Savings Institutions – Savings culture

THE EFFECT OF CULTURE AND INSTITUTIONS ON FINANCIAL BEHAVIORS

Master of Arts in Law and Diplomacy Thesis

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TUFTS UNIVERSITY

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I. Executive Summary

How does culture influence how people manage money? In order to continue to provide better financial services for the poor, microfinance must recognize how the poor already manage their money and why they choose the strategies they do. To that end, this paper explores what role culture plays in determining financial behavior, and how a greater understanding of that role may help microfinance institutions (MFIs) provide better financial services to the rural poor.

This paper is the result of financial diaries research in Rivas, Nicaragua, in 2009 as a consultancy project for international development agency Agros International[1]. The study was designed to capture what financial services, both formal and informal, beneficiaries in their program sites used and why. Study data showed that respondents used many financial services, except for savings, a phenomenon that participants claimed was cultural. Subsequent research around culture and financial behavior revealed that culture can affect financial behaviors, but that its impacts are diluted and often indistinguishable from those of institutions and history.

Since institutions are more flexible than culture or history, they should be the primary means by which MFIs and other non-governmental organizations (NGOs) encourage better financial management among the poor. The microfinance industry is urged to consider cultural factors in terms of individuals' beliefs about how to win in their, in order to gain a deeper understanding of a community's needs and the possible usefulness or harm of changing an institution or introducing a new microfinance product.

II. Introduction

While the boom in microfinance over the last thirty years has made myriad new financial services available to poor households, but researchers have only recently begun to investigate whether these tools are the best for the poor and their financial needs (Banerjee and Duflo 2007; D. Collins et al. 2009; Jonathan Morduch 1995; S. Rutherford 2000; Shipton 1990). Stuart Rutherford, one of the leading researchers on money management and the poor, has said that in

[1] See www.agros.org for more information.

order to provide *better* financial services to the poor, we must first understand what those services are and how poor households currently use them (2000, 2). In this paper, I will explore what financial management services poor people are already using and how they choose between the services available to them. In particular, this paper will explore to what extent poor households' choice between financial services is rational and criteria-based and to what extent cultural factors influence these decisions. Lastly, I will explore what these trends mean for microfinance institutions (MFIs).

III. Case Study - Context & Methodology

A. Purpose of the Study

The research that contributes to this paper was conducted for two purposes. The first was to answer practical questions for Agros International, an International Non-Governmental Organization (NGO)[2] and was conducted as part of a research consultancy for that organization. Agros wanted to learn about gender roles and income generation in its program sites – which the agency refers to as "villages" – in order to inform their microenterprise services to its beneficiaries. In particular, Agros wanted to learn about three things: (1) how households as a whole earn and manage money; (2) how women's economic activity affects her household economy, and (3) village members' attitudes about available financial services.

A secondary purpose of the study was to inform a thesis for a Master of Arts in Law and Diplomacy (MALD) at the Fletcher School at Tufts University[3]. For this purpose, I isolated the research finding of greatest interest from the field data and subjected pursued it through a second level of inquiry. The finding of greatest interest was that the study participants did not use savings as a significant financial management strategy, contrary to the fact that all knew they should. To explore their claim that "Nicaraguans don't save (as a culture)," I also undertook to explore how culture might influence financial behavior, and how microfinance might learn from this relationship to provide better savings services to the poor in Nicaragua and around the world.

[2] For more information, see http://www.agros.org

[3] See www.fletcher.tufts.edu.

B. Case Study Context

Geography

The study was conducted in the department of Rivas, Nicaragua, in two rural villages of approximately 100 residents each, both of which are Agros International program sites. Rivas is a low-altitude, humid coastal region in the southwest of Nicaragua occupying the approximately 15-mile wide strip of land between the Lake of Nicaragua and the Pacific coast; between Managua, approximately 50 miles to the north, and the border with Costa Rica. The weather is hot and humid most of the year, with heavy rains falling during the winter (May through July and September through November). The flat terrain and tourism-driven infrastructure along the coast make for easy travel both within the department and between Rivas and Managua. Ease of travel within the region, as well as relatively easy access to the capital city and Costa Rica means that residents have access to the economies and industries of these areas, and they are not geographically bound to their own village or local economies.

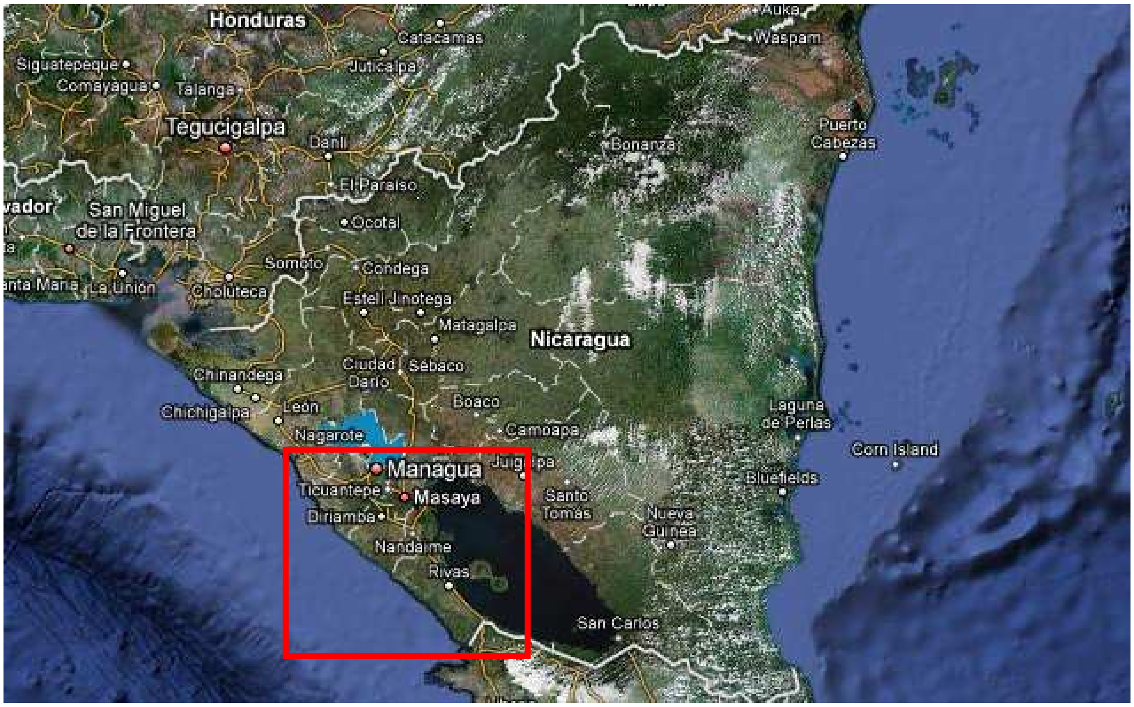

Honduras
Auka
Waspam
Catacamas
Siguatepeque
Comayagua
Talanga
Juticalpa
Tegucigalpa
Danli
Bonanza
Puerto Cabezas
El Paraiso
vador
San Miguel de la Frontera
Ocotal
Somoto
Condega
nta Maria
La Union
Choluteca
Esteli
Jinotega
Matagalpa
Nicaragua
Ciudad Dario
Sebaco
Chinandega
Boaco
Chichigalpa
Leon
Laguna de Perlas
Nagarote
Camoapa
Corn Island
Managua
Juigalpa
Bluefields
Ticuantepe
Masaya
Santo Tomas
Nueva Guinea
Diriamba
Nandaime
Rivas
San Carlos

FIGURE 1: THE COUNTRY OF NICARAGUA

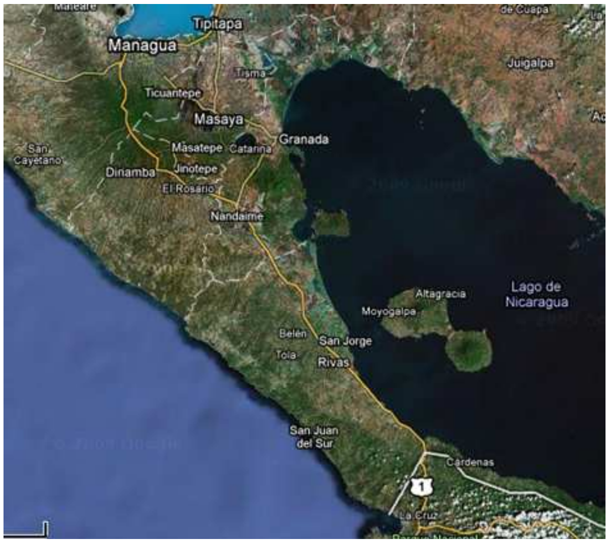

Tipitapa
Managua
de Cuapa
Juigalpa
Tisma
Ticuantepe
Masaya
Granada
San Cayetano
Masatepe
Catarina
Dinamba
Jinotepe
El Rosario
Nandaime
Altagracia
Lago de Nicaragua
Moyogalpa
Belén
San Jorge
Tola
Rivas
San Juan del Sur
Cardenas
1
La Cruz

FIGURE 2: THE DEPARTMENT OF RIVAS

Economy

Agriculture is by far the largest economic activity in Rivas. The most prevalent form of agricultural production is small family plots of rice, corn, and beans. Almost all rural households produce at least two of the above three crops and produce enough annually for household consumption, plus a little to sell or trade for other foodstuffs or household necessities. Industrial farms in the region produce sugar cane, banana, rice, and a few specialty crops like grenadine, papaya, and watermelon. These employ thousands of local men and women, especially during the harvest season.

Non-agricultural business enterprises abound in the form of small service enterprises, a few small businesses clustered in and around Rivas City, and one large garment factory that employs mostly young women.

Nearby Costa Rica is a significant source of income for the region. Its boarder lies only 25 miles from Rivas City and is a destination for seasonal employment and migration. While it was not the season for typical travel to Costa Rica for work during the study period, most households shared stories of how migration had affected their lives and their economies.

Enter Agros International

All participant households shared significant social and financial characteristics because of their relationship with Agros International. Agros is a Seattle-based international development agency with operations throughout Central America and Chiapas, Mexico. Agros' mission is to help poor landless farmers[4] own agricultural land derive from it a sustainable livelihood (Agros International 2006). Agros purchases agricultural land and loans it interest-free to households who live on and work the land together. Households work the land as a group, but each is responsible for paying back its 5-acre plot individually. During the next 7-10 years, households pay down their land loan from agricultural profits.

Each of the study participant households carries land debt in the amount of $1,4000 to $5,000 USD[5]. Agros administers the loan, sets rates, and often markets and sells the produce on behalf of the farmer. In these cases, an agreed-upon amount of product revenue is withheld as loan payment. Participants are often given the opportunity to take out smaller loans with varying rates of interest for income-accelerating products such as irrigation pumps, specialty crop seeds, and processing equipment; all of which Agros administers.

Agros also provides a limited portfolio of microenterprise products to its village members. Because members are landless by definition and the majority of them have few physical or financial assets, most do not have access to outside financial services. Agros offers "directed credit", which means they design and offer projects that village members can choose to undertake, either as small groups or individuals. Agros then provides supplies and training through a subsidized loan. Among projects offered are small plots of cash crops, baking projects, artisan projects, ponds for fishing, and small animal husbandry. Individual lines of credit are also given out on a discretionary basis.

C. Methodology

Field research was conducted in Nicaragua in July and August of 2009. In order to address Agros' lines of inquiry about household finances, I modeled the study after the Financial Diaries

[4] Those for whom farming is a profession, but not necessarily a sustainable source of income.

[5] The wide variation in debt amount is primarily accounted for by fluctuations in land price over time (i.e. when their land was purchased) and quality of land. The second participant village land is of much higher quality and purchased 8 years after the first.

methodology which Daryl Collins, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven, created for *Portfolios of the Poor* (D. Collins et al. 2009). In contrast to “snapshot” studies in which households describe their financial behaviors in a one-time interview, the Financial Diaries methodology tracks actual income, expenditures, and other financial activity over a period of time, providing a more complete and accurate picture of household financial characteristics and habits. It also includes qualitative components that allow broader insight into questions regarding attitudes and non-financial effects of financial behavior.

Site Selection

Participant households were selected from two of four Agros villages in Rivas, El Paraiso and La Bendicion. These two villages were selected based on longevity with Agros and physical accessibility. Both had been established for more than two years at the time of the study and were within two hours’ bus ride (or 30 minute motorcycle ride) from each other. Previous consideration of Agros villages in the northern region of Matagalpa was considered, but ultimately rejected because of the lesser involvement in formal markets, recent establishment of villages, and difficulty traveling between villages and cities in that region. However, these villages are of particular interest for future study because of the contrast they would provide with the Rivas villages.[6]

Household Selection

Particular households were selected through quota sampling methods and staff recommendations. Important characteristics were family size, age of children, known economic activity, level of income, and length of membership with Agros. Controlling for diversity in these characteristics, families whom Agros staff believed to be trustworthy and minimally literate and numerate were asked to participate in the study.

[6] The month prior to this study, I had conducted qualitative interviews in Matagalpa about family roles, women’s work, and families’ vision for the future. Qualitative data from Matagalpa interviews is used in this paper to supplement cultural qualitative data from the Rivas study. Data from Matagalpa also reveals interesting cultural differences between the two regions: less migration, less involvement of women in commerce, less education, and greater dependence on agriculture for income. A comparison of the two regions’ financial management through financial diaries would be useful.

All short-listed household heads were explained the study purpose and process, participation requirements, privacy policy, and given an opportunity to ask questions. All seven households agreed to participate in the study.

After agreeing to participate, diarists were read and signed an information and confidentiality agreement. Of these families, one discontinued participation in the financial diary after the first week and participated in the qualitative interviews only.

Figure 3: Participant Household Profiles

Household	**Household Size**	**Monthly Cash Inflow**[7]	**Daily Income per person**	**Occupations**
FM-01 Elias & Laura	5	$71.57	$0.51	Farmer / Housewife
FM-02 Aaron & Mariana	4	$86.76	$0.77	Farmer / Housewife, Raises pigs
FM-03 Fernando & Mina	5	$64.41	$0.46	Farmer, craftsman / Housewife
FM-04 Joel & Alejandra	5	$322.01[8]	$2.30	Farmer / Housewife, domestic assistant
SM-01 Hernan & Alba	5	$410.74	$2.93	Farmer, sells gasoline / Elementary school teacher, sells ice
SM-02 Javier & Sara	5	$221.32	$1.58	Farmer, ox cart driver / Housewife, sells produce & dairy goods, owns store
SM-03 Manuel & Berenice	4	$29.31	$0.26	Farmer / Housewife, sells baked goods

Interview participants

Initial interviews were conducted with both heads of household present. Throughout the study, I attempted to include both heads of household in as many interviews as possible. However, there

[7] Includes all forms of in-flows of cash, including loans

[8] Joel and Alejandra took out an unusual amount of loans this period, which has artificially inflated their income for this month. Without the loans for land purchase, their income would have been $145.49, or $1.07 per person per day. Reasons for this will be discussed later in this section.

were occasions with most household where one of the two was unavailable. Far from being detrimental to the study, these one-on-one interviews allowed me to delve deeper into that individual's spending habits and views on financial behavior.

Respondent Gender

In most households, however, one family member participated more actively in the interviews than the other. There was a noted gender disparity along which these patterns fell. In 4 of 7 households, the man was the primary responder. In one of these households, the woman rarely participated and the man did not encourage her to participate, although he did not prevent her from listening in when she was available. In 2 of 7 households, the woman was the primary responder, and in only 2 of 7 did both participate equally. It is worth noting that this gender disparity of respondents also followed village lines. In all La Bendicion households, the primary respondents were male. In all San Marcos households, primary respondents were either female or participation was equal.

In-depth Initial Interviews

Households who participated in the study agreed to three in-depth 60-minute interviews, keeping a daily income and expenditure diary, and 2-3 short interviews per week, for 4 weeks. The in-depth interviews provided an overall picture of the household's financial situation. The first asked questions about household assets, outstanding loans, current savings, family member profiles, specific economic activities, and special events or emergencies within the previous year. The second in-depth interview focused on household member economic activity, current and past employment (formal and informal), income sources of all kinds, and estimated yearly spending habits. The third provided a profile of the household's current financial tools (savings, and credit), as well as their attitudes about financial tools in general. These questions encouraged participants to compare formal and in-formal tools, both for savings and for credit.

Financial Diaries

From the first interest interview through the end of the study period, participant households kept diaries detailing their monetary inflows and outflows on a daily basis. The diary-keeping period lasted approximately 28 days. Households were given a small notebook and pen and asked to record any inflows of cash (salary, new loans, income, sales of goods, etc.) and outflows (deposits, purchases, loan payments, transportation costs, etc.) each day. In order to keep accounting as simple as possible, only actual cash, not expected income or expenditure, was counted. These diaries were reviewed 2-3 times per week with the researcher and recorded in excel worksheets to track family spending and earning patterns.

Report of Findings

Initial findings were shared with both Agros Nicaragua staff and participant households before leaving Nicaragua. A 45-minute power-point presentation and Q&A session was hosted at the Agros Nicaragua office with all field staff, project directors, and the country director.

Income statements for the research period were shared with participant households as well. This reporting back was particularly beneficial for study participants. Three of seven households were shocked that their income was as high as it was, and that they spent as much on non-essentials as they did. These households indicated that the very act of keeping track of income and spending helped them to identify areas where they could reduce spending. In one case, the document review revealed inconsistencies with record-keeping that led to the disclosure of a large amount previously-withheld financial information.[9] In another reporting back led to a pledge to save 5 cordobas (approximately 25 cents) per day.

D. Limitations and Challenges

Sampling Limitations

- ***Non-representative Sampling:*** Findings from this study are illustrative only, and should not be construed to be descriptive of a greater population than the sample of participant households. Participant selection may have been biased based on self-selection of literate households. Selection lists from which participants were chosen may have unintentionally favored village members viewed as more responsible, more agreeable, or who had a better relationship with Agros.

[9] This information had to do with a financial transaction being conducted that the family did not want Agros to know about. Diary data was adjusted as much as possible to reflect this discrepancy, but the issue is also addressed under “limitations and challenges”.

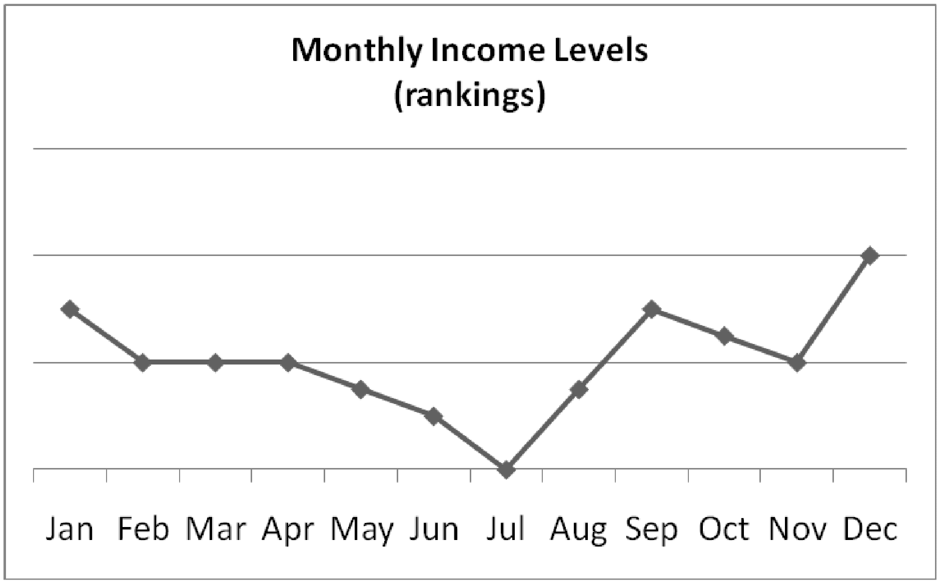
- ***Non-generalizability of findings:*** Research and findings should be used to enlighten discussion and to inform and incite further research. Data should not be considered representative of the poor as a whole, the rural poor, the poor in Nicaragua, or even the nearby neighbors of the participant households who are not Agros members.

Short Duration of the Study

- ***Participant Learning Curve:*** Financial diaries were kept and recorded for 28 days only, at the end of which time many participants were still learning how to keep accurate records. The short time period did not allow adequate time for participants to learn the skills necessary to keep accurate financial records for their households. Others simply were not able to keep track of every piece of cash that came into or went out from their homes in a given day. On more than one occasion I witnessed cash transactions between participant households that I did not find recorded in the financial diaries at the next review.
- ***Seasonal Variance in Incomes:*** Since participant incomes vary greatly over the course of a year, the one-month snapshot captured in this study does not fully represent the participants' comprehensive financial situation. All participant households agreed that the month in which the study was conducted (July 8 – August 4, 2009) fell within their "the hungry season," the season just before the harvest. This period is a time of high expenditure and low income and consumption.

  When asked how the research month compared with other months of the year, participants were asked to rank months 1-12 according to how much "resources" they have in that month. Aggregation of participant answers produced the following chart:

Figure 4: Monthly Income Level rankings



- ***Non-longitudinal:*** This study was only able to grasp the financial changes that take place within one month. This did not allow the study to track repayment of loans taken out during the study period, financial emergencies and how households dealt with these, or the ways in which households distributed income (also related to the "irregular incomes" limitations, since incomes were a mere trickle of what they are other times of the year). In contrast, The *Portfolios of the Poor* study tracked household income and expenditures for one full year, allowing it to capture inter-temporal, as well as inter-household patterns.

Mistrust of the Privacy Statement

Study participants may have withheld or modified information because of concerns about confidentiality. Although all participant households signed and indicated understanding of the privacy agreement (which stated that their individual information would not be shared with Agros), some intrinsically mistrusted this agreement. Based on this fear, the following incentivized behaviors may have skewed findings.

- ***Incentive to manipulate information:*** Believing that financial information may make its way back to Agros, participants had incentive to under-state income or over-state expenses, believing that by depicting their financial situation as more difficult than it actually was, Agros may treat their loan payments with more leniency.

- ***Incentive to withhold information:*** Diary participants Joel and Alejandra shared that they had been investing in additional land, which had caused them to fall behind on their Agros land loan payments, yet they only shared this with me after I had given my final in-country briefing report to Agros. They told me, "If you hadn't come with Agros, we would have told you everything." I must believe that other households also had similar reservations.

Attrition

One family had difficulty keeping track of expenses. They understood "all household expenses" to mean only food expenses, and presented slim records at the first review. By the second review, they had misplaced the diary, and the replacement diary was lost between the second and third reviews. This family discontinued use of the diaries and their data was only included in non-diary qualitative areas.

Despite the above limitations of the study, much can still be learned from the participant diaries and other areas of study participation. I have reason to believe that the diaries are a fair representation of participants' financial lives and that any skewness fell across the spectrum of financial behaviors, instead of particularly leaving out categories of information. Most participants openly admitted record-keeping mistakes, and enabled me to make corrections at each interview.

Open conversations about the diaries also helped greatly to illumine attitudes, habits, values, and patterns of financial behavior that could not have been gathered even in the most complete of financial diaries. For this reason, I am confident that the data in this study, presented in light of its limitations, holds value for its intended purposes.

E. Recommendations for Future Study

The fields of microfinance, development, and commercial financial services for the poor can learn much from financial diaries research. However, future research should take care to learn from lessons of this and other financial diaries. Lessons learned from this study are:

1. Plan for at least one year of data collection. This will allow approximately one month for participant learning, initial attrition, and logistical refinement. Data collected during this first month may or may not be included in the final report.
2. Researchers should be independent of interested organizations. Since affiliation communicates bias and risk to participants, researchers should make every effort to conduct research independently of interested organizations. Where an organization may commission the study, the organization should provide the researcher with independent accommodations, transportation, and tools. Ideally a, consortium of interested organizations would together commission an independent researcher. Confidentiality agreements should be clear and signed by all stakeholders.
3. The more frequent visits the better. Information on spending and can be forgotten quickly, and should therefore be gathered at least three times per week; more if possible.
4. Study more than one region. Research findings will be more enlightening to organizations and academics if regions are compared to each other. This study included only one fairly economically-homogeneous region.

IV. Literature Review

A. Financial characteristics of poor households

Before discussing the findings of the Rivas study, I would like to put the study as a whole in context. The above research piqued my curiosity about financial behaviors and how those are and aren't influenced by culture. Therefore, this literature review is broken down into three parts: Part A reviews current research on financial characteristics of poor households, part B summarizes the current research on financial services (formal and informal) that poor households use, and part C reviews the current debate the role of culture in financial behavior.

Who are the poor?

Let me first briefly define what I mean by "the poor". It would be impossible to describe the poor as a homogenous group – they live over the world, in all kinds of environments and living situations, and they are culturally richly diverse (as shall be discussed in detail later). When referencing the poor in this paper, I shall mean rural poor living on less than $2/day.

The World Bank defines the poor as those living on less than $2/day, the very poor as those living on less than $1.25/day[10], and the extremely poor as those living on less than $1 per person per day (World Bank 2009). 75% of households living under $2/day live in rural areas and employ dominantly agricultural livelihoods (The World Bank 2007). The rural agricultural poor are of particular interest to this study and will be treated with emphasis for the following reasons: they are more vulnerable to economic and environmental shocks; they generally have less able to access public and financial services; the participants in the case study later in the paper are members of this group. By focusing on these poor in particular, the context and application of this paper are narrowed.

Financial Objectives of Poor Households

A critical component of poor households' financial behaviors is what they are trying to accomplish with those behaviors, i.e. their financial goals. Generic financial theory defines the overall goal of financial management to smooth consumption levels over a lifetime (Meng 2003; Armendariz, de Aghion, and J. Morduch 2007). According to this idea, called the "permanent income hypothesis", individuals should save during times of "normal" income and draw down during periods of shock, in order to keep consumption consistent over time. However, this hypothesis is more easily applied to wealthy households than to poor ones, whose income is rarely "normal" (Meng 2003). For poor households, the overall financial goal is to put food on the table every day; a condition that must be met before considering other long-term financial objectives (Collins et al. 2009, 30).

If poor households' financial management objective is not to maximize consumption over time but to avoid drastic shocks to their daily consumption levels, the financial strategies must aim to avoid impacts from shocks, not to maximize consumption. This means that financial strategies of the poor are fundamentally different than those of the rich, who generally seek a bit of risk in order to maximize potential gains, and ultimately consumption.

Obstacles to Achieving Objectives

[10] Figures adjusted for Purchasing Power Parity, according to the 2005 round of the International Comparison Program

The new book *Portfolios of the Poor* describes three types of inflow challenges: size of income, irregularity, and unpredictability. We have already established that the poor make under $2/day, and the very poor under $1/day. However, as Collins and her colleagues point out, it is not as if poor households actually receive a $2 paycheck every day (2009, 2). Not only their incomes small, they are also irregular and unpredictable (2009, chap. 2).

Irregularity is largely tied to the idea that the poor generally do not receive consistent wages throughout the year. Even if they receive a consistent wage, it is often only one of the many sources of income they patch together to accumulate that $1 or $2 per day. Most poor households earn incomes from several sources, many of which involve seasonality in some form or another (Banerjee and Duflo 2007, 10). Agriculture is a main source of income in 25-98% of rural households living on a dollar a day, depending on the country (Banerjee and Duflo 2007, 10). The seasonality of this occupation alone, creates vast seasonal fluctuations in household income. Other sources of irregularity include festival seasons, educational cycles (D. Collins et al. 2009, 39-42), day labor availability, and even international demand where jobs are tied to product exportation. Some income irregularities may be seasonal; some may be unpredictable.

In addition to seasonal dips and jumps, incomes of the poor are also *unpredictable*. The poor seldom perform consistent and protected jobs. They work day jobs that can be discontinued at any time, labor-intensive jobs with no insurance to protect them should they become injured or ill and unable to work. Even seasonal irregularity may be unpredictable, depending on weather patterns, international events, economic fluctuations, etc. Consider the situation of Pumza, a rural shop owner in Collins' financial diaries study who gives occasional credit to customers and has no means of regulating or demanding their repayment (2009, 39-40). Since she cannot control or predict when her customers will pay their credit, she has difficulty predicting her income and planning her finances. Variable prices of goods (both bought and sold), health needs, and variance in crop yield all make the poor's incomes unpredictable and therefore difficult to manage. [11]

[11] By presenting the financial goals of poor households and challenges to achieving them as such may be a bit artificial. In reality, the logic may be the other way around: poor households may focus on consistently meeting daily needs because trying to maximize income over time is unrealistic given the above challenges. The literature

Poor households must deal with unplanned expenditures as well. Financial emergencies come about as the result of other emergencies such as sickness and injury, crop failure, extreme weather, government instability, and other risks. Not only do the poor usually live in areas more geographically vulnerable to these events, the events themselves are much more likely to result in financial emergency among households with limited social and financial safety nets, i.e. the very poor. In the Collins financial diaries study, 56% of households experienced some kind of financial emergency within the research year (D. Collins et al. 2009, 68), and none held insurance policies.[12]

Even if it were not for the above emergencies, holding onto money would be a difficult task for the poor. Inasmuch as savings means avoiding unnecessary expenditures, for the poor it also means denying oneself things that others take for granted (Banerjee and Duflo 2007, 22). Inasmuch as saving involves finding a safe place to store cash, it consequently means getting that cash out of one's own reach. Most poor homes structurally do not have safe keeping spaces and are forced to save money in jars, under mattresses, and on high shelves. They are then faced with the dilemma of having to deny themselves simple and even basic items in order to save, even while the savings sits very accessibly and visibly on the shelf in front of them. Thus, self-discipline is the most basic among many challenges saving. The following section addresses the methods the poor use to try to overcome these challenges.

B. Financial Management Strategies of the Poor

In his foundational essay on *The Poor and their Money*, Stuart Rutherford states, "Managing money well begins with hanging on to what you have. This means avoiding unnecessary expenditure and then finding a safe place to store whatever money is left over" (2000, 6). Poor and rich alike must ensure the availability of large-enough sums of money[13] for emergencies or

does not attempt to explain which causes which, and it will have to remain for future scholars to attempt to unravel the "chicken-and-egg" relationship between the two.

[12] Some diarists in South Africa held funeral insurance, which was a help in covering funeral costs in the case of a family member death. However, these emergencies were only xx% of the total. No other insurance was reported.

[13] "Large" is a relative term in this context. The sums of money for which one needs credit or savings are large only in relation the sums of money one normally has available through regular income. A sum of money for which I may need to save for years may be the amount that someone else spends at the spa each month. Since the term "large" is relative, I will call them simply "lump sums" from now on.

for large planned expenditures such as weddings, funerals, furniture or technology, and home improvements. However, the poor must accomplish this “avoidance and storing” (i.e. savings) with small, irregular, and unpredictable inflows of cash, which they must stretch over time to meet their goal of consistent consumption. Jonathan Morduch describes the types of strategies they must employ to do so in two broad categories: income smoothing and consumption smoothing (Jonathan Morduch 1995, 104). The idea behind both categories is that poor households must adjust either their small incomes or their consumption, over irregular and unpredictable conditions, in order to ensure enough funds are available to meet daily needs.

Savings

The simplest and most common savings method is keeping cash somewhere in the house: in pots, under mattresses, between rafters, or on top of the refrigerator. Most households keep their cash at home whether they are saving it intentionally or not, and yet with houses that stand open most of the day and boast few truly secure storage places, it is hard to keep this stored cash a secret. They worry more about family members misusing the funds or, as Armendariz and Morduch have it in their book, “needy neighbors putting claims on surpluses” (2007, 163).

Getting cash out of the house is a common solution to this problem (Armendariz, de Aghion, and J. Morduch 2007). Many poor households place cash in the hands of trusted relatives or friends, called “money guards” in order to avoid the temptation of misusing it, or the risk that it will be borrowed or used by greedy family members.

In response to the difficulties and expense of borrowing, many poor communities create savings groups in the form of ROSCAs, ASCAs, and lending groups.[14] These groups are locally-led savings and lending mechanisms that help members accumulate large-enough sums with the help of group accountability. Most of these mechanisms involve a series of small regular pay-ins to a group who keeps track of payments, and a periodic payout of whatever the paid-in amount was. The difference between mechanisms lies in when the payout occurs in relation to pay-ins, and how this timing is decided (S. Rutherford 2000).

[14] Here, “lending groups” refer to groups where members contribute a set amount of money, which a representative then lends out to others with interest and distributes as profit to the original contributors.

Collins and her colleagues describe another saving mechanism: traveling "savings sharks" (my term) who collect cash savings deposits (22). These savings sharks may be local village members with a safe, or may be entrepreneurial outsiders who visit several villages on rotation. They visit their clients regularly collecting deposits of savings, which they guard for an agreed-upon period of time, and return minus a certain flat fee or percentage. In other words, many poor savers are paying to save. This phenomenon illustrates the difficulty that many poor households experience in accumulating lump sums. Savings sharks are a flexible, accessible (depending on particular savings-collector practices), and relatively risk-free, all of which are characteristics that poor households with little access to formal banks cannot otherwise find in a savings product. The practice of paying to save may seem ridiculous to savings account holders in developed countries, but when the option is not saving at all or subjecting savings to real risk, it can be a reasonable way to fill a real market failure in un-banked rural areas.

While MFIs traditionally pride themselves on serving the poor where formal banks do not, the vast majority still do not offer savings.[15] This is due largely in part to the hefty price of a deposit-taking license, as well as increased bookkeeping and reporting rigor. In addition, the staffing limitations and financial returns that make savings expensive for banks apply to MFIs as well. Holding money for someone else seems like it should be easy, but as Armendariz and Morduch imply, it's cheaper to lend a dollar than to collect one (2007, 165). Especially if it's only a dollar (or less), upon which interest is paid.

Income-smoothing strategies

Aside from savings, two other strategies are used to ensure that daily needs are met. The first is by adjusting incomes, or "income smoothing," an idea that Jonathan Morduch first published in 1995. In this article, he defines income smoothing as "making conservative production and employment choices, and diversifying economic activities" (Jonathan Morduch 1995, 104). In other words, the poor construct their own safety nets. His example of this phenomenon is poor households' general aversion to crop diversification. Poor households often avoid the potential

[15] Data on MFIs in Nicaragua show that fewer than 30% offer savings products of any kind, and most of these were institutions that have larger average loan balances, indicating a wealthier client base. Compiled from http://www.mixmarket.org/mfi/country/Nicaragua.

risk of planting new, more lucrative crops and stick with the traditional consumption crops. This way, they avoid the risk of losing a potentially large investment if the new crop fails; even as they also forgo potential additional profit from the cash crop sales, off-season sales, and diet diversification (Jonathan Morduch 1995, 110). For the poor, ensuring that daily needs are met means income smoothing: in other words, being risk averse.

Collins poses the question of whether or not formal sector jobs can serve as income-smoothers for otherwise agricultural or seasonal workers. She discovered that formal-sector jobs are often as risky, or more risky than farmers' crop diversification and are avoided for similar reasons. Leaving one's small or incremental income for a formal sector job is risky in itself. If the company goes bust, if you get injured, fired, or cut down to part time (common for low-paying rural jobs), you may be worse off than before, having cut ties with previous employment (D. Collins et al. 2009, 43).

In the end, taking on risk can be much more damaging to poor households than what they lose by not maximizing profits. With no safety nets (i.e. imperfect markets), a lost job or failed crop may mean going without food, poor health, and forfeited education. Were the poor operating in perfect markets, they could borrow, save, and insure these risks away, but even with the growing microfinance markets of today, this is rarely the case ((Jonathan Morduch 1995, 106). In the end, the poor would rather trade off wealth for smooth consumption (Jacoby and Skoufias 1997, 312).

Consumption-smoothing strategies

If income smoothing helps poor households avoid risks and shocks before they occur, then consumption smoothing serves to mitigate effects of shocks themselves (Jonathan Morduch 1995, 104). Households of all income levels do this by borrowing, drawing on saving or insurance, taking credit, and accumulating or drawing down physical assets.

However, the poor often do not or cannot use the best and most efficient financial management services. Their financial goals differ from those of the wealthy (permanent income hypothesis vs. daily needs), and the amounts of money they engage in these mechanisms is small. Therefore, formal financial institutions are either too expensive, their products are not designed to meet poor households' unique needs, or their services are inaccessible. While many poor households do use formal financial services, they seldom meet their financial needs well.

Most rural households supplement inadequate or inaccessible formal financial services with informal consumption-smoothing strategies. While these strategies tend to insulate them from the most violent shocks, they often fail to achieve consistent consumption over time (Kazianga and Udry 2006). Households may be forced to draw on productive assets in times of shock, including livestock or children's labor, thereby effectively deepening the impact on the household's long-term financial health (Jacoby and Skoufias 1997).

The following is a list of consumption-smoothing strategies, both formal and informal, that poor households employ, with descriptions of how well each meets their consumption-smoothing needs.

Formal loans are by far the most common, and the most expensive, of the available options since banks, microfinance institutions, and NGOs have active lending programs in most rural areas. While often the only way to access large sums of money, formal loans can be cumbersome and difficult to qualify for. Once obtained, they usually come with a hefty interest rate of 30 – 100%, including service and penalty fees. Formal loans are sometimes the most useful, but rarely the friendliest option.

Loan sharks and less-poor neighbors are usually willing to offer informal loans, for smaller amounts of money. These loans are highly accessible, sufficient for most small emergencies and investments, and flexible. There is some relational risk if the borrower is slow to repay, but testimonies show that adjustments can be made easily enough and that a neighbor or local lender is generally far more understanding than a formal loan collector when payments become difficult. Pricing on informal loans can range anywhere from free to the market lending rate.

Buying on credit is another common consumption-smoothing strategy. Corporate retail representatives often travel to rural areas to sell clothing, bedding, furniture and electronics, and then return periodically to collect small payments at high interest.

Prioritizing spending can also be a consumption smoothing strategy. A recent study by Abhijit Banerjee and Esther Duflo reveals how poor households prioritize and spend money on a daily basis (2007). The study surveyed and compared household financial behaviors in 13 countries. These studies revealed that the very poor (those living on less than $1.25/day) only spend 56 - 74% on food, and that there was an inverse relationship between depth of poverty and amount spent on food (2007, 5). In other words, the very poor do not necessarily spend extra marginal amounts of income on food. The study even suggests that even those households who struggle to eat enough may forfeit an improved diet in order for TV sets, radios, bicycles, or celebrations, things that may be considered luxuries in comparison to food, but are still important in the long run.

The Banerjee and Duflo study suggests that priorities of consumption, which could be called priorities for money management at all, vary across cultures, which brings us to our next issue: the role of culture in poor households' money management strategies.

C. Economic Culture

We have seen that the poor manage their money in sophisticated ways and that they employ a variety of financial tools in order to do so. Now we turn to the question of how the poor choose among the variety of financial tools available to them. Do they choose according the most cost efficient tools, as classic economic theory would suggest? Or, are their choices less rational? Are their choices determined by culture?[16] The following section will address the relationship between culture and financial behavior and explore what academics within microfinance, anthropology, and economics have said about that relationship.

Before discussing the relationship between culture and financial behavior, we must first define these terms. By "culture", I do not mean what is often deemed "high culture", namely visual and performing arts, music, and literature. Nor do I mean culture in the anthropological "thick description" of culture: all the ways people and things interact within a society that creates

[16] The same questions could be asked (and should be asked) of wealthy consumers as well. In fact, most of the scholarship discussed in this section does not discriminate between wealthy or poor. However, since the practical application of this paper is tied to the poor through microfinance, discussion of financial behaviors will be framed in terms of the poor, at least for now.

identity and sense of place (Huntington 2000, xv). Here, we shall use a definition taken from Samuel Huntington (Huntington 2000, xv) and Luigi Guiso (Guiso, et al. 2006, 1): *culture is those customary beliefs, values, attitudes, orientations, and underlying assumptions that are passed down from generation to generation within a society*. In other words, culture is the set of underlying factors, common across a society, that influence individual and corporate behavior.

As to the "behavior" part of the definition, we shall concern ourselves primarily with those behaviors that have to do with making, spending, or managing financial resources. In other words, we shall discuss economic culture: *the set of beliefs, values, and attitudes that influence the* economic behavior *of individuals, organizations, and other institutions* (Porter 2000, 15). While the same underlying beliefs, values, and attitudes influence other behaviors as well, economic behavior will remain the primary focus of this paper.

Foundations of scholarship on economic culture

The conversation about economic culture has been going on for hundreds of years. In the 19th century, scholars focused on explaining national economic development. Among the first to use culture to explain economic development as a function of culture were Alexis De Toqueville with *Democracy in America*, Max Weber and *The Protestant Ethic and the Spirit of Capitalism*, and Edward Banfield with *The Moral Basis of a Backward Society* (about the cultural roots of poverty in Southern Italy). These writers established the cultural categories commonly used in current scholarship economics and culture.

Where does culture come from?

But before examining how culture influences financial behavior, we must first ask where culture comes from. Since we have defined culture as factors that are passed down through generations, then we shall describe the way in which these factors are passed down as vehicles. And the two most commonly-cited vehicles are religion and history.

Many scholars assert that economic development (as increase in consumption per person) correlates with religious societal beliefs. Many scholars point to Protestantism, and even Calvinist Protestantism as catalyzing cultures prone to economic development (Rangel in Harrison, 32; Weber 2002). They argue that Protestantism promotes values such as hard work, individualism and, long-term planning, as opposed to traditional values like family, immediacy, and fatalism. The fact that the most obvious cultural lines are largely drawn near religious lines around the world makes religion a subject of much investigation as a vehicle for culture. In addition, religion itself is not a value, but a comprehensive system of values that include and influence the cultural vehicles as well. Culture comes from religion.

Second to religion, history is considered the next most influential cultural vehicle. Through historical events that impacted entire nations, patterns, behaviors, and beliefs were formed. Lawrence Harrison explains culture through historical vehicles in his book, *Underdevelopment as a State of Mind.* He cites the *caudillo* system in Central America and the slave trade's effect on certain African societies as prime examples of this relationship (Harrison 2000). The Spanish *caudillos* not only controlled the land they owned, but the residents, productive assets, commerce, and civic life on that land as well. Cuban-born journalist Carlos Montaner claims that this system infused Latin American culture with a propensity to categorically revere those in power; to consider wealth as inherited, not earned; and to pursue success through proximity to or goodwill from a person in power (2000, 60).

Another example of historical impact on cultural formation is the slave trade's effect on Africans (both inside and outside Africa). The argument holds that slavery destroys the motivation to achieve (Harrison 2000, 25). On another level, the inter-tribal slave hunting and trading within sub-Saharan Africa contributed to Africa's current struggle with civil war. Culture comes from history.

What cultural factors matter?

Scholars who address the issue of culture generally agree as to which cultural qualities are development-prone and which are development-resistant. Argentinean writer Mariano Grondona provides the most comprehensive list of these "contrasting cultural factors" in *A Cultural Typology of Economic Development* (Grondona 2000). His complete list is 20 factors long, but I shall only list the six most theoretically broad and those most often referenced elsewhere in the literature. These are:

- ***Religion***: Weber identified Protestantism (and especially Calvinist Protestantism) as the root of capitalism because of its emphasis on independent hard work. In largely Catholic societies, the poor are considered justified, and the rich often feel guilty. In largely Protestant societies, the poor feel inadequate and the rich feel blessed; therefore, both rich and poor have incentive to improve their economic situation (Grondona 2000, 47).
- ***Concept of wealth***: In development-resistant cultures, wealth is generally seen as something granted through inheritance, connections, luck, good fortune, or justice, whereas in development-prone cultures, wealth is something that one creates through hard work.
- ***Notion of justice***: Development-resistant cultures tend to prefer the kind of justice that benefits the individual at the present time. Development-prone cultures tend to see justice in light of the precedence it will set for others and who may benefit in the future.
- ***Value of work***: Related to the protestant/catholic divide are differing views of work. In resistant cultures, work is usually considered a curse, whereas in development-prone cultures, work is considered a privilege at the most, and a viable means to wealth attainment at the least.[17]
- ***Time focus***: In development-prone cultures, there is generally a focus on the immediate future and one's ability to influence it; development-resistant cultures tend to focus more on the past or the distant future, both out of one's sphere of influence.
- ***Life view:*** Development-prone cultures tend to view life as something to make happen, whereas development-resistant cultures view life as something that "happens to you."

Italian economist Guido Tabellini provides an alternate list of important economic cultural factors. This list describes *trust*, *respect* of others, and *control* (how much one feels in control of one's destiny) as development-prone cultural traits. *Obedience* is the only development-resistant characteristic in his list, as it supposedly undermines the benefits of the other three. In comparison to the Grondona listing and others like it, trust and respect of others are similar to

[17] Grondona points out that this divide can be seen as far back in history as the ancient Greeks, who considered the highest privilege to be a philosopher, and that only those less intelligent or less fortunate would need to perform manual labor (50).

Grondona's "notion of justice", control is comparable to Grondona's life view, and obedience (as Tabellini describes it) can represent the antithesis of each. Other scholarly lists of development-prone or development-resistant cultural characteristics generally look something like one of these two (See Johnson and Lenartowicz 1998, 3; Guiso, Sapienza, and Zingales 2006).

Nicaragua's barriers to development

Applying similar cultural categories to Nicaragua in particular, Dr. Emilio Alvarez Montalván, former foreign minister of Nicaragua, provides perhaps the most unflattering list of them all. He concluded in an unpublished essay that, "The country's failure to find democratic stability, its proneness to violent political confrontation, is rooted in traditional values that can be traced back to the colonial period and are still dominant to this day" (in Harrison 2000, xxvii). His list of Nicaraguan-specific cultural characteristics looks familiar to the general list above.

- ***Personalism***: Focus on personal benefit above that of the community.
- ***Authoritarianism***: Vertical patron/client tendency in all human relationships, especially politics.
- ***Familialism***: Where family is defined in degrees as an ever-increasing circle around the nuclear family, what is outside the "family" is either inconsequential or inimical.
- ***Patrimonialism***: Belief that the person in power has complete control of the state and all its inhabitants and resources.
- ***Fatalism***: Whatever happens in life is more or less predetermined; individuals have little control over their lives.
- ***Short-term time focus***: Political actions are taken to maximize short-term benefits, not long-term benefit.

Does culture affect economic behavior?

Whereas traditional literature has explored cultural trends in relation to national economic trends, anthropologists and economists have recently begun to study how beliefs and attitudes influence individual financial *behaviors*. However, their work tends to focus on individual beliefs and attitudes, rather than society-wide beliefs and attitudes, as influencing financial behavior (Guiso, Sapienza, and Zingales 2006; Harrison 2000; Johnson and Lenartowicz 1998) Michael Bauer's is perhaps the most prolific writer on individual financial behaviors. In *The Behavioral*

Foundations of Microcredit, he describes research that correlates how much women value future over present gains and with their savings practices. He found that women who greatly discounted future gains were more likely to borrow from formal institutions and less likely to save at home (2008). These findings and others like them attribute financial behavior to individual traits, not cultural traits, but combining the literature about cultural characteristics with these findings creates an academic bridge linking culture with financial behaviors. For example, Bauer's finding that women who value present gains over future profits take more credits might be a cultural, not just individual, trait in some places. There is certainly more room for research that looks at this connection directly.

The nil argument

While scholars generally agree as to which cultural characteristics correlate with economic development, they disagree strongly about whether and to what degree those factors *determine* economic behavior. Many argue that culture's influence on financial behavior is nil. Marguerite Robinson asserts that the poor make rational choices about financial tools independent of cultural bias (Marguerite Robinson 2009). She claims that all cultures, societies, nations, and individuals look for four things when choosing financial tools: *security; convenience (location & timing); liquidity; and helpful, friendly, respectful, and knowledgeable service.* Indeed, when first-world banks offer services like free checking, FDIC insurance, online banking, and a range of other services, it is these criteria they are trying to meet in order to attract customers.

If these basic criteria for quality financial tools are the only determinants of financial product choice, we should expect to see roughly the same financial services all over the world. However, we actually see a wide variety of financial products on the market that attempt to meet these criteria in different ways. It is not new to financial institutions that products must be tailored to meet clients' particular needs in a certain context. This is Marketing 101. However, even Marketing 101 encounters the question: how much are client behaviors determined by rational economic choices, and how much by cultural beliefs, values, attitudes, and assumptions?

Those arguing for a null relationship between culture and behavior claim that it is impossible to distinguish the influence of culture from other influences on behavior, and is therefore weak as a sole explanation for behaior (Uvin 2009). There is no society without culture that we might study as a control, and there are no two societies with exactly the same culture that we might set against each other and test the influence of other factors on societal patterns of behavior.

Cultural determinism

Others argue that culture determines behavior. One oft-cited argument are diasporas' similarities to host cultures. Certain cultural stereotypes seem to reflect their home culture even as immigrants in foreign lands: the Chinese as highly successful in academics, music, and technical professions; the Jewish Diaspora as financially successful wherever they have settled, and Central American emigrants as poorly educated laborers (Sachs 2000, 41). Even outside of the region and policies of their origin, these cultures have largely maintained their defining characteristics.

The quintessential expression of cultural determinism is *Guide to the Perfect Latin American Idiot* (Mendoza 2000). The books argument can be summed up in this quote by its authors: "In reality – except for cultural factors – nothing prevented Mexico from doing what Japan did when it almost totally displaced the United States' production of television sets" (Mendoza in Harrison 2000, xix). This and arguments like it claim that national economic development and individual financial behaviors are almost, if not completely, determined by cultural factors such as those listed above specific to Nicaragua, but common across Latin America as a whole.

Culture and Institutions

Here, the arguments about cultural influences on behavior take an interesting turn. Many scholars argue that culture is only one of the factors that influences widespread patterns of behavior within a society. The other important factor is institutions. Let us pause briefly again for a definition. By "institutions" in this context I mean all the formal and informal organizations, social and public rules, as well as private institutions that make up the social, political, civic, and public structure within which people operate in a society. Institutions can influence behavior as well, goes the argument, and possibly even culture.

Never culture alone

Amartya Sen represents this point of view in his book chapter, *How Does Culture Matter?,* a direct response to the views in Harrison and Huntington's previously published book: *Culture*

Matters. In it, Sen claims that cultures are not the only factor that influences behavior and identities. In fact,

> "Other things, such as class, race, gender, profession, and politics also matter, and can matter powerfully. Our cultural identity is only one of the many aspects of our self-realization and is only one influence among a great many that can inspire and influence what we do and how we do it. Further, our behavior depends not only on our values and predispositions, but also on the hard facts of the presence or absence of relevant institutions and on the incentives - prudential or moral - they generate" (2000, 43).

Sen warns that to claim that culture is the only (or even the primary) determinant of behavior, and to define these cultural boundaries too broadly, is to risk dangerous discrimination on par with Jim Crow segregation or the Holocaust (2000, 45). Not only is cultural determinism intellectually lazy he says; it can be dangerous.

Culture responds to institutions

Michael Porter has observed that of the factors that comprise culture, beliefs about "how to win" are the most important in determining economic behaviors (2000, 21), and he links this idea to national economic development. According to him, individuals' beliefs about how to get ahead, get rich, or achieve power determine whether or not a society as a whole actually does. Under-developed societies generally believe that connections, luck, bribery, and selfishness are the way to win; whereas highly developed societies generally consider hard work, action, and the good of the community winning strategies.

Samuel Huntington writes about culture as greatly influenced by the institutions within and around it (2000, xv). In addition to policy, claims Huntington, cultures change in response to shocks, a type of institutional change. After World War II, he claims, Japan and Germany went from "two of the most aggressive societies in the world to two of the most pacifist" (2000, xv). Japan's savings rate also increased dramatically after the wars, we may say in response to need and to how they were going to be able to "win" (in Porter's language) within the new institutional environment in which they found themselves. What was once considered embedded cultural behavior was changed.

Culture and institutions together

Independent of Sen's warning, but in seeming response, Tabellini suggests a compelling third theory about how culture affects economic outcomes. In his analysis, culture alone does not influence economic outcomes; neither does it determine institutions and behaviors, as Harrison and Guiso suggest. The relationship Tabellini suggests is one in which history influences economic outcomes through the channels of culture and institutions. Tabellini's model compares European countries along lines of historical development and the cultural values of trust, respect, control, and obedience. His regressions that control for all of these factors suggest that positive cultural values[18] are significantly positively correlated with stronger economic performance, but only when controlling for early political institutions in each region. He concludes that neither culture nor institutions are exclusively responsible for economic outcomes, but do robustly explain the difference in economic outcomes when considered as tandem forces (2005).

Therefore, perhaps a more accurate description of the relationship between policy and culture is that they interact. Surely cultures influence the institutions they create, but institutions can also change, either intentionally or through shock, changing the payoff structure and therefore the culture over which they hold influence.

Culture and Microfinance

These theories have some very practical applications in Microfinance. The simple idea that cultural preferences can influence behaviors has produced some innovative new products to try to encourage lucrative savings products around the world. And these products in themselves provide a strong argument that culture does influence behavior: some products take off in one context and in another fall flat. The following are a few examples.

Lottery-led savings is one product that has been wildly successful in certain areas, but not in others. Marguerite Robinson describes how BDB in Indonesia crafted a savings product where instead of interest, the bank holds a monthly lottery where customers are given a number of tickets dependent on the amount of money held in their savings accounts. Robinson describes the process in her book, *The Microfinance Revolution.* Describing what may be called the cultural genius of the product design, she says the owners were...

[18] As indicated by responses on the 1999-2000 World Value Survey.

> “... inspired by their knowledge of the psychology of smaller savers. They perceived that many poor people in Bali, as in other places, are attracted to gambling as the only possible means of escape from poverty. The (owners) sought to transform this widespread interest in gambling by removing the lottery risk for participants, while encouraging them to save in BDB. (2002, 158)”

This lottery-led savings has worked among the poor in Indonesia, Haiti, and other societies where lotteries are already a part of the economic culture. But it has not taken hold in societies where gambling is taboo, or simply not seen as a viable way to escape poverty.

Group lending was the basis of microfinance design in Bangladesh, and was for years considered the only “right way” to do microfinance. However, group lending in Afghanistan was much less successful, and in ways even harmful for participants. In one particular attempt, informal mechanisms were already meeting the target community’s credit needs, so they were encouraged to take loans they did not need. It was also culturally inappropriate. Women suffered embarrassment and became further indebted because they were uncomfortable with the group format of repayment (Kantor and Andersen 2007). While the group format in Bangladesh helped ensure repayment and provide credit for many clients, the same product in Afghanistan served mostly to shame women and burden households with unnecessary debt.

Conclusion of the Literature

Looking at culture can help explain differences in behaviors, both on a national level and on the individual level. However, culture alone does not sufficiently explain these behaviors. In order to understand financial behaviors and where they come from, we must examine culture alongside institutions and history as well.

The following section describes the findings of the Rivas study. These findings are an example of one pattern of financial behaviors. The analysis section then explores how relevant cultural, institutional, and historical factors influence these behaviors. Lastly, I give a few short recommendations as to how MFIs and NGOs might apply these lessons to provide better financial services to the poor.

V. Findings

The Rivas financial diaries revealed valuable information about the participant households, capturing preferences, attitudes, and habits around financial management. The daily diaries, reveal a piece of the annual cash flow puzzle, and the qualitative interviews depict what the other pieces of the puzzle might look like. The interviews also provide explanations as to which financial tools participants prefer, which they use the most, and (most interesting of all) which they do not use. Even though a larger-scaled year-long study would provide more accurate information in all of the above areas, this study can serve as a useful starting point for future research, and it provides a valuable contribution to conversations around financial service provision for the poor today.

Findings reported below fall under three categories: (1) financial objectives, (2) financial services (formal and informal) used and why, and (3) savings not a principle strategy.

A. Rivas Financial Objectives

Before studying how households manage their money, I first gathered information around what kinds of financial goals they were trying to meet. If, as Meng and Morduch claim, poor households must be able to put food on the table every day before they can begin to worry about more long-term financial goals (see Financial Objectives), the poorest households should have reported the most basic of goals, and the wealthier should have displayed more long-term financial goals. In fact, this is what interview data revealed.

When asked, “What do you hope for your family in the next 5 years?” The 5 poorest of the 7 households responded, “to move forward.” When asked what it would mean to have “moved forward”, the answer was having enough food and not having to worry about where it would come from. Most of these participants mentioned that they would also like their children to attend school but mentioned nothing about them completing high school or college, or obtaining a career. Overall, their objectives were to have daily needs met.

The two households that did not have trouble putting food on the table identified their goals as improved health, education, and secure employment. These households were also both from San

Marcos and both those in which the woman was the primary income earner and financial manager. These households' goals were not only to send their children to school, but that their children *se preparen*, which implies getting a degree that prepares one for a well-paying job.

All households identified paying off their Agros debt and owning the land they now worked as a primary goal. When asked what this would mean for them, they responded that they wanted to leave the land to their children. Interestingly, only about half of the respondents added that they hoped their children stayed on the land and worked it; others thought of it as an asset that their children could use as they wish.[19]

B. Rivas Financial Strategies

Qualitative interviews revealed respondents' attitudes about formal and informal financial tools (see In-depth Initial Interviews). From these questions, it became clear that respondent households have clear and relatively uniform criteria by which they measure potential financial tools. As a side note, these criteria differ some from Robinson's generic criteria listed earlier. Hers are criteria for formal financial services, whereas these are criteria for any financial too, formal or informal. The study findings show that one is often a better fit than the other. Respondent households make decisions about financial tools based on the following criteria:

Criteria for Financial tools

***Accessibility*:** How quickly and easily one can access lump sums of money. The poor have frequent and unpredictable needs for cash, and they also want to have control over money they call their own. Therefore, accessibility was the most commonly cited criteria for lump sum accumulation. Both savings and loan disbursements should be physically close by and easy to withdraw (e.g. low waiting periods for loan approval or minimum balances to be maintained). Informal financial tools best fit this criterion. However, some respondents also cited accessibility as a risk. If savings are too accessible, they are more likely to be used for purposes other than that for which they were intended.

[19] This finding is in stark contrast to the respondents from Matagalpa. The majority of families there are actively training their children to work the land (sometimes at the cost of a formal education), and hope that the land stays in their family for generations.

Sufficiency: An ideal financial tool must be able to provide enough money for the intended use. Many respondents reported difficulty qualifying for a large loan sum from a formal lender, and yet the only loans they could qualify for (formal or informal) would not yield a lump sum large enough to meet their needs.

Flexibility: Financial tools should feature flexible schedules for lump sum accumulation (either loan payments or savings deposits). Both savings and loans require payment, either as deposits or loan balance payments. The Rivas respondents appreciated tools where these payments were not rigid, but could be made when they had money available (see Figure 4: Monthly Income Level rankings).

Collateral Risk: Study participants were concerned with risk to two kinds of collateral: relational and physical. Relationships can be at risk in savings arrangements where money is guarded by a friend or placed with a ROSCA. In both instances, there is risk of the deposit holder breaking trust, which could potentially damage his or her relationship with the depositor. Relationships can also be at risk in informal lending (e.g. failure to pay back a loan to a friend), as well as in formal lending agreements where co-signers are required for a loan. Physical collateral is put at risk in formal lending agreements where banks require it for a loan.

How do the tools stack up?

Because the poor have criteria in mind when selecting financial tools, not only do the options available to them become elementally important, as Michael Bauer and Jonathan Morduch observed Figure in *Behavioral Foundations of Microcredit* (Bauer, Chytilová, and J. Morduch 2008, 7), but the options available *that meet the above criteria*. For the Rivas participants, the financial tools available are formal loans, loan shark loans, retail credit, savings at home, savings groups, money guards, and ROSCAs/ASCAs. Here's how these financial services stacked up for the Rivas participants.

Borrowing

Formal Loans*:* Most participants considered a formal loan best for large and long-term needs, such as business and agricultural investments, since it is the only kind that meets the sufficiency requirement for these needs. However, respondents reported avoiding formal loans for other lump sum needs, as they tend to fall short on all four of the above criteria. They are usually inaccessible (requiring long applications, trips to town, and sometimes a waiting period), can be insufficient (without a long borrowing history with an institution, it can be difficult to qualify for a larger loan), inflexible (most formal loans carry strict repayment schedules with penalties for both early and late repayment), and they often incur collateral risk of one or both kinds either by requiring physical collateral deposits or a cosigner for the loan.

Individual Loans*:* Less-poor neighbors are usually willing to offer informal loans, which meet the majority of the above criteria and are vastly preferred by the Rivas respondents when smaller lump sums are required. These loans are highly accessible, sufficient for most small emergencies and investments, and flexible. There is some relational risk if the borrower is slow to repay, but respondents report that adjustments can be made easily enough and that a neighbor is generally more understanding than a formal loan collector when payments become difficult. Pricing on informal loans can range anywhere from free to around the market lending rate.

Retail Credit*:* Buying goods on credit is extremely common among the Rivas respondents. Usually a credit purchase is tendered by a sales representative who visits customers at their homes, selling transportable goods like bedding, shoes, clothing, medicines, and other small items. However, retail stores often provide credit as well, which in Rivas are usually electronics. The arrangement satisfies the availability, sufficiency, and collateral risk criteria nicely, and only falls short in flexibility, since repayment schedules are strict, and delinquent payments incur not only high fees but can ensure the buyer frequent and embarrassing visits from the collector. Buying goods this way can cost up to 100% more than the base cost of the item, even before late fees and commission. Still, its convenience makes it a widely-used financial tool.

In sum, study participants generally preferred different tools for different needs. Participants reported benefits to formal and informal lending when large sums are needed; however, they saw no benefit to borrowing small sums of money from formal lenders. Figure 5 describes how the Rivas respondents viewed formal vs. informal lending for small and large sums.

Figure 5: Formal vs. Informal Lending for large and small sums

	Formal	**Informal**
Large sums	Less risk to relationship Capacity Longer term Ag investments	Flexibility No collateral required No interest No risk to collateral
Small sums		Flexibility No collateral Immediate availability Cheaper

Saving

Savings at home: While this method meets accessibility and flexibility criteria remarkably well, it rarely results in a sufficient accumulation of capital. Collateral risk to the cash itself is high due to temptation, revealing that perhaps too much flexibility and accessibility can be hazardous. Relational risk can also come into play when saving cash at home. The Rivas respondents all commented on the overwhelming temptation to use household savings on daily expenses. One respondent confided, "My son eats nothing but rice and beans most days; when the neighbor is selling homemade candies and I have enough coins on the shelf to buy him one, how can I tell him no?" The temptation to misuse home savings can be strong and come from many sources.

Surprisingly, none of the Rivas respondents reported worrying about theft, although it would be naïve not to include it as a risk in general. Participant Berenice reported having her house robbed several years earlier, resulting in loss of over $245 USD, plus household items.

Neither loan sharks nor savings sharks were apparent in the Rivas study, most likely because of the low demand for savings products in general.

Money guards*:* In reference to the four criteria, this method performs fairly well where keeping cash at home fails. It is both flexible and accessible if the money guard doesn't live too far away, and poses little collateral risk to either property or relationships. The only criterion a money guard cannot meet is sufficiency, since the saver's discipline in saving is the only accumulator of funds. Also, money guards may impose a small fee for providing the service (Daryl Collins et al., 22). Amongst Rivas participants, only two participants reported ever having used a money guard, but neither were using one at the time.

Figure 6: Formal vs. Informal Savings

Formal	**Informal**
Safer Accumulates interest Harder to get at (decreased moral risk) Best for large sums	Accept small amounts Not susceptible to economic shocks

ROSCAs and ASCAs: Designed and run by members of a local community, these groups can meet all four financial product criteria, if the group runs well. However, they can also be unreliable, at risk of corruption, invasive of privacy, and relationally risky. In fact, none of the Rivas respondents reported having had a positive experience with an informal savings group. Joel & Alejandra had attempted to save through an ASCA that lent to outside members, only to lose all of their capital to a borrower who did not repay. The others never mentioned having considered it.

Which tools are Rivas households using?

The above analysis of financial tools gives us an idea as to how available financial tools stack up against the criteria established by the respondents. So what financial tools are they actually using? The following chart lists the financial tools that the Rivas respondents reported using during the research month. The tools are listed in order of most to least used. Physical assets are included because these are generally considered to be a form of savings for poor households (although all respondents described their physical assets as either possessions or investments; not as a savings repository).

Figure 7: Financial tools (most common to least common)

		Financial Tool	**Number of Households reported using**
Assets	*Physical*	Furniture/electronics	6
		Land*	5
		Agricultural equipment	4
		Animals	4
		Transportation	2
	Financial	Interest-free loans out	2
		Goods supplied on credit	2
		Pre-paid insurance	1
Liabilities		Agros land loan	6
		*Pulpería*** credit	5
		Agros loan (non-land)	5
		Individual interest-bearing loans taken	3
		Buying goods on credit	3
		MFI loan (agriculture)	2
		Wage advance	2
		Funeral home credit	1
		Individual interest-free loans taken	1

* THOSE WHO HAVE ALREADY PAID OFF A PORTION OF THEIR LAND CAN CLAIM THE PAID OFF PORTION AN ASSET

**. A CONVENIENCE STORE LOCATED IN A NEIGHBORHOOD OR VILLAGE THAT USUALLY STOCKS SMALL AMOUNTS OF A VARIETY OF DAILY NECESSITIES FROM FOOD TO CLEANING SUPPLIES. SINCE THE OWNER IS USUALLY A MEMBER OF THE COMMUNITY, FRIENDLY LINES OF CREDIT ARE OFTEN HONORED.

Because of their relationship with Agros International, each household holds a land loan liability, and all but one household, having paid back a portion of their loan, also hold a portion of this land as an asset. The "Agros Loan (non-land)" category includes 3 loans for cash crop projects (both group and individual), 1 women's group microenterprise project, and 1 individual microcredit loan. Other forms of formal credit include loans from a funeral home for funeral and burial costs, and loans from other MFIs.

Less formal liabilities include buying goods on credit, wage advances, and individual loans (with and without interest). Nearly every family held a running account at the local *pulper*ia. While some paid off their balance regularly, some ran high debts for the whole research month.

Assets include loans given to neighbors or family members, usually with flexible repayment schedules. Goods supplied on credit are either store goods (particularly from Sara, a *pulperia* owner), and prepaid insurance (held by the only respondent with a steady salary, schoolteacher Alba).

Absence of Savings

Perhaps the most important finding from Figure 7 is what is absent from it. None of the Rivas respondents reported using any sort of tool for savings. None of the households reported using formal savings accounts, ROSCAs, ASCAs, money guards, or even savings sharks to save money. These tools are ubiquitous in the literature about poor households' money management, and yet none of the survey respondents were using any of them during the research month.

Some respondent households reported having used savings tools in the past. Joel and Alejandra participated in a lending ASCA a few years prior to the study, but lost all their money when the woman in charge of lending lent to untrustworthy clients. None of their money was recovered. Elias & Laura and Aaron & Marta reported savings money under cushions in their house in the past. Both admitted, however, that the money was usually "withdrawn" before it could be used for its intended purpose. Fernando & Marta said they had considered storing money with a friend, but hadn't done it because they feared not having access to the money in an emergency.

Alba & Hernan's Story

Alba and Hernan had made the most promising efforts at saving. They opened a savings account a few years ago when a bank representative visited their village to promote a new savings product. They signed paperwork, accepted the terms, and deposited the minimum balance of $10 USD on the spot. Unfortunately, it proved nearly impossible for Alba to use the account. Opening the account was the only time the bank representative visited her village, and for Alba to make deposits or withdrawals required a two-hour round trip by bus, at a cost of $3 per trip. Not surprisingly, the only trip she actually made was to withdraw the $10 she had deposited and close the account.

Why not save?

Early on in the field research process, it became clear that the respondents did not save money. In fact, each household expressed that they felt the "should" save, but didn't. Each household considered savings a good idea in theory, but no one was actually practicing it. When asked why they did not save, several households said that they didn't earn enough money to put any of it away. However, every single household said something to the effect of, "We Nicaraguans just don't save."

When asked why they did not save, most simply chuckled and said it just wasn't part of their culture, it was their impetuous nature, or that they weren't educated in savings as children. Alba provided a slightly more insightful answer along the same theme. "Maybe we put too much trust in God," she said. "There's a saying, '*Dios no desampara a nadie,*[20]' and we believe that, so we don't worry about the future." Not saving, according to respondents, is simply a part of Nicaraguan culture.

Could "not saving" really be a national cultural trait? Or does the "we" in "we just don't save," really only refer to poor Nicaraguans? Perhaps it referred only to those living in their village. Perhaps it was a trait unique Agros villages. Or maybe study households were trying to skew results and hide their resources from being included in the report to Agros. In order to find out, I asked other Nicaraguans the same question. Agros Nicaragua staff gave nearly identical answers, chuckles and all, "Oh, well, we just don't save." I asked if any of them had savings, and all shook their heads sheepishly.

I decided to interview the American friend I stayed with on the weekends in Managua. She had married a Nicaraguan man and had been living in the country for over 10 years. I hoped that her outside perspective and knowledge of Nicaraguan culture would enable her to explain the non-saving phenomenon. Surprisingly, she confirmed that non-saving was a characteristic common across Nicaragua. She even shared that her Nicaraguan husband, a government-employed engineer, did not save anything from his paycheck and snubbed any suggestions that he do so.

[20] This phrase has no direct translation in English, although the closest translation would be "God doesn't abandon anyone." Still, the connotation of the world *desamparar* is more than just abandoning, but to leave someone without support or sustenance, even to put someone into poverty. The phrase evokes an image of home eviction. A looser translation would be, "God won't throw you out into the cold."

She and her husband save temporarily for planned large expenditures such as travel and their recently-purchased home. But they have been surprised by emergencies of late and had to borrow from family and friends. Money that he has, she says, is money to be spent.

C. Conclusion of Findings

The data from this study reveals that participant households prefer financial tools (formal or informal) that are accessible, sufficient, flexible, and that minimize risk to social and physical collateral. None of the financial tools that the poor currently use fit all of these criteria. Even though financial security is a goal, and even though they use the available tools that best fit their criteria, these tools still do not yield lucrative financial results. And, they omit savings almost categorically as a financial tool. The next section explores why this might be.

VI. Analysis

In a blog post on May 30, 2008, Jeff Meyer of the New America Foundation asked a daring question: “Is there such thing as a culture of savings?” After traveling around the world researching child savings accounts, he noticed a marked difference in individual savings rates amongst countries. Sri Lankans told him, “We tend to save a lot.” A Pacific Island bank executive confided that, “There is no such thing as a savings culture (here); if you get something today, you’d better consume it today.” Culture seemed to be a common explanation for differences in financial behaviors. However, Meyer was not satisfied with a merely cultural explanation, and neither am I.

Culture is only half the story

Using culture as an explanation for financial behavior is the same as using culture to explain wide-spread societal behavior. For example, when I first moved to the Boston area, I was shocked at how pedestrians disregarded crosswalk signals. Bostonian pedestrians cross the street whenever there was a slight break in traffic, and sometimes even when there wasn’t. Asking a local Bostonian about this shocking behavior, I received an answer that sounded familiar: “That’s just how we do it.” In other words, jaywalking is a part of Bostonian culture.

The problem with explaining any behavior as simply cultural is that there are exceptions to, and usually other explanations for, the behavior. In the case of Bostonian pedestrians, I soon discovered that not all Bostonians jaywalk. A few stand patiently waiting for the signal to turn while other pedestrians stream into the intersection. There is also a good reason for this behavior. Many intersections are wide and convoluted, incorporating up to 6 or 7 streets. Someone in municipal traffic control (who I'm sure also has very good reasons for these decisions), decided to stop all traffic once a cycle and let all the pedestrians cross at once, instead of synchronizing the walk signals with the traffic signals. This makes for long waits at many a walk signal for which most busy Bostonian pedestrians simply do not have the patience.

This, however, brings us back to culture. Pedestrians don't have the patience to wait for the light. This lack of patience could be considered a cultural trait, but is also likely related to the fact that Boston is a hub for professional and educational institutions that require high time commitment and draw highly motivated, over-achieving individuals. Therefore, understanding jaywalking in Boston seems to support the hypothesis that institutions (of education and profession, in this case) and culture interact to influence behaviors.

Our working definition of culture is "those customary beliefs, values, attitudes, orientations, and underlying assumptions that are passed down from generation to generation within a society." All of these things that make up a culture are intertwined with the institutions within which they operate; therefore, Bostonians j-walk because of poorly-timed lights (institutions) and busy personal schedules (another aspect of "culture"), and j-walking has now become a part of New England "culture." Meyer also answered his question with this "both and" conclusion, as did Porter, Tabellini, and Sen.

Culture and Institutions in Nicaragua

If culture and institutions interact, how does this explain the lack of savings in Rivas? What are the relevant cultural characteristics and institutional deficiencies that contribute to this behavior? In the following section, I argue that inadequate institutions, coupled with cultural tendencies, both individual and corporate, have together formed the patterns of non-savings found in the Rivas study.

Institutional Constraints

Rivas study participants lacked access to financial institutions that met their criteria, either those Robinson coined or those resulting from the study. Every one of the financial tools available to them fell short, and those tools that potentially could have worked well were under-provided. The formal banking system has not been able to accommodate the poor's small, irregular, and unpredictable incomes with savings accounts that match these flows. Formal savings accounts require high minimum balances, strict deposit schedules, and/or withdrawal fees. Formal services also do not have offices or representatives in poor areas and are therefore physically inaccessible. This under-provision is undoubtedly due to the high cost of providing these features; nevertheless, the result is that it is very difficult for poor households to save (A good example is Alba & Hernan's Story).

Lack of access to lucrative savings methods is no one's fault or intention: providing financial services to the poor – especially savings – is difficult and costly. Marguerite Robinson's *Microfinance Revolution* (2002) describes how the rural poor are now widely considered the next big market for banking services. Nevertheless, financial institutions still are not able to deliver these quality services, on a large scale, to those who need them. MFIs, NGOs, government banks, and multinational banks have found it cost-*in*effective to provide the kind of costly financial services that the poor need, especially to the rural poor living in remote areas.

Economic forces, which can be considered an institution for our purposes, may also impede the poor's ability to save effectively. If households have saved in physical goods, these may be at their lowest value precisely when most households need to turn them into cash, like after a natural disaster or poor crop yield. Inflation is another economic institution that can devalue physical assets used to save no matter when they are sold (Armendariz, de Aghion, and J. Morduch 2007, 160). These forces outside the households' control make saving effectively difficult.

These institutional savings constraints are more or less common to poor households around the world. Others are unique to Nicaragua. Since so few Nicaraguan MFIs offer savings products, the poor have very limited opportunities to access lucrative savings, even if they wanted to. A big part of the problem is, however, that many do not recognize the importance of saving – even those who do have access. This brings us back to the cultural question.

Cultural Constraints

Inadequate institutions, financial and otherwise, play a large role in barring the poor from lucrative savings methods. However, these institutional constraints are universal. Poor households all over the world struggle with these constraints to more or less the same degree[21] – yet they do not deal with these constraints in the same way. In many parts of the world, poor households create informal savings institutions to compensate for formal institutional constraints. While these do not meet all of their criteria for financial services, they usually fit the accessibility criterion so well that failings in other areas are readily overlooked. However, informal savings mechanisms are virtually unknown to the Rivas study participants. Why? Here, culture can provide a helpful explanation.

Of the characteristics in the literature identified as barriers to Nicaragua's development, four are particularly helpful in explaining the phenomena of non-savings: fatalism, short time-focus, religion, and concept of wealth.

Fatalism: Just as much as savings requires a belief that the best days are ahead, it also requires a view that one is powerful to do something about that future. In the first round of interviews, participants were asked what they would do to support their family if their primary livelihood were somehow destroyed. The most common answer (over 60% participants) had no idea or responded that they would simply wait for external actors to rescue them, indicating that they believed they had little influence on the outcomes in their lives. If life is something that primarily "happens to you", then saving or not saving will have little value. In order to be motivated to save, one must believe that it can impact the future.

Short time-focus: Nicaraguans are known for being impetuous (socially, financially, and politically). In interviews with both Matagalpa and Rivas households, participants' vision for the future rarely lasted beyond daily considerations. Only the most educated considered goals beyond daily survival. A focus on the immediate future means that the most important thing

[21] Assuming that all poor rural households lack access to formal financial services and struggle to find lucrative savings methods. An interesting topic for further study would be to research the relationship between access to services and the prevalence of traditional savings mechanisms.

about life is happening right now. Long-term savings, on the other hand, requires a belief that the best days may be ahead.

Religion: the local saying that Alba shared with me, "*Dios no desampara a nadie*," illuminates the role of religious belief in the culture of non-saving. However, it seems unfair to blame religion alone – Christians all over the world are proactive, thrift money managers, and prudent savers – it seems to be particular unique characteristics to Christianity in this context that are actually at play. In fact, much of the somewhat defaming literature about religion's impact on culture asserts Protestantism's superior cultural values over that of Catholicism, but this did not play out in the Rivas study. In fact, the predominantly Catholic village was overall more proactive and hard-working (both usually considered "protestant" traits). Both of the two slightly wealthier households where the woman managed household finances lived in the predominantly Catholic village.[22] So religion alone does not explain the behavior, but digging deeper into particular beliefs may provide some clues. The saying conveys a willingness to live a bit recklessly; no matter what happens, God will bail you out.

Concept of wealth: Nicaraguans' concept of wealth is that it is granted, seldom earned. They look to each other for help in times of need, which is probably why the inter-community informal loans are so popular and successful. This means that Nicaraguans are more than willing to help neighbors in need, but it also means that there is a tendency to expect help instead of advancing one's own cause "the hard way."

When Nicaraguans say that they just don't save, and when they claim this is an inseparable cultural characteristic, they deny the impact of inefficient institutions on their behavior. However, they are not entirely wrong. Whether or not certain cultural characteristics are intrinsic or irreversible is up for debate, but the fact that most Nicaraguans posses certain cultural characteristics is not.

[22] An entire book could be written on the difference of these two villages based on their religious differences. In the Latin American context, there are two factors of particular interest here: (1) Catholicism's moral elevation of the woman through "*marianismo*" vs. Protestantism's more traditional views on gender, and (2) Catholicism's practical, earth-centered eschatology vs. Protestantism's focus on the life to come, which can lead to fatalistic thinking.

Blurring the Line

If, as I have argued, culture and institutions are not distinct actors in determining behaviors but interact, then there will be factors that influence savings behaviors that cannot be classified as strictly cultural or strictly institutional. The following is an initial attempt to identify what these factors might be in Nicaragua.

Education: Children do not learn savings generally in school or in their homes. Parents do not model the behavior, and it is not taught early in school. For poor rural children who rarely attend school past elementary education, this leaves financial management almost completely out of their upbringing. Here, does the institution of education influence a culture of poor financial management, or is poor financial management as a part of the culture the reason that savings isn't included in primary education?

Violence and asset-stripping: Today's middle-aged adults are the former soldiers in Nicaragua's civil wars of the 1970s and 80s, during which most lost assets, family, and possibly hope for a better future. To survivors of wars that destroyed land, separated communities and households, and stripped many households of their possessions, it may seem pointless to save. Living for today may seem the rational thing to do when past savings have been destroyed. In this, we have an example of an institution (war) that could have influenced a cultural trait (non-savings). However, if Montalvan is correct, Nicaraguans are prone to violence as a culture to begin with (in Harrison 2000, xxvii), in which case culture (violence) may have influenced the institution (war). The argument could go round and round.

Culture as "how to win"

In the end, cultures and institutions interact to such an extent that it is difficult to distinguish one from the other, and how both are affecting behaviors. In order to clarify how these two interact, I find Michael Porter's theory that cultural characteristics are influenced by beliefs about "how to win," helpful. It seems appropriate for our purposes to define "winning" in not merely competitive individualistic terms, but in terms of how to move ahead, succeed, or even survive. Therefore, if culture is mostly about how individuals believe they will win (in such ways), and if institutions are the structural context in which individuals must try to win, then both culture and institutions together explain behaviors.

The Rivas respondents behaved financially in ways that they believed would lead them to win, but that did not actually produce the best outcomes because the institutions available were inadequate. They did not save money because they believed in the power of community and the goodwill of neighbors to support them in an emergency, and since there was no institution available that fit their criteria for financial tools. Within their context, and with the institutions available to them, they believed that not saving was the best way to win. So, what does this mean for MFIs

VII. Policy Recommendations

When I talk about changing financial behaviors, I do not mean directly changing beliefs about how to win financially; I mean changing the institutions and pay-off structures, according to what is already known about people's beliefs about how to win, in order to help them choose more productive behaviors. An example may help explain.

The example cited earlier in this paper about lottery-led savings groups in Indonesia may actually have succeeded precisely because, whether BDB knew it or not, they recognized the interplay between culture and institutions. They manipulated an institution (i.e. banks) according to the society's beliefs about how to win (i.e. gambling). In that way, BDB transformed people's behaviors from gambling away savings to gambling *in order to* save. By using institutions and tailoring them to societal beliefs about how to win (i.e. culture), BDB changed savings behavior in Indonesia.

If tailoring institutions to culture can change behavior, what does this mean for microfinance for the rural poor? It means that MFIs can better tailor their products and services according to culture to help clients achieve more productive outcomes. Currently, MFIs and other NGOs talk about knowing the culture, or understanding the context, but MFIs can go deeper by asking themselves how individuals in a society believe they will win. What is the social structure? How do people define "winning"? How do people define survival? What, in this context, makes people feel healthy physically, emotionally, socially, relationally, financially, etc.? Only after having painstakingly answered these questions should an MFI begin to offer services in a new context.

Bringing it back to Rivas

More specifically, what does this mean for the financial diarists in Rivas? How can we, according to this research, provide better financial services to the poor of Rivas, Nicaragua? Since they are already sophisticated financial managers, but lack lucrative savings tools, better financial services must include access to them. Without this, they will continue to pay exorbitant prices for substitute services of credit and loans and lose the potential earnings from quality savings tools. Such a tool must meet the four criteria defined by the respondents: flexibility, accessibility, sufficiency, and minimal risk to collateral (social and physical). Second, it must take into account culture and local conceptions of how to win, and its focus must be on changing institutions according to these conceptions to make the "wins" more positive.

One way to provide such a savings tool is through a savings model similar to Stuart Rutherford's *Safe*Save product, piloted in urban Bangladesh in 2001 (SafeSave 2009). The model utilizes community representatives to collect small daily savings deposits from clients. The clients need not save every day, are given the opportunity through representative visits. Clients can deposit and withdraw without penalty, and they can use the funds for whatever they choose. Adapted for the Rivas participants, this model might use Agros staff members as deposit collectors. Clients could have the option of tying their savings to their Agros loan products or not. Banks or other MFIs might actually be better service providers, given their greater financial infrastructure and that they could finance this high-cost service with profits from high-yield services elsewhere while growing their customer base.

These findings and analysis certainly open the door for further research. More should be known about how individuals in Rivas define winning. Why do people consider short-term time focus and fatalism winning strategies, and how might institutions accommodate that belief to enable more lucrative strategies? The answers to these questions in Rivas and elsewhere may be significantly different than what MFIs have assumed in the past, and they will most certainly require more creative institutional structuring than is now in place. But if we start asking the right questions about culture, winning, and institutions, we can design institutions that help the poor meet their financial goals.

VIII. Conclusion

Nicaraguans describe themselves as intrinsically poor savers. While they may be right to a degree, in saying this they gloss over the complex web of characteristics that make not saving a common behavior in Nicaragua.

In this paper, we have discussed how the poor's small, irregular, and unpredictable incomes require them to manage money and how they choose between different methods. We have discussed culture's possible impact on financial behaviors. While many discount culture's role in determining financial behavior, my research indicates that culture is a valid explanatory component of many widespread societal behaviors, including financial management. However, culture alone is a dangerously incomplete explanation. The role of institutions and culture together provides a more complete explanatory picture of societal behaviors.

The Rivas financial diaries revealed that poor households choose their financial services carefully, and examined how culture and institutions together influence these choices. In Nicaragua and elsewhere, certain cultural factors cannot be distinguished from institutional factors in influencing behavior. So, if Nicaraguans are ever to start saving, NGOs, banks, and MFIs must create institutions that respond to the culture, that operate according to individuals' beliefs about how to win, and that meet their rational criteria for quality financial products.

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