and a huge development for the group that has formed this small business and for their families. I personally thank you and your mother and to the group that you all have given me the opportunity to participate in the elaboration of the products, in part because I am not part of the group, but I feel like I am because I work with them always and some of the members look for me when they need someone to warp the loom or to weave for them when they are not able and after they pay me for my work. In this small business I have developed opportunities and much knowledge that before I did not have, in that it is an art to learn to create and to realize the bags, rugs and placemats and I have had the opportunity to have my own income to buy my things and cover my needs thanks to the work I do.
2. Well with my family there is more communication, I have more freedom to leave, even though it is only here in the community, but now I am not just in the house, helping to roll up the warp, cutting cloth, and repairing products.
3. One goal that I have for myself is to improve the flaws that I have had in making the products and learn to experiment new models of craft products. One goal for the group would be to work more in unity in the project to make more products, to make new designs of weavings,

and to look for the patronage of a business that also makes crafts to improve the sale of the products. To look for better places to sell the products in fairs or tourist destinations in the country.

11.

1. The truth is that I feel really great now because in the beginning I felt discouraged because I couldn't do it and it was all very difficult for me (I just couldn't do it), it took me a long time to make the products. But now that I am able everything is a lot better for me. I have advanced a lot in making bags, rugs, and placemats because I can make 3 to 4 products in a day. Even though I am not an official member of the group FABMRON, I almost feel like I am because I weave for my mother and grandmother. I have had lots of opportunities that I did not have before, like traveling to other departments, municipalities of Nicaragua looking for places to sell the products.

2. In my family the relationship between my parents and with my siblings has changed a lot, because I am girl who is single, and I am still not married. When my mother or my grandmother sells a product they give me a part of the money and with this money I am able to help myself with some of the necessities that I have and it helps me to pay for the transportation to the university and in this way I am able to help my family.

3. One of my main goals is to keep moving forward, to not step backward in this small business, to be able to sell more products, that have my name on them so that the people who buy them know that I made them and in regards to the group I hope to keep helping in publicizing and looking for places to sell the products, so that in the future we are able to have a real business, because even though I am not an official member of the group I have always liked to help in this, and I have the hope that one day I will be able to become someone closer to this group.

12.

1. About the experience that I have had weaving is that I feel more capacitated to make these types of products with better quality and to sell them at a better price. I have been continually improving my work and motivating myself to continue forward because before I did not have any way to make my own money and now I do.

2. My relation with my spouse has been very good because he helps me. As a family, my children always help me and they are always willing to help me in any type of work for the benefit of myself and them.

3. The goal that I have for myself is to continue working in weaving to achieve a better life. The goal that I have for the group in the aspect of development is that we work to sell more and gather a large quantity of money to buy a mill so that we women have more time to do other activities that help us have more money and we work to make it a reality, counting on the help of Ivy and Carol. Thanks.

13.

1. I feel that I have improved and I feel content because before I had to ask my husband to buy some things and now I make use of the money that I make.
2. In that when I go to weave my husband helps me with the housework, yes it has changed a lot.
3. The goal that I have is to keep working to continue selling products to keep helping the family, and as a group to continue working in unity.

14.

1. Well Ivy, first I feel really good and above all I am thankful to you and your mother because we have never had a project like this before because it has helped us get ahead with economic costs, in that we have worked to get ahead with the vision of our children,
2. Well, it has changed a lot because I have had more liberty and I have known new experiences with the women of the group and I have had the opportunity to leave the house more and also we share part of the work.
3. Well, the goal is to continue forward with the investing in the weaving to get ahead and to not stop developing the business because it has helped excel the economics of the family.

15.

1. I feel very thankful and content to have learned to weave for today it has allowed me to have a small business so that I can generate personal income and for the family. It has allowed us to have opportunities that before the project we did not have, for example to know other departments when we go to buy warp, or to sell products, to have new friendships, and to be involved much more in society, to know that now we are not only women of the house, but a another professional in making crafts where some people admire the work that we do. Evidence of this is that people have come directly to me house to see how we make the weavings and this leads to them buying products. I wish to tell you that just last week two Americans from Kansas and Maryland visited me and they bought the products of some of the women that I had in my house. Ivy, I am always looking for markets for the products and it is possible that in March they will visit me again to buy a large quantity. They are Christian missionaries that visit us twice a year. They have always bought weavings from me when they come to Sebaco and I am going to take one product per woman.
2. It has changed in that we have more communication and there is mutual help in making the balls of warp and also when I don't have money to buy warp they (family) loan it to me, this is a form that we relate to each other better. Another form is that I make decisions on how to use my own money.
3. Personally my goal is to each time improve the quality of my work. To innovate designs for bags that have cover flaps and some adornments. Right now we producing this model and hopefully you like then and you are able to sell them. In the group the goal is to overcome some of our weaknesses and to improve some of the deficiencies in the group. To aspire in this

new year of 2012 that we work better with **more understanding and comprehension**. Because it is of your knowledge, I am traveling and I always bring products of different women to sell. Another goal is to **finish the work on the house**, we still haven't painted it. We also want to find a place to sell

16.

1. (basically the same as Trinidad's)

I feel very thankful and content to have learned to weave for today it has allowed me to have a small business so that **I can generate personal income and for the family**. It has allowed us to **have opportunities** that before the project we did not have, for example to **know other departments when we go to buy warp, or to sell products**, to have **new friendships**, and to **be involved much more in society**, and it **helps me a lot economically**.

2. It has changed in the manner that we have more communication, we **have more development and good experiences and there exists mutual help**, when I don't have money to buy warp the other women of the group loan it to me. I feel very good because they take into account the **participation and opinion of each one of the women**.

3. In my opinion my biggest goal is **to improve the work and make products of quality**, once and many times. To make designs for bags with cover flaps and adornment. Right now we are producing this model and we hope that you like it and are able to sell it. In the group the goal is **to improve some of the obstacles and the goal is to improve some of the differences** that we have in warping **and problems weaving that we have with some of the women, but we are going to improve**.

Appendix:B

CONFIDENTIAL REGISTER BOOK

NICARAGUAN RURAL DEVELOPMENT IMPACT STUDY 2011

(CONTROL BOOK)

SECTIONS:

Respondent is HH Member 18 Years or Older who is Knowledgeable About Characteristics of Household Members

NAME OF RESPONDENT: _____

AR00 (PID)

Is Respondent: (Circle One)

- Head of Household..... 1
- Spouse of Head of Household 2
- Other Household Member..... 3
- Non-Household Member..... 4

INTERVIEW SESSIONS OF BOOK K:

| | | | | |
|---|--|--|--|---|
| DATE: <input type="text"/> / <input type="text"/> DAY MONTH | <input type="text"/> / <input type="text"/> DAY MONTH | <input type="text"/> / <input type="text"/> DAY MONTH | CK.1. Interview was entirely/mostly conducted in what language? 1. Spanish 3. Other: _____ | CK.3. HH sent to central tracking ? 1. Yes, moved within province → All pre-printed to field coord. 2. Yes, moved outside province → All pre-printed to central tracking 3. No. |
| TIME STARTED: <input type="text"/> / <input type="text"/> HOUR MINUTE | <input type="text"/> / <input type="text"/> HOUR MINUTE | <input type="text"/> / <input type="text"/> HOUR MINUTE | CK.5. CODE OF FINAL INTERVIEW OUTCOME: 01. Completed 02. Partially completed 03. Household could not be contacted 04. Refusal 05. Building was demolished 06. Vacated building 07. Building was not found 08. Other, pecify _____ | CK.4. Total number of individual Respondents who have left the household and must be tracked (from FP10) a. Y1 <input type="text"/> b. Y2 <input type="text"/> |
| FP5 EDIT OF BOOK 4. Manual edit, without CAFÉ 3. Entered but not corrected explain _____ 2. Entered AND corrected 1. Entered, no corrections necessary | FP6 REVIEW BY LOCAL SUPERVISOR 3. No 1. Yes | | | |

HHID |_|_|_| |_|_|_| |_|_|_|
HOUSEHOLD ROSTER

| AR00 | AR02 | AR03 | AR04 | AR05 | AR06 | AR07 | AR08 | AR09 | AR10 | AR11 | AR12 | AR13 |
|------------------|------|-------------------------|------------------|----------------|----------------------------|-----------------------|-----------------------|-------------------------------|----------------------------------|------------------------------|----------------------|-------------------------------------|
| No. of HHM (PID) | Sex | Month and Year of Birth | Age Now in Years | Marital status | Relation to Household Head | Line No. Birth Father | Line No. Birth Mother | Line No. of Caretake (HHM<15) | Highest level of school attended | Highest grade ever completed | Main occupation | Monthly income from main occupation |
| 01 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 02 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 03 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 04 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 05 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 06 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 07 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 0 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 09 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 10 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 11 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |
| 12 | 1 3 | _ _ / _ _ | _ _ _ | 1 2 3 4 | _ _ | _ _ | _ _ | _ _ | 0 1 2 4 3 | 1 2 3 4 5 6 7 | 1 2 3 4 5 6 7 8 9 | _ _ _ _ |

AR05 key
1= single
2= married
3= non married partner
4= widowed

AR10 key
0= did not attend school
1 = Primary school
2= Secondary school
3= Technical school
4= University

AR12 key
Agriculture.....1
Housework.....2
Attending school.....3
Day Laborer.....4
Skilled trade.....5

AR12 key cont.
Sales/Services.....6
Weaving.....7
Teaching.....8
Sports team.....9

RESPONDENTS WORK EXPERIENCE

| | |
|---|---|
| D1. What was [NOR]’s primary activity during the past week ? | Working/trying to work/helping to earn income 01 Job searching 02 Attending school..... 03 Housekeeping 04 Retired 05 Other, specify 06 DON’T KNOW 98 |
| D2. Did [NOR] work for pay for at least 1 hour during the past week ? | Yes 1 → F5 No 3 DON’T KNOW 8 |
| D3. Does [NOR] have a job/business, but was temporarily not working during the past week ? | Yes 1 → F5 No 3 DON’T KNOW 8 |
| D4. Did [NOR] work at a family-owned (fam or non-fam) business during the past week ? | Yes 1 → F5 No 3 DON’T KNOW 8 |
| D5. Has [NOR] ever worked before ? | No 3 → G Yes 1 DON’T KNOW.....8 |
| D6. When did [NOR] work for the last time? | Year <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 DON’T KNOW..... 8 |

| | |
|--|---|
| F1. Why hasn’t [NOR] worked again since that year ? | Retirement A Prolonged sickness..... B Handicap C Marriage D Too old..... E Have a child F Other, specify G DON’T KNOW H |
| F2. Which category best describes the work [NOR] did in [NOR]’s last job? | Self-employed 1 Government worker 4 Private worker..... 5 Unpaid family worker 6 → F21 DON’T KNOW 8 |
| F3. What was [NOR]’s net monthly income when from working at that job ? | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> . <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rp. 1 DON’T KNOW 8 |
| F4 Was that a ? | Wage 1 Net profits (after taking out costs) 3 Gross income (including operating) 5 DON’T KNOW 8 →F21 |

COMMUNITY PARTICIPATION

| Program or Community Activity | G15 | G16 | G17 | G18 | G19 |
|--|--|--|---|--|--|
| | Do you know whether, in the last 12 months, the [...] activity has occurred in this village? | During the last 12 months did you participate in or use [...]? | How much time did you spend participating in the [...] program during the last 12 months? (total hours) | What is the value of money or materials that you contributed to the [...] program during the last 12 months? (total) | Did you receive any benefits, such as services, materials, or money, from this program during the last 12 months? (all benefits) |
| E. UNAG, INTA, agricultural extension | 1 ----- -----> 3 8 ↓ ↓ | 3 → G18 1 -----> | [][][] 02. Hour 03. Day 98. DK | 1. Rp [][][] . [][][][][] . [][][][][] 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE F |
| F. Drinking Water System/Supply (for example a public pump) | 1 ----- -----> 3 8 ↓ ↓ | 3 → G18 1 -----> | [][][] 02. Hour 03. Day 98. DK | 1. Rp [][][] . [][][][][] . [][][][][] 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE G |
| G. Community meetings | 1 ----- -----> 3 8 ↓ ↓ | 3 → G18 1 -----> | [][][] 02. Hour 03. Day 98. DK | 1. Rp [][][] . [][][][][] . [][][][][] 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE H |
| H. Voluntary Labor | 1 ----- -----> 3 8 ↓ ↓ | 3 → G18 1 -----> | [][][] 02. Hour 03. Day 98. DK | 1. Rp [][][] . [][][][][] . [][][][][] 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE I |
| I. Cooperatives | 1 ----- -----> 3 8 ↓ ↓ BA BA | 3 → G18 1 -----> | [][][] 02. Hour 03. Day 98. DK | 1. Rp [][][] . [][][][][] . [][][][][] 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →BA |

| | |
|---|-------------------------------------|
| CODE G15 1. Yes 3. No 8. Don't Know | CODE G16 1. Yes, 3. No |
|---|-------------------------------------|

| |
|---|
| CODE G19 A. Service B. Materials C. Money D. Other _____ E. Nothing |
|---|

COMMUNITY PARTICIPATION CONTINUED

| Program or Community Activity | G15 | G16 | G17 | G18 | G19 |
|--|--|--|--|---|---|
| | Do you know whether, in the last 12 months, the [...] activity has occurred in this village? | During the last 12 months did you participate in or use [...]? | How much time did you spend participating in the [...] program during the last 12 months? (total hours) | What is the value of money or materials that you contributed to the [...] program during the last 12 months? (total) | Did you receive any benefits, such as services, materials, or money, from this program during the last 12 months? (all benefits) |
| I. Women's community bank | 1 _____ -----> 3 8 ↓ ↓ | 3 → G18 1 _____> | 02. Hour 03. Day 98. DK _ _ | 1. Rp _ _ . _ _ _ . _ _ _ 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE J |
| J. Small infrastructure livestock coops, pig pens) (chicken) | 1 _____ -----> 3 8 ↓ ↓ | 3 → G18 1 _____> | 02. Hour 03. Day 98. DK _ _ | 1. Rp _ _ . _ _ _ . _ _ _ 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE K |
| K. Weaving group | 1 _____ -----> 3 8 ↓ ↓ | 3 → G18 1 _____> | 02. Hour 03. Day 98. DK _ _ | 1. Rp _ _ . _ _ _ . _ _ _ 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →G15 LINE L |
| L. Collectivo de Mujeres | 1 _____ -----> 3 8 ↓ ↓ NEXT SECTION | 3 → G18 1 _____> | 02. Hour 03. Day 98. DK _ _ | 1. Rp _ _ . _ _ _ . _ _ _ 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →NEXT SECTION |
| M. Small business development | 1 _____ -----> 3 8 ↓ ↓ NEXT SECTION | 3 → G18 1 _____> | 02. Hour 03. Day 98. DK _ _ | 1. Rp _ _ . _ _ _ . _ _ _ 3. NOTHING 8. DK | A. _____ B. _____ C. _____ D. _____ E. _____ →NEXT SECTION |

| | |
|---|--|
| <p>CODE G15 1. Yes 3. No 8. Don't Know</p> | <p>CODE G16 1. Yes, 3. No</p> |
|---|--|

| |
|---|
| <p>CODE G19 A. Service B. Materials C. Money D. Other _____ E. Nothing</p> |
|---|

HOUSEHOLD CONSUMPTION

| Please estimate the value of food expenditures in this household during the previous week, (including those from purchase, own production and gifts). | KS01. |
|---|--|
| | Total (C\$.) |
| (1) | (2) |
| 1A. Cereals (rice corn, wheat flour, rice flour, corn flour, etc.) | <input type="text"/> , <input type="text"/> C\$ |
| 1B. Tuber (cassava, sweet potato, potato, dried cassava, taro, sago, etc.) | <input type="text"/> , <input type="text"/> C\$ |
| 1C. Fish (fresh fish, salted/preserved fish, shrimp, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1D. Meat (beef/buffalo/goat/port/chicken, innards, liver, spleen, shredded dried meat, dried meat, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1E. Egg and milk (chicken egg/duck egg/quail egg, fresh milk, sweetened condensed milk, powered milk, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1F. Vegetables (spinach, water spinach, cucumber, carrot, string bean, green bean, onion, chili, tomato, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1G. Bean (peanut/ mung bean/soybean/kidney bean/lima bean/) | <input type="text"/> , <input type="text"/> C\$. |
| 1H. Fruits (orange, mango, pineapple, water melon, banana, papaya, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1I. Oil and fat oil/frying (oil, pig fat, butter, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1J. Beverage ingredients (granulated sugar, palm sugar, tea, coffee, cocoa, syrup, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1K. Spices (salt, pepper, cloves, achote) | <input type="text"/> , <input type="text"/> C\$. |
| 1L. Other consumption (fish/shrimp cracker, emping chips, noodle, rice noodle, macaroni, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1M. Prepared food and beverages (bread, biscuits, cake, porridge, meatball soup, syrup ice, soda pop, gado gado, rice and side dish, etc.) | <input type="text"/> , <input type="text"/> C\$. |
| 1N. Alcoholic beverage (beer, wine, and other alcoholic drink) | <input type="text"/> , <input type="text"/> C\$. |
| 1O. Tobacco and betel (clove cigarette, cigarettes, cigar, tobacco, betel, areca nut, etc.) | <input type="text"/> , <input type="text"/> C\$. |

HHID

CONSUMPTION CONT.

| Please estimate the value of expenditures on non-food items (from purchases, own production and gifts). (1) | KS02. | KS03. |
|--|---|--|
| | Previous Month (C\$) (2) | During the past 12 months (C\$) (3) |
| Housing and household facility | | |
| 2A. Rents, contracts, house rents estimation | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2B. Electricity, telephone, gas, kerosene, water, wood, etc. | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2C. House keeping and light improvement | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2D. Miscellaneous goods and services (toilet soap, cosmetic article, transportation, reading material, ID car and driver's license, recreation, telephone card, postal, etc.) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2E. Education expenses (entry/registration fee, tuition, scouts, handicraft, etc.) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2F. Health expenses (hospital, medical doctor, traditional healer, medicines, etc.) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2G. Clothing, footwear, head gear (fabrics, ready-made clothes, shoes, hat, detergent, etc.) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2H. Durable goods (household appliances, tools, kitchen ware, amusement tools, sports equipment, expensive jewelry/imitation jewelry, vehicle, umbrella, watch, camera, telephone installment cost, electricity installment cost, etc.) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| Taxes and insurance | | |
| 2I. Taxes (Building and land tax, TV/radio tax, vehicle tax) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2J. Accident/health insurance) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2K. Other _____ | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |
| 2L. Festivities and ceremonies (wedding, circumcision, birthday, religious festival, traditional ceremony, etc.) | <input type="text"/> , <input type="text"/> | <input type="text"/> , <input type="text"/> |

CHILD (0-13 yrs)HEALTH AND WELFARE

| | |
|---|----------------|
| J1. Does the HH have a health card for the children of the HH? | YES.....1 → J2 |
| | NO.....3 → J5 |
| J2. Is the respondent willing to provide some of the basic information recoded in the health card? | YES.....1 → J3 |
| | NO.....3 → J5 |

DATA COLLECTED FROM HEALTH CARD

| Childs name | Height (meters) | Weight (pounds) | Most recent illness | Vaccinations |
|-------------|-----------------|-----------------|--|--|
| | | | Diarrhea.....01 Vomiting.....02 Cough.....03 Flu.....04 Other.....05 | Hep. A/B.....01 Polio.....02 MMR.....03 DPT.....04 not vaccinated.....05 |
| | | | Diarrhea.....01 Vomiting.....02 Cough.....03 Flu.....04 Other.....05 | Hep. A/B.....01 Polio.....02 MMR.....03 DPT.....04 not vaccinated.....05 |
| | | | Diarrhea.....01 Vomiting.....02 Cough.....03 Flu.....04 Other.....05 | Hep. A/B.....01 Polio.....02 MMR.....03 DPT.....04 not vaccinated.....05 |
| | | | Diarrhea.....01 Vomiting.....02 Cough.....03 Flu.....04 Other.....05 | Hep. A/B.....01 Polio.....02 MMR.....03 DPT.....04 not vaccinated.....05 |
| | | | Diarrhea.....01 Vomiting.....02 Cough.....03 Flu.....04 Other.....05 | Hep. A/B.....01 Polio.....02 MMR.....03 DPT.....04 not vaccinated.....05 |
| | | | Diarrhea.....01 Vomiting.....02 Cough.....03 Flu.....04 Other.....05 | Hep. A/B.....01 Polio.....02 MMR.....03 DPT.....04 not vaccinated.....05 |

| | | |
|---|-------------|---|
| J5. When a child becomes ill in the HH which treatment is typically given? | Diarrhea | Herbal remedy.....01 Drug bought at a pharmacy.....02 Drug/ evaluation provided by public health clinic.....03 Drug/evaluation provided by charitable organization.....04 No treatment given.....05 |
| | Vomiting | Herbal remedy.....01 Drug bought at a pharmacy.....02 Drug/ evaluation provided by public health clinic.....03 Drug/evaluation provided by charitable organization.....04 No treatment given.....05 |
| | Cough | Herbal remedy.....01 Drug bought at a pharmacy.....02 Drug/ evaluation provided by public health clinic.....03 Drug/evaluation provided by charitable organization.....04 No treatment given.....05 |
| | Flu | Herbal remedy.....01 Drug bought at a pharmacy.....02 Drug/ evaluation provided by public health clinic.....03 Drug/evaluation provided by charitable organization.....04 No treatment given.....05 |
| | Parasites | Herbal remedy.....01 Drug bought at a pharmacy.....02 Drug/ evaluation provided by public health clinic.....03 Drug/evaluation provided by charitable organization.....04 No treatment given.....05 |
| | Skin rashes | Herbal remedy.....01 Drug bought at a pharmacy.....02 Drug/ evaluation provided by public health clinic.....03 Drug/evaluation provided by charitable organization.....04 No treatment given.....05 |

HHID

DECISION MAKING

| | |
|--|--|
| K00a. Are you currently married? | Yes..... 1 No 3 ---> NEXT SECTION |
| K00b. Does your spouse live in this household now/in the past 6 months? | Yes..... 1 No 3 ---> NEXT SECTION |
| K01. Do you yourself receive money from working inside or outside the household, or from some other regular source? (Do not include money from your spouse.) | Yes..... 1 No 3 --->K07 |
| K02. Are you free to spend this money for household expenses? | Yes, all HH expenses 1 Yes, some HH expenses 2 Yes, daily expenses 3 No 5 |
| K03. Apart from money you spend for household expenses, is there any part of your income that you set aside which you can spend without consulting your spouse? | Yes..... 1 No 3 --->K07 |
| K04. From this money, how much did you keep for personal use in the last month? | Rp. <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> 1 --->K07 DON'T KNOW 8 |
| K05. About what percent did you keep? | <input type="text"/> <input type="text"/> <input type="text"/> 1 --->K07 DON'T KNOW 8 |
| K06. Try to estimate the percentage that you kept. | Only a little (less than 10%) 1 Some (approximately 25%) 2 About half 3 More than half 4 |
| K07. Does your spouse receive money from working inside or outside the household or from some other regular source? (Do not include money you give to your spouse.) | Yes..... 1 No 3 --->K14 |
| K07a. Is your spouse free to spend some of that money for household expenses? | Yes, all HH expenses 1 Yes, some HH expenses 2 Yes, daily expenses 3 No 5 |
| K07b. Apart from the money your spouse spends for household expenses, is there any part of your spouse's income that your spouse sets aside and can spend without consulting you? | No 3 Yes 1 --->K12 |
| K08. From this money, how much did your spouse keep for personal use in the last month? | Rp. <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> 1 --->K12 DON'T KNOW 8 |

HOUSEHOLD CHARACTERISTICS

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|---|--|
| K09. About what percent did your spouse keep? | <input type="text"/> <input type="text"/> <input type="text"/> % 1 --->K11 DON'T KNOW 8 |
| K10. Try to estimate the percentage that your spouse kept. | Only (less than 10%) 1 Some (approximately 25%) 2 Approximately half 3 More than half 4 |
| K12. INTERVIEWER CHECK: PK01, PK06 DO THE RESPONDENT AND SPOUSE BOTH RECEIVE MONEY? | Yes 1 No 3 --->K14 |
| K13. How regular is the money you receive in comparison to the money your spouse receives? | Much less regular 1 A little less regular 2 About the same 3 A little more regular 4 Much more regular 5 |
| K14. If you needed money and your spouse was not at home, would you feel comfortable taking money from your spouse's wallet/purse? | Yes 1 No 3 Spouse never has money 6 Refuse to answer 7 |
| K15. If you need money and your spouse is not at home, do you ever take money from your spouse's wallet/purse? | Often 1 Sometimes 2 Rarely 3 Never 4 |
| K15a. If you needed money and your spouse were not at home, would he/she feel upset if you took money from his/her wallet? | Yes 1 No 3 |
| K16. If your spouse needed money and you were not at home, would you feel comfortable if your spouse took money from you purse/wallet? | Yes 1 No 3 |
| K17. If your spouse needs money and you are not at home, has your spouse ever taken money from your wallet/purse? | Often 1 Sometimes 2 Rarely 3 Never 4 |
| K17a. If your spouse needed money and you were not at home, would you feel upset if your spouse took money from your wallet/purse? | Yes 1 No 3 |

HHID [] [] [] [] [] [] [] [] [] []
HOUSEHOLD CHARACTERISTICS CONT.

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| KR03. A few questions will be asked regarding this house. What is the status of this house? | SELF-OWNED.....1--> KR05 OCCUPYING2--> KR05 RENTED/CONTRACTED5 OTHER6 |
| KR04. What is the monthly rent of this house? | 1. [] [] [] . [] [] [] . [] [] [] ---> KR11 8. DK |
| KR05. How much monthly rent would you pay if you were renting this house? | 1. [] [] [] . [] [] [] . [] [] [] Rp 8. DK |
| KR11. Does this household utilize electricity? | Yes..... 1 No 3 |
| KR13. What is the main water source for drinking for this household? | PIPE WATER01 PUMP/WELL WITH PUMP (MANUAL, ELECTRIC)02 WELL WATER.....03 SPRING WATER.....04 RAIN WATER.....05 RIVER/CREEK WATER06 POND/FISHPOND.....07 WATER COLLECTION BASIN08 OTHER09 AQUA/AIR MINERAL 10- -> KR13b |
| KR13a. Before the water is used for drinking, is it boiled? | Yes.....1 No3 |
| KR13b. Do you purchase water? | YES, DELIVERED.....1 --> KR16 YES, SELF-SERVICE.....2 NO3 |
| KR14. Where is the main water source located? | INSIDE THE HOUSE1--> KR16 OUTSIDE THE HOUSE 3 |
| KR15. What is the distance (from this house) to the main water source? | [] . [] [] [] Meters |

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|--|--|
| KR16. Is water used for other necessities, like bathing and laundry, also drawn from the same source as drinking water? | Yes 1 --> KR20 No3 |
| KR17. What is the main source of water for other necessities like bathing and laundry? | PIPE WATER 01 PUMP/WELL WITH PUMP (MANUAL, ELECTRIC)..... 02 WELL WATER..... 03 SPRING WATER 04 RAIN WATER 05 RIVER/CREEK WATER 06 POND/FISHPOND..... 07 COLLECTION BASIN 08 OTHER 09 |
| KR17b. Do you purchase the water? | YES, DELIVERED 1 --> KR20 YES, SELF-SERVICE2 NO.....3 |
| KR18. Where is the main water source located? | INSIDE THE HOUSE1 --> KR20 OUTSIDE THE HOUSE 3 |
| KR19. What is the distance (from this house) to the main water source? | [] . [] [] [] Meters |
| KR20. Where do the majority of householders go to the toilet? | OWN TOILET WITH SEPTIC TANK 01 OWN TOILET WITHOUT SEPTIC TANK.....02 SHARED TOILET WITH OTHER HOUSEHOLDS03 PUBLIC TOILET04 CREEK/RIVER/DITCH (WITHOUT TOILET).....05 YARD/FIELD (WITHOUT TOILET)06 SEWER07 OTHER 08 POND/FISHPOND.....09 ANIMAL STABLE.....10 SEA/LAKE11 |

