A Simple Poverty Scorecard for Nicaragua: Documentation for Data-Entry Software

This document, the data-entry software, and full scorecard documentation are available at `http://www.microfinance.com/#Nicaragua`

Introduction

The simple poverty scorecard is an easy-to-use tool that local pro-poor development programs in Nicaragua can use for targeting, for measuring their participants' poverty rates, and for tracking changes in participants' poverty rates over time. Field agents visit participants in their homes and ask 10 simple, objective questions (such as "What fuel does the household usually use for cooking?"). The responses are used to estimate the likelihood that the participant's per-capita household expenditure is below any of a range of poverty lines. The results are comparable across service points or geographic regions.

This document tells how to apply the scorecard and use the data-entry software.

Structure of the Scorecard

Each scorecard includes identifying information at the top and 10 questions below.

Field agents first fill in identifying information. Some items—such as survey number and current date—can be filled in ahead of time. Each survey must have a unique survey number. The rest of the identifying information can be defined with default values that are automatically filled in, or they can be filled in ahead of time. The five user-defined fields can be given default values, filled out while waiting, or asked of the participant. "Type of service" is asked of the participant. The user-defined fields might include data on scorecard implementation (such as the language or the length of the interview), or tracking information for survey management (such as details on sampling and participant selection).

Just below the tracking information, there are 10 short questions, all with answer options that are pre-coded, close-ended, and restricted to No/Yes or multiple-choice.

Administering the Survey

The scorecard is administered in face-to-face interviews with participants at their homes. Data quality is key, and following the steps below helps to ensure high-quality data.

The first step is to prepare scorecards before the interview. In `User Definitions` (see below), the scoring manager can fill in default fields with identifying information that does not vary across participants. If the scorecards are done on paper, the scoring manager can then print out multiple copies and fill in the unique identifying scorecard numbers.

The second step is for the field agent to introduce herself and the scorecard to the participant. Be friendly, and begin the conversation with a script explaining the organization's interest in learning more about the participant and ensuring confidentiality of the responses. Ask for the participant's permission to start.

The third step is to administer the scorecard. The field agent should read each question completely and exactly as it is written.

If the participant asks for clarification (or if it is not clear to the field agent which response option corresponds to the participant's answer), then field agents should proceed based on their own best judgment.[1] For example, if the question asks about the possession of an iron, and the household owns a broken iron, then the field agent should advise the respondent as to whether the broken iron "counts" according to the field agent's best judgment. Or the field agent might simply repeat the question, or gently probe for clarification. Or the field agent could choose to mark the response option judged to be the closest to the participant's answer.

In all cases, field agents should record one response for each question by clearly drawing a circle around the entire response option (not just its letter) and its corresponding points on the paper scorecard. All 10 questions must be answered.

After double-checking that all 10 questions have a response marked, the field agents should thank the participants for their time, repeat that answers will be kept confidential, and inform them that the interview is over.

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[1] See Appendix A in the full scorecard documentation at `http://www.microfinance.com/English/Papers/Scoring_Poverty_Nicaragua_2005_EN.pdf` for guidelines for the interpretation of scorecard indicators.

Most organizations will want to interview a representative sample of their participants. The simplest and most common ways to do this are:

- Interview all participants at all service points
- Interview all participants at a random sample of service points
- Interview a random sample of participants at a random sample of service points

Interviews could take place continuously, or for a period of time (say, one month). When taking a random sample of service points, the likelihood of drawing any given service point should be proportional to its share of all of the organization's participants.

Data Entry and Management

The Excel workbook has three worksheets that are initially visible to the user:

- `Data_Entry`
- `User_Definitions`
- `Results`

The user can modify `Data_Entry` and `User_Definitions`. The sheet `Results` is generated automatically from information entered in `Data_Entry` and `User_Definitions`.

The user navigates between sheets by using the named tabs at the bottom of the workbook or via the "Poverty Scoring" menu at the top of the screen.

There is also a `Database` worksheet which can be viewed by selecting "View database" from the "Poverty Scoring" menu. If desired, this database can be copied or exported for more detailed analysis.

Data Entry
The data-entry interface allows scorecards to input and managed via four buttons.

1. *Submit Responses* checks the responses for completeness and consistency and then records the scorecard in the database
2. *Retrieve Survey* displays a specified scorecard from the database for viewing or modifying
3. *Clear Entries* resets all data-entry fields without recording anything in the database
4. *Delete Entry* deletes a specified scorecard from the database

<u>Entering data</u>
Fields for identifying information are at the top of `Data_Entry`. The fields accept text or numbers. Any default values should be defined in `User_Definitions`. The user must press `<Enter>` after inputting the unique scorecard number.

Just below the tracking information appear the 10 scorecard questions and their response options. The questions and responses—and their layout—match those in the paper scorecard. This eases the data-entry process and also allows for the possibility of field agents' entering scorecard answers into the database in the field in real time.

To input responses, the data-entry operator clicks the radio button next to the relevant response option. All 10 responses are recorded upon clicking *Submit Responses*. If any response is missing, an error message appears and the scorecard is not recorded in the database. Also, successful submission to the database requires having input a unique scorecard number and that all responses are logically consistent.

<u>Retrieving, modifying, and deleting data</u>
Clicking *Retrieve Survey* leads to a prompt to type a scorecard number or select one from a menu. The template then populates the current worksheet with the responses recorded for that scorecard, and the user can modify responses or tracking information (including the scorecard number).

If, after making modifications, the user clicks *Submit Responses*, then the modified entry is stored in the database, overwriting any record with the same scorecard number. If the scorecard number already exists, a pop-up box notifies the user and asks for confirmation.

To delete a record from the database, the user clicks *Delete Entry*, types or selects the scorecard number to be deleted, and then confirms the desire to delete.

<u>User Definitions</u>
`User_Definitions` allows users to define default values for the identifying fields at the top of the scorecard by typing them into the yellow cells. Those default values then appear in the appropriate fields in the data-entry worksheet.

To facilitate measuring change over time, it is ***strongly suggested*** that the following definitions be applied to the first four of the five user-defined fields:

1. Household size
2. Name and identification number of participant
3. Name and identification number of field agent
4. Date the participant joined the organization

Results
Results shows the number of cases in the database, the estimated poverty rate among those cases (for a range of poverty lines), and the estimated number of cases who live in households below the poverty lines. This offers a snapshot of the entity's outreach to the poor.

Database
As noted earlier, Database is hidden when opening the workbook, but users can view it by choosing *View Database* from the "Poverty Scoring" menu at the top of the screen.

Documentary details

Data
The scorecard is based on the 6,852 households in the Nicaragua's 2005 Living Standards Measurement Survey (*Encuesta Nacional de Hogares sobre Medición de Nivel de Vida*, EMNV) conducted by the *Instituto Nacional de Información de Desarrollo*. The database may be downloaded from `http://www.inide.gob.ni/pobreza/emnv/emnv05/AnexoH.pdf`. For more detail, see `http://www.microfinance.com/English/Papers/Scoring_Poverty_Nicaragua _2005_EN.pdf`

Poverty lines
The national poverty line (and its multiples) and the food line come from:

Instituto Nacional de Estadística y Censos. (2006) "Informe de Metodología y Operaciones", Managua: República de Nicaragua, `http://www.inide.gob.ni/pobreza/publicacion/InforMetod_EMNV05.pdf`, retrieved 1 June 2010.

Instituto Nacional de Información de Desarrollo. (2007) *Perfil y Características de los Pobres en Nicaragua 2005*, Managua: República de Nicaragua, `http://www.inide.gob.ni/pobreza/publicacion/Pobrezafinal05.pdf`, retrieved 10 December 2009.

The USAID "extreme" poverty line is that line which marks the poorest half of people below the national poverty line as defined in:

United States Congress. (2002) "Amendments to the Microenterprise for Self-Reliance Act of 2000 (Public Law 106–309)", October 8, `http://www.microlinks.org/file_download.php/AmendMicroenterpriseAct2 000.pdf?URL_ID=7744&filename=11205460851AmendMicroenterpriseAct2000. pdf&filetype=application%2Fpdf&filesize=95834&name=AmendMicroenterpr iseAct2000.pdf&location=user-S/`, accessed 1 June 2010.

The $1.25/day line, the $2.50/day line, and the $3.75/day line use 2005 purchase-power parity figures and are based on the formula in:

Sillers, Don. (2006) "National and International Poverty Lines: An Overview", Washington, D.C.: United States Agency for International Development, `http://www.povertytools.org/other_documents/siller-povertylines.doc`, retrieved 1 June 2010,

and

World Bank. (2008) "Estimation of PPPs for Non-Benchmark Economies for the 2005 ICP Round", Washington, D.C. `http://siteresources.worldbank.org/ICPINT/Resources/non-benhmark.pdf` (sic), retrieved 1 June 2010.

Indicators
The 10 poverty indicators were selected based on the strength of their association with poverty, the likelihood of acceptance by users (as determined by simplicity, cost of collection, and "face validity" in terms of experience, theory, and common sense), sensitivity to changes in poverty status, variety among indicators, and verifiability. Points come from Logit regressions. The Logit coefficients were transformed into non-negative integers such that scores range from 0 (most likely below a poverty line) to 100 (least likely below a poverty line). Scores were divided into twenty ranges (0–4, 5–9, 10–14, etc.) and associated with poverty likelihoods via a look-up table.

Simple poverty scorecard for Nicaragua

Date: _____ Scorecard No.: _____ User field 1: _____

Organization: _____ Province: _____ User field 2: _____

Service delivery point: _____ District: _____ User field 3: _____

Org. ID, delivery point: _____ Community: _____ User field 4: _____

Type of service: _____ Household size: _____ User field 5: _____

Indicator	Value	Points	Score
1. How many household members are there?	A. Eight or more	0	
	B. Seven	10	
	C. Six	12	
	D. Five	13	
	E. Four	19	
	F. Three	26	
	G. One or two	37	
2. How many household members ages 7 to 12 are enrolled this year in the formal education system?	A. Not all	0	
	B. All, and all are in a non-autonomous public school, community school, or other	1	
	C. All, and one is in autonomous or private school	3	
	D. No children ages 7 to 12	3	
	E. All, and two or more in autonomous or private school	13	
3. Can the female head/spouse read and write?	A. No	0	
	B. Yes, or no female head/spouse	3	
4. What is the main material of the floor of the residence?	A. Earth, or other	0	
	B. Wooded planks, tiles or concrete, mud bricks, or cement bricks or tile (mosaic, ceramic, or glazed)	7	
5. What type of toilet arrangement does the household have?	A. None	0	
	B. Outhouse or latrine (with or without treatment), or flush toilet connected to cesspool, septic tank, river, or stream	3	
	C. Flush toilet connected to sewer	7	
6. What fuel does the household usually use for cooking?	A. Non-purchased firewood	0	
	B. Purchased firewood	2	
	C. Charcoal, butane or propane gas, kerosene, electricity, other, or does not cook	9	
7. Does the household have a refrigerator?	A. No	0	
	B. Yes	6	
8. Does the household have a blender?	A. No	0	
	B. Yes	4	
9. Does the household have an iron?	A. No	0	
	B. Yes	4	
10. Does the household have a radio, radio/tape player, or stereo system?	A. None	0	
	B. Only radio	1	
	C. Radio/tape player, regardless of radio, and no stereo	5	
	D. Stereo, regardless of radio and radio/tape player	10	

Microfinance Risk Management, L.L.C., http://www.microfinance.com   **Score:**

Simple poverty scorecard for Nicaragua (no points)

Date: _____ Scorecard No.: _____ User field 1: _____

Organization: _____ Province: _____ User field 2: _____

Service delivery point: _____ District: _____ User field 3: _____

Org. ID, delivery point: _____ Community:_____ User field 4: _____

Type of service: _____ Household size: _____ User field 5: _____

Indicator	Value
1. How many household members are there?	A. Eight or more B. Seven C. Six D. Five E. Four F. Three G. One or two
2. How many household members ages 7 to 12 are enrolled this year in the formal education system?	A. Not all B. All, and all in non-autonomous public school, community school, or other C. All, and one is in autonomous or private school D. No children ages 7 to 12 E. All, and two or more in autonomous or private school
3. Can the female head/spouse read and write?	A. No B. Yes, or no female head/spouse
4. What is the main material of the floor of the residence?	A. Earth, or other B. Wooded planks, tiles or concrete, mud bricks, or cement bricks or tile (mosaic, ceramic, or glazed)
5. What type of toilet arrangement does the household have?	A. None B. Outhouse or latrine (with or without treatment), or flush toilet connected to a cesspool, septic tank, river, or stream C. Flush toilet connected to sewer
6. What fuel does the household usually use for cooking?	A. Non-purchased firewood B. Purchased firewood C. Charcoal, butane or propane gas, kerosene, electricity, other, or does not cook
7. Does the household have a refrigerator?	A. No B. Yes
8. Does the household have a blender?	A. No B. Yes
9. Does the household have an iron?	A. No B. Yes
10. Does the household have a radio, radio/tape player, or stereo system?	A. None B. Only radio C. Radio/tape player, regardless of radio, and no stereo D. Stereo, regardless of radio and radio/tape player

Simple Poverty Scorecard for Nicaragua:
Look-Up Table Associating Scores with Poverty Likelihoods

	Poverty Likelihood (%)							
	National				USAID	2005 PPP (USD)		
Score	100%	Food	150%	200%	'extreme'	$1.25/day	$2.50/day	$3.75/day
0–4	92.0	78.5	100.0	100.0	79.2	61.3	89.0	100.0
5–9	87.5	54.7	100.0	100.0	60.3	40.5	87.5	100.0
10–14	96.7	45.5	99.9	100.0	61.9	37.3	96.4	99.9
15–19	87.3	42.3	97.4	100.0	54.0	27.8	84.7	96.4
20–24	80.7	30.0	97.8	99.8	36.2	13.9	73.3	97.8
25–29	69.3	21.9	90.6	97.1	34.2	14.1	64.4	90.0
30–34	58.5	12.3	87.6	97.8	18.6	6.9	55.4	86.3
35–39	54.1	2.6	85.6	97.5	17.5	1.8	49.4	83.9
40–44	40.6	2.0	74.0	94.2	8.3	0.5	36.1	71.2
45–49	25.5	0.9	64.6	88.0	4.0	0.9	20.9	60.7
50–54	10.1	0.2	45.5	69.6	2.1	0.0	8.0	40.8
55–59	10.2	0.0	29.2	54.4	0.0	0.0	3.9	25.4
60–64	1.2	0.0	19.7	46.3	0.0	0.0	1.2	16.6
65–69	2.4	0.0	14.6	33.7	0.0	0.0	2.2	13.2
70–74	3.8	0.0	15.2	37.8	0.0	0.0	3.8	12.5
75–79	0.0	0.0	5.3	17.8	0.0	0.0	0.0	4.3
80–84	0.0	0.0	0.0	13.7	0.0	0.0	0.0	0.0
85–89	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
90–94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95–100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0