

# Simple Poverty Scorecard<sup>®</sup> Poverty-Assessment Tool El Salvador

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9 February 2017

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## Abstract

The Simple Poverty Scorecard-brand poverty-assessment tool uses ten low-cost indicators from El Salvador's 2014 Multi-Purpose Household Survey to estimate the likelihood that a household has income below a given poverty line. Field workers can collect responses in about ten minutes. The scorecard's accuracy is reported for a range of poverty lines. The scorecard is a practical way for pro-poor programs in El Salvador to measure poverty rates, to track changes in poverty rates over time, and to segment clients for targeted services.

## Version note

This paper uses 2014 data, replacing Schreiner and Woller (2010), which uses 2008 data. The new 2014 scorecard here should be used from now on. Existing legacy users of Schreiner and Woller (2010) can measure change over time using the food poverty line or 100% of the national line with a baseline from the old 2008 scorecard and a follow-up from the the new 2014 scorecard.

## Acknowledgements

Data are from El Salvador's Dirección General de Estadística y Censos. Thanks go to Verónica O. Melgar Ascencio. "Simple Poverty Scorecard" is a Registered Trademark of Microfinance Risk Management, L.L.C. for its brand of poverty-assessment tools. Copyright © 2017 Microfinance Risk Management.

## Simple Poverty Scorecard® Poverty-Assessment Tool

Interview ID: _____	<u>Name</u>	<u>Identifier</u>
Interview date: _____	Participant: _____	_____
Country: <u>SLV</u>	Field agent: _____	_____
Scorecard: <u>002</u>	Service point: _____	_____
Sampling wgt.: _____	Number of household members: _____	

Indicator	Response	Points	Score
1. How many household members are 18-years-old or younger?	A. Four or more	0	
	B. Three	4	
	C. Two	8	
	D. One	17	
	E. None	26	
2. In the past calendar-week, how many household members 18-years-old or older worked for at least one hour? (not counting household chores)	A. None, or one	0	
	B. Two	2	
	C. Three or more	5	
3. How many household members who worked were wage or salary employees (whether temporary or permanent)?	A. None	0	
	B. One	5	
	C. Two or more	16	
4. In the past calendar-week, did the female head/spouse work for at least one hour? (not counting household chores)	A. No	0	
	B. Yes	7	
	C. No female head/spouse	16	
5. What is the highest level and grade which the male head/spouse has studied and passed?	A. None, informal or special education, or other	0	
	B. Pre-school to Primary 5	1	
	C. Primary 6 or 7	3	
	D. Primary 8 or 9, or secondary 10 or 11	4	
	E. No male head/spouse	7	
	F. Secondary 12, or post-secondary	10	
6. What is the main fuel used for cooking?	A. Firewood, charcoal, kerosene, or other	0	
	B. LPG, electricity, or does not cook	4	
7. Does the household have a refrigerator?	A. No	0	
	B. Yes	5	
8. Does the household have a blender?	A. No	0	
	B. Yes	3	
9. Does the household have a fan?	A. No	0	
	B. Yes	5	
10. Does the household have a TV, VCR/DVD, or cable?	A. None, or only TV	0	
	B. TV, and only one of VCR/DVD or cable	4	
	C. All three	10	

## Back-page Worksheet: Household Membership, Age, Work Status, and Wage/Salary Status

In the scorecard header, write the interview’s unique identifier (if known), the interview date, and the sampling weight of the participant (if known). Then record the names and the unique identification numbers of the participant, of yourself as the field agent, and of the service point that the participant uses.

Read to the respondent: *What are the first names and ages of the members of your household? A household is one or more people—regardless of blood or marital ties—who usually live together, eat from the same pot, and cooperate to meet their basic needs.*

Count as *household members* all people—whether now present or absent—who usually reside with the household. Absent members count as long as they have a planned date of return, as long as their total expected absence is less than three months, and as long as the household contributes to covering their expenses or they contribute to covering the household’s expenses.

For your own future use, note who is the male head/spouse (if he exists) and who is the female head/spouse (if she exists).

Count the number of members, and write it in the scorecard header by “Number of household members:”. Then count the number of members 18-years-old or younger, and mark the corresponding response option for the first scorecard indicator.

For each member 18-years-old or older, ask: “Did <name> work for at least one hour in the past calendar-week? (not counting household chores)”. If the person worked, then ask: “Was <name> a wage or salary employee (whether temporary or permanent) in his/her main line of work?”

Count the workers, and mark the second indicator. Then count the wage/salary employees, and mark the third indicator.

Keep in mind the full definitions in the “Guidelines” for *household*, *household member*, *work*, and *salaried*.

Name	Age	Age		If <name> is $\geq 18$ , then did he/she work for at least one hour in the past calendar-week? (not counting household chores)			If <name> worked, then was he/she a wage or salary employee (whether temporary or permanent) in his/her main line of work?		
		$\leq 18?$	$\geq 18?$	<18	No	Yes	<18 or did not work	No	Yes
1.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
2.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
3.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
4.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
5.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
6.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
7.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
8.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
9.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
10.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
11.		No Yes	No Yes	<18	No	Yes	<18 or did not work	No	Yes
—	—	<b># <math>\leq 18</math>:</b>	—	<b># Yes:</b>			<b># Yes:</b>		

**Look-up table to convert scores to poverty likelihoods:  
National poverty lines**

<i>Score</i>	Poverty likelihood (%)			
	<u>National lines</u>			
	<b>Food</b>	<b>100%</b>	<b>150%</b>	<b>200%</b>
0–4	64.8	98.6	99.5	100.0
5–9	53.3	91.1	97.3	100.0
10–14	39.9	84.9	95.8	99.2
15–19	33.2	78.4	95.1	98.4
20–24	21.7	71.9	90.9	97.1
25–29	18.6	63.0	84.8	94.0
30–34	11.2	51.9	79.7	90.9
35–39	6.7	44.5	72.4	85.7
40–44	5.4	35.3	65.0	80.5
45–49	2.6	24.8	52.5	72.5
50–54	2.0	15.3	40.9	60.9
55–59	0.6	10.2	31.2	49.1
60–64	0.2	6.7	24.2	44.9
65–69	0.0	3.2	18.0	34.7
70–74	0.0	1.4	10.1	24.6
75–79	0.0	1.3	8.4	15.2
80–84	0.0	0.0	4.6	10.6
85–89	0.0	0.0	4.1	10.2
90–94	0.0	0.0	0.0	1.3
95–100	0.0	0.0	0.0	0.0

**Look-up table to convert scores to poverty likelihoods:  
International 2005 and 2011 PPP lines**

<i>Score</i>	Poverty likelihood (%)					
	<u>Intl. 2005 PPP lines</u>				<u>Intl. 2011 PPP lines</u>	
	<b>\$1.25</b>	<b>\$2.00</b>	<b>\$2.50</b>	<b>\$5.00</b>	<b>\$1.90</b>	<b>\$3.10</b>
0–4	38.9	64.8	89.0	99.3	52.1	88.6
5–9	26.7	54.4	69.3	96.9	40.4	68.2
10–14	13.4	40.0	58.0	93.2	21.4	55.0
15–19	9.9	33.3	49.2	90.6	18.7	47.3
20–24	6.3	22.9	36.7	85.9	10.2	34.2
25–29	5.4	19.4	31.4	77.2	8.0	29.1
30–34	2.9	12.4	22.4	69.1	5.0	20.7
35–39	1.8	7.7	15.4	62.5	2.8	14.6
40–44	1.5	5.8	11.5	54.7	2.2	10.8
45–49	0.4	3.1	6.6	42.2	0.8	5.9
50–54	0.2	2.4	4.4	29.8	0.4	4.2
55–59	0.0	0.6	1.5	21.3	0.0	1.3
60–64	0.0	0.2	0.5	14.2	0.0	0.5
65–69	0.0	0.0	0.2	10.2	0.0	0.2
70–74	0.0	0.0	0.0	5.4	0.0	0.0
75–79	0.0	0.0	0.0	3.2	0.0	0.0
80–84	0.0	0.0	0.0	2.9	0.0	0.0
85–89	0.0	0.0	0.0	2.8	0.0	0.0
90–94	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

**Look-up table to convert scores to poverty likelihoods:  
Relative and percentile-based poverty lines**

<i>Score</i>	Poverty likelihood (%)					
	Poorest half of people below 100% Natl. line	20th	40th	50th	60th	80th
0–4	89.5	92.8	98.6	99.3	99.5	100.0
5–9	73.3	75.7	92.2	95.8	97.2	100.0
10–14	63.1	64.9	86.7	92.2	95.7	99.8
15–19	53.4	55.2	82.6	89.4	93.9	99.4
20–24	43.7	45.7	76.0	84.4	90.2	98.1
25–29	35.1	37.0	66.0	75.5	84.6	96.3
30–34	26.2	28.8	55.2	67.5	79.0	93.6
35–39	17.8	20.1	47.5	60.2	72.0	90.9
40–44	12.9	14.5	40.2	52.7	64.4	86.1
45–49	8.2	9.0	28.2	39.7	52.0	79.2
50–54	4.9	5.2	17.4	28.4	40.4	69.8
55–59	1.9	3.3	11.7	20.1	30.4	58.0
60–64	1.2	1.5	7.7	12.9	23.9	53.9
65–69	0.7	0.8	3.7	9.0	17.2	46.1
70–74	0.0	0.0	2.9	5.4	9.7	30.2
75–79	0.0	0.0	2.4	3.2	8.3	23.6
80–84	0.0	0.0	0.0	2.3	4.6	16.3
85–89	0.0	0.0	0.0	0.7	4.1	15.9
90–94	0.0	0.0	0.0	0.0	0.0	11.5
95–100	0.0	0.0	0.0	0.0	0.0	0.0

## **Note on estimating changes in poverty rates over time using the old 2008 and new 2014 scorecards**

This paper uses data from El Salvador's 2014 Multi-Purpose Household Survey (*Encuesta de Hogares de Propósitos Múltiples*, EHPM). It replaces Schreiner and Woller (2010), which uses data from the 2008 EHPM. The new 2014 scorecard is more accurate and so should be used from now on.

Some pro-poor programs in El Salvador already use the old 2008 scorecard. Even after these legacy users switch to the the new 2014 scorecard, they can still estimate changes in poverty over time that combine a baseline from the old 2008 scorecard with a follow-up from the new 2014 scorecard for the food poverty line or 100% of the national line which are supported for both the old and new scorecards. From now on, any of the seven lowest absolute poverty lines supported for the new 2014 scorecard can be used to estimates changes in poverty rates with both a baseline and follow-up from the new 2014 scorecard.

Schreiner and Woller (2010) made a serious error in the derivation of the \$1.25/day and \$2.50/day 2005 PPP lines for the old 2008 scorecard such that estimates of poverty rates are about 10 times too high. This error has been corrected for the 2005 PPP lines for the new 2014 scorecard here. Estimates for the the 2005 PPP lines from the old 2008 scorecard should not be used for any purpose.

In sum, both first-time and legacy users should use the new 2014 scorecard from now on. Looking forward, this establishes the best income-based baseline. Looking backward, legacy users of El Salvador's old 2008 scorecard can still salvage existing estimates when measuring change for the food line or for 100% of the national line.



# Simple Poverty Scorecard<sup>®</sup> Poverty-Assessment Tool El Salvador

## 1. Introduction

Pro-poor programs in El Salvador can use the Simple Poverty Scorecard poverty-assessment tool to estimate the likelihood that a household has income below a given poverty line, to estimate a population's poverty rate at a point in time, to track changes in a population's poverty rate over time, and to segment participants for differentiated treatment.

The new scorecard here uses data from El Salvador's 2014 Multi-Purpose Household Survey (*Encuesta de Hogares de Propósitos Múltiples*, EHPM). It replaces the old scorecard in Schreiner and Woller (2010) that uses data from the 2008 EHPM. The new 2014 scorecard is more accurate, so it should be used from now on. Legacy users of the old 2008 scorecard can measure change over time for the food poverty line or for 100% of the national line with a baseline from the old scorecard and a follow-up from the new scorecard. From now on, any of the seven lowest absolute poverty lines supported for the new 2014 scorecard can be used to estimate changes in poverty rates with both a baseline and follow-up from the new 2014 scorecard. For estimating poverty rates at a point in time, any of the 16 poverty lines supported for the new 2014 scorecard can be used.

An error by Schreiner and Woller (2010) in the derivation of the \$1.25/day and \$2.50/day 2005 PPP lines for the old 2008 scorecard leads to estimates of poverty rates are about 10 times too high. This error has been corrected for the 2005 PPP lines for the new 2014 scorecard here. Estimates for the erroneous 2005 PPP lines from the old 2008 scorecard should not be used for any purpose. There is no unusual caveats for estimates for the corrected 2005 PPP lines supported for the new 2014 scorecard here.

The direct approach to poverty measurement via income surveys is difficult and costly. The 2014 EHPM (conducted by El Salvador's *Dirección General de Estadística y Censos*, DIGESTYC) is a case in point. It runs 22 pages and has about 350 questions, many of which have a series of sub-questions and/or may be asked multiple times (for example, for each household member, each worker, or each consumption item).

In comparison, the indirect approach of the scorecard is quick and low-cost. It uses 10 verifiable indicators drawn from the 2014 EHPM (such as “What is the main fuel used for cooking?” and “Does the household have a fan?”) to get a score that is correlated with income-based poverty status as measured by the exhaustive EHPM survey.

The scorecard differs from “proxy-means tests” (Coady, Grosh, and Hoddinott, 2004) in that it is transparent, it is freely available,<sup>1</sup> and it is tailored to the capabilities and purposes not of national governments but rather of local, pro-poor programs. The feasible poverty-measurement options for local programs are typically blunt (such as rules based on land ownership or housing quality) or subjective and relative (such as participatory wealth ranking facilitated by skilled field workers). Poverty measures from these approaches may be costly, their accuracy is unknown, and they are not comparable across programs, places, nor periods.

The scorecard’s main use is to measure the share of a program’s participants who are below a given poverty line (for example, El Salvador’s national line, the *línea de pobreza total*). USAID microenterprise partners in El Salvador can use scoring with the line that marks the poorest half of people below 100% of the national line to report how many of their participants are “very poor”.<sup>2</sup> Scoring can also be used to measure net movement across a poverty line over time. In all these applications, the scorecard provides an income-based, objective tool with accuracy that has been tested to the extent possible. While income surveys are costly even for governments, some local pro-poor programs may be able to implement the low-cost scorecard to help with monitoring poverty and (if desired) segmenting clients for differentiated treatment.

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<sup>1</sup> The Simple Poverty Scorecard tool for El Salvador is not, however, in the public domain. Copyright is held by Microfinance Risk Management, L.L.C.

<sup>2</sup> USAID defines a household as *very poor* if its daily per-capita income is less than the highest of the \$1.90/day 2011 PPP line (USD1.05, Table 1) or the line that marks the poorest half of people below 100% of the national line (USD1.88).

The statistical approach here aims to be understood by non-specialists. After all, if managers are to adopt the scorecard on their own and apply it to inform their decisions, then they must first trust that it works. Transparency and straightforwardness build trust. Getting “buy-in” matters; proxy-means tests and regressions on the “determinants of poverty” have been around for decades, but they are rarely used to inform decisions by local, pro-poor programs. This is not because they do not work, but because they are often presented (when they are presented at all) only in English and as tables of regression coefficients incomprehensible to non-specialists (with cryptic indicator names such as “LGHHSZ\_2” and with points with negative values and many decimal places). Thanks to the predictive-modeling phenomenon known as the *flat maximum*, transparent/straightforward approaches are usually about as accurate as opaque/complex ones (Schreiner, 2012a; Caire and Schreiner, 2012).

Beyond its low cost and transparency, the technical approach of the scorecard is innovative in how it associates scores with poverty likelihoods, in the extent of its accuracy tests, and in how it derives formulas for standard errors. Although the accuracy tests are simple and commonplace in statistical practice and in the for-profit field of credit-risk scoring, they have rarely been applied to poverty-assessment tools.

The scorecard is based on data from the 2014 EHPM by El Salvador's

DIGESTYC. Indicators are selected to be:

- Inexpensive to collect, easy to answer quickly, and simple to verify
- Strongly correlated with poverty
- Liable to change over time as poverty status changes
- Applicable in all regions in El Salvador

All points in the scorecard are non-negative integers, and total scores range from 0 (most likely below a poverty line) to 100 (least likely below a poverty line). Non-specialists can collect data and tally scores on paper in the field in about ten minutes.

The scorecard can be used to estimate three basic quantities. First, it can estimate a particular household's *poverty likelihood*, that is, the probability that the household has per-capita income below a given poverty line.

Second, the scorecard can estimate the poverty rate of a population of households at a point in time. This estimate is the average of poverty likelihoods among a representative sample of households from the population. This is by far the scorecard's most common application.

Third, the scorecard can estimate the annual rate of change in the poverty rate. This is a less-common—but still valid—use of the scorecard. The accuracy of estimates of changes in poverty rates across two time periods is lower than that of estimates of poverty rates in a single time period. With two independent samples that are representative of the same population, the estimate of change is the difference in the average poverty likelihood in the baseline sample versus the average likelihood in the follow-up sample, divided by the difference (in years) between the average interview

date in the baseline sample and the average interview date in the follow-up sample. With one sample in which each household is scored twice, the estimate of change is the sum of the changes in each household's poverty likelihood from baseline to follow-up, divided by the sum of years between each household's pair of interviews (Schreiner, 2014a).

The scorecard can also be used to segment participants for differentiated treatment. This is a less-common—but still valid—use of the scorecard. To help managers choose appropriate targeting cut-offs for their purposes, several measures of targeting accuracy are reported for a range of possible cut-offs.

This paper presents a single scorecard whose indicators and points are derived with El Salvador's national poverty line and data from the 2014 EHPM. Scores from this one scorecard are calibrated with this same data to poverty likelihoods for 16 poverty lines. Four of these 16 lines are also supported by the old 2008 scorecard (Schreiner and Woller 2010).<sup>3</sup> Thus, legacy users can switch to the new 2014 scorecard and measure change over time by combining existing estimates from the old 2008 scorecard with estimates from the new 2014 scorecard. Only the two of the four lines (food and 100% of national) should be used in this way, however, as tests in this paper show that the other two lines (150% and 200% of national) give very inaccurate estimates of changes in poverty rates between 2014 and 2008.

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<sup>3</sup> DIGESTYC (2015, p. 7) compares poverty estimates from the 2008 and 2014 EHPM.

The new 2014 scorecard is constructed using data from half of the households in the 2014 EHPM. Data from that same half of households is also used to calibrate scores to poverty likelihoods for 16 poverty lines. Data from the other half of households is used to validate the scorecard’s accuracy for estimating households’ poverty likelihoods, for estimating populations’ poverty rates at a point in time, and for segmenting participants. Furthermore, the accuracy of estimates of changes in poverty rates over time is tested using the validation sample from the 2014 EHPM (baseline) and data on all households in the 2008 EHPM (follow-up).

Given their assumptions, all three scoring-based estimators (a household’s poverty likelihood, a population’s poverty rate at a point in time, and a population’s annual rate of change in its poverty rate) are *unbiased*. That is, they match the observed value on average in repeated samples when constructed from (and applied to) a single, unchanging population in which the relationship between scorecard indicators and poverty is unchanging. Like all predictive models, the scorecard is constructed from a single sample and so makes errors when applied (as in this paper) to a validation sample. Furthermore, it makes errors when applied (in practice) to a different population or when applied before or after 2014 (because the relationships between indicators and poverty change over time).<sup>4</sup>

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<sup>4</sup> Important cases include nationally representative samples at a later point in time and sub-national populations (Schreiner, forthcoming; Diamond *et al.*, 2016; Tarozzi and Deaton, 2009).

Thus, while the indirect scoring approach is less costly than the direct survey approach, it makes errors when applied in practice. (Observed values from the direct survey approach are taken as-is, ignoring sampling variation and all other sources of error.) Scoring makes errors because it necessarily assumes that future relationships between indicators and poverty in all populations will be the same as in the construction data. Of course, this assumption—inevitable in predictive modeling—holds only partly.

On average across 1,000 bootstraps of  $n = 16,384$  from the 2014 validation sample, the average error (that is, the difference between the scorecard's estimate of a poverty rate versus the observed rate in the EHPM) at a point in time for 100% of the national poverty line is +1.2 percentage points. The average of the absolute average errors across all 16 poverty lines is about 1.1 percentage points, and the maximum absolute average error is 1.9 percentage points. These estimation errors are due to sampling variation, not bias; the average difference would be zero if the whole 2014 EHPM were to be repeatedly re-fielded and divided into sub-samples before repeating the entire process of scorecard construction and validation.

With  $n = 16,384$ , the 90-percent confidence intervals are  $\pm 0.8$  percentage points or better. For  $n = 1,024$ , the 90-percent intervals are  $\pm 3.0$  percentage points or better.

To check the accuracy of estimates of changes in poverty rates over time, the new 2014 scorecard is applied to data from the 2014 validation sample (baseline) and to all data from the 2008 EHPM (follow-up).



With 1,000 bootstraps with  $n = 16,384$ , the average of the absolute average errors across the 10 estimates of change for the ten absolute poverty lines is about 2.8 percentage points. For comparison, the average absolute observed change across the 10 lines is about 4.8 percentage points. Thus, the average of the absolute average errors is about 60 percent of the average absolute observed change.

The largest errors are for the three highest lines: 150% and 200% of the national line and \$5.00/day 2005 PPP. For these three lines, 45 percent or more of households in El Salvador are poor. Errors are smaller for the seven lower, more-relevant lines. The average of the absolute average errors across the seven lower lines is about 0.8 percentage points, which is about one-sixth of the average absolute observed change is about 4.6 percentage points. This accuracy is probably adequate for most common purposes.

As an example, the error for 100% of the national line is +2.9 percentage points because the observed change in the EHPM at the household level in the 2014 and 2008 validation samples is +8.2 percentage points while the scorecard's estimate of change is +11.1 percentage points. The estimate's error is thus about one-third of the observed change ( $2.9 \div 8.2 = 35.4$  percent).

The standard errors of estimated changes are  $\pm 4.0$  percentage points or better ( $n = 1,024$ ). The 90-percent confidence intervals (with  $n = 1,024$ ) of the estimated changes include the observed changes for the seven lowest lines, but not for the three highest lines. The estimated direction of change matches the observed direction and is

“statistically significant” (the 90-percent confidence interval of the estimate with  $n = 1,024$  does not include zero) for all 10 lines.

Existing legacy users can switch to the new 2014 scorecard and then estimate change with a baseline from the old 2008 scorecard and a follow-up from the new 2014 scorecard. Such estimates of change should be based on the food line or 100% of the national line. From now on, users of the new 2014 scorecard can use any of the 16 supported lines for estimates of poverty rates at a point in time and any of the seven lowest absolute lines for estimates of changes in poverty rates over time.

Section 2 below documents data and poverty lines. Sections 3 and 4 describe scorecard construction and offer guidelines for implementation. Sections 5 and 6 tell how to estimate households’ poverty likelihoods and populations’ poverty rates at a point in time. Section 7 discusses estimating changes in poverty rates over time. Section 8 covers targeting. Section 9 places the scorecard here in the context of a related exercise for El Salvador. The last section is a summary.

The “Guidelines for the Interpretation of Scorecard Indicators” (found after the “References”) tells how to ask questions—and how to interpret responses—so as to mimic as closely as possible DIGESTYC’s practice in El Salvador’s 2014 EHPM. These “Guidelines” (and the “Back-page Worksheet”) are integral parts of the Simple Poverty Scorecard tool.

## 2. Data and poverty lines

This section presents the data used to construct and validate the scorecard. It also documents the 16 poverty lines to which scores are calibrated.

### 2.1 Data

Indicators and points for the scorecard are selected (*constructed*) based on data from a random half of the 21,129 households in the 2014 EHPM, El Salvador’s most-recent national income survey.

The data that is used to construct the scorecard is also used to associate (*calibrate*) scores to poverty likelihoods for all poverty lines.

Data from the other half of households in the 2014 EHPM is used to test (*validate*) scorecard accuracy for point-in-time estimates of poverty rates *out-of-sample* (that is, with data that is not used in construction/calibration). This 2014 validation sample is also used—along with data from all 16,674 households in the 2008 EHPM—to test accuracy for estimates of changes in poverty rates between 2014 to 2008. These tests are *out-of-sample* and *out-of-time* because they use data that is not used in construction/calibration and that also comes from a different time period than did the data used in construction/calibration.

Field work for the 2014 EHPM covered calendar-year 2014. Likewise, the 2008 EHPM covered calendar-year 2008.

Income is in units of USD per person per day in average prices for El Salvador as a whole during fieldwork for a given EHPM.

## 2.2 Poverty rates at the household, person, or participant level

A *poverty rate* is the share of units in households in which total household income (divided by the number of household members) is below a given poverty line. The unit of analysis is either the household itself or a person in the household. By assumption, each member of a given household has the same poverty status (or estimated poverty likelihood) as the other members in that household.

To illustrate, suppose that a program serves two households. The first household is poor (its per-capita income is less than a given poverty line), and it has three members, one of whom is a program participant. The second household is non-poor and has four members, two of whom are program participants.

Poverty rates are in terms of either households or people. If the program defines its *participants* as households, then the household level is relevant. The estimated household-level poverty rate is the weighted<sup>5</sup> average of poverty statuses (or estimated poverty likelihoods) across households with participants. This is

$$\frac{1 \cdot 1 + 1 \cdot 0}{1 + 1} = \frac{1}{2} = 0.5 = 50 \text{ percent.}$$

In the “1 · 1” term in the numerator, the first “1” is

the first household’s weight, and the second “1” represents the first household’s poverty

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<sup>5</sup> The examples assume simple random sampling at the household level. This means that each household has the same household-level weight, taken here to be one (1).

status (poor) or its estimated poverty likelihood. In the “1 · 0” term in the numerator, the “1” is the second household’s weight, and the “0” represents the second household’s poverty status (non-poor) or its estimated poverty likelihood. The “1 + 1” in the denominator is the sum of the weights of the two households. Household-level weights are used because the unit of analysis is the household.

Alternatively, a person-level rate is relevant if a program defines all people in households that benefit from its services as *participants*. In the example here, the person-level rate is the household-size-weighted<sup>6</sup> average of poverty statuses (or estimated poverty likelihoods) for households with participants, or

$$\frac{3 \cdot 1 + 4 \cdot 0}{3 + 4} = \frac{3}{7} = 0.43 = 43 \text{ percent.}$$

In the “3 · 1” term in the numerator, the “3” is the first household’s weight because it has three members, and the “1” represents its poverty status (poor) or its estimated poverty likelihood. In the “4 · 0” term in the numerator, the “4” is the second household’s weight because it has four members, and the zero represents its poverty status (non-poor) or its estimated poverty likelihood. The “3 + 4” in the denominator is the sum of the weights of the two households. A household’s weight is its number of members because the unit of analysis is the household member.

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<sup>6</sup> Given simple random sampling at the household level, a household’s person-level weight is the number of people in the household.

As a final example, a program might count as *participants* only those household members who directly participate in the program. For the example here, this means that some—but not all—household members are counted. The person-level rate is now the participant-weighted average<sup>7</sup> of the poverty statuses (or estimated poverty likelihoods) of households with participants, or  $\frac{1 \cdot 1 + 2 \cdot 0}{1 + 2} = \frac{1}{3} = 0.33 = 33$  percent. The first “1” in the “1 · 1” in the numerator is the first household’s weight because it has one participant, and the second “1” represents its poverty status (poor) or its estimated poverty likelihood. In the “2 · 0” term in the numerator, the “2” is the second household’s weight because it has two participants, and the zero represents its poverty status (non-poor) or its estimated poverty likelihood. The “1 + 2” in the denominator is the sum of the weights of the two households. Each household’s weight is its number of participants because the unit of analysis is the participant.

To sum up, estimated poverty rates are weighted averages of households’ poverty statuses (or estimated poverty likelihoods), where—given simple random sampling at the household level—the weights are the number of relevant units in the household. When reporting, programs should clearly state the unit of analysis (household, household member, or participant) as well as explain why that unit is relevant.

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<sup>7</sup> Given simple random sampling at the household level, a household’s participant-level weight is the number of participants in the household.

Table 1 reports poverty lines and poverty rates for households and people in the 2014 and 2008 EHPM for El Salvador as a whole, for the 2014 construction/calibration sample, and for the 2014 and 2008 validation samples. For El Salvador as a whole and for each of El Salvador's 14 departments, Table 2 reports poverty lines and poverty rates for households and for people by urban/rural/all in 2008 and 2014.

Household-level poverty rates are reported because—as shown above—household-level poverty likelihoods can be straightforwardly converted into poverty rates for other units of analysis and because sampling is almost always done at the level of households. This is also why the scorecard is constructed, calibrated, and validated with household weights. Person-level poverty rates are also included in Tables 1 and 2 because they are the relevant rates for policy discussions and decision-making; the goal of governments and pro-poor programs is to help people (not households) to improve their well-being. Oddly, the government of El Salvador reports only household-level rates.<sup>8</sup>

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<sup>8</sup> Almost all other governments report person-level poverty rates. Reporting household-level rates makes poverty in El Salvador seem lower than it really is.

## 2.3 Definition of *poverty*, and the national poverty line

In El Salvador, a household's *poverty status* as poor or non-poor depends on whether its per-capita income is below a given poverty line. Thus, a definition of *poverty* has two parts: a poverty line, and a measure of income.

DIGESTYC (2015) compares poverty-rate estimates from the 2008 and 2014 EHPM. Such a comparison implies that the two survey rounds use the same definition of *poverty* (that is, the same constant-price poverty lines and the same measure of income). This paper follows DIGESTYC in this treatment.

For 2014, El Salvador's food poverty line (*línea de pobreza extrema*) is defined as the cost (USD1.63 per person per day in urban areas and USD1.01 in rural areas, Table 2) of a food basket with 2,200 Calories and 46 grams of protein (Florés, 2007). The basket was set in 1983 by El Salvador's *Secretaría Ejecutiva de la Comisión Nacional de Alimentación y Nutrición*, and the 2014 food line is its average cost based on data in the 2014 EHPM.<sup>9</sup> The all-El Salvador poverty rate for the food line in 2014 is 7.5 percent for households and 9.3 percent for people (Table 1). These are weighted averages of the urban and rural household-level rates (5.7 and 10.8 percent, Table 2) and the urban and rural person-level rates (7.0 and 13.1 percent). These match the household-level rates in DIGESTYC (2015, p. 9).

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<sup>9</sup> World Bank (2005) discusses weaknesses with El Salvador's official poverty lines.



The national poverty line (usually called here “100% of the national line”, corresponding to El Salvador’s *línea de pobreza total*) is defined as the food line plus the observed cost of the non-food goods and services purchased by households whose diets are close to the nutritional norm. About two decades ago, this ratio was found to be about 2:1, and the national (food-plus-non-food) line has been twice the food line ever since.<sup>10</sup> The all-El Salvador poverty rate for the national line (Tables 1 and 2) is 31.8 percent for households (28.5 urban and 37.9 rural) and 37.2 percent for people (33.2 urban and 43.7 rural). The household-level rates match DIGESTYC (2015, p. 7).

The lines for 150% and 200% of the national line are multiples of 100% of the national line.

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<sup>10</sup> The fixed ratio implies that poverty-rate estimates based on the national line are not comparable over time if the ratio of non-food-to-food consumption for households whose diets are close to the nutritional norm has changed over the past two decades.

## 2.4 Supported poverty lines

Because pro-poor programs in El Salvador may want to use different or various poverty lines, this paper calibrates scores from its single new 2014 scorecard to poverty likelihoods for 16 lines:

- Food
- 100% of national
- 150% of national
- 200% of national
- \$1.25/day 2005 PPP
- \$2.00/day 2005 PPP
- \$2.50/day 2005 PPP
- \$5.00/day 2005 PPP
- \$1.90/day 2011 PPP
- \$3.10/day 2011 PPP
- Line marking the poorest half of people below 100% of the national line
- First-quintile (20<sup>th</sup>-percentile) line
- Second-quintile (40<sup>th</sup>-percentile) line
- Median (50<sup>th</sup>-percentile) line
- Third-quintile (60<sup>th</sup>-percentile) line
- Fourth-quintile (80<sup>th</sup>-percentile) line

Four of these lines are also supported for the old 2008 scorecard (Schreiner and Woller, 2010):

- Food
- 100% of national
- 150% of national
- 200% of national

### **2.4.1 \$1.25/day 2005 PPP lines**

As noted earlier, an error in Schreiner and Woller's (2010) derivation of 2005 PPP lines for the old 2008 scorecard leads to estimates of poverty rates that are about 10 times too high. This error has been corrected for the 2005 PPP lines supported for the new 2014 scorecard here. Estimates for the the 2005 PPP lines from the old 2008 scorecard are wrong and thus should not be used for any purpose. The incorrect 2005 PPP lines supported for the old 2008 scorecard are not comparable with the corrected 2005 PPP lines supported for the new 2014 scorecard.

The error is in the conversion of the 2005 PPP factor from SVC to USD. The conversion is necessary because Sun and Swanson (2009) report a 2005 PPP factor in SVC even though El Salvador has been dollarized since 2001. Schreiner and Woller (2010) incorrectly divide the market exchange rate in 2005 (SVC8.750 per USD1.00) by the 2005 PPP factor (SVC4.812 per USD1.00), giving a factor of 1.81837. This implausibly implies that a dollar buys less in El Salvador than in the United States of America. The correct conversion is to divide the PPP factor by the market exchange rate, giving 0.54994. This reasonably implies that a dollar buys more in El Salvador than in the United States of America.

The international 2005 and 2011 PPP lines are derived from:

- PPP exchange rates for El Salvador for “individual consumption expenditure by households”:
  - 2005:<sup>11</sup> SVC4.812 per USD1.00
  - 2011:<sup>12</sup> USD0.530774 per USD1.00
- Market exchange rate in 2005:<sup>13</sup> SVC8.750 per USD1.00
- Average Consumer Price Index (CPI) for all of El Salvador:<sup>14</sup>
  - 2005 calendar-year: 85.243
  - 2008 calendar-year: 99.433
  - 2011 calendar-year: 106.063
  - 2014 calendar-year: 110.160
- Urban and rural price deflators:<sup>15</sup>
  - 2008: 1.150051 (urban), 0.746668 (rural), and 1.0082339 (average national)
  - 2014: 1.166627 (urban), 0.724723 (rural), and 1.0001112 (average national)

Given the 2005 PPP factor and the market exchange rate in 2005, the (corrected) 2005 PPP factor in USD is  $4.812 \div 8.750 = 0.54994$ . Thus, a given urban or rural area’s \$1.25/day 2005 PPP line in prices in El Salvador as a whole during 2014 is

$$\frac{2005 \text{ PPP} \cdot 1.25 \cdot \left( \frac{\text{CPI}_{2014}}{\text{CPI}_{2005}} \right) \cdot \text{Area price deflator in 2014}}{\text{Average price deflator across areas in 2014}} .$$

For the example of rural areas in 2014, the \$1.25/day 2005 PPP line is:

$$\frac{\text{USD}0.54994 \cdot 1.25 \cdot \left( \frac{110.160}{85.243} \right) \cdot 0.724723}{1.0001112} = \text{USD}0.6437 \text{ (Table 2)}.$$

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<sup>11</sup> Sun and Swanson, 2009.

<sup>12</sup> [iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&CO=SLV\\_3&PPP0=0.53&PL0=1.90&Y0=2008&NumOfCountries=1](http://iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&CO=SLV_3&PPP0=0.53&PL0=1.90&Y0=2008&NumOfCountries=1), retrieved 6 February 2017.

<sup>13</sup> Sun and Swanson, 2009.

<sup>14</sup> The CPI has a base of 100 for December 2009. See [www.digestyc.gob.sv/index.php/temas/ee/ipc/indice-de-precios-al-consumidor.html?download=565%3Aboletin-ipc-febrero-2016](http://www.digestyc.gob.sv/index.php/temas/ee/ipc/indice-de-precios-al-consumidor.html?download=565%3Aboletin-ipc-febrero-2016), retrieved 4 February 2017.

<sup>15</sup> Found as the urban (rural) line divided by the national average line in a given round.

The all-El Salvador \$1.25/day 2005 PPP line is the person-weighted average of the urban and rural \$1.25/day lines. For 2014, this is USD0.89 per person per day, giving a household-level poverty rate of 2.2 percent and a person-level poverty rate of 2.8 percent (Table 1).

The other 2005 PPP lines are multiples of the \$1.25/day line. The corrected \$1.25/day 2005 PPP lines for 2008 are derived in the same way as for 2014. Of course, the corrected \$1.25/day 2005 PPP lines for 2008 here differ from the erroneous \$1.25/day 2005 PPP lines in Schreiner and Woller (2010).

The World Bank's PovcalNet does not report a \$1.25/day 2005 PPP line for El Salvador for 2014. For 2008, PovcalNet reports a line of USD0.81 per person per day and a person-level poverty rate of 4.8 percent.<sup>16</sup> This is close to this paper's line of USD0.80 and its poverty rate of 5.1 percent (Table 1).

PovcalNet differs from this paper in three ways. First, the change in PovcalNet's CPI deflator ( $94.508 \div 81.269 = 1.163$ )<sup>17</sup> is very slightly lower than that used here ( $99.433 \div 85.243 = 1.166$ ). Second, PovcalNet uses data from the 2008 EHPM obtained from SEDLAC<sup>18</sup> (not from DIGESTYC) with  $n = 14,556$  households (not  $n = 16,674$ ).<sup>19</sup>

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<sup>16</sup> [iresearch.worldbank.org/PovcalNetPPP2005/Detail.aspx?Format=Detail&C0=SLV\\_3&PPP0=4.81&PL0=1.25&Y0=2008&NumOfCountries=1](http://iresearch.worldbank.org/PovcalNetPPP2005/Detail.aspx?Format=Detail&C0=SLV_3&PPP0=4.81&PL0=1.25&Y0=2008&NumOfCountries=1), retrieved 7 February 2017. PovcalNet does not report \$1.25/day 2005 PPP estimates for 2014 for El Salvador.

<sup>17</sup> [iresearch.worldbank.org/PovcalNetPPP2005/Docs/CountryDocs/SLV.htm#3](http://iresearch.worldbank.org/PovcalNetPPP2005/Docs/CountryDocs/SLV.htm#3), retrieved 8 February 2017.

<sup>18</sup> [sedlac.econo.unlp.edu.ar](http://sedlac.econo.unlp.edu.ar).

<sup>19</sup> For 2014, PovcalNet reports  $n$  of 19,538 when the 2014 EHPM has  $n = 21,129$ .

Third, PovcalNet probably does not adjust for urban/rural price differences, but this paper does make the adjustment.<sup>20</sup>

All in all, this paper’s 2005 PPP figures (and 2011 PPP figures) are to be preferred because their derivation is more fully documented, they are adjusted for urban/rural price differences, and they use all of the EHPM data.

#### **2.4.2 \$1.90/day 2011 PPP lines**

In prices for El Salvador as a whole during the EHPM fieldwork, the \$1.90/day 2011 PPP line in a given urban or rural area in 2014 is

$$\frac{2011 \text{ PPP} \cdot 1.90 \cdot \left( \frac{\text{CPI}_{2014}}{\text{CPI}_{2011}} \right) \cdot \text{Area price deflator in 2014}}{\text{Average price deflator across areas in 2014}}.$$

For the example of rural areas in 2014, this is

$$\frac{0.530774 \cdot \$1.90 \cdot \left( \frac{110.160}{106.063} \right) \cdot 0.724723}{1.0001112} = \text{USD}0.76 \text{ (Table 2)}.$$

The all-El Salvador \$1.90/day 2011 PPP line is the person-weighted average of the urban and rural \$1.90/day lines. For 2014, this is USD1.05 per person per day, giving a household-level poverty rate of 3.6 percent and a person-level poverty rate of 4.5 percent (Table 1).

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<sup>20</sup> Regional-price adjustments make sense; after all, they are the reason for using international PPP lines in the first place.

For 2014, PovcalNet also reports USD1.05 for its \$1.90/day 2011 PPP line with a person-level poverty rate of 3.0 percent (versus 4.5 here).<sup>21</sup> For 2008, PovcalNet’s \$1.90/day line is again the same as here (USD0.95), and its person-level poverty rate is again lower (6.9 versus 7.7 percent).<sup>22</sup> This paper’s \$1.90/day 2011 PPP figures are to be preferred for the same reasons presented earlier in the context of the \$1.25/day 2005 PPP figures.

The \$3.10/day 2011 PPP line is a multiple of the \$1.90/day line.

### **2.4.3 “Very poor” line for reporting by USAID microenterprise partners**

The line that marks the poorest half of people below 100% of the national line is defined as the median of the aggregate household per-capita income of people (not households) below 100% of the national line (U.S. Congress, 2004). Unlike all the previous (absolute) lines, this relative line (and the percentile-based lines below) is derived by:

- Putting all regional price adjustments in the measure of income rather than in the poverty line
- Deriving a single line for all of El Salvador
- Taking all price adjustments out of income and putting them back in the regional lines<sup>23</sup>

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<sup>21</sup> [iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=SLV\\_3&PPP0=0.530774&PL0=1.90&Y0=2014&NumOfCountries=1](http://iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=SLV_3&PPP0=0.530774&PL0=1.90&Y0=2014&NumOfCountries=1), retrieved 8 February 2017.

<sup>22</sup> [iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=SLV\\_3&PPP0=0.530774&PL0=1.90&Y0=2008&NumOfCountries=1](http://iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=SLV_3&PPP0=0.530774&PL0=1.90&Y0=2008&NumOfCountries=1), retrieved 8 February 2017.

<sup>23</sup> This corrects how the scorecard derived this line prior to 2016 (in particular, in Schreiner and Woller, 2010). Formerly, price adjustments were left in the poverty lines. Each region’s poverty line was compared with nominal income to find a line in each poverty-line region that marked the poorest half of people below 100% of the national

Microenterprise programs in El Salvador that use the scorecard to report the number of their participants who are “very poor” to USAID should use the line that marks the poorest half of people below 100% of the national line. This is because USAID defines the “very poor” as those people in households whose daily per-capita income in 2014 is below the highest of the following two poverty lines:

- The line that marks the poorest half of people below 100% of the national line (USD1.88, with a person-level poverty rate of 18.6 percent, Table 1)
- \$1.90/day 2011 PPP (USD1.05, with a person-level poverty rate of 4.5 percent)

#### **2.4.4 Percentile-based poverty lines**

The scorecard also supports percentile-based poverty lines. This facilitates a number of types of analyses. For example, the second-quintile (40<sup>th</sup>-percentile) line might be used to help track El Salvador’s progress towards the World Bank’s (2013) goal of “shared prosperity/inclusive economic growth”, defined as income growth among the bottom 40 percent of the world’s people.

The four quintile lines, analyzed together, could also be used to look at the relationship of income with health outcomes (or anything else related with the distribution of income). The scorecard thus offers an alternative for health-equity

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line in that particular poverty-line region. Both approaches produce an all-country person-level poverty rate that is half that of 100% of the national line, but the set of people who are identified as *poor* differs. Unlike the former approach, the current approach correctly identifies as *poor* the poorest half of all people in the country whose price-adjusted income is below the single, all-country national line. This implies that the correction in Schreiner (2014b) of the derivation used for this line by IRIS Center for its Poverty-Assessment Tool is itself wrong, and IRIS Center’s approach (the one now used here) is correct (although IRIS Center still incorrectly derives this line based on households instead of people).



analyses that compare some estimate of wealth with health outcomes. These analyses have typically used a “wealth index” such as that supplied with the data from the Demographic and Health Surveys (Rutstein and Johnson, 2004).

Of course, analysts could always do (and can still do) asset-based, relative-wealth analyses with scores from the scorecard. Support for relative income lines also allows a more straightforward use of a single tool (the scorecard) to analyze any or all of:

- Relative wealth (via scores)
- Absolute income (via poverty likelihoods and absolute poverty lines)
- Relative income (via poverty likelihoods and percentile-based poverty lines)

Unlike the scorecard, asset-based wealth indexes only serve to analyze relative wealth. Furthermore, the scorecard—unlike wealth indexes based on Principal Component Analysis or similar approaches—uses a straightforward, well-understood standard whose definition is external to the scorecard itself (income related to a poverty line defined in monetary terms).

In contrast, a wealth index opaquely defines *poverty* in terms of its own indicators and points, without reference to an external standard (Ravaillon, 2012). This means that two wealth indexes with different indicators or different points—even if derived from the same data for a given country—imply two different definitions of *poverty*. In the same set-up, two scorecards would both apply a single definition of income-based *poverty*.

### 3. Scorecard construction

For El Salvador, about 80 candidate indicators are initially prepared in the areas of:

- Household composition (such as the number of members 18-years-old or younger)
- Education (such as the highest level and grade that the male head/spouse has studied and passed)
- Housing (such as the main construction material of the roof)
- Ownership of durable assets (such as refrigerators or fans)
- Employment (such as the number of household members who work)

Table 3 lists the candidate indicators, ordered by the entropy-based “uncertainty coefficient” (Goodman and Kruskal, 1979) that measures how well a given indicator predicts poverty status on its own.<sup>24</sup>

One possible application of the scorecard is to measure *changes* in poverty through time. Thus, when selecting indicators—and holding other considerations constant—preference is given to more sensitive indicators. For example, the ownership of a blender is probably more likely to change in response to changes in income than is the age of the male head/spouse.

The scorecard itself is constructed using 100% of the national poverty line and Logit regression on the construction sub-sample. Indicator selection uses both judgment and statistics. The first step is to use Logit to build one scorecard for each candidate indicator. The power of each one-indicator scorecard to rank households by poverty status is measured as “c” (SAS Institute Inc., 2004).

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<sup>24</sup> The uncertainty coefficient is only used to order the candidate indicators in Table 3. It is not used when selecting scorecard indicators.

One of these one-indicator scorecards is then selected based on several factors (Schreiner *et al.*, 2014; Zeller, 2004). These include improvement in accuracy, likelihood of acceptance by users (determined by simplicity, cost of collection, and “face validity” in terms of experience, theory, and common sense), sensitivity to changes in poverty, variety among indicators, applicability across regions, tendency to have a slow-changing relationship with poverty over time, relevance for distinguishing among households at the poorer end of the distribution of income, and verifiability.

A series of two-indicator scorecards are then built, each adding a second indicator to the one-indicator scorecard selected from the first round. The best two-indicator scorecard is then selected, again using judgment to balance statistical accuracy with the non-statistical criteria. These steps are repeated until the scorecard has 10 indicators that work well together.

The final step is to transform the Logit coefficients into non-negative integers such that total scores range from 0 (most likely below a poverty line) to 100 (least likely below a poverty line).

This algorithm is similar to common  $R^2$ -based stepwise least-squares regression. It differs from naïve stepwise in that the selection of indicators considers both statistical<sup>25</sup> and non-statistical criteria. The use of non-statistical criteria can improve robustness through time and across non-nationally representative groups. It also helps ensure that indicators are simple, common-sense, and acceptable to users.

The single scorecard here applies to all of El Salvador. Segmenting poverty-assessment tools by urban/rural does not improve targeting accuracy much as shown for Sub-Sahara Africa (Brown, Ravallion, and van de Walle, 2016)<sup>26</sup>, Indonesia (World Bank, 2012), Bangladesh (Sharif, 2009), India and Mexico (Schreiner, 2006 and 2005a), Sri Lanka (Narayan and Yoshida, 2005), and Jamaica (Grosh and Baker, 1995). In general, segmentation may improve the accuracy of estimates of poverty rates (Schreiner, forthcoming; Diamond *et al.*, 2016; Tarozzi and Deaton, 2009), but it may also increase the risk of overfitting (Haslett, 2012).

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<sup>25</sup> The statistical criterion for selecting an indicator is not the  $p$  values of its coefficients, nor is it its uncertainty coefficient. Rather, it is the indicator's contribution to the ranking of households by poverty status.

<sup>26</sup> Burkina Faso, Ethiopia, Ghana, Malawi, Mali, Niger, Nigeria, Tanzania, and Uganda. On average when targeting people in the lowest quintile or lowest two quintiles of scores and when 20 or 40 percent of people are poor, segmenting by urban/rural correctly targeted about 1 more poor person per 200 or 400 poor people.

## 4. Guidelines for scorecard use in practice

The main challenge of scorecard design is not to maximize statistical accuracy but rather to improve the chances that the scorecard is actually used (Schreiner, 2005b). When scoring projects fail, the reason is not usually statistical inaccuracy but rather the failure of a program to decide to do what is needed to integrate scoring in its processes and to train and convince its employees to use the scorecard properly (Schreiner, 2002). After all, most reasonable scorecards have similar targeting accuracy, thanks to the empirical phenomenon known as the “flat maximum” (Caire and Schreiner, 2012; Hand, 2006; Baesens *et al.*, 2003; Lovie and Lovie, 1986; Kolesar and Showers, 1985; Stillwell, Barron, and Edwards, 1983; Dawes, 1979; Wainer, 1976; Myers and Forgy, 1963). The bottleneck is less technical and more human, not statistics but organizational-change management. Accuracy is easier to achieve than adoption.

The scorecard here is designed to encourage understanding and trust so that users will want to adopt it on their own and use it properly. Of course, accuracy matters, but it must be balanced with simplicity, ease-of-use, and “face validity”. Programs are more likely to collect data, compute scores, and pay attention to the results if, in their view, scoring does not imply a lot of additional work and if the whole process generally seems to them to make sense.

To this end, El Salvador’s scorecard fits on one page. The construction process, indicators, and points are transparent and straightforward. Additional work is minimized; non-specialists can compute scores by hand in the field because the scorecard has:

- Only 10 indicators
- Only “multiple-choice” indicators
- Only simple points (non-negative integers, and no arithmetic beyond addition)

The scorecard (and its “Back-page Worksheet”) is ready to be photocopied. A field worker using the new 2014 scorecard in El Salvador would:

- Record the interview identifier, interview date, country code (“SLV”), scorecard code (“002”), and the sampling weight assigned by the program’s survey design to the household of the participant (if known)
- Record the names and identifiers of the participant (who may not be the same as the respondent), of the field agent, and of the relevant program service point. As part of this process, record which household member is:
  - The male head/spouse (if he exists)
  - The female head/spouse (if she exists)
- Complete the “Back-page Worksheet” with:
  - Each household member’s first name or nickname
  - Each member’s age
  - Whether the member is 18-years-old or younger
  - Whether the member is 18-years-old or older
  - Whether a member who is 18-years-old or older worked for at least one hour in the past calendar-week (not counting household chores)
  - Whether a member who worked was a wage or salary employee (whether temporary or permanent) in his/her main line of work
- Based on what has already been recorded on the “Back-page Worksheet”, record the number of household members in the scorecard header next to the heading “Number of household members:”
- Based on what has already been recorded on the “Back-page Worksheet”, mark the response to the first scorecard indicator (“How many household members are 18-years-old or younger?”)

- Based on what has already been recorded on the “Back-page Worksheet”, mark the response to the second scorecard indicator (“In the past calendar-week, how many household members 18-years-old or older worked for at least one hour? (not counting household chores)”)
- Based on what has already been recorded on the “Back-page Worksheet”, mark the response to the third scorecard indicator (“How many household members who worked were wage or salary employees (whether temporary or permanent)?”)
- Based on what has already been recorded on the “Back-page Worksheet”, mark the response to the fourth scorecard indicator (“In the past calendar-week, did the female head/spouse work for at least one hour? (not counting household chores)?”)
- Read the rest of the scorecard indicators to the respondent one-by-one. Do not read the response options to the respondent, except for the sixth scorecard indicator (“What is the main fuel used for cooking?”)
- Draw circles around the relevant responses and their points. Then write each point value in the far right-hand column
- Add up the points to get a total score
- Implement targeting policy (if any)
- Deliver the paper scorecard to a central office for data entry and filing

Of course, field workers must be trained. The quality of outputs depends on the quality of inputs. If programs or field workers gather their own data and believe that they have an incentive to exaggerate poverty rates (for example, if managers or funders reward them for higher poverty rates), then it is wise to do on-going quality control via data review and random audits (Matul and Kline, 2003).<sup>27</sup> Schreiner (2014a), IRIS Center (2007a), and Toohig (2008) are useful nuts-and-bolts guides for budgeting,

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<sup>27</sup> If a program does not want field workers and respondents to know the points associated with responses, then it can give them a version of the scorecard that does not display the points and then apply the points and compute scores later at a central office. Even if points are hidden, however, field workers and respondents can use common sense to guess how response options are linked with poverty. Schreiner (2012b) argues that hiding points in Colombia (Camacho and Conover, 2011) did little to deter cheating and that, in any case, cheating by the user’s central office was more damaging than cheating by field workers and respondents.

training field workers and supervisors, logistics, sampling, interviewing, piloting, recording data, and controlling quality.

In particular, while collecting indicators for a scorecard is relatively easier than alternative ways of measuring poverty, it is still absolutely difficult. Training and explicit definitions of terms and concepts in the scorecard are essential, and field workers should scrupulously study and follow the “Guidelines for the Interpretation of Scorecard Indicators” found after the “References” section in this paper, as these “Guidelines”—along with the “Back-page Worksheet”—are integral parts of the scorecard.<sup>28</sup>

For the example of Nigeria, one study (Onwujekwe, Hanson, and Fox-Rushby, 2006) found distressingly low inter-rater and test-retest correlations for indicators as seemingly simple as whether a household owns an automobile. At the same time, Grosh and Baker (1995) suggest that gross under-reporting of assets does not affect targeting. For the first stage of targeting in a conditional cash-transfer program in Mexico, Martinelli and Parker (2007, pp. 24–25) find that “under-reporting [of asset ownership] is widespread but not overwhelming, except for a few goods . . . [and] over-reporting is common for a few goods”. Still—as Mexico does in the second stage of its targeting process—most false self-reports can be corrected (or avoided in the first place) by field

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<sup>28</sup> The guidelines here are the only ones that organizations should give to field workers. All other issues of interpretation should be left to the judgment of field workers and respondents, as this seems to be what El Salvador’s DIGESTYC did in the EHPM.



workers who make a home visit. This is the recommended procedure for programs who use scoring for targeting in El Salvador.

In terms of implementation and sampling design, a program must make choices about:

- Who will do the interviews
- How responses and scores will be recorded
- Which participants will be interviewed
- How many participants will be interviewed
- How frequently participants will be interviewed
- Whether scoring will be applied at more than one point in time
- Whether the same participants will be scored at more than one point in time

In general, the sampling design should follow from the program's goals for the exercise, the questions to be answered, and the budget. The main goal should be to make sure that the sample is representative of a well-defined population and that the scorecard will inform an issue that matters to the program.

The non-specialists who apply the scorecard with participants in the field can be:

- Employees of the program
- Third parties

Responses, scores, and poverty likelihoods can be recorded on:

- Paper in the field, and then filed at a central office
- Paper in the field, and then keyed into a database or spreadsheet at a central office
- Portable electronic devices in the field, and then uploaded to a database

Given a population of participants relevant for a particular business question, the participants to be scored can be:

- All relevant participants (a census)
- A representative sample of relevant participants
- All relevant participants in a representative sample of relevant field offices and/or in a representative sample of relevant field agents
- A representative sample of relevant participants in a representative sample of relevant field offices and/or in a representative sample of relevant field agents

If not determined by other factors, the number of participants to be scored can be derived from sample-size formulas (presented later) to achieve a desired confidence level and a desired confidence interval. To have the best chance to meaningfully inform questions that matter to the program, however, the focus should be less on having a sample size large enough to achieve some arbitrary level of statistical significance and more on having a representative sample from a well-defined population that is relevant for issues that matter to the program.

The frequency of application can be:

- As a once-off project (precluding measuring change)
- Every three years (or at any other fixed or variable time interval, allowing measuring change)
- Each time a field worker visits a participant at home (allowing measuring change)

When a scorecard is applied more than once in order to measure changes in poverty rates, it can be applied:

- With a different set of participants from the same population
- With the same set of participants

An example set of choices is illustrated by BRAC and ASA, two microfinance organizations in Bangladesh who each have about 7 million participants and who declared their intention to apply the scorecard (Schreiner, 2013a) with a sample of about 25,000. Their design is that all loan officers in a random sample of branches will score all participants each time they visit a homestead (about once a year) as part of their standard due diligence prior to loan disbursement. Responses will be recorded on paper in the field before the completed forms are sent to a central office to be entered into a database and converted to poverty likelihoods.

## 5. Estimates of a household's poverty likelihood

The sum of scorecard points for a household is called the *score*. For El Salvador, scores range from 0 (most likely below a poverty line) to 100 (least likely below a poverty line). While higher scores indicate less likelihood of being poor, the scores themselves have only relative units. For example, doubling the score decreases the likelihood of being below a given poverty line, but it does not cut it in half.

To get absolute units, scores are converted to *poverty likelihoods*, that is, probabilities of being below a poverty line. This is done via straightforward look-up tables. For the example of 100% of the national line, scores of 35–39 have a poverty likelihood of 44.5 percent, and scores of 40–44 have a poverty likelihood of 35.3 percent (Table 4).

The poverty likelihood associated with a score varies by poverty line. For example, scores of 35–39 are associated with a poverty likelihood of 44.5 percent for 100% of the national line but 2.8 percent for the \$1.90/day 2011 PPP line.<sup>29</sup>

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<sup>29</sup> From Table 4 on, many tables have 16 versions, one for each of the 16 poverty lines. To keep them straight, they are grouped by line. Single tables pertaining to all lines appear with the first group of tables for 100% of the national line.

## 5.1 Calibrating scores with poverty likelihoods

A given score is associated (“calibrated”) with a poverty likelihood by defining the poverty likelihood as the share of households in the calibration sub-sample who have the score and who have per-capita income below a given poverty line.

For the example of 100% of the national line (Table 5), there are 10,608 (normalized) households in the calibration sub-sample with a score of 35–39. Of these, 4,726 (normalized) are below the poverty line. The estimated poverty likelihood associated with a score of 35–39 is then 44.5 percent, because  $4,726 \div 10,608 = 44.5$  percent.

To illustrate with 100% of the national line and a score of 40–44, there are 11,020 (normalized) households in the calibration sub-sample, of whom 3,885 (normalized) are below the line (Table 5). The poverty likelihood for this score range is then  $3,885 \div 11,020 = 35.3$  percent.

The same method is used to calibrate scores with estimated poverty likelihoods for all 16 poverty lines.<sup>30</sup>

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<sup>30</sup> To ensure that poverty likelihoods never increase as scores increase, likelihoods across series of adjacent scores are sometimes iteratively averaged before grouping scores into ranges. This preserves unbiasedness while keeping users from balking when sampling variation in score ranges with few households would otherwise lead to higher scores being linked with higher poverty likelihoods.

Even though the scorecard is constructed partly based on judgment related to non-statistical criteria, the calibration process produces poverty likelihoods that are objective, that is, derived from quantitative poverty lines and from survey data on income. The calibrated poverty likelihoods would be objective even if the process of selecting indicators and points did not use any data at all. In fact, objective scorecards of proven accuracy are often constructed using only expert judgment to select indicators and points (Fuller, 2006; Caire, 2004; Schreiner *et al.*, 2014). Of course, the scorecard here is constructed with both data and judgment. The fact that this paper acknowledges that some choices in scorecard construction—as in any statistical analysis—are informed by judgment in no way impugns the objectivity of the poverty likelihoods, as their objectivity depends on using data in score calibration, not on using data (and nothing else) in scorecard construction.

Although the points in the El Salvador scorecard are transformed coefficients from a Logit regression, (untransformed) scores are not converted to poverty likelihoods via the Logit formula of  $2.718281828^{\text{score}} \times (1 + 2.718281828^{\text{score}})^{-1}$ . This is because the Logit formula is daunting and difficult to compute by hand. Non-specialists find it more intuitive to define the poverty likelihood as the share of households with a given score in the calibration sample who are below a poverty line. Going from scores to poverty likelihoods in this way requires no arithmetic at all, just a look-up table. This approach to calibration can also improve accuracy, especially with large samples.

## 5.2 Accuracy of estimates of households' poverty likelihoods

As long as the relationships between indicators and poverty do not change over time, and as long as the scorecard is applied to households who are representative of the same population from which the scorecard was originally constructed, then this calibration process produces unbiased estimates of poverty likelihoods. *Unbiased* means that in repeated samples from the same population, the average estimate matches the true value.<sup>31</sup> Given the assumptions above, the scorecard also produces unbiased estimates of poverty rates at a point in time and unbiased estimates of changes in poverty rates between two points in time.<sup>32</sup>

Of course, the relationships between indicators and poverty do change to some unknown extent over time, and they also vary across sub-national groups in El Salvador's population. Thus, the scorecard will generally be biased when applied after December 2014 (the last month of fieldwork for the 2014 EHPM) or when applied with sub-groups that are not nationally representative.

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<sup>31</sup> *Unbiasedness* is defined in terms of averages across repeated samples. In any given sample, estimates will not usually match observed values.

<sup>32</sup> This is because these estimates of populations' poverty rates are linear functions of the unbiased estimates of households' poverty likelihoods.

How accurate are estimates of households' poverty likelihoods, given the assumption of unchanging relationships between indicators and poverty over time and the assumption of a sample that is representative of El Salvador as a whole? To find out, the scorecard is applied to 1,000 bootstrap samples of size  $n = 16,384$  with the 2014 validation sample. Bootstrapping means to:

- Score each household in a validation sample
- Draw a bootstrap sample *with replacement* from a validation sample
- For each score range, compute the observed poverty likelihood in the bootstrap sample, that is, the share of households with the score and with income below a poverty line
- For each score range, record the difference between the estimated poverty likelihood (Table 4) and the poverty likelihood observed in the bootstrap sample
- Repeat the previous three steps 1,000 times
- For each score range, report the average difference between estimated and observed poverty likelihoods across the 1,000 bootstrap samples
- For each score range, report the two-sided intervals containing the central 900, 950, and 990 differences between estimated and observed poverty likelihoods

For each score range and for  $n = 16,384$ , Table 6 shows the average error between estimated and observed poverty likelihoods. It also shows confidence intervals for the average errors.

For the 100% of the national line, the average poverty likelihood across bootstrap samples for scores of 35–39 in the 2014 validation sample is too high by 0.5 percentage points. For scores of 40–44, the estimate is too high by 5.5 percentage points.<sup>33</sup>

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<sup>33</sup> These differences are not zero, in spite of the estimator's unbiasedness, because the scorecard comes from a single sample. The average difference by score would be zero if samples were repeatedly drawn from the population and split into sub-samples before repeating the entire process of scorecard construction/calibration and validation.



The 90-percent confidence interval for the differences for scores of 35–39 is  $\pm 2.6$  percentage points (Table 6). This means that in 900 of 1,000 bootstraps, the average difference between the estimate and the observed value for households in this score range is between  $-2.1$  and  $+3.1$  percentage points (because  $+0.5 - 2.6 = -2.1$ , and  $+0.5 + 2.6 = +3.1$ ). In 950 of 1,000 bootstraps (95 percent), the difference is  $+0.5 \pm 3.0$  percentage points, and in 990 of 1,000 bootstraps (99 percent), the difference is  $+0.5 \pm 3.9$  percentage points.

A couple of the absolute differences between estimated poverty likelihoods and observed values in Table 6 for 100% of the national line are large. There are differences because the 2014 validation sample is a single sample that—thanks to sampling variation—differs in distribution from the construction/calibration sub-sample and from El Salvador’s population. For targeting, however, what matters is less the difference in all score ranges and more the difference in the score ranges just above and below the targeting cut-off. This mitigates the effects of bias and sampling variation on targeting (Friedman, 1997). Section 8 below looks at targeting accuracy in detail.

In addition, if estimates of groups’ poverty rates are to be usefully accurate, then errors for individual households’ poverty likelihoods must largely balance out. As discussed in the next section, this is generally the case for nationally representative samples in 2014, although it holds less well for samples from sub-national groups or in other time periods.

Another possible source of differences between estimates and observed values is overfitting. The scorecard here is unbiased, but it may still be *overfit* when applied after the end of the EHPM fieldwork in December 2014. That is, the scorecard may fit the construction/calibration data from 2014 so closely that it captures not only some real patterns but also some random patterns that, due to sampling variation, show up only in the 2014 EHPM construction/calibration data but not in the overall population of El Salvador. Or the scorecard may be overfit in the sense that it is not robust when relationships between indicators and poverty change over time or when the scorecard is applied to samples that are not nationally representative.

Overfitting can be mitigated by simplifying the scorecard and by not relying only on data but rather also considering theory, experience, and judgment. Of course, the scorecard here does this. Combining scorecards can also reduce overfitting, at the cost of greater complexity.

Most errors in individual households' likelihoods do balance out in the estimates of poverty rates for nationally representative samples (see the next two sections). Furthermore, at least some of the differences in change-over-time estimates come from non-scorecard sources such as changes in the relationships between indicators and poverty, sampling variation, changes in poverty lines, inconsistencies in data quality across time, and imperfections in price adjustments across time and across geographic regions. These factors can be addressed only by improving the availability, frequency, quantity, and quality of data from national income surveys (which is beyond the scope of the scorecard) or by reducing overfitting (which likely has limited returns, given the scorecard's parsimony).

## 6. Estimates of a poverty rate at a point in time

A population's estimated poverty rate at a point in time is the average of the estimated poverty likelihoods of households in a representative sample from the population.

To illustrate, suppose a program samples three households on 1 January 2018 and that they have scores of 20, 30, and 40, corresponding to poverty likelihoods of 71.9, 51.9, and 35.3 percent (100% of the national line, Table 4). The group's estimated poverty rate is the households' average poverty likelihood of  $(71.9 + 51.9 + 35.3) \div 3 = 53.0$  percent.

Be careful; the group's poverty rate is *not* the poverty likelihood associated with the average score. Here, the average score is 30, which corresponds to a poverty likelihood of 51.9 percent. This differs from the 53.0 percent found as the average of the three individual poverty likelihoods associated with each of the three scores. Unlike poverty likelihoods, scores are ordinal symbols, like letters in the alphabet or colors in the spectrum. Because scores are not cardinal numbers, they cannot meaningfully be added up or averaged across households. Only three operations are valid for scores: conversion to poverty likelihoods, analysis of distributions (Schreiner, 2012a), or comparison—if desired—with a cut-off for targeting. There are contexts in which the analysis of scores is appropriate, but, in general, the safest rule to follow is: If in doubt, then use poverty likelihoods, not scores.

Scores from the new 2014 scorecard are calibrated with data from the 2014 EHPM for all 16 poverty lines. The process of calibrating scores to poverty likelihoods and the approach to estimating poverty rates is exactly the same for all poverty lines. For users, the only difference in terms of what they do with one poverty line versus with another is the specific look-up table used to convert scores to poverty likelihoods.

## **6.1 Accuracy of estimated poverty rates at a point in time**

For the new 2014 scorecard applied to 1,000 bootstraps of  $n = 16,384$  from the 2014 validation sample and 100% of the national poverty line, the average error (differences between estimates and observed values in the 2014 validation sample) for a household-level poverty rate at a point in time is +1.2 percentage points (Table 8, summarizing Table 7 across poverty lines). Across all 16 lines in the 2014 validation sample, the maximum average absolute error is 1.9 percentage points, and the average of the absolute average errors is about 1.1 percentage points. At least part of these differences is due to sampling variation in the division of the 2014 EHPM into sub-samples.

When estimating poverty rates at a point in time for a given poverty line, the average error reported in Table 8 should be subtracted from the average poverty likelihood to give a corrected estimate. For the example of the new 2014 scorecard and 100% of the national line in the 2014 validation sample, the error is +1.2 percentage

points, so the corrected estimate in the three-household example above is  $53.0 - (+1.2) = 51.8$  percent.

In terms of precision, the 90-percent confidence interval for a group's estimated poverty rate at a point in time with  $n = 16,384$  is  $\pm 0.8$  percentage points or better for all poverty lines (Table 8). This means that in 900 of 1,000 bootstraps of this size, the estimate (after correcting for the known average error) is within 0.8 percentage points of the observed value.

For example, suppose that the (uncorrected) average poverty likelihood in a sample of  $n = 16,384$  with the new 2014 scorecard and 100% of the national line is 53.0 percent. Then estimates in 90 percent of such samples would be expected to fall in the range of  $53.0 - (+1.2) - 0.6 = 51.2$  percent to  $53.0 - (+1.2) + 0.6 = 52.4$  percent, with the most likely observed value being the corrected estimate in the middle of this range, that is,  $53.0 - (+1.2) = 51.8$  percent. This is because the original (uncorrected) estimate is 53.0 percent, the average error is +1.2 percentage points, and the 90-percent confidence interval for 100% of the national line in the 2014 validation sample with this sample size is  $\pm 0.6$  percentage points (Table 8).

## 6.2 Formula for standard errors for estimates of poverty rates

How precise are the point-in-time estimates? Because these estimates are averages, they have (in “large” repeated samples) a Normal distribution and can be characterized by their error (average difference vis-à-vis observed values), together with their standard error (precision measured as the square root of the sum of the squares of the errors).

Schreiner (2008) proposes an approach to deriving a formula for the standard errors of estimated poverty rates at a point in time from indirect measurement via poverty-assessment tools. It starts with Cochran’s (1977) textbook formula of  $\pm c = \pm z \cdot \sigma$  that relates confidence intervals with standard errors in the case of the direct measurement of ratios, where:

$\pm c$  is a confidence interval as a proportion (*e.g.*,  $\pm 0.02$  for  $\pm 2$  percentage points),

$z$  is from the Normal distribution and is  $\begin{cases} 1.04 \text{ for confidence levels of 70 percent} \\ 1.28 \text{ for confidence levels of 80 percent,} \\ 1.64 \text{ for confidence levels of 90 percent} \end{cases}$

$\sigma$  is the standard error of the estimated poverty rate, that is,  $\sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \phi$ ,

$\hat{p}$  is the estimated proportion of households below the poverty line in the sample,

$\phi$  is the finite population correction factor  $\sqrt{\frac{N - n}{N - 1}}$ ,

$N$  is the population size, and

$n$  is the sample size.

For example, El Salvador’s 2014 EHPM gives a direct-measure estimate of the household-level poverty rate for 100% of the national line in the 2014 validation sample of  $\hat{p} = 31.8$  percent (Table 1).<sup>34</sup> If this estimate came from a sample of  $n = 16,384$  households from a population  $N$  of 1,722,075 (the number of households in El Salvador in 2014 according to the EHPM sampling weights), then the finite population correction

$\phi$  is  $\sqrt{\frac{1,722,075 - 16,384}{1,722,075 - 1}} = 0.9952$ , which close to  $\phi = 1$ . If the desired confidence level

is 90-percent ( $z = 1.64$ ), then the confidence interval  $\pm c$  is

$$\pm z \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}} = \pm 1.64 \cdot \sqrt{\frac{0.318 \cdot (1 - 0.318)}{16,384}} \cdot \sqrt{\frac{1,722,075 - 16,384}{1,722,075 - 1}} = \pm 0.594$$

percentage points. If  $\phi$  were taken as 1, then the interval is  $\pm 0.597$  percentage points.

Unlike the 2014 EHPM, however, the scorecard does not measure poverty directly, so this formula is not applicable. To derive a formula for the new 2014 scorecard, consider Table 7, which reports empirical confidence intervals  $\pm c$  for the errors for the scorecard applied to 1,000 bootstrap samples of various sizes from the 2014 validation sample. For example, with  $n = 16,384$  and 100% of the national line in the 2014 validation sample, the 90-percent confidence interval is  $\pm 0.627$  percentage points.<sup>35</sup>

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<sup>34</sup> The analysis here ignores that poverty-rate estimates from the EHPM are themselves based on samples and so have their own sampling distribution.

<sup>35</sup> Due to rounding, Table 7 displays 0.6, not 0.627.



Thus, the 90-percent confidence interval with  $n = 16,384$  is  $\pm 0.627$  percentage points for the new 2014 scorecard and  $\pm 0.594$  percentage points for direct measurement. The ratio of the two intervals is  $0.627 \div 0.594 = 1.06$ .

Now repeat with exercise with  $n = 8,192$ . The confidence interval under direct measurement and 100% of the national line in the 2014 validation sample is

$$\pm 1.64 \cdot \sqrt{\frac{0.318 \cdot (1 - 0.318)}{8,192}} \cdot \sqrt{\frac{1,722,075 - 8,192}{1,722,075 - 1}} = \pm 0.842 \text{ percentage points. The}$$

empirical confidence interval with the new 2014 scorecard (Table 7) is  $\pm 0.813$  percentage points. Thus for  $n = 8,192$ , the ratio of the two intervals is  $0.813 \div 0.842 = 0.97$ .

This ratio of 0.97 for  $n = 8,192$  is not too far from the ratio of 1.06 for  $n = 16,384$ . Across all sample sizes of 256 or more in Table 7, these ratios are generally close to each other, and the average of these ratios in the 2014 validation sample turns out to be 1.01, implying that confidence intervals for indirect estimates of poverty rates via El Salvador's new 2014 scorecard and 100% of the national line are—for a given sample size—about the same as the confidence intervals for direct estimates via the 2014 EHPM. This 1.01 appears in Table 8 as the “ $\alpha$  factor for precision” because if  $\alpha = 1.01$ , then the formula for confidence intervals  $c$  for the new 2014 scorecard is  $\pm c = \pm z \cdot \alpha \cdot \sigma$ . That is, the formula for the standard error  $\sigma$  for point-in-time estimates

of poverty rates via scoring is  $\alpha \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}}$ .

In general,  $\alpha$  can be more or less than 1.00. When  $\alpha$  is less than 1.00, it means that the scorecard is has smaller standard errors than direct measurement. It turns out that  $\alpha$  is less than 1.00 for eight of the 16 poverty lines in Table 8, with a range from 0.75 to 1.28.

The formula relating confidence intervals with standard errors for the scorecard can be rearranged to give a formula for determining sample size before measurement. If  $\bar{p}$  is the expected poverty rate before measurement, then the formula for sample size  $n$  from a population of size  $N$  that is based on the desired confidence level that corresponds to  $z$  and the desired confidence interval  $\pm c$  is

$$n = N \cdot \left( \frac{z^2 \cdot \alpha^2 \cdot \bar{p} \cdot (1 - \bar{p})}{z^2 \cdot \alpha^2 \cdot \bar{p} \cdot (1 - \bar{p}) + c^2 \cdot (N - 1)} \right). \text{ If the population } N \text{ is "large" relative to the}$$

sample size  $n$ , then the finite-population correction factor  $\phi$  can be taken as one (1),

$$\text{and the formula becomes } n = \left( \frac{\alpha \cdot z}{c} \right)^2 \cdot \bar{p} \cdot (1 - \bar{p}).$$

To illustrate how to use this, suppose the population  $N$  is 1,722,075 (the number of households in El Salvador in 2014), suppose  $c = 0.04652$ ,  $z = 1.64$  (90-percent confidence), and the relevant poverty line is 100% of the national line so that the most sensible expected poverty rate  $\bar{p}$  is El Salvador's overall poverty rate for that line in 2014 (31.8 percent at the household level, Table 1). The  $\alpha$  factor is 1.01 (Table 8). Then the sample-size formula gives

$$n = 1,722,075 \cdot \left( \frac{1.64^2 \cdot 1.01^2 \cdot 0.318 \cdot (1 - 0.318)}{1.64^2 \cdot 1.01^2 \cdot 0.318 \cdot (1 - 0.318) + 0.04652^2 \cdot (1,722,075 - 1)} \right) = 275, \text{ which}$$

is not far from the sample size of 256 observed for these parameters in Table 7 for 100% of the national line. Taking the finite population correction factor  $\phi$  as one (1) gives the same result, as  $n = \left(\frac{1.01 \cdot 1.64}{0.04652}\right)^2 \cdot 0.318 \cdot (1 - 0.318) = 275$ .<sup>36</sup>

Of course, the  $\alpha$  factors in Table 8 are specific to El Salvador, its poverty lines, its poverty rates, and the new 2014 scorecard. The derivation of the formulas for standard errors using the  $\alpha$  factors, however, is valid for any poverty-measurement tool following the approach in this paper.

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<sup>36</sup> Although USAID has not specified confidence levels nor intervals, IRIS Center (2007a and 2007b) says that a sample size of  $n = 300$  is sufficient for USAID reporting. USAID's microenterprise partners in El Salvador should report using the poverty line that marks the poorest half of people below 100% of the national line. Given the  $\alpha$  factor of 0.90 for this line (Table 8), an expected before-measurement household-level poverty rate of 18.6 percent (the all-El Salvador rate for this line in 2014, Table 1), and a confidence level of 90 percent ( $z = 1.64$ ), then  $n = 300$  implies a confidence interval of  $\pm 1.64 \cdot 0.90 \cdot \sqrt{\frac{0.186 \cdot (1 - 0.186)}{300}} = \pm 3.3$  percentage points.

In practice after the end of EHPM fieldwork in December 2014, a program would select a poverty line (say, 100% of the national line), note its participants' population size (for example,  $N = 10,000$  participants), select a desired confidence level (say, 90 percent, or  $z = 1.64$ ), select a desired confidence interval (say,  $\pm 2.0$  percentage points, or  $c = \pm 0.02$ ), make an assumption about  $\tilde{p}$  (perhaps based on a previous measurement such as the household-level poverty rate for 100% of the national line for El Salvador of 31.8 percent in the 2014 EHPM in Table 1), look up  $\alpha$  (here, 1.01 in Table 8), assume that the scorecard will still work in the future and for sub-groups that are not nationally representative,<sup>37</sup> and then compute the required sample size. In this

$$\text{illustration, } n = 10,000 \cdot \left( \frac{1.64^2 \cdot 1.01^2 \cdot 0.318 \cdot (1 - 0.318)}{1.64^2 \cdot 1.01^2 \cdot 0.318 \cdot (1 - 0.318) + 0.02^2 \cdot (10,000 - 1)} \right) = 1,296.$$

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<sup>37</sup> This paper reports accuracy for the scorecard applied to its validation sample, but it does not test accuracy for later years nor for sub-populations that are not nationally representative. Performance after December 2014 will resemble that in the 2014 EHPM with deterioration over time to the extent that the relationships between indicators and poverty status change.

## 7. Estimates of changes in poverty rates over time

The change in a population's poverty rate between two points in time is estimated as the change in the average poverty likelihood of a sample or samples of households from the population.

To give an idea of how accurate the new 2014 scorecard might be when used to measure changes in poverty rates over time from now on, this section looks at how accurate this scorecard would have been, had it been applied with a baseline from the 2014 validation sample and a follow-up from the 2008 validation sample.<sup>38</sup>

The tests here are stringent because:

- They compare scorecard estimates with observed values from the EHPM
- The long time frame (six years) increases the risk of inaccuracy due to greater changes in the relationships between indicators and poverty as well as greater changes in the population of El Salvador
- The tests are *out-of-sample* in that they use—in both baseline and follow-up—only EHPM data from households that are not used in construction/calibration of the new 2014 scorecard
- The tests are *out-of-time* in that the follow-up is from a different time period (2008) than the data used to construct the scorecard (2014)

Of course, these necessarily backward-looking tests can only give a rough idea of how accurate the scorecard might be when used from now on. After all, the factors that mattered in the past will differ in type and degree from the factors that will matter in the future. This is the unfortunate-but-inevitable nature of scorecards.

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<sup>38</sup> In actual use, of course, the baseline comes before the follow-up. The baseline here is 2014 because the old 2008 scorecard will not be used from now on to estimate income-based poverty. In any case, such tests are merely indicative—not definitive—as there is no way to know for certain how well the new 2014 scorecard will work in, say, 2018.

Because estimates from the scorecard are unbiased when applied to an unchanging population in which there are unchanging relationships between indicators and poverty, inaccuracies in estimates of change between the pair of EHPM rounds must be due to some combination of:

- Sampling variation
- Inconsistent data quality
- Inconstant definitions of *poverty*
- Imperfections in how well a definition of *poverty* captures a household's income-based poverty
- Changes in the relationships between indicators and poverty
- Changes in the composition of El Salvador's population

Of course, the more resistant a scorecard's estimates are to deviations from its assumptions, the better. A scorecard whose real-world inaccuracies are too much to be useful for measuring change in a given context can take no consolation in how well it would work in a (non-existent) world in which all of its assumptions hold.

## 7.1 **Warning: *Change is not necessarily impact***

Scoring can estimate change. Of course, poverty could get better or worse, and scoring does not indicate what caused change. This point is often forgotten or confused, so it bears repeating: the scorecard merely estimates change, and it does not, in and of itself, indicate the causes of change. In particular, estimating the impact of participation requires knowing what would have happened to participants if they had not been participants. Making judgments or drawing conclusions about causality requires either strong assumptions or a control group that resembles participants in all

ways except participation. To belabor the point, the scorecard can help estimate the impact of participation only if there is some way to know—or explicit assumptions about—what would have happened in the absence of participation. And that information must come from beyond the scorecard.

## **7.2 Warning: Estimate change over time only for the seven lowest of the supported absolute lines**

In the case of El Salvador, estimates of change over time are accurate enough only for the seven lowest absolute poverty lines: food, 100% of national, \$1.25, \$2.00, and \$2.50/day 2005 PPP, and \$1.90/day and \$3.10/day 2011 PPP. Errors are too high for the higher absolute lines (150% and 200% of national, and \$5.00/day PPP).

Legacy users can estimate change over time with a baseline from the old 2008 scorecard and a follow-up from the new 2014 scorecard only for the food line and 100% of the national line. Estimates for 150% and 200% of the national line are too inaccurate, and the erroneous 2005 PPP lines supported for the old 2008 scorecard are not comparable with the corrected 2005 PPP lines supported for the new 2014 scorecard.

### 7.3 Estimating changes in poverty rates over time

Consider the illustration begun in the previous section. On 1 January 2018, a program samples three households who score 20, 30, and 40 and so have poverty likelihoods of 71.9, 51.9, and 35.3 percent (100% of the national line, Table 4).

Correcting for the known average error for this line in the 2014 validation sample of +1.2 percentage points (Table 8), the corrected baseline estimated poverty rate is the households' average poverty likelihood of  $[(71.9 + 51.9 + 35.3) \div 3] - (+1.2) = 51.8$  percent.

After baseline, two sampling approaches are possible at follow-up:

- Score a new, independent sample from the same population
- Score the same sample that was scored at baseline

By way of illustration, suppose that three years later on 1 January 2021, the program samples three additional households who are in the same population as the three original households and finds that their scores are 25, 35, and 45 (poverty likelihoods of 63.0, 44.5, and 24.8 percent, 100% of the national line, Table 4).

Adjusting for the known average error, the average poverty likelihood at follow-up is  $[(63.0 + 44.5 + 24.8) \div 3] - (+1.2) = 42.9$  percent, an improvement of  $51.8 - 42.9 = 8.9$  percentage points.<sup>39</sup> Supposing that exactly three years passed between the average baseline interview and the average follow-up interview, the estimated annual rate of decrease in poverty is  $8.9 \div 3 = 3.0$  percentage points per year. About one in 11

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<sup>39</sup> Of course, such a huge reduction in poverty in three years is unlikely, but this is just an example to show how the scorecard can be used to estimate change.



participants in this hypothetical example cross the poverty line between 2018 and 2021.<sup>40</sup> Among those who start below the line, about one in six ( $8.9 \div 51.8 = 17.2$  percent) on net end up above the line.<sup>41</sup>

Alternatively, suppose that the same three original households who were scored at baseline are scored again on 1 January 2021. Given scores of 25, 35, and 45, their follow-up poverty likelihoods are 63.0, 44.5, and 24.8 percent. The average across households of the difference in each given household's baseline poverty likelihood and its follow-up poverty likelihood is  $[(71.9 - 63.0) + (51.9 - 44.5) + (35.3 - 24.8)] \div 3 = 8.9$  percentage points.<sup>42</sup> Assuming in this example that there are exactly three years between each household's interviews, the estimated annual decrease in poverty is (again)  $8.9 \div 3 = 3.0$  percentage points per year.

Given the assumptions of the scorecard, both approaches to estimating change through time are unbiased. In a specific sample, however, they will give different estimates due to differences in the timing of interviews, in the composition of the samples, and in the nature of two samples being scored once versus one sample being scored twice (Schreiner, 2014a).

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<sup>40</sup> This is a net figure; some start above the line and end below it, and vice versa.

<sup>41</sup> The scorecard does not reveal the reasons for this change.

<sup>42</sup> In this second approach, the error for this line in Table 8 should *not* be subtracted off.

## 7.4 Accuracy for estimated change in two independent samples

The accuracy of scoring’s estimates of changes in poverty rates over time is checked using data from the 2014 and 2008 EHPM. While one cannot “drive by looking in the rear-view mirror”, historical accuracy is the best-available—but inevitably imperfect—indicator of future accuracy.

Change between 2014 (baseline) and 2008 (follow-up) can be estimated for the 10 absolute poverty lines supported for the new 2014 scorecard.<sup>43</sup> The average of the absolute average errors of the 10 estimates of change is about 2.8 percentage points (Table 9). For comparison, the average absolute observed change in the EHPM is about 4.8 percentage points. Thus, the average of the average absolute errors is about two-thirds of the average absolute observed change.

This is disappointing, but it turns out that the largest errors are concentrated in the three highest poverty lines (150% and 200% of the national line, and \$5.00/day 2005 PPP). These higher lines are not as relevant for pro-poor programs as the lower lines, and they are more inaccurate.

Accuracy is much higher for the seven lower lines (food, 100% of national, \$1.25, \$2.00, and \$2.50/day 2005 PPP, and the two 2011 PPP lines); the average of their absolute average errors is about 0.8 percentage points (Table 9), while the average absolute observed change is about 4.6 percentage points. This accuracy is probably

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<sup>43</sup> Change cannot be estimated for relative lines, as their real value is not constant over time. These are the five percentile-based lines and the line that marks the poorest half of people below 100% of the national line.

adequate for most common purposes, assuming—of course—that it continues into the future. This average of the absolute average errors of about 0.8 percentage points is much better than the average of the averages of the absolute average errors of about 3.5 percentage points across the other 16 countries with scorecards that have had similar tests (Schreiner, 2016a, 2016b, 2016c, 2016d, 2015a, 2015b, 2015c, 2015d, 2013a, 2013b, 2012c, 2010, 2009a, 2009b, 2009c; and Chen and Schreiner, 2009).

For the example of 100% of the national line, the error from 2014 to 2008 is +2.9 percentage points; the scorecard estimates a decrease of 11.1 percentage points when the observed decrease was 8.2 percentage points.

For all seven of the lowest lines (but not for any of the three highest lines), the observed value is in the estimate's 90-percent confidence interval (given  $n = 1,024$ ). Of course, if scoring's assumptions held, then more or less nine of ten 90-percent confidence intervals would contain the observed value.

The estimated direction of change (that is, whether poverty increased or decreased) matches the observed direction of change for all ten lines, and all of these are “statistically significant” in that zero is outside of the estimate's 90-percent confidence interval (given  $n = 1,024$ ). For this lowest of hurdles, the scorecard's estimates of change in El Salvador are accurate.

## 7.5 Precision for estimates of change in two samples

For two equal-sized independent samples (and maintaining the standard assumptions of the scorecard), the same logic as in the previous section can be used to derive a formula relating the confidence interval  $\pm c$  with the standard error  $\sigma$  of a scorecard's estimate of the change in poverty rates over time:

$$\pm c = \pm z \cdot \sigma = \pm z \cdot \alpha \cdot \sqrt{\frac{2 \cdot \hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}}.$$

Here,  $z$ ,  $c$ ,  $\hat{p}$  and  $N$  are defined as above,  $n$  is the sample size at both baseline and follow-up,<sup>44</sup> and  $\alpha$  is the average (across a range of bootstrapped sample sizes) of the ratio of the observed confidence interval from a scorecard and the theoretical confidence interval under direct measurement.

For El Salvador, the average  $\alpha$  across the 10 lines is about 0.99 (Table 9). For  $n = 16,384$ , the 90-percent confidence intervals are  $\pm 1.0$  percentage points or better.

As before, the formula for standard errors can be rearranged to give a formula for sample sizes before indirect measurement via a poverty-assessment tool, where  $\tilde{p}$  is based on previous measurements and is assumed equal at both baseline and follow-up:

$$n = 2 \cdot N \cdot \left( \frac{z^2 \cdot \alpha^2 \cdot \tilde{p} \cdot (1 - \tilde{p})}{z^2 \cdot \alpha^2 \cdot \tilde{p} \cdot (1 - \tilde{p}) + c^2 \cdot (N - 1)} \right). \text{ If } \phi \text{ can be taken as one, then the}$$

$$\text{formula becomes } n = 2 \cdot \left( \frac{\alpha \cdot z}{c} \right)^2 \cdot \tilde{p} \cdot (1 - \tilde{p}).$$

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<sup>44</sup> This means that—for a given level of precision—estimating the change in a poverty rate between two points in time requires four times as many total interviews (not twice as many) as does estimating a poverty rate at a point in time.

To illustrate the use of this formula to determine sample size for estimating changes in poverty rates across two independent samples, suppose the desired confidence level is 90 percent ( $z = 1.64$ ), the desired confidence interval is  $\pm 2$  percentage points ( $\pm c = \pm 0.02$ ), the poverty line is 100% of the national line,  $\alpha = 1.05$  (Table 9 for 2014 to 2008),  $\tilde{p} = 0.318$  (the household-level poverty rate in 2014 for 100% of the national line in Table 1), and the population  $N$  is large enough relative to the expected sample size  $n$  that the finite population correction  $\phi$  can be taken as one (1). Then the baseline sample size is  $n = 2 \cdot \left( \frac{1.05 \cdot 1.64}{0.02} \right)^2 \cdot 0.318 \cdot (1 - 0.318) \cdot 1 = 3,216$ , and the follow-up sample size is also 3,216.

## 7.6 Precision for estimated change for one sample, scored twice

Analogous to previous derivations, the general formula relating the confidence interval  $\pm c$  to the standard error  $\sigma$  when using a scorecard to estimate change for a single group of households, all of whom are scored at two points in time, is:<sup>45</sup>

$$\pm c = \pm z \cdot \sigma = \pm z \cdot \alpha \cdot \sqrt{\frac{\hat{p}_{12} \cdot (1 - \hat{p}_{12}) + \hat{p}_{21} \cdot (1 - \hat{p}_{21}) + 2 \cdot \hat{p}_{12} \cdot \hat{p}_{21}}{n}} \cdot \sqrt{\frac{N - n}{n - 1}},$$

where  $z$ ,  $c$ ,  $\alpha$ ,  $N$ , and  $n$  are defined as usual,  $\hat{p}_{12}$  is the share of all sampled households that move from below the poverty line to above it, and  $\hat{p}_{21}$  is the share of all sampled households that move from above the line to below it. With the available data for El Salvador, it is not possible to estimate values of  $\alpha$  here.

The formula for confidence intervals can be rearranged to give a formula for sample size before measurement. This requires an estimate (based on information available before measurement) of the expected shares of all households who cross the poverty line  $\tilde{p}_{12}$  and  $\tilde{p}_{21}$ . Before measurement, an agnostic assumption is that the change in the poverty rate will be zero, which implies  $\tilde{p}_{12} = \tilde{p}_{21} = \tilde{p}_*$ , giving:

$$n = 2 \cdot \left( \frac{\alpha \cdot z}{c} \right)^2 \cdot \tilde{p}_* \cdot \sqrt{\frac{N - n}{n - 1}}.$$

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<sup>45</sup> See McNemar (1947) and Johnson (2007). John Pezzullo helped find this formula.

Because  $\tilde{p}_*$  could be anything between 0 and 0.5, more information is needed to apply this formula. Suppose that the observed relationship between  $\tilde{p}_*$ , the number of years  $y$  between baseline and follow-up, and  $p_{\text{pre-baseline}} \cdot (1 - p_{\text{pre-baseline}})$  is—as in Peru (Schreiner, 2009d)—close to:

$$\tilde{p}_* = -0.02 + 0.016 \cdot y + 0.47 \cdot [p_{\text{pre-baseline}} \cdot (1 - p_{\text{pre-baseline}})].$$

Given this, a sample-size formula for a group of households to whom the new 2014 scorecard is applied twice (once after December 2014 and then again later) is

$$n = 2 \cdot \left( \frac{\alpha \cdot z}{c} \right)^2 \cdot [-0.02 + 0.016 \cdot y + 0.47 \cdot p_{\text{pre-baseline}} \cdot (1 - p_{\text{pre-baseline}})] \cdot \sqrt{\frac{N - n}{n - 1}}.$$

In Peru (the only source of a data-based estimate, Schreiner, 2009d), the average  $\alpha$  across years and poverty lines is about 1.30.

To illustrate the use of this formula, suppose the desired confidence level is 90 percent ( $z = 1.64$ ), the desired confidence interval is  $\pm 2.0$  percentage points ( $\pm c = \pm 0.02$ ), the poverty line is 100% of the national line, the sample will first be scored in 2018 and then again in 2021 ( $y = 3$ ), and the population  $N$  is so large relative to the expected sample size  $n$  that the finite population correction  $\phi$  can be taken as one (1).

The pre-baseline poverty rate  $p_{2018}$  is taken as 31.8 percent (Table 1), and  $\alpha$  is assumed to be 1.30. Then the baseline sample size is

$$n = 2 \cdot \left( \frac{1.30 \cdot 1.64}{0.02} \right)^2 \cdot [-0.02 + 0.016 \cdot 3 + 0.47 \cdot 0.318 \cdot (1 - 0.318)] \cdot 1 = 2,953. \text{ The same}$$

group of 2,953 households is scored at follow-up as well.

## 8. Targeting

When a program uses scoring for segmenting clients for differentiated treatment (*targeting*), households with scores at or below a cut-off are labeled *targeted* and given one type of treatment by the program. Households with scores above a cut-off are labeled *non-targeted* and given another type of treatment.

There is a distinction between *targeting status* (scoring at or below a targeting cut-off) and *poverty status* (having income below a poverty line). Poverty status is a fact that is defined by whether income is below a poverty line as directly measured by a survey. In contrast, targeting status is a program's policy choice that depends on a cut-off and on an indirect estimate from a poverty-assessment tool.

Households who score at or below a given cut-off should be labeled as *targeted*,<sup>46</sup> not as *poor*. After all, unless all targeted households have poverty likelihoods of 100 percent, some of them are non-poor (their income is above a given poverty line). With scoring, the terms *poor* and *non-poor* have specific definitions. Using these same terms for targeting status is incorrect and misleading.

Targeting is successful when households truly below a poverty line are targeted (*inclusion*) and when households truly above a poverty line are not targeted (*exclusion*).

Of course, no poverty-assessment tool is perfect, and targeting is unsuccessful when

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<sup>46</sup> Other labels are acceptable as long as they describe the segment and do not confuse targeting status (having a score below a program-selected cut-off) with poverty status (having income below an externally-defined poverty line). Examples of acceptable labels include *Groups A, B, and C*; *Households scoring 29 or less, 30 to 69, or 70 or more*; and *Households who qualify for reduced fees, or do not*.



households truly below a poverty line are not targeted (*undercoverage*) or when households truly above a poverty line are targeted (*leakage*).

Table 10 depicts these four possible targeting outcomes. Targeting accuracy varies by the cut-off score; a higher cut-off has better inclusion (but worse leakage), while a lower cut-off has better exclusion (but worse undercoverage).

Programs should weigh these trade-offs when setting a cut-off. A formal way to do this is to assign net benefits—based on a program’s values and mission—to each of the four possible targeting outcomes and then to choose the cut-off that maximizes total net benefits (Adams and Hand, 2000; Hoadley and Oliver, 1998).

Table 11 shows the distribution of households by targeting outcome for El Salvador. For an example cut-off of 39 or less, outcomes for 100% of the national line in the 2014 validation sample are:

- Inclusion: 21.9 percent are below the line and correctly targeted
- Undercoverage: 9.9 percent are below the line and mistakenly not targeted
- Leakage: 14.9 percent are above the line and mistakenly targeted
- Exclusion: 53.3 percent are above the line and correctly not targeted

Increasing the cut-off to 44 or less improves inclusion and undercoverage but worsens leakage and exclusion:

- Inclusion: 25.7 percent are below the line and correctly targeted
- Undercoverage: 6.1 percent are below the line and mistakenly not targeted
- Leakage: 22.1 percent are above the line and mistakenly targeted
- Exclusion: 46.1 percent are above the line and correctly not targeted

Which cut-off is preferred depends on total net benefit. If each targeting outcome has a per-household benefit or cost, then total net benefit for a given cut-off is:

Benefit per household correctly included	x	Households correctly included	–
Cost per household mistakenly not covered	x	Households mistakenly not covered	–
Cost per household mistakenly leaked	x	Households mistakenly leaked	+
Benefit per household correctly excluded	x	Households correctly excluded.	

To set an optimal cut-off, a program would:

- Assign benefits and costs to possible outcomes, based on its values and mission
- Tally total net benefits for each cut-off using Table 11 for a given poverty line
- Select the cut-off with the highest total net benefit

The most difficult step is assigning benefits and costs to targeting outcomes. A program that uses targeting—with or without scoring—should thoughtfully consider how it values successful inclusion and exclusion versus errors of undercoverage and leakage. It is healthy to go through a process of thinking explicitly and intentionally about how possible targeting outcomes are valued.

A common choice of benefits and costs is the “hit rate”, where total net benefit is the number of households correctly included or correctly excluded:

Hit rate =	1	x	Households correctly included	–
	0	x	Households mistakenly undercovered	–
	0	x	Households mistakenly leaked	+
	1	x	Households correctly excluded.	

Table 11 shows the hit rate for all cut-offs for the new 2014 scorecard. For 100% of the national line in the 2014 validation sample, total net benefit—under the hit rate—is greatest (76.7) for a cut-off of 34 or less, with about three in four households in El Salvador correctly classified.

The hit rate weighs successful inclusion of households below the line the same as successful exclusion of households above the line. If a program values inclusion more (say, twice as much) than exclusion, then it can reflect this by setting the benefit for inclusion to 2 and the benefit for exclusion to 1. Then the chosen cut-off will maximize  $(2 \times \text{Households correctly included}) + (1 \times \text{Households correctly excluded})$ .<sup>47</sup>

As an alternative to assigning benefits and costs to targeting outcomes and then choosing a cut-off to maximize total net benefits, a program could set a cut-off to achieve a desired poverty rate among targeted households. The third column of Table 12 (“% targeted HHs who are poor”) shows, for the new 2014 scorecard applied to the 2014 validation sample, the expected poverty rate among households who score at or below a given cut-off. For the example of 100% of the national line, targeting households in the 2014 validation sample who score 39 or less would target 36.7 percent of all households (second column) and would be associated with an expected poverty rate among those targeted of 59.5 percent (third column).

Table 12 also reports two other measures of targeting accuracy. The first is a version of coverage (“% poor HHs who are targeted”). For the example of 100% of the

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<sup>47</sup> Table 11 also reports BPAC, the Balanced Poverty Accuracy Criteria adopted by USAID for certifying poverty-assessment tools. IRIS Center (2005) made BPAC to consider accuracy in terms of the error of estimated poverty rates and in terms of targeting inclusion.  $BPAC = (\text{Inclusion} - |\text{Undercoverage} - \text{Leakage}|) \times [100 \div (\text{Inclusion} + \text{Undercoverage})]$ . Schreiner (2014b) explains why BPAC does not add any useful information beyond that provided by the more-standard measures used here.

national line with the 2014 validation sample and a cut-off of 39 or less, 68.7 percent of all poor households are covered.

The final targeting measure in Table 12 is the number of successfully targeted poor households for each non-poor household mistakenly targeted (right-most column). For 100% of the national line with the 2014 validation sample and a cut-off of 39 or less, covering 1.5 poor households means leaking to 1 non-poor household.

## 9. Context of poverty-measurement tools in El Salvador

The “Poverty Assessment Tool” (PAT) by IRIS Center (2010) is the only other known poverty-assessment tool that estimates income-based poverty rates for El Salvador. USAID commissioned the PAT to help its microenterprise partners fulfill a mandate to report the share of their participants who are “very poor”, defined for El Salvador as having income below the line that marks the poorest half of people below 100% of the national line (U.S. Congress, 2004).

In general, the PAT for El Salvador is like the scorecard except that it:

- Estimates income itself (not whether a household’s income is below a poverty line) and then converts estimated income to a poverty likelihood of either 0 or 100 percent (rather than a poverty likelihood between 0 and 100)
- Uses 2008 EHPM data (rather than 2014 EHPM data)
- Has more indicators (19 rather than 10)
- Does not report errors nor standard errors for estimates of changes in poverty rates
- Does not report sample-size formula for point-in-time nor change-over-time estimates

The PAT supports five poverty lines:

- Line marking the poorest half of people under 100% of the national line
- Line marking the poorest three-fourths of people under 100% of the national line
- Food
- 100% of national
- 150% of national

IRIS tests four regression-based approaches in both one-stage and two-stage versions (IRIS, 2005), settling on a one-step quantile regression that estimates the 38<sup>th</sup> percentile of the logarithm of per-capita household income, conditional on the household's responses to the PAT's 19 indicators (IRIS, 2010):

- Demographics:
  - Number of household members (and its square)
  - Age of the head (and its square)
- Whether the head worked in the past week
- Characteristics of the residence:
  - Tenancy status
  - Number of rooms
  - Type of floor
  - Type of fuel for cooking
  - Method of disposal of garbage
- Consumer durables:
  - Presence of a microwave oven
  - Presence of a blender
  - Presence of a fan
  - Presence of a iron
  - Presence of a washing machine
  - Number of televisions
  - Presence of a VCR or DVD player
  - Presence of a computer
  - Number of motor vehicles
- Location of residence:
  - Urban/rural
  - Region

For El Salvador, Schreiner (2014b) reports an apples-to-apple comparison of the PAT from IRIS (2010) versus the old 2008 scorecard from Schreiner and Woller (2010). In out-of-sample tests, the average error for the line marking the poorest half of people below 100% of the national line is about the same for the scorecard (+0.2 percentage points) as for the PAT (-0.5 percentage points).<sup>48</sup> The PAT is less precise (its  $\alpha$  factor for standard errors is 1.26 versus 0.88 for the scorecard). For targeting, the scorecard classifies 1.6 more households per 100 correctly than does the PAT. To sum up, the PAT and the scorecard are about tied in terms of accuracy.

IRIS also reports accuracy in terms of the Balanced Poverty Accuracy Criterion. IRIS Center (2005) introduced BPAC, and USAID adopted it as its criterion for approving poverty-assessment tools for use by its microenterprise partners. BPAC considers accuracy in terms of inclusion and in terms of the absolute difference between undercoverage and leakage (which under the PAT’s approach—but not under the scorecard’s approach—is equal to the absolute error of the estimated poverty rate):

$$\text{BPAC} = 100 \cdot \left( \frac{\text{Inclusion} - |\text{Undercoverage} - \text{Leakage}|}{\text{Inclusion} + \text{Undercoverage}} \right).$$

Because the error (in the PAT approach) is the difference between undercoverage and leakage, and because the normalization term  $\frac{100}{\text{Inclusion} + \text{Undercoverage}}$  may be relevant only when comparing poverty-assessment tools across populations with

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<sup>48</sup> In any case, when the average known error can be removed, so both the PAT and scorecard are unbiased.

different poverty rates (but irrelevant when selecting among alternative poverty-assessment tools for a given country in a given year for a given poverty line), the simpler formula  $\text{BPAC} = \text{Inclusion} - |\text{Error}|$  ranks poverty-assessment tools the same as the more complex formula.

Expressing BPAC as  $\text{Inclusion} - |\text{Error}|$  helps to show why BPAC is not useful for comparing the PAT with the scorecard (Schreiner, 2014b). Given the assumptions discussed earlier,<sup>49</sup> scorecard estimates of poverty rates are unbiased, regardless of whether undercoverage differs from leakage when targeting. While BPAC can be used to compare alternatives that use the PAT's income-estimation approach, it does not make sense to apply BPAC to the scorecard's likelihood-estimation approach. This is because the scorecard does not use a single cut-off to classify households as either 100-percent poor or 0-percent poor. Instead, households have an estimated poverty likelihood somewhere between 0 to 100 percent. If a scorecard user sets a targeting cut-off, then that cut-off matters only for targeting, and it does not affect the estimation of poverty rates at all.

Although IRIS reports the PAT's targeting accuracy and although the BPAC formula considers targeting accuracy in terms of inclusion, IRIS disavows the use of the PAT for targeting.<sup>50</sup>

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<sup>49</sup> The unbiasedness of the PAT—or of any other poverty-assessment tool—also requires these assumptions.

<sup>50</sup> FHI360 (2013) and [povertytools.org/faq/faq2.html](http://povertytools.org/faq/faq2.html) (retrieved 5 February 2017).



IRIS also disavows using the PAT to estimate change over time, saying “It is unclear that the tools will be able to identify real changes in poverty over time due to their inherent measurement errors. Unless the changes in the poverty rate are exceptionally large and unless the tools are exceptionally accurate, then the changes identified are likely to be contained within the margin of error.”<sup>51</sup> Even though IRIS does not report accuracy for estimates of change over time for El Salvador nor for any other country, it nevertheless asserts that the confidence interval for estimates of change—for some unstated confidence level and some unstated sample size—will usually include zero. For the new 2014 scorecard for El Salvador, however, out-of-sample estimates of change from the 2014 validation sample to the full 2008 EHPM are statistically different from zero with  $n = 1,024$  and 90-percent confidence for all poverty lines.

The scorecard supports targeting and estimating changes over time by reporting accuracy for these possible uses. This allows users to decide for themselves whether the scorecard is adequate for their purposes.

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<sup>51</sup> [povertytools.org/faq/faq2.html](http://povertytools.org/faq/faq2.html), retrieved 5 February 2017.

## 10. Conclusion

Pro-poor programs in El Salvador can use the scorecard to segment clients for differentiated treatment as well as to estimate:

- The likelihood that a household has income below a given poverty line
- A population's poverty rate at a point in time
- The change in a population's poverty rate over time

The scorecard is inexpensive to use and can be understood by non-specialists. It is designed to be practical for pro-poor programs in El Salvador that want to improve how they monitor and manage their social performance.

The new 2014 scorecard is constructed with data from half of the households in El Salvador's 2014 EHPM. Those households' scores are then calibrated to poverty likelihoods for 16 poverty lines. The 2005 PPP lines here correct an error in the 2005 PPP lines in Schreiner and Woller (2010).

The accuracy (errors and precision) of the new 2014 scorecard is tested out-of-sample for targeting, for estimating a household's poverty likelihood at a point in time, and for estimating a population's poverty rate a point in time.

When the scorecard is applied to the 16 poverty lines in the 2014 validation sample, the maximum absolute average error for point-in-time estimates of poverty rates is 1.9 percentage points, and the average of the absolute average errors is about 1.1 percentage points. Corrected estimates may be had by subtracting the known error for a given poverty line from the original, uncorrected estimates.

For  $n = 16,384$  and 90-percent confidence, the precision of point-in-time estimates of poverty rates is  $\pm 0.8$  percentage points or better. With  $n = 1,024$ , the 90-percent confidence intervals are  $\pm 3.0$  percentage points or better.

The accuracy of estimates of changes in poverty rates over time is tested out-of-sample and out-of-time. Of course, estimates of change are not necessarily the same as estimates of program impact. It turns out that the errors of estimates of change over time for the three highest absolute poverty lines (150% and 200% of national, and \$5.00/day 2005 PPP) are so high as to preclude their use.

Errors are much lower for the seven lowest absolute lines (food, 100% of national, \$1.25/day, \$2.00/day, and \$2.50/day 2005 PPP, and the two 2011 PPP lines). The average of their absolute average errors is about 0.8 percentage points when the average absolute observed change is about 5.2 percentage points. For these seven lines, the 90-percent confidence intervals (with  $n = 1,024$ ) of the estimated changes include the observed changes. In addition, the estimated direction of change matches the observed direction and is “statistically significant” (the confidence interval of the estimate does not include zero) for all lines. In sum, the accuracy of estimated changes is adequate for most common purposes when using the seven lowest absolute poverty lines.

If a program wants to use the scorecard for segmenting clients for differentiated treatment, then the results here provide useful information for selecting a targeting cut-off that fits its values and mission.

Although the statistical technique is innovative, and although technical accuracy is important, the design of the scorecard focuses on transparency and ease-of-use. After all, accuracy is irrelevant if a program's managers feel so daunted by a scorecard's complexity or its cost that they do not even try to use it.

For this reason, the scorecard uses 10 indicators that are straightforward, low-cost, and verifiable. Points are all zeros or positive integers, and scores range from 0 (most likely below a poverty line) to 100 (least likely below a poverty line). Scores are converted to poverty likelihoods via look-up tables, and targeting cut-offs are likewise straightforward to apply. The design attempts to facilitate voluntary adoption by helping managers to understand and to trust scoring and by allowing non-specialists to add up scores quickly in the field.

In summary, the scorecard is a practical, objective way for pro-poor programs in El Salvador to estimate income-based poverty rates, to track changes in poverty rates over time, and to segment participants for differentiated treatment. The same approach can be applied to any country with similar data.

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## Guidelines for the Interpretation of Scorecard Indicators

The excerpts quoted below come from:

Dirección General de Estadística y Censos. (2013) “Manual del Encuestador 2014”, [the *Manual*], Delgado.

and

Dirección General de Estadística y Censos. (2014) “Boleta de la Encuesta de Hogares de Propósitos Múltiples 2014”, [the *Questionnaire*], Delgado.

### **Only train enumerators and promulgate rules from these “Guidelines”**

When an issue comes up that is not addressed here, its resolution should be left to the unaided judgment of the enumerator, as that seems to have been what El Salvador’s DIGESTYC did in the 2014 EHPM. That is, an organization using the scorecard should not promulgate any definitions nor rules (other than those in these “Guidelines”) to be used by all its field agents. Anything not explicitly addressed in these “Guidelines” is to be left to the unaided judgment of the individual enumerator. This is meant to mimic the practice in the 2014 EHPM.

### **General guidelines for asking scorecard questions**

Fill out the scorecard header and the “Back-page Worksheet” first, following the directions on the “Back-page Worksheet”.

Do not ask the first scorecard indicator directly (“How many household members are 18-years-old or younger?”). Instead, use the information recorded on the “Back-page Worksheet” to determine the response to mark. You must also record the number of household members in the scorecard header next to “Number of household members:”.

In the same way, do not ask the second indicator directly (“In the past calendar-week, how many household members 18-years-old or older worked for at least one hour? (not counting household chores)”). Rather, use the information recorded on the “Back-page Worksheet” to determine the response to mark.

Likewise, do not ask the third indicator directly (“How many household members who worked were wage or salary employees (whether temporary or permanent)?”). Again, mark the relevant response based on the information recorded when filling out the “Back-page Worksheet”.

Finally, do not ask the fourth indicator directly (“In the past calendar-week, did the female head/spouse work for at least one hour? (not counting household chores)”). Again, mark the relevant response based on the information recorded when filling out the “Back-page Worksheet”.

Do not read the response options to the respondent except for the sixth indicator (“What is the main fuel used for cooking?”). In all other cases, read the question, and then stop; wait for a response. If the respondent asks for clarification or otherwise hesitates or seems confused, then read the question again or provide additional assistance based on these “Guidelines” or as you, the enumerator, deem appropriate.

Read the questions word-for-word exactly as they are written and in the order that they appear on the scorecard.

When you mark a response to a scorecard indicator, circle the spelled-out response option and its point value, and write the point value in the “Score” column, like this:

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4. In the past calendar-week, did the female head/spouse work for at least one hour? (not counting household chores)	A. No	0	
	B. Yes	7	7
	C. No female head/spouse	16	

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In general, you should accept the responses given by the respondent. Nevertheless, if the respondent says something—or if you see or sense something—that suggests that the response may not be accurate, that the respondent is uncertain, or that the respondent desires assistance in figuring out how to respond, then you should read the question again and provide whatever help you deem appropriate based on these “Guidelines”.

While most indicators in the scorecard are verifiable, you do not—in general—need to verify responses. You should verify a response only if something suggests to you that the response may not be accurate and thus that verification might improve data quality.

For example, you might choose to verify if the respondent hesitates, seems nervous, or otherwise gives signals that he/she may be lying or be confused. Likewise, verification is probably appropriate if a child in the household or a neighbor says something that does not square with the respondent’s answer.

Verification is also a good idea if you happen to see something yourself—such as a consumer durable that the respondent avers not to possess, or a child eating in the room who has not been counted as a member of the household—that suggests that the response may not be accurate.

In general, your application of the scorecard should mimic as closely as possible DIGESTYC's application of the 2014 EHPM. For example, poverty-scoring interviews should take place in respondents' homesteads because the 2014 EHPM took place in respondents' homesteads.

**Confidencialidad:**

According to p. 8 of the *Manual*, you as the enumerator must keep all information received from the respondent strictly confidential.

**Who should be the respondent?**

According to p. 20 of the *Manual*, responses should be supplied by “the head of the household (male or female) or by a capable adult.”

The respondent need not be the same person as the household member who is a participant with your organization.

**General guidelines:**

Study these “Guidelines” slowly and carefully. Take a copy with you to all interviews.

According to p. 9 of the *Manual*, you as the enumeratour should “read the questions out loud, clearly and slowly and word-for-word.” Read the questions in the order that they are listed.

**Enumerator responsibilities:**

According to pp. 5–6 of the *Manual*, you as the enumerator should:

- “Participate actively in the training and pass the training’s test
- Study carefully [these “Guidelines”] until you master them
- Interview the sampled household (and not some other household)
- Do your own work without taking third parties to interviews when they have no business being there
- Keep the survey forms—both blank and filled-out—with you at all times, and maintain the confidentiality of the information that your receive
- Ask the respondent the survey questions politely, recording answers accurately
- Review the questionnaire as soon as the interview is over to detect and correct any possible errors
- Tell your supervisor about any issues or questions that arise in the course of your work so that they can be resolved quickly
- Be on your best behavior at all times, as befits the critical work entrusted to you

### Prohibitions:

According to p. 6 of the *Manual*, you as the enumerator must not:

- Delegate your work to someone else
- Do something other than your assigned work
- Alter any information received from the respondent
- Show or discuss any information received from respondents with anyone outside of your organization's team
- Pressure or threaten respondents to get them to cooperate or to try to induce them to respond with false promises
- Leave survey instruments—whether blank or filled-out—where unauthorized people can have access to them
- Drink alcohol or use other non-prescription drugs while at work on the survey

### Art of interviewing:

Page 8 of the *Manual* tells how to start an interview.

### Introducing the survey:

“Once you locate the residence of the sampled household, greet its members politely, telling them your name and showing them the badge that confirms that you work for [your organization]. Explain the purpose of the survey (“to learn how our organization’s participants live”) in simple, clear language that the respondent can understand. Emphasize that all information you receive will be kept strictly confidential.

“For example, your introduction might be: ‘Good morning, my name is [your name]. I work with [your organization], and we are doing a short survey to learn about how [our participants] live. I would like to ask you a few questions, and I would appreciate it if you would be so kind as to cooperate with me.’

“If the members of the responding household do not ask any follow-up questions, then do not go into more detail. If they ask about the purpose and use of the data, tell them that . . . it will help [your organization learn how its participants live].

How to act during the interview:

“Dress appropriately so as to win the respondents’ trust and acceptance. During the interview itself, show that you know what you are doing, as this will also encourage trust and cooperation.

“During the interview itself, you can facilitate communication with the respondent by:

- Avoiding any discussion or situation that has nothing to do with the interview
- Showing the respondent deference and respect
- If asked about how the data will be used, giving a clear, confident answer
- Reading the questions slowly and out loud. Clearly state the relevant reference period. Do not suggest in any way that you expect any specific response

“When the interview is finished, politely take your leave. Thank the respondent profusely for having cooperated with your requests. Mention that if there are any additional questions, you or someone else from your organization may return. Leave the respondent with a good impression of you and of [your organization].”



## Guidelines for specific scorecard indicators

1. How many household members are 18-years-old or younger?
  - A. Four or more
  - B. Three
  - C. Two
  - D. One
  - E. None

Do not ask this question directly. Instead, use the information recorded on the “Back-page Worksheet” to determine the response to mark. Also, be sure to record the number of household members in the scorecard header next to “Number of household members:”.

According to p. 19 of the *Manual*, a *household* is “one or more people linked by blood or friendship who usually live together, who eat from the same pot, and who cooperate to meet their other basic needs.

“Families that live in the same residence—regardless of blood or marital ties—who do not eat from the same pot [are considered to be distinct households].”

According to p. 44 of the *Manual*, a *household* is “a person or group of people linked by blood or friendship who share a residence and who eat from the same pot.”

According to p. 20 of the *Manual*, “You should count as *household members* all people—whether present or absent on the day of the interview—who have their usual residence with the household. Also count people who are present in the household and who, on the day of the interview, do not have a usual residence anywhere else [even if they do not usually reside with the interviewed household].

“Absent household members—defined as those who have their usual residence with the interviewed household but who on the day of the interview are not present due to classes, business, visits to friends or relatives, vacation, hospital stays, and so on—count as *household members* as long as they have a planned date of return and as long as the household contributes to covering their expenses [or they contribute to covering the household’s expenses].

“Live-in domestic servants also count as *household members*. A servant is classified as *live-in* if he/she leaves the residence where he/she works to visit his/her family elsewhere no more than once every two weeks. Domestic servants who visit their families more frequently than once every two weeks are not live-in and so do not count as members of the household being interviewed.

“People who have their usual residence with the household but who are absent on the day of the interview and who have been absent for less than three months and who share in the household’s expenses [are counted as household members].”

According to pp. 14 and 19 of the *Manual*, do not count as *members of the interviewed household* people who the members of the interviewed household consider as members but who “have been abroad for work or for school for more than three months and who cover their own expenses [with their pay from their work or a scholarship], [even if these people happen to be visiting the household on the day of the interview]. In the same way, student lodgers (*pupilos*) are not counted as members of the household with which they pay for room and board (even if they are a relative of someone in the household where they are staying). Rather, they are counted as member of the household to which they return and to which they need not pay for room and board.”

Following this logic, if a person is considered to be a member of the interviewed household by the other members of the interviewed household, and if this person is a student lodger (*pupilo*) with another household or in a dormitory, then the person is considered to be a member of the interviewed household.

According to p. 14 of the *Manual*, do not count as members of the interviewed household “those who the respondent says are sailors working on internationally-registered ships or who are incarcerated for some crime and who have been absent from the household for more than three months . . . . In contrast, sailors or fisherpeople on Salvadorian ships that have been absent for less than three months are counted as household members.”

2. In the past calendar-week, how many household members 18-years-old or older worked for at least one hour? (not counting household chores)
- A. None, or one
  - B. Two
  - C. Three or more

Do not ask this question directly. Rather, use the information that you will have already recorded on the “Back-page Worksheet” to determine the response to mark.

According to p. 69 of the *Manual*, *economic activity (work)* is “any task or labor that serves to produce goods or services . . . inside or outside of the residence during the reference period.”

According to p. 70 of the *Manual*, the *economically active population* is that which “in the reference period did work from which they received remuneration or profit—whether in-cash or in-kind—or that worked without financial remuneration in a family business.”

According to p. 70 of the *Manual*, “Make sure that you respect the reference period when dealing with farmers (whether agri-business owners or family farmers). For example, if a farmer did not work in the past week, then [he/she is counted as not having worked, even if the inactivity was purely seasonal].”

According to p. 60 of the *Manual*, “The reference period is the *past calendar-week* (that is, the calendar week preceding the calendar-week in which the interview takes place).

“For example, if the interview takes place on Thursday, February 14, then the past calendar-week runs from Monday, February 4 to Sunday, February 10.”

February						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

Day of the interview

Reference week

3. How many household members who worked were wage or salary employees (whether temporary or permanent)?
  - A. None
  - B. One
  - C. Two or more

Do not ask this question directly. Instead, mark the relevant response based on the information that you will have already recorded when filling out the “Back-page Worksheet”.

According to p. 134 of the *Manual*, a *salary* is “financial remuneration that an employee receives in exchange for working for a given period of time.”

4. In the past calendar-week, did the female head/spouse work for at least one hour?  
(not counting household chores)
  - A. No
  - B. Yes
  - C. No female head/spouse

Do not ask this question directly. Instead, mark the relevant response based on the information that you will have already recorded when filling out the “Back-page Worksheet” for the female head spouse (if there is one).

Please refer to the “Guidelines” above for definitions of *economic activity*, *work*, and the *economically active population*.

If there is no female head/spouse, mark “C. No female head/spouse” and go to the next question.

According to p. 21 of the *Manual*, the *head of the household* is “the person (father, mother, or some other household member) who has the greatest authority in decisions affecting the household and who produces the most support for the household. Nevertheless, you as the enumerator should accept whatever the respondent says in terms of who is the head.”

According to p. 19 of the *Manual*, the *head of the household* can be male or female and is whoever “is recognized as the head by the other members of the household.

“If the household has more than one income-earner, then select the one (male or female) who earns the most. If the household’s members are unrelated by blood or marriage, and if they cannot agree on who is the head, then you should take as the head the person who has been a member of the household for the longest time. If the person who the other household members name as head is not a household member (for example, due to extended absence), then count as the head another person who meets the criteria of headship (that is, the person who the other members of the household recognize as the head) or who—if they are not recognized by the others as the head—still meets some of the other criteria for headship.”

According to p. 20 of the *Manual*, “Do not count as the female head/spouse anyone younger than 15-years-old.”

According to p. 21 of the *Manual*, only someone who is a member of the interviewed household can be the head of the interviewed household. For example, someone who is permanently abroad cannot be the head of the interviewed household because such a person is not a member of the interviewed household.

For the purposes of the scorecard, the *female head/spouse* is defined as:

- The household head, if the head is female
- The spouse/conjugal partner of the household head, if the head is male
- Non-existent, if the head is male and if he does not have a spouse/conjugal partner who is a member of the interviewed household

5. What is the highest level and grade which the male head/spouse has studied and passed?
- A. None, informal or special education, or other
  - B. Pre-school to Primary 5
  - C. Primary 6 or 7
  - D. Primary 8 or 9, or secondary 10 or 11
  - E. No male head/spouse
  - F. Secondary 12, or post-secondary

Remember that you already know the name of the male head/spouse (and whether he exists) from the notes you took while compiling the “Back-page Worksheet”. Thus, if there is a male head/spouse, do not robotically ask, “What is the highest level and grade which the male head/spouse has studied and passed?”. Instead, use the actual name of the male head/spouse, for example: “What is the highest level and grade which John has studied and passed?” If there is no male head/spouse, then do not read the question at all; just mark “E. No male head/spouse” and proceed to the next indicator.

According to p. 21 of the *Manual*, the *head of the household* is “the person (father, mother, or some other household member) who has the greatest authority in decisions affecting the household and who produces the most support for the household. Nevertheless, you as the enumerator should accept whatever the respondent says in terms of who is the head.”

According to p. 19 of the *Manual*, the *head of the household* can be male or female and is whoever “is recognized as the head by the other members of the household.

“If the household has more than one income-earner, then select the one (male or female) who earns the most. If the household’s members are unrelated by blood or marriage, and if they cannot agree on who is the head, then you should take as the head the person who has been a member of the household for the longest time. If the person who the other household members name as head is not a household member (for example, due to extended absence), then count as the head another person who meets the criteria of headship (that is, the person who the other members of the household recognize as the head) or who—if they are not recognized by the others as the head—still meets some of the other criteria for headship.”

According to p. 20 of the *Manual*, “Do not count as the male head/spouse anyone younger than 15-years-old.”

According to p. 21 of the *Manual*, only someone who is a member of the interviewed household can be the head of the interviewed household. For example, someone who is permanently abroad cannot be the head of the interviewed household because such a person is not a member of the interviewed household.

For the purposes of the scorecard, the *male head/spouse* is defined as:

- The household head, if the head is male
- The spouse/conjugal partner of the household head, if the head is female
- Non-existent, if the head is female and if she does not have a spouse/conjugal partner who is a member of the interviewed household



6. What is the main fuel used for cooking?
- A. Firewood, charcoal, kerosene, or other
  - B. LPG, electricity, or does not cook

According to p. 64 of the *Manual*, “Read the question and the response options. Mark the option that corresponds to what the respondent says.

“If the respondent says that the household uses two or more types of cooking fuel, then mark the response that corresponds to the type of cooking fuel that the household uses most often. If the respondent is unable to say which type of fuel is used most often, then mark the option that corresponds with the type of fuel on which the household spends the most money.”

This question has “closed” response options. According to p. 7 of the *Manual*, “Questions with closed response options are those in which the response is selected from a pre-determined list from which the respondent must select the most relevant option.” In other words, you as the enumerator must read the respondent not only the question but also all the response options.”

This is the only question in the scorecard for which you must read all the response options to the respondent.

7. Does the household have a refrigerator?
- A. No
  - B. Yes

According to p. 65 of the *Manual*, “This question concerns refrigerators that the household owns, regardless of how they were acquired (purchase, received as gifts, won in raffles, or brought from abroad).

“The key to this question is ownership. For example, if the household owns a refrigerator but does not have electricity to run it, you should still count the refrigerator.”

8. Does the household have a blender?
- A. No
  - B. Yes

According to p. 65 of the *Manual*, “This question concerns blenders that the household owns, regardless of how they were acquired (purchase, received as gifts, won in raffles, or brought from abroad).

“The key to this question is ownership. For example, if the household owns a blender but does not have electricity to run it, you should still count the blender.”

9. Does the household have a fan?
- A. No
  - B. Yes

According to p. 65 of the *Manual*, “This question concerns fans that the household owns, regardless of how they were acquired (purchase, received as gifts, won in raffles, or brought from abroad).

“The key to this question is ownership. For example, if the household owns a fan but does not have electricity to run it, you should still count the fan.”

10. Does the household have a TV, VCR/DVD, or cable?
- A. None, or only TV
  - B. TV, and only one of VCR/DVD or cable
  - C. All three

For the purposes of this question, a household that has pirated access to cable via a neighbor is still considered to *have cable*.

According to p. 65 of the *Manual*, “This question concerns TVs, VCRs/DVDs, and cable service that the household owns, regardless of how they were acquired (purchase, received as gifts, won in raffles, or brought from abroad).

“The key to this question is ownership. For example, if the household owns a TV, VCR/DVD, or has cable service but does not have electricity to run them, you should still count the TV, VCR/DVD, or cable service.”

Ask this indicator in three parts:

- Does the household have a TV?
- Does the household have a VCR/DVD
- Does the household have cable?

Mark the response according to the combination the two responses to these two sub-questions as follows:

<b>TV?</b>	<b>VCR/DVD?</b>	<b>Cable?</b>	<b>Response</b>
No	No	No	A
Yes	No	No	A
No	Yes	No	A
Yes	Yes	No	B
No	No	Yes	A
Yes	No	Yes	B
No	Yes	Yes	A
Yes	Yes	Yes	C

**Table 1: National poverty lines, poverty rates, and sample sizes for all of El Salvador and for the construction and validation samples, by households and people for 2014 and 2008**

Year	Line or Rate	HHs or People	<i>n</i>	Poverty lines and poverty rates (%)			
				Food	<u>National</u>		
				100%	150%	200%	
<b>All of El Salvador</b>							
2014	Line	People		1.40	2.79	4.19	5.58
	Rate	HHs	21,129	7.5	31.8	54.0	68.5
	Rate	People		9.3	37.2	60.6	74.7
2008	Line	People		1.29	2.59	3.88	5.17
	Rate	HHs	16,674	12.4	40.0	60.3	73.0
	Rate	People		15.4	46.4	66.7	78.4
<b>Construction and calibration:</b>							
(Selecting indicators and points, and associating scores with poverty likelihoods)							
2014	Rate	HHs	10,623	7.5	31.9	54.1	68.5
<b>Validation:</b>							
(Measuring accuracy)							
2014	Rate	HHs	10,506	7.6	31.8	53.9	68.6
2008	Rate	HHs	16,674	12.4	40.0	60.3	73.0

Source: 2014 Multi-Purpose Household Survey

Poverty lines are USD per day per person in ave. prices in all of El Salvador in calendar-years 2014 and 2008.

**Table 1: International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for all of El Salvador and for the construction and validation samples, by households and people for 2014 and 2008**

Year	Line or Rate	HHs or People	<i>n</i>	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP				Intl. 2011 PPP	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
<b><u>All of El Salvador</u></b>									
2014	Line	People		0.89	1.42	1.78	3.55	1.05	1.71
	Rate	HHs	21,129	2.2	8.1	13.4	45.2	3.6	12.5
	Rate	People		2.8	9.8	16.4	51.6	4.5	15.2
2008	Line	People		0.80	1.28	1.60	3.21	0.95	1.54
	Rate	HHs	16,674	3.9	12.3	18.7	50.9	6.0	17.4
	Rate	People		5.1	15.2	22.6	57.4	7.7	21.1
<b>Construction and calibration:</b>									
(Selecting indicators and points, and associating scores with poverty likelihoods)									
2014	Rate	HHs	10,623	2.2	8.0	13.5	45.3	3.6	12.7
<b><u>Validation:</u></b>									
(Measuring accuracy)									
2014	Rate	HHs	10,506	2.1	8.2	13.4	45.2	3.5	12.3
2008	Rate	HHs	16,674	3.9	12.3	18.7	50.9	6.0	17.4

Source: 2014 Multi-Purpose Household Survey

Poverty lines are USD per day per person in ave. prices in all of El Salvador in calendar-years 2014 and 2008.

**Table 1: Relative and percentile-based poverty lines, poverty rates, and sample sizes for all of El Salvador and for the construction and validation samples, by households and people for 2014 and 2008**

Year	Line or Rate	HHs or People	<i>n</i>	Poverty lines and poverty rates (%)					
				Poorest half of people below 100% Natl. line	20th	40th	50th	60th	80th
<b>All of El Salvador</b>									
2014	Line	People		1.88	1.96	2.92	3.45	4.13	6.34
	Rate	HHs	21,129	15.4	16.6	34.5	43.7	53.4	74.5
	Rate	People		18.6	20.0	40.0	50.0	60.0	80.0
2008	Line	People		1.63	1.50	2.29	2.78	3.38	5.39
	Rate	HHs	16,674	19.2	16.5	34.1	43.3	53.6	74.7
	Rate	People		23.2	20.0	40.0	50.0	60.0	80.0
<b>Construction and calibration:</b>									
(Selecting indicators and points, and associating scores with poverty likelihoods)									
2014	Rate	HHs	10,623	15.4	16.7	34.5	43.7	53.5	74.5
<b>Validation:</b>									
(Measuring accuracy)									
2014	Rate	HHs	10,506	15.4	16.6	34.5	43.7	53.3	74.6
2008	Rate	HHs	16,674	19.2	16.5	34.1	43.3	53.6	74.7

Source: 2014 Multi-Purpose Household Survey

Poverty lines are USD per day per person in ave. prices in all of El Salvador in calendar-years 2014 and 2008.



**Table 2 (El Salvador): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)			
				National lines			
				Food	100%	150%	200%
Urban	2008	Line	9,972	1.47	2.95	4.43	5.90
		Rate (HHs)		10.0	35.7	56.0	69.2
		Rate (people)		12.1	41.5	61.9	74.5
Rural	2008	Line	6,702	0.96	1.92	2.87	3.83
		Rate (HHs)		17.5	49.0	69.3	81.0
		Rate (people)		21.4	55.4	75.5	85.8
All	2008	Line	16,674	1.29	2.59	3.88	5.17
		Rate (HHs)		12.4	40.0	60.3	73.0
		Rate (people)		15.4	46.4	66.7	78.4
Urban	2014	Line	11,456	1.63	3.25	4.88	6.51
		Rate (HHs)		5.7	28.5	51.3	65.9
		Rate (people)		7.0	33.2	57.4	71.9
Rural	2014	Line	9,673	1.01	2.02	3.03	4.04
		Rate (HHs)		10.8	37.9	58.9	73.4
		Rate (people)		13.1	43.7	65.8	79.2
All	2014	Line	21,129	1.40	2.79	4.19	5.58
		Rate (HHs)		7.5	31.8	54.0	68.5
		Rate (people)		9.3	37.2	60.6	74.7

Source and definitions: See Table 1 and text.

**Table 2 (El Salvador): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	9,972	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		3.0	9.9	15.5	46.4	4.7	14.4
		Rate (people)		3.8	11.9	18.6	52.4	5.9	17.3
Rural	2008	Line	6,702	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		5.9	17.3	25.6	60.3	8.7	23.7
		Rate (people)		7.6	21.2	30.1	66.6	11.1	28.1
All	2008	Line	16,674	0.80	1.28	1.60	3.21	0.95	1.54
		Rate (HHs)		3.9	12.3	18.7	50.9	6.0	17.4
		Rate (people)		5.1	15.2	22.6	57.4	7.7	21.1
Urban	2014	Line	11,456	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		1.7	6.4	11.1	42.2	2.6	10.4
		Rate (people)		2.1	7.6	13.5	47.9	3.2	12.6
Rural	2014	Line	9,673	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		3.1	11.3	17.6	50.7	5.4	16.3
		Rate (people)		3.9	13.6	21.2	57.6	6.7	19.7
All	2014	Line	21,129	0.89	1.42	1.78	3.55	1.05	1.71
		Rate (HHs)		2.2	8.1	13.4	45.2	3.6	12.5
		Rate (people)		2.8	9.8	16.4	51.6	4.5	15.2

Source and definitions: See Table 1 and text.

**Table 2 (El Salvador): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	n	Poverty lines and poverty rates (%)					
				Poorest half of people below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	9,972	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		15.9	13.7	30.0	38.8	49.0	71.0
		Rate (people)		19.1	16.4	35.1	45.0	55.0	76.1
Rural	2008	Line	6,702	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		26.1	22.5	42.7	52.9	63.2	82.4
		Rate (people)		30.8	26.7	49.0	59.3	69.3	87.1
All	2008	Line	16,674	1.63	1.50	2.29	2.78	3.38	5.39
		Rate (HHs)		19.2	16.5	34.1	43.3	53.6	74.7
		Rate (people)		23.2	20.0	40.0	50.0	60.0	80.0
Urban	2014	Line	11,456	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		13.0	14.2	31.4	40.7	50.7	72.3
		Rate (people)		15.5	16.9	36.2	46.5	56.9	77.5
Rural	2014	Line	9,673	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		19.9	21.1	40.2	49.1	58.3	78.6
		Rate (people)		23.7	25.1	46.3	55.9	65.2	84.2
All	2014	Line	21,129	1.88	1.96	2.92	3.45	4.13	6.34
		Rate (HHs)		15.4	16.6	34.5	43.7	53.4	74.5
		Rate (people)		18.6	20.0	40.0	50.0	60.0	80.0

Source and definitions: See Table 1 and text.

**Table 2 (Ahuachapán): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)			
				National lines			
				Food	100%	150%	200%
Urban	2008	Line	505	1.47	2.95	4.43	5.90
		Rate (HHs)		22.3	51.7	72.5	80.0
		Rate (people)		24.8	56.5	77.7	84.2
Rural	2008	Line	573	0.96	1.92	2.87	3.83
		Rate (HHs)		32.0	61.6	82.9	91.6
		Rate (people)		36.3	67.2	87.2	94.3
All	2008	Line	1,078	1.20	2.40	3.60	4.79
		Rate (HHs)		27.0	56.5	77.6	85.7
		Rate (people)		31.0	62.2	82.8	89.6
Urban	2014	Line	571	1.63	3.25	4.88	6.51
		Rate (HHs)		14.1	43.8	65.5	78.3
		Rate (people)		18.3	51.8	72.4	84.1
Rural	2014	Line	662	1.01	2.02	3.03	4.04
		Rate (HHs)		14.3	45.8	64.2	77.7
		Rate (people)		16.8	50.9	70.4	83.3
All	2014	Line	1,233	1.26	2.53	3.80	5.06
		Rate (HHs)		14.2	44.9	64.8	77.9
		Rate (people)		17.4	51.2	71.2	83.6

Source and definitions: See Table 1 and text.

**Table 2 (Ahuachapán): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	505	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		7.9	22.3	30.9	63.7	11.5	30.4
		Rate (people)		9.1	24.8	33.9	69.4	12.9	33.4
Rural	2008	Line	573	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		13.5	31.7	39.0	72.7	18.8	36.5
		Rate (people)		16.5	36.1	43.0	77.5	21.6	40.9
All	2008	Line	1,078	0.74	1.19	1.49	2.97	0.88	1.43
		Rate (HHs)		10.6	26.9	34.9	68.0	15.0	33.4
		Rate (people)		13.0	30.9	38.8	73.7	17.5	37.4
Urban	2014	Line	571	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		3.9	14.8	22.5	57.6	6.3	21.2
		Rate (people)		5.5	18.8	27.7	65.3	8.5	25.7
Rural	2014	Line	662	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		5.0	15.4	22.8	57.8	9.0	21.4
		Rate (people)		5.9	18.0	26.6	65.1	11.0	25.2
All	2014	Line	1,233	0.81	1.29	1.61	3.22	0.95	1.55
		Rate (HHs)		4.5	15.1	22.7	57.7	7.8	21.3
		Rate (people)		5.8	18.3	27.0	65.2	10.0	25.4

Source and definitions: See Table 1 and text.

**Table 2 (Ahuachapán): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	n	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	505	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		31.2	29.8	47.9	55.2	66.2	82.0
		Rate (people)		34.3	33.1	52.8	60.8	72.1	86.5
Rural	2008	Line	573	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		39.3	35.8	55.9	64.4	75.7	92.1
		Rate (people)		43.3	40.2	61.9	70.1	80.7	94.6
All	2008	Line	1,078	1.51	1.39	2.13	2.58	3.13	5.00
		Rate (HHs)		35.1	32.7	51.8	59.7	70.9	86.9
		Rate (people)		39.1	36.9	57.7	65.8	76.7	90.8
Urban	2014	Line	571	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		24.2	26.2	46.6	55.4	64.8	83.3
		Rate (people)		29.5	32.2	54.7	63.5	71.8	88.0
Rural	2014	Line	662	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		26.1	27.4	48.0	56.3	63.5	82.6
		Rate (people)		29.8	31.3	53.8	62.9	69.7	88.1
All	2014	Line	1,233	1.71	1.78	2.65	3.13	3.75	5.75
		Rate (HHs)		25.2	26.9	47.4	55.9	64.1	82.9
		Rate (people)		29.7	31.7	54.2	63.2	70.5	88.0

Source and definitions: See Table 1 and text.

**Table 2 (Santa Ana): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	692	1.47	2.95	4.43	5.90
		Rate (HHs)		11.4	39.8	58.9	73.8
		Rate (people)		12.9	44.5	64.3	78.2
Rural	2008	Line	722	0.96	1.92	2.87	3.83
		Rate (HHs)		13.1	43.5	65.9	79.8
		Rate (people)		16.9	49.6	72.8	85.9
All	2008	Line	1,414	1.30	2.61	3.91	5.21
		Rate (HHs)		11.9	41.0	61.1	75.6
		Rate (people)		14.2	46.2	67.1	80.8
Urban	2014	Line	864	1.63	3.25	4.88	6.51
		Rate (HHs)		6.8	28.9	57.5	70.4
		Rate (people)		7.7	33.9	63.4	76.3
Rural	2014	Line	1,118	1.01	2.02	3.03	4.04
		Rate (HHs)		10.3	37.5	58.1	74.0
		Rate (people)		11.3	43.0	64.8	79.2
All	2014	Line	1,982	1.40	2.81	4.21	5.61
		Rate (HHs)		8.0	31.9	57.7	71.6
		Rate (people)		9.0	37.2	63.9	77.3

Source and definitions: See Table 1 and text.

**Table 2 (Santa Ana): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	692	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		2.4	11.3	18.8	49.5	4.6	17.8
		Rate (people)		2.9	12.9	22.1	55.0	5.5	20.9
Rural	2008	Line	722	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		5.3	13.0	20.1	54.7	7.6	19.0
		Rate (people)		7.4	16.7	24.4	61.0	10.2	23.5
All	2008	Line	1,414	0.81	1.29	1.62	3.23	0.95	1.55
		Rate (HHs)		3.3	11.8	19.2	51.1	5.5	18.2
		Rate (people)		4.4	14.2	22.9	57.0	7.1	21.8
Urban	2014	Line	864	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		1.6	7.6	11.3	45.6	2.0	10.4
		Rate (people)		1.9	8.6	13.1	50.8	2.4	11.9
Rural	2014	Line	1,118	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		2.8	10.5	18.3	49.6	4.6	16.9
		Rate (people)		3.3	11.5	21.7	55.8	5.4	19.9
All	2014	Line	1,982	0.89	1.43	1.79	3.58	1.05	1.72
		Rate (HHs)		2.0	8.6	13.7	47.0	2.9	12.7
		Rate (people)		2.4	9.7	16.2	52.6	3.5	14.8

Source and definitions: See Table 1 and text.



**Table 2 (Santa Ana): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)					
				Poorest half of people		Percentile-based lines			
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	692	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		19.0	17.2	33.7	41.6	52.0	74.7
		Rate (people)		22.4	20.1	37.9	46.5	57.6	79.3
Rural	2008	Line	722	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		20.6	18.4	38.9	47.9	58.9	81.4
		Rate (people)		24.8	22.7	43.8	54.2	65.8	87.6
All	2008	Line	1,414	1.64	1.51	2.31	2.80	3.41	5.43
		Rate (HHs)		19.5	17.5	35.3	43.6	54.1	76.8
		Rate (people)		23.2	21.0	39.8	49.0	60.3	82.1
Urban	2014	Line	864	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		12.2	13.7	32.3	43.5	57.0	77.4
		Rate (people)		14.1	15.6	36.9	48.7	62.7	82.2
Rural	2014	Line	1,118	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		20.2	21.8	40.0	48.0	57.7	79.4
		Rate (people)		23.5	25.0	45.9	54.0	64.5	84.6
All	2014	Line	1,982	1.89	1.97	2.94	3.47	4.16	6.38
		Rate (HHs)		15.0	16.5	34.9	45.1	57.3	78.1
		Rate (people)		17.5	19.0	40.2	50.6	63.4	83.1

Source and definitions: See Table 1 and text.

**Table 2 (Sonsonate): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	717	1.47	2.95	4.43	5.90
		Rate (HHs)		13.6	43.7	65.1	80.5
		Rate (people)		16.1	48.6	70.6	84.9
Rural	2008	Line	654	0.96	1.92	2.87	3.83
		Rate (HHs)		18.1	53.3	73.6	83.7
		Rate (people)		18.8	56.9	77.4	87.0
All	2008	Line	1,371	1.26	2.52	3.78	5.04
		Rate (HHs)		15.2	47.3	68.3	81.7
		Rate (people)		17.2	52.0	73.4	85.8
Urban	2014	Line	827	1.63	3.25	4.88	6.51
		Rate (HHs)		6.0	33.0	55.3	70.4
		Rate (people)		8.1	38.2	60.9	75.3
Rural	2014	Line	707	1.01	2.02	3.03	4.04
		Rate (HHs)		7.5	37.1	58.1	74.1
		Rate (people)		8.6	42.3	66.2	79.7
All	2014	Line	1,534	1.37	2.74	4.11	5.47
		Rate (HHs)		6.6	34.6	56.4	71.8
		Rate (people)		8.3	39.9	63.1	77.2

Source and definitions: See Table 1 and text.

**Table 2 (Sonsonate): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	717	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		4.1	13.1	20.2	54.9	6.7	18.5
		Rate (people)		5.3	15.5	23.9	60.2	8.2	22.0
Rural	2008	Line	654	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		6.2	18.1	27.6	64.6	8.5	26.2
		Rate (people)		7.3	18.8	28.5	68.1	10.0	26.7
All	2008	Line	1,371	0.78	1.25	1.56	3.13	0.92	1.50
		Rate (HHs)		4.9	14.9	22.9	58.5	7.4	21.4
		Rate (people)		6.1	16.9	25.8	63.5	9.0	23.9
Urban	2014	Line	827	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		2.3	7.0	12.6	48.0	3.3	11.9
		Rate (people)		3.4	9.2	15.9	53.8	4.7	14.9
Rural	2014	Line	707	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		1.4	7.6	14.9	50.4	3.4	14.6
		Rate (people)		2.0	8.7	16.6	58.6	3.8	16.2
All	2014	Line	1,534	0.87	1.39	1.74	3.49	1.03	1.68
		Rate (HHs)		2.0	7.2	13.5	48.9	3.3	13.0
		Rate (people)		2.8	9.0	16.1	55.8	4.3	15.4

Source and definitions: See Table 1 and text.

**Table 2 (Sonsonate): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	717	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		21.0	17.4	37.2	47.8	57.1	81.7
		Rate (people)		25.0	20.6	41.5	53.1	62.4	85.8
Rural	2008	Line	654	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		27.6	24.1	46.0	56.6	67.9	85.3
		Rate (people)		28.5	24.1	49.9	60.3	71.6	88.6
All	2008	Line	1,371	1.59	1.46	2.24	2.71	3.30	5.26
		Rate (HHs)		23.5	19.9	40.4	51.0	61.1	83.0
		Rate (people)		26.4	22.1	45.0	56.1	66.2	87.0
Urban	2014	Line	827	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		14.2	15.6	37.0	46.3	55.1	75.9
		Rate (people)		17.5	19.1	42.5	52.0	60.6	80.4
Rural	2014	Line	707	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		16.6	16.9	40.6	49.7	57.5	80.4
		Rate (people)		18.0	18.5	47.3	57.8	65.5	86.1
All	2014	Line	1,534	1.85	1.92	2.87	3.39	4.06	6.22
		Rate (HHs)		15.1	16.1	38.4	47.6	56.0	77.7
		Rate (people)		17.7	18.8	44.5	54.4	62.7	82.8

Source and definitions: See Table 1 and text.

**Table 2 (Chalatenango): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)			
				National lines			
				Food	100%	150%	200%
Urban	2008	Line	373	1.47	2.95	4.43	5.90
		Rate (HHs)		18.8	47.8	65.3	77.6
		Rate (people)		23.2	54.8	71.3	81.4
Rural	2008	Line	320	0.96	1.92	2.87	3.83
		Rate (HHs)		17.7	52.3	65.8	77.6
		Rate (people)		23.8	58.4	73.5	84.6
All	2008	Line	693	1.16	2.31	3.47	4.63
		Rate (HHs)		18.2	50.4	65.6	77.6
		Rate (people)		23.6	57.0	72.7	83.3
Urban	2014	Line	406	1.63	3.25	4.88	6.51
		Rate (HHs)		9.3	39.8	57.7	69.9
		Rate (people)		11.8	45.2	63.2	75.6
Rural	2014	Line	468	1.01	2.02	3.03	4.04
		Rate (HHs)		10.0	36.9	58.2	73.3
		Rate (people)		11.8	41.1	62.9	78.0
All	2014	Line	874	1.21	2.43	3.64	4.85
		Rate (HHs)		9.8	37.8	58.0	72.2
		Rate (people)		11.8	42.4	63.0	77.2

Source and definitions: See Table 1 and text.

**Table 2 (Chalatenango): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	373	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		9.4	18.8	26.8	57.1	11.9	24.9
		Rate (people)		10.9	23.2	31.3	64.3	13.7	29.3
Rural	2008	Line	320	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		6.6	17.7	27.4	57.8	9.7	26.0
		Rate (people)		8.7	23.8	34.0	65.4	13.0	32.2
All	2008	Line	693	0.72	1.15	1.43	2.87	0.85	1.38
		Rate (HHs)		7.7	18.2	27.2	57.5	10.6	25.6
		Rate (people)		9.6	23.6	33.0	65.0	13.2	31.1
Urban	2014	Line	406	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		3.7	9.6	17.5	51.2	6.0	16.3
		Rate (people)		4.6	11.9	21.2	56.7	7.3	20.0
Rural	2014	Line	468	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		2.6	10.2	17.4	50.2	5.0	15.4
		Rate (people)		2.6	11.9	20.9	54.0	5.6	18.4
All	2014	Line	874	0.77	1.24	1.55	3.09	0.91	1.49
		Rate (HHs)		3.0	10.0	17.4	50.5	5.3	15.7
		Rate (people)		3.2	11.9	21.0	54.9	6.2	18.9

Source and definitions: See Table 1 and text.

**Table 2 (Chalatenango): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	373	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		28.0	24.2	41.9	52.1	59.5	79.1
		Rate (people)		32.3	28.5	47.6	58.9	65.9	82.3
Rural	2008	Line	320	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		27.8	24.8	44.1	54.5	60.6	78.2
		Rate (people)		34.4	31.0	50.9	61.1	68.3	84.9
All	2008	Line	693	1.45	1.34	2.05	2.49	3.02	4.82
		Rate (HHs)		27.9	24.5	43.2	53.5	60.1	78.5
		Rate (people)		33.6	30.0	49.6	60.3	67.4	83.9
Urban	2014	Line	406	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		21.2	22.1	42.8	48.4	57.4	73.7
		Rate (people)		25.9	26.7	48.0	54.7	62.7	78.6
Rural	2014	Line	468	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		19.7	20.6	39.0	48.1	57.7	77.7
		Rate (people)		23.1	23.9	43.8	52.2	62.6	82.4
All	2014	Line	874	1.64	1.70	2.54	3.00	3.60	5.52
		Rate (HHs)		20.2	21.1	40.3	48.2	57.6	76.4
		Rate (people)		24.0	24.8	45.2	53.0	62.6	81.2

Source and definitions: See Table 1 and text.

**Table 2 (La Libertad): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	1,407	1.47	2.95	4.43	5.90
		Rate (HHs)		8.8	32.7	50.5	63.5
		Rate (people)		10.2	37.7	55.9	67.8
Rural	2008	Line	537	0.96	1.92	2.87	3.83
		Rate (HHs)		11.1	39.9	62.7	79.3
		Rate (people)		14.1	45.7	70.0	84.6
All	2008	Line	1,944	1.34	2.67	4.01	5.35
		Rate (HHs)		9.4	34.5	53.5	67.4
		Rate (people)		11.2	39.9	59.7	72.3
Urban	2014	Line	1,508	1.63	3.25	4.88	6.51
		Rate (HHs)		6.3	28.0	49.6	63.5
		Rate (people)		6.8	31.2	54.5	68.3
Rural	2014	Line	743	1.01	2.02	3.03	4.04
		Rate (HHs)		7.7	34.9	55.3	68.8
		Rate (people)		10.9	41.3	61.7	74.6
All	2014	Line	2,251	1.43	2.86	4.30	5.73
		Rate (HHs)		6.7	30.0	51.3	65.0
		Rate (people)		8.1	34.4	56.8	70.3

Source and definitions: See Table 1 and text.



**Table 2 (La Libertad): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	1,407	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		2.5	8.8	13.9	41.6	4.2	12.9
		Rate (people)		2.6	10.2	15.9	46.8	4.9	14.8
Rural	2008	Line	537	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		4.8	10.7	17.8	51.1	6.2	16.3
		Rate (people)		6.8	13.5	20.7	58.3	8.4	18.9
All	2008	Line	1,944	0.83	1.33	1.66	3.32	0.98	1.59
		Rate (HHs)		3.1	9.3	14.8	43.9	4.7	13.8
		Rate (people)		3.7	11.1	17.2	49.9	5.8	15.9
Urban	2014	Line	1,508	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		2.3	7.0	10.8	39.4	3.3	10.3
		Rate (people)		2.5	7.5	12.4	43.4	3.5	11.9
Rural	2014	Line	743	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		1.8	8.4	14.3	48.6	3.6	13.1
		Rate (people)		2.3	11.6	18.7	55.4	4.6	17.3
All	2014	Line	2,251	0.91	1.46	1.82	3.65	1.08	1.75
		Rate (HHs)		2.1	7.4	11.8	42.1	3.4	11.1
		Rate (people)		2.5	8.8	14.4	47.2	3.9	13.6

Source and definitions: See Table 1 and text.

**Table 2 (La Libertad): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	1,407	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		14.3	12.4	27.4	35.2	44.5	65.2
		Rate (people)		16.5	14.2	31.8	40.3	49.8	69.1
Rural	2008	Line	537	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		18.3	16.2	32.5	44.1	55.4	79.8
		Rate (people)		21.5	18.7	36.9	51.3	62.2	85.2
All	2008	Line	1,944	1.68	1.55	2.37	2.87	3.50	5.58
		Rate (HHs)		15.3	13.3	28.7	37.4	47.3	68.9
		Rate (people)		17.8	15.4	33.2	43.2	53.1	73.4
Urban	2014	Line	1,508	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		12.1	13.7	30.5	38.5	48.8	70.3
		Rate (people)		13.9	15.5	33.8	42.6	53.6	75.1
Rural	2014	Line	743	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		16.2	17.3	37.7	46.6	54.5	74.8
		Rate (people)		20.5	21.6	43.9	53.0	60.9	80.7
All	2014	Line	2,251	1.93	2.01	3.00	3.54	4.24	6.51
		Rate (HHs)		13.3	14.7	32.6	40.9	50.4	71.6
		Rate (people)		16.0	17.5	37.0	45.9	55.9	76.9

Source and definitions: See Table 1 and text.

**Table 2 (San Salvador): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	2,998	1.47	2.95	4.43	5.90
		Rate (HHs)		4.7	27.0	48.4	62.5
		Rate (people)		6.0	32.5	54.8	68.8
Rural	2008	Line	599	0.96	1.92	2.87	3.83
		Rate (HHs)		11.8	38.5	63.3	75.3
		Rate (people)		15.7	45.3	71.0	82.7
All	2008	Line	3,597	1.44	2.88	4.32	5.76
		Rate (HHs)		5.1	27.6	49.3	63.2
		Rate (people)		6.6	33.3	55.9	69.7
Urban	2014	Line	3,220	1.63	3.25	4.88	6.51
		Rate (HHs)		3.0	22.8	45.6	61.2
		Rate (people)		3.8	26.8	51.9	67.9
Rural	2014	Line	698	1.01	2.02	3.03	4.04
		Rate (HHs)		6.2	26.8	47.3	63.5
		Rate (people)		7.7	32.1	55.0	71.2
All	2014	Line	3,918	1.59	3.18	4.77	6.36
		Rate (HHs)		3.1	23.1	45.7	61.4
		Rate (people)		4.1	27.2	52.1	68.1

Source and definitions: See Table 1 and text.

**Table 2 (San Salvador): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	2,998	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		1.3	4.6	8.9	38.1	1.9	8.0
		Rate (people)		1.7	5.8	11.1	44.2	2.5	9.9
Rural	2008	Line	599	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		3.8	11.6	18.7	52.7	5.6	17.4
		Rate (people)		4.7	15.5	23.3	60.1	7.9	21.7
All	2008	Line	3,597	0.89	1.43	1.79	3.57	1.05	1.72
		Rate (HHs)		1.4	5.0	9.5	38.9	2.1	8.5
		Rate (people)		1.9	6.5	11.9	45.2	2.9	10.7
Urban	2014	Line	3,220	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		0.6	3.5	7.2	36.5	0.9	6.7
		Rate (people)		0.8	4.2	8.7	42.2	1.2	8.1
Rural	2014	Line	698	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		1.8	6.4	11.1	38.7	2.6	10.2
		Rate (people)		2.2	7.8	14.0	45.6	3.3	12.8
All	2014	Line	3,918	1.01	1.62	2.02	4.05	1.19	1.95
		Rate (HHs)		0.7	3.7	7.4	36.6	1.0	6.9
		Rate (people)		0.9	4.4	9.1	42.4	1.3	8.4

Source and definitions: See Table 1 and text.

**Table 2 (San Salvador): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)					
				Poorest half of people		Percentile-based lines			
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	2,998	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		9.1	7.3	21.7	30.2	40.8	64.4
		Rate (people)		11.2	9.0	26.2	36.4	46.8	70.7
Rural	2008	Line	599	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		18.7	15.9	32.2	43.1	55.1	76.9
		Rate (people)		23.3	20.1	38.9	50.4	62.9	83.9
All	2008	Line	3,597	1.81	1.67	2.56	3.10	3.77	6.01
		Rate (HHs)		9.6	7.8	22.3	30.9	41.6	65.2
		Rate (people)		12.0	9.8	27.1	37.3	47.9	71.6
Urban	2014	Line	3,220	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		9.2	10.1	25.4	35.0	45.1	68.2
		Rate (people)		11.0	12.1	29.6	40.8	51.4	73.6
Rural	2014	Line	698	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		11.5	12.1	28.7	36.7	47.0	70.1
		Rate (people)		14.4	14.8	34.2	43.4	54.7	77.3
All	2014	Line	3,918	2.14	2.23	3.33	3.93	4.71	7.22
		Rate (HHs)		9.4	10.2	25.5	35.1	45.2	68.3
		Rate (people)		11.2	12.2	29.9	40.9	51.6	73.8

Source and definitions: See Table 1 and text.

**Table 2 (Cuscatlán): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)			
				National lines			
				Food	100%	150%	200%
Urban	2008	Line	414	1.47	2.95	4.43	5.90
		Rate (HHs)		15.0	46.1	68.7	79.0
		Rate (people)		18.0	53.3	74.4	84.5
Rural	2008	Line	289	0.96	1.92	2.87	3.83
		Rate (HHs)		15.7	49.2	73.7	84.5
		Rate (people)		19.2	55.6	79.8	90.2
All	2008	Line	703	1.17	2.35	3.52	4.69
		Rate (HHs)		15.4	47.8	71.4	81.9
		Rate (people)		18.7	54.6	77.6	87.8
Urban	2014	Line	512	1.63	3.25	4.88	6.51
		Rate (HHs)		5.6	33.5	57.2	72.6
		Rate (people)		6.4	37.8	62.1	77.8
Rural	2014	Line	444	1.01	2.02	3.03	4.04
		Rate (HHs)		10.8	37.2	60.7	76.6
		Rate (people)		12.5	39.8	64.5	81.3
All	2014	Line	956	1.25	2.50	3.75	5.00
		Rate (HHs)		8.6	35.7	59.2	74.9
		Rate (people)		10.1	39.0	63.6	79.9

Source and definitions: See Table 1 and text.

**Table 2 (Cuscatlán): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	414	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		4.3	15.0	23.6	60.1	6.8	21.5
		Rate (people)		6.5	18.0	27.7	66.2	9.1	25.2
Rural	2008	Line	289	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		5.9	15.7	25.0	66.8	8.7	24.1
		Rate (people)		6.7	19.2	28.7	72.9	10.2	27.4
All	2008	Line	703	0.73	1.16	1.45	2.91	0.86	1.40
		Rate (HHs)		5.1	15.4	24.4	63.7	7.8	22.9
		Rate (people)		6.6	18.7	28.3	70.1	9.7	26.4
Urban	2014	Line	512	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		1.8	6.2	13.2	50.3	2.6	11.8
		Rate (people)		2.5	6.8	15.3	55.4	3.4	13.5
Rural	2014	Line	444	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		2.3	10.8	17.7	50.6	4.7	16.5
		Rate (people)		2.3	12.5	19.7	54.3	4.8	18.5
All	2014	Line	956	0.80	1.27	1.59	3.19	0.94	1.53
		Rate (HHs)		2.1	8.9	15.8	50.5	3.8	14.5
		Rate (people)		2.4	10.3	18.0	54.7	4.3	16.6

Source and definitions: See Table 1 and text.

**Table 2 (Cuscatlán): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)					
				Poorest half of people		Percentile-based lines			
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	414	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		24.0	20.2	37.8	50.1	62.0	80.5
		Rate (people)		28.2	23.4	45.2	56.8	67.7	85.9
Rural	2008	Line	289	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		26.7	22.0	43.6	54.0	68.8	85.7
		Rate (people)		30.5	24.7	50.0	59.3	74.9	91.2
All	2008	Line	703	1.47	1.36	2.08	2.52	3.07	4.89
		Rate (HHs)		25.4	21.2	40.9	52.2	65.6	83.3
		Rate (people)		29.5	24.2	48.0	58.3	71.9	89.0
Urban	2014	Line	512	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		15.0	15.9	37.4	47.8	57.0	78.7
		Rate (people)		17.9	19.1	42.4	53.1	61.9	83.0
Rural	2014	Line	444	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		20.7	21.1	40.0	50.1	59.7	80.2
		Rate (people)		22.2	22.8	42.6	53.7	63.2	85.8
All	2014	Line	956	1.69	1.76	2.62	3.10	3.71	5.69
		Rate (HHs)		18.3	18.9	38.9	49.2	58.6	79.6
		Rate (people)		20.6	21.4	42.5	53.5	62.7	84.8

Source and definitions: See Table 1 and text.



**Table 2 (La Paz): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	601	1.47	2.95	4.43	5.90
		Rate (HHs)		19.6	50.8	71.1	83.7
		Rate (people)		22.9	57.4	76.2	87.1
Rural	2008	Line	492	0.96	1.92	2.87	3.83
		Rate (HHs)		14.7	48.2	64.3	77.4
		Rate (people)		18.4	54.5	70.5	81.7
All	2008	Line	1,093	1.24	2.49	3.74	4.98
		Rate (HHs)		17.4	49.6	68.0	80.9
		Rate (people)		20.9	56.1	73.7	84.7
Urban	2014	Line	632	1.63	3.25	4.88	6.51
		Rate (HHs)		10.9	40.7	64.5	75.5
		Rate (people)		12.9	48.1	72.5	82.1
Rural	2014	Line	636	1.01	2.02	3.03	4.04
		Rate (HHs)		8.1	32.8	57.0	70.7
		Rate (people)		8.9	38.0	64.0	75.8
All	2014	Line	1,268	1.31	2.61	3.92	5.23
		Rate (HHs)		9.5	36.6	60.6	73.0
		Rate (people)		10.8	42.9	68.1	78.8

Source and definitions: See Table 1 and text.

**Table 2 (La Paz): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	601	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		4.9	19.1	26.1	63.3	9.0	25.1
		Rate (people)		6.1	21.9	30.6	69.3	10.5	29.5
Rural	2008	Line	492	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		3.8	14.6	24.2	57.4	6.2	21.1
		Rate (people)		4.6	18.4	27.8	62.9	8.1	25.3
All	2008	Line	1,093	0.77	1.24	1.54	3.09	0.91	1.49
		Rate (HHs)		4.4	17.1	25.3	60.7	7.7	23.3
		Rate (people)		5.4	20.4	29.4	66.4	9.4	27.7
Urban	2014	Line	632	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		3.0	11.5	19.8	54.4	5.0	19.0
		Rate (people)		3.0	13.5	24.6	61.8	5.9	24.0
Rural	2014	Line	636	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		2.2	8.1	14.0	44.6	4.5	11.9
		Rate (people)		2.2	9.0	16.6	51.0	5.1	13.5
All	2014	Line	1,268	0.83	1.33	1.66	3.33	0.98	1.60
		Rate (HHs)		2.6	9.7	16.8	49.3	4.7	15.3
		Rate (people)		2.6	11.1	20.5	56.2	5.5	18.6

Source and definitions: See Table 1 and text.

**Table 2 (La Paz): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)					
				Poorest half of people below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	601	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		26.5	24.4	44.1	53.5	65.0	85.3
		Rate (people)		31.0	28.7	50.4	60.3	71.1	88.6
Rural	2008	Line	492	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		25.2	20.4	40.6	53.0	60.0	79.4
		Rate (people)		28.7	24.1	44.1	58.3	65.2	84.1
All	2008	Line	1,093	1.57	1.44	2.21	2.68	3.26	5.19
		Rate (HHs)		25.9	22.6	42.5	53.3	62.7	82.7
		Rate (people)		30.0	26.6	47.6	59.4	68.5	86.6
Urban	2014	Line	632	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		21.6	24.3	44.1	53.3	64.1	78.5
		Rate (people)		26.2	29.2	51.5	61.0	72.3	84.6
Rural	2014	Line	636	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		16.1	16.4	33.6	43.0	56.8	77.4
		Rate (people)		19.2	19.5	39.0	49.5	63.6	82.7
All	2014	Line	1,268	1.76	1.84	2.74	3.24	3.87	5.94
		Rate (HHs)		18.7	20.2	38.7	48.0	60.3	78.0
		Rate (people)		22.5	24.1	45.0	55.0	67.8	83.6

Source and definitions: See Table 1 and text.

**Table 2 (Cabañas): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	325	1.47	2.95	4.43	5.90
		Rate (HHs)		21.6	50.8	70.5	80.5
		Rate (people)		25.3	54.3	72.7	83.2
Rural	2008	Line	527	0.96	1.92	2.87	3.83
		Rate (HHs)		29.2	65.5	82.2	89.3
		Rate (people)		32.4	70.2	86.6	92.3
All	2008	Line	852	1.14	2.29	3.43	4.57
		Rate (HHs)		26.2	59.7	77.6	85.8
		Rate (people)		29.9	64.5	81.6	89.0
Urban	2014	Line	497	1.63	3.25	4.88	6.51
		Rate (HHs)		7.4	36.2	59.4	71.6
		Rate (people)		8.4	41.2	66.4	77.1
Rural	2014	Line	913	1.01	2.02	3.03	4.04
		Rate (HHs)		20.2	49.3	69.0	81.5
		Rate (people)		25.5	57.8	76.6	87.2
All	2014	Line	1,410	1.20	2.41	3.61	4.81
		Rate (HHs)		15.7	44.7	65.6	78.0
		Rate (people)		20.2	52.6	73.4	84.0

Source and definitions: See Table 1 and text.

**Table 2 (Cabañas): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	325	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		10.4	21.4	30.4	65.5	14.7	30.0
		Rate (people)		11.9	25.0	34.3	68.0	16.6	34.0
Rural	2008	Line	527	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		11.5	28.9	40.6	73.3	16.4	39.1
		Rate (people)		13.4	32.1	46.0	77.8	18.5	44.2
All	2008	Line	852	0.71	1.13	1.42	2.84	0.84	1.36
		Rate (HHs)		11.1	25.9	36.6	70.2	15.7	35.5
		Rate (people)		12.9	29.6	41.8	74.3	17.8	40.5
Urban	2014	Line	497	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		2.4	8.3	15.0	48.8	2.8	13.8
		Rate (people)		2.6	9.7	18.0	55.6	3.1	16.7
Rural	2014	Line	913	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		8.2	20.8	29.0	61.8	11.6	26.6
		Rate (people)		10.8	26.0	36.1	70.2	15.1	33.3
All	2014	Line	1,410	0.77	1.23	1.53	3.07	0.90	1.47
		Rate (HHs)		6.1	16.4	24.0	57.2	8.5	22.0
		Rate (people)		8.3	20.9	30.4	65.7	11.3	28.1

Source and definitions: See Table 1 and text.

**Table 2 (Cabañas): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	n	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	325	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		31.4	27.3	46.9	55.4	67.0	81.5
		Rate (people)		35.1	30.8	49.6	58.5	69.9	84.0
Rural	2008	Line	527	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		41.2	36.6	60.6	67.6	76.0	90.1
		Rate (people)		46.8	40.8	66.3	72.6	79.9	92.9
All	2008	Line	852	1.44	1.32	2.03	2.46	2.99	4.77
		Rate (HHs)		37.3	32.9	55.2	62.7	72.4	86.7
		Rate (people)		42.6	37.2	60.3	67.5	76.3	89.7
Urban	2014	Line	497	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		17.7	19.0	39.0	47.7	58.4	77.3
		Rate (people)		20.9	22.6	44.6	54.3	65.4	81.4
Rural	2014	Line	913	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		31.3	31.8	51.4	60.8	68.5	85.8
		Rate (people)		38.6	39.3	60.1	69.0	76.1	90.8
All	2014	Line	1,410	1.62	1.69	2.52	2.98	3.57	5.47
		Rate (HHs)		26.5	27.3	47.0	56.1	64.9	82.8
		Rate (people)		33.1	34.1	55.3	64.4	72.7	87.9

Source and definitions: See Table 1 and text.

**Table 2 (San Vincente): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	385	1.47	2.95	4.43	5.90
		Rate (HHs)		20.5	50.5	68.9	77.8
		Rate (people)		24.1	55.4	73.0	82.8
Rural	2008	Line	302	0.96	1.92	2.87	3.83
		Rate (HHs)		17.8	53.1	74.0	83.8
		Rate (people)		20.7	56.4	77.8	86.7
All	2008	Line	687	1.23	2.45	3.68	4.91
		Rate (HHs)		19.3	51.7	71.3	80.6
		Rate (people)		22.5	55.9	75.3	84.7
Urban	2014	Line	394	1.63	3.25	4.88	6.51
		Rate (HHs)		8.9	36.9	60.3	76.0
		Rate (people)		10.0	43.0	66.2	80.7
Rural	2014	Line	397	1.01	2.02	3.03	4.04
		Rate (HHs)		11.6	37.0	55.2	70.4
		Rate (people)		16.4	43.6	62.4	77.3
All	2014	Line	791	1.31	2.63	3.94	5.26
		Rate (HHs)		10.3	36.9	57.6	73.1
		Rate (people)		13.2	43.3	64.3	79.0

Source and definitions: See Table 1 and text.

**Table 2 (San Vincente): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	385	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		7.3	20.5	25.7	59.8	10.8	24.5
		Rate (people)		9.3	24.1	29.7	63.6	14.0	28.3
Rural	2008	Line	302	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		4.5	17.1	27.9	64.8	8.7	26.8
		Rate (people)		5.6	19.9	31.6	69.6	10.0	30.0
All	2008	Line	687	0.76	1.22	1.52	3.04	0.90	1.46
		Rate (HHs)		6.0	18.9	26.7	62.1	9.8	25.6
		Rate (people)		7.5	22.1	30.6	66.5	12.0	29.1
Urban	2014	Line	394	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		2.6	8.9	17.0	50.8	4.3	15.4
		Rate (people)		3.1	10.0	20.2	56.2	5.1	18.1
Rural	2014	Line	397	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		3.7	12.2	18.7	47.9	6.3	17.7
		Rate (people)		6.3	17.3	24.2	54.0	9.5	22.6
All	2014	Line	791	0.84	1.34	1.67	3.35	0.99	1.61
		Rate (HHs)		3.2	10.6	17.9	49.3	5.3	16.6
		Rate (people)		4.7	13.7	22.2	55.1	7.3	20.4

Source and definitions: See Table 1 and text.



**Table 2 (San Vicente): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	385	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		26.4	24.1	42.7	53.2	61.8	79.5
		Rate (people)		30.5	28.1	47.2	58.6	65.3	84.2
Rural	2008	Line	302	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		28.4	24.8	46.5	57.4	67.6	85.5
		Rate (people)		32.3	28.5	50.7	61.2	71.6	88.3
All	2008	Line	687	1.54	1.42	2.18	2.64	3.21	5.11
		Rate (HHs)		27.3	24.4	44.5	55.2	64.5	82.3
		Rate (people)		31.3	28.3	48.9	59.8	68.3	86.2
Urban	2014	Line	394	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		18.7	20.2	41.0	49.4	59.3	80.3
		Rate (people)		22.6	24.1	46.6	55.1	65.1	84.4
Rural	2014	Line	397	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		21.6	22.0	39.0	46.2	54.9	76.4
		Rate (people)		27.6	28.4	45.4	51.9	62.1	82.0
All	2014	Line	791	1.77	1.85	2.76	3.25	3.90	5.97
		Rate (HHs)		20.2	21.1	39.9	47.7	57.0	78.3
		Rate (people)		25.1	26.3	46.0	53.5	63.6	83.1

Source and definitions: See Table 1 and text.

**Table 2 (Usulután): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	418	1.47	2.95	4.43	5.90
		Rate (HHs)		15.3	48.2	66.1	78.2
		Rate (people)		17.7	56.3	72.2	83.2
Rural	2008	Line	433	0.96	1.92	2.87	3.83
		Rate (HHs)		16.3	54.7	74.5	84.4
		Rate (people)		19.1	64.3	82.0	89.3
All	2008	Line	851	1.22	2.43	3.65	4.87
		Rate (HHs)		15.7	51.3	70.1	81.1
		Rate (people)		18.4	60.3	77.1	86.2
Urban	2014	Line	490	1.63	3.25	4.88	6.51
		Rate (HHs)		12.0	43.3	63.3	77.1
		Rate (people)		13.9	47.9	67.6	81.9
Rural	2014	Line	467	1.01	2.02	3.03	4.04
		Rate (HHs)		8.2	31.9	54.5	71.9
		Rate (people)		9.7	37.3	62.4	79.0
All	2014	Line	957	1.30	2.60	3.90	5.20
		Rate (HHs)		10.0	37.5	58.8	74.4
		Rate (people)		11.7	42.2	64.9	80.3

Source and definitions: See Table 1 and text.

**Table 2 (Usulután): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	418	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		2.3	15.2	20.3	58.6	5.5	19.6
		Rate (people)		3.1	17.6	23.5	65.7	6.3	22.4
Rural	2008	Line	433	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		3.3	15.9	26.8	68.4	7.0	22.1
		Rate (people)		4.8	18.7	31.9	75.9	9.1	26.1
All	2008	Line	851	0.75	1.21	1.51	3.02	0.89	1.45
		Rate (HHs)		2.8	15.5	23.4	63.2	6.2	20.8
		Rate (people)		3.9	18.2	27.7	70.7	7.7	24.2
Urban	2014	Line	490	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		4.4	12.6	20.9	55.4	6.5	19.0
		Rate (people)		5.9	14.4	23.7	60.6	8.1	21.4
Rural	2014	Line	467	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		2.5	8.9	12.9	47.3	3.4	12.0
		Rate (people)		2.8	10.3	15.0	54.5	3.8	14.1
All	2014	Line	957	0.83	1.32	1.66	3.31	0.98	1.59
		Rate (HHs)		3.4	10.7	16.8	51.2	4.9	15.4
		Rate (people)		4.2	12.2	19.1	57.3	5.8	17.5

Source and definitions: See Table 1 and text.

**Table 2 (Usulután): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	418	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		21.7	18.8	41.6	52.1	61.8	80.1
		Rate (people)		25.1	21.3	48.5	59.6	68.8	84.8
Rural	2008	Line	433	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		26.9	20.3	47.1	59.8	69.6	85.2
		Rate (people)		32.1	24.2	56.5	68.7	77.2	89.9
All	2008	Line	851	1.53	1.41	2.16	2.62	3.18	5.08
		Rate (HHs)		24.2	19.5	44.2	55.7	65.5	82.5
		Rate (people)		28.6	22.7	52.5	64.2	73.0	87.3
Urban	2014	Line	490	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		25.4	26.9	46.1	54.4	62.9	82.5
		Rate (people)		28.8	30.6	50.7	59.3	67.2	86.3
Rural	2014	Line	467	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		15.3	16.3	33.7	45.9	53.8	75.8
		Rate (people)		17.5	18.6	39.2	53.2	61.8	82.0
All	2014	Line	957	1.75	1.82	2.72	3.22	3.85	5.91
		Rate (HHs)		20.2	21.4	39.7	50.0	58.2	79.0
		Rate (people)		22.8	24.2	44.6	56.1	64.4	84.0

Source and definitions: See Table 1 and text.

**Table 2 (San Miguel): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)			
				National lines			
				Food	100%	150%	200%
Urban	2008	Line	397	1.47	2.95	4.43	5.90
		Rate (HHs)		8.3	30.9	52.7	64.7
		Rate (people)		11.6	38.8	58.1	69.6
Rural	2008	Line	434	0.96	1.92	2.87	3.83
		Rate (HHs)		15.5	40.6	64.9	78.4
		Rate (people)		20.2	47.1	70.1	82.2
All	2008	Line	831	1.24	2.49	3.73	4.98
		Rate (HHs)		11.4	35.0	57.9	70.6
		Rate (people)		15.4	42.5	63.4	75.2
Urban	2014	Line	514	1.63	3.25	4.88	6.51
		Rate (HHs)		4.8	23.4	42.6	57.6
		Rate (people)		5.8	28.2	49.3	64.6
Rural	2014	Line	731	1.01	2.02	3.03	4.04
		Rate (HHs)		13.6	41.6	63.8	76.8
		Rate (people)		15.1	46.9	70.2	81.4
All	2014	Line	1,245	1.32	2.65	3.97	5.29
		Rate (HHs)		9.1	32.5	53.1	67.1
		Rate (people)		10.4	37.4	59.6	72.9

Source and definitions: See Table 1 and text.

**Table 2 (San Miguel): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	397	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		2.9	8.3	12.5	41.3	4.3	11.2
		Rate (people)		4.2	11.6	16.9	48.3	6.3	15.2
Rural	2008	Line	434	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		4.0	15.5	20.8	53.8	6.7	19.9
		Rate (people)		5.7	20.2	26.2	59.5	8.9	25.1
All	2008	Line	831	0.77	1.23	1.54	3.09	0.91	1.48
		Rate (HHs)		3.4	11.4	16.0	46.6	5.3	14.9
		Rate (people)		4.9	15.4	21.0	53.3	7.4	19.6
Urban	2014	Line	514	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		0.8	5.2	10.1	36.9	2.2	9.5
		Rate (people)		0.9	6.2	12.5	42.9	2.9	11.9
Rural	2014	Line	731	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		3.1	14.2	19.5	54.8	5.3	18.2
		Rate (people)		4.2	15.9	22.3	61.1	6.6	20.7
All	2014	Line	1,245	0.84	1.35	1.69	3.37	0.99	1.62
		Rate (HHs)		1.9	9.6	14.7	45.7	3.8	13.8
		Rate (people)		2.5	11.0	17.4	51.9	4.7	16.3

Source and definitions: See Table 1 and text.

**Table 2 (San Miguel): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	n	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	397	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		13.3	10.9	25.7	33.6	44.2	67.9
		Rate (people)		18.0	15.0	33.0	41.5	50.9	72.7
Rural	2008	Line	434	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		21.1	19.2	35.8	44.6	56.9	80.9
		Rate (people)		26.8	24.2	43.0	51.0	61.7	85.4
All	2008	Line	831	1.57	1.44	2.21	2.68	3.25	5.19
		Rate (HHs)		16.6	14.5	30.0	38.3	49.6	73.5
		Rate (people)		21.9	19.1	37.5	45.8	55.7	78.4
Urban	2014	Line	514	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		10.7	11.5	26.3	35.8	42.5	65.2
		Rate (people)		13.2	13.9	30.5	41.8	49.3	72.7
Rural	2014	Line	731	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		22.9	25.4	44.7	52.3	62.5	81.2
		Rate (people)		26.8	30.0	50.3	58.8	69.0	84.9
All	2014	Line	1,245	1.79	1.86	2.77	3.28	3.92	6.02
		Rate (HHs)		16.8	18.4	35.4	44.0	52.4	73.2
		Rate (people)		19.9	21.8	40.3	50.1	59.0	78.7

Source and definitions: See Table 1 and text.

**Table 2 (Morazán): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	324	1.47	2.95	4.43	5.90
		Rate (HHs)		24.4	56.9	70.9	82.0
		Rate (people)		30.1	63.5	75.9	85.2
Rural	2008	Line	390	0.96	1.92	2.87	3.83
		Rate (HHs)		26.1	57.5	73.5	83.1
		Rate (people)		31.6	65.3	80.0	87.0
All	2008	Line	714	1.11	2.22	3.33	4.44
		Rate (HHs)		25.6	57.3	72.7	82.7
		Rate (people)		31.2	64.8	78.8	86.5
Urban	2014	Line	494	1.63	3.25	4.88	6.51
		Rate (HHs)		14.5	41.2	62.8	75.6
		Rate (people)		18.3	48.5	70.2	80.4
Rural	2014	Line	846	1.01	2.02	3.03	4.04
		Rate (HHs)		14.3	46.2	66.1	78.6
		Rate (people)		16.9	52.7	72.9	83.9
All	2014	Line	1,340	1.17	2.35	3.53	4.70
		Rate (HHs)		14.4	44.8	65.2	77.8
		Rate (people)		17.3	51.6	72.2	82.9

Source and definitions: See Table 1 and text.



**Table 2 (Morazán): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	324	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		11.1	23.6	36.9	63.6	15.0	34.8
		Rate (people)		15.0	29.1	44.0	68.9	18.5	41.5
Rural	2008	Line	390	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		9.3	25.3	34.5	66.8	13.0	32.1
		Rate (people)		11.3	31.0	40.6	73.8	15.3	38.4
All	2008	Line	714	0.69	1.10	1.38	2.75	0.81	1.32
		Rate (HHs)		9.9	24.8	35.2	65.8	13.6	32.9
		Rate (people)		12.4	30.5	41.6	72.4	16.2	39.3
Urban	2014	Line	494	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		6.3	15.4	21.3	54.7	8.7	20.0
		Rate (people)		8.9	19.0	26.3	62.4	11.3	24.8
Rural	2014	Line	846	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		4.1	14.3	22.9	59.1	7.2	21.4
		Rate (people)		5.2	16.9	26.8	65.5	9.6	25.1
All	2014	Line	1,340	0.75	1.20	1.50	2.99	0.88	1.44
		Rate (HHs)		4.7	14.6	22.5	57.9	7.6	21.0
		Rate (people)		6.2	17.5	26.6	64.7	10.1	25.0

Source and definitions: See Table 1 and text.

**Table 2 (Morazán): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Poorest half of people	Percentile-based lines				
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	324	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		37.1	32.8	51.8	59.0	65.1	82.2
		Rate (people)		44.3	39.7	57.6	66.1	70.4	85.6
Rural	2008	Line	390	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		34.7	31.0	52.6	61.2	68.5	84.6
		Rate (people)		40.8	37.1	59.9	68.3	75.2	88.2
All	2008	Line	714	1.40	1.29	1.97	2.39	2.90	4.63
		Rate (HHs)		35.5	31.6	52.4	60.5	67.5	83.9
		Rate (people)		41.8	37.9	59.2	67.6	73.8	87.4
Urban	2014	Line	494	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		24.5	26.0	45.2	52.6	62.3	80.1
		Rate (people)		29.9	32.3	51.9	60.0	69.7	83.2
Rural	2014	Line	846	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		25.5	28.1	48.5	57.7	65.5	82.7
		Rate (people)		29.7	33.1	55.0	64.3	72.2	87.5
All	2014	Line	1,340	1.59	1.65	2.46	2.91	3.48	5.34
		Rate (HHs)		25.2	27.5	47.6	56.3	64.6	82.0
		Rate (people)		29.7	32.8	54.2	63.2	71.5	86.3

Source and definitions: See Table 1 and text.

**Table 2 (La Unión): National poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)						
	Year	Line/rate	<i>n</i>	National lines			
				Food	100%	150%	200%
Urban	2008	Line	416	1.47	2.95	4.43	5.90
		Rate (HHs)		11.9	42.2	64.8	76.6
		Rate (people)		13.6	44.9	70.2	80.1
Rural	2008	Line	430	0.96	1.92	2.87	3.83
		Rate (HHs)		14.7	42.1	59.9	71.5
		Rate (people)		18.6	48.2	64.6	75.1
All	2008	Line	846	1.13	2.26	3.40	4.53
		Rate (HHs)		13.7	42.1	61.7	73.3
		Rate (people)		16.9	47.1	66.5	76.8
Urban	2014	Line	527	1.63	3.25	4.88	6.51
		Rate (HHs)		7.1	28.9	52.3	70.9
		Rate (people)		8.2	34.2	59.4	76.1
Rural	2014	Line	843	1.01	2.02	3.03	4.04
		Rate (HHs)		13.3	38.6	57.5	70.6
		Rate (people)		17.1	46.1	65.8	77.5
All	2014	Line	1,370	1.19	2.38	3.58	4.77
		Rate (HHs)		11.4	35.6	55.9	70.7
		Rate (people)		14.5	42.6	63.9	77.1

Source and definitions: See Table 1 and text.

**Table 2 (La Unión): International 2005 and 2011 PPP poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Poverty lines and poverty rates (%)								
	Year	Line/rate	<i>n</i>	Intl. 2005 PPP lines				Intl. 2011 PPP lines	
				\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Urban	2008	Line	416	0.91	1.46	1.83	3.66	1.08	1.76
		Rate (HHs)		4.1	11.8	18.0	53.8	6.0	16.2
		Rate (people)		5.2	13.4	19.7	58.1	7.6	17.9
Rural	2008	Line	430	0.59	0.95	1.19	2.38	0.70	1.14
		Rate (HHs)		3.9	14.6	20.0	51.8	5.4	19.1
		Rate (people)		4.9	18.4	25.4	57.2	7.4	24.1
All	2008	Line	846	0.70	1.12	1.40	2.81	0.83	1.35
		Rate (HHs)		4.0	13.6	19.3	52.5	5.6	18.1
		Rate (people)		5.0	16.7	23.5	57.5	7.5	22.0
Urban	2014	Line	527	1.04	1.66	2.07	4.15	1.22	1.99
		Rate (HHs)		3.0	7.7	13.1	42.6	4.3	12.2
		Rate (people)		3.5	9.0	15.9	49.2	5.0	14.6
Rural	2014	Line	843	0.64	1.03	1.29	2.57	0.76	1.24
		Rate (HHs)		4.3	13.8	18.8	49.6	7.6	17.8
		Rate (people)		5.9	18.1	24.2	58.1	10.2	23.2
All	2014	Line	1,370	0.76	1.21	1.52	3.04	0.89	1.46
		Rate (HHs)		3.9	11.9	17.0	47.4	6.6	16.0
		Rate (people)		5.2	15.4	21.8	55.5	8.7	20.7

Source and definitions: See Table 1 and text.

**Table 2 (La Unión): Relative and percentile-based poverty lines, poverty rates, and sample sizes for urban/rural/all by households and people for 2008 and 2014**

Region	Year	Line/rate	<i>n</i>	Poverty lines and poverty rates (%)					
				Poorest half of people		Percentile-based lines			
				below 100% Natl. line	20th	40th	50th	60th	80th
Urban	2008	Line	416	1.86	1.71	2.62	3.17	3.86	6.15
		Rate (HHs)		18.6	15.6	36.4	46.5	57.2	78.2
		Rate (people)		20.2	17.1	39.0	50.9	61.5	81.7
Rural	2008	Line	430	1.20	1.11	1.70	2.06	2.50	3.99
		Rate (HHs)		21.6	17.7	35.6	46.0	54.6	73.9
		Rate (people)		27.7	22.9	42.6	51.5	59.6	77.0
All	2008	Line	846	1.42	1.31	2.01	2.43	2.96	4.72
		Rate (HHs)		20.5	16.9	35.9	46.2	55.6	75.4
		Rate (people)		25.2	21.0	41.3	51.3	60.3	78.6
Urban	2014	Line	527	2.20	2.28	3.41	4.03	4.82	7.40
		Rate (HHs)		13.8	15.0	31.3	40.3	51.7	77.1
		Rate (people)		16.8	18.2	37.0	46.8	58.7	81.1
Rural	2014	Line	843	1.36	1.42	2.12	2.50	3.00	4.60
		Rate (HHs)		20.1	22.5	40.4	47.8	56.8	76.5
		Rate (people)		25.8	28.8	48.0	56.2	65.4	82.9
All	2014	Line	1,370	1.61	1.67	2.50	2.95	3.53	5.42
		Rate (HHs)		18.1	20.1	37.5	45.4	55.2	76.7
		Rate (people)		23.1	25.7	44.8	53.4	63.4	82.4

Source and definitions: See Table 1 and text.

**Table 3: Poverty indicators**

<u>Uncertainty coefficient</u>	<u>Indicator (Responses ordered starting with those linked with higher poverty likelihoods)</u>
792	If the female head/spouse worked in the past week, what was her occupation? (Does not work; Unskilled laborer, manager, operator, or craftsperson in manufacturing, or farmer or skilled worker in agriculture and fishing; Service worker or salesperson in stores and markets, or factory worker; No female head/spouse; Member of the armed forces, lawmaker, policymaker, or executive in public or private administration, professional, scientist, or intellectual, technician or para-professional, or clerk or other office worker)
732	In their work in the past week, did any household member work as a lawmaker, executive in public or private administration, professional, scientist, intellectual, technician/para-professional, clerk/office worker, or in the armed forces? (No; Yes)
719	Does the household have motorcycle or a vehicle for personal use? (No; Yes)
705	What was the most recent level and highest grade which the female head/spouse studied and passed? (None, informal or special education, or other; Pre-school/kindergarten 1 to 3, or primary 1 to 5; Primary 6 to 9; No female head/spouse; Secondary 10 to 12; Post-secondary)
682	Does the household have a vehicle for personal use? (No; Yes)
679	How many household members are 18-years-old or younger? (Four or more; Three; Two; One; None)
665	If the male head/spouse worked in the past week, what was his occupation? (Farmer or skilled worker in agriculture and fishing; Unskilled laborer; Does not work; No male head/spouse; Service worker or salesperson in stores and markets; Manager, operator, or craftsperson in manufacturing; Factory worker; Member of the armed forces, lawmaker, policymaker, or executive in public or private administration, professional, scientist, or intellectual, technician or para-professional, or clerk or other office worker)
662	How many household members are 17-years-old or younger? (Three or more; Two; One; None)
661	If the female head/spouse worked in the past week, what was her occupational status in her main line of work? (Does not work; Member of a cooperative, apprentice/intern, or other; Self-employed without a fixed place of business, or unpaid family worker; Temporary wage or salaried employee, or domestic servant; Self-employed with a fixed place of business; No female head/spouse; Permanent wage or salaried employee, or self-employed with employees)

**Table 3 (cont.): Poverty indicators**

<u>Uncertainty coefficient</u>	<u>Indicator (Responses ordered starting with those linked with higher poverty likelihoods)</u>
659	How many household members are 16-years-old or younger? (Three or more; Two; One; None)
654	What toilet arrangement does the household have? (No toilet arrangement; Latrine, not shared; Shared latrine; Composting latrine, or solar latrine; Shared toilet connected to a septic tank; Toilet connected to a septic tank outside the residence; Toilet connected to sewer outside the residence; Shared toilet connected to sewer; Toilet connected to a septic tank inside the residence, or toilet connected to sewer inside the residence)
652	How is the residence supplied with water? (Puddle, river, stream, spring/artesian well, rainwater, public standpipe, or other; Piped to residence of neighbor, carried from neighbor, public tank, standpipe, water truck, cart, protected (covered) well, or unprotected well; Piped outside the house but on the property; Tube well; Piped inside the house; Bottled water)
646	How many household members are 14-years-old or younger? (Three or more; Two; One; None)
639	How many household members are 15-years-old or younger? (Three or more; Two; One; None)
635	How does the household take a bath? (Outdoor barrel or bucket, river, stream, spring, or other; Shower or tub outside the residence but on the property, or shower or tub shared shared with other households; Shower or tub inside the residence)
614	In their work in the past week, how many household members were permanent salaried employees? (None; One; Two or more)
603	How many household members are 13-years-old or younger? (Three or more; Two; One; None)
550	Does the household have a personal computer? (No; Yes)
538	What is the main material of the floor? (Dirt, or other; Cement, or mud bricks; Cement bricks; Ceramic tile)
536	Does the household have a TV, VCR/DVD, or cable? (None, or only TV; TV, and only one of VCR/DVD or cable; All three)
525	How many household members are 12-years-old or younger? (Two or more; One; None)
504	How many household members are 11-years-old or younger? (Two or more; One; None)
495	Does the household have internet (or mobile internet) and/or e-mail in its residence? (No; Yes)

**Table 3 (cont.): Poverty indicators**

<u>Uncertainty coefficient</u>	<u>Indicator (Responses ordered starting with those linked with higher poverty likelihoods)</u>
492	Does the household have a clothes washer? (No; Yes)
481	Does the household have a refrigerator? (No; Yes)
478	Does the household use any land-line telephones? (No; Yes)
465	Does the household have a fan? (No; Yes)
456	How many household members are there? (Six or more; Five; Four; Three; Two; One)
452	Not counting bathrooms, kitchen, hallways, or garage, how many rooms does the household have exclusively for its own use? (One; Two; Three; Four or more)
441	In the past calendar-week, did the female head/spouse work for at least one hour? (not counting household chores) (No; Yes; No female head/spouse)
410	Does the household have cable (or tapped from neighbor)? (No; Yes)
404	What is the highest level and grade which the male head/spouse has studied and passed? (None, informal or special education, or other; Pre-school to Primary 5; Primary 6 or 7; Primary 8 or 9, or secondary 10 or 11; No male head/spouse; Secondary 12, or post-secondary)
400	Does the household have a microwave oven? (No; Yes)
391	Does the household have a blender? (No; Yes)
383	Among the household members 18-years-old or older who worked in the past calendar-week, how many were salary or wage employees (temporary or permanent)? (None; One; Two or more)
376	What is the main fuel used for cooking? (Firewood, charcoal, kerosene, or other; LPG, electricity, or does not cook)
372	If the male head/spouse worked in the past week, what was his occupational status in his main line of work? (Self-employed without a dedicated place of business, unpaid family worker, member of a cooperative, apprentice/intern, or other; Temporary wage or salaried employee; Does not work; No male head/spouse; Self-employed with employees, self-employed with a fixed place of business, permanent wage or salaried employee, or domestic servant)
365	How many rooms are used exclusively as bedrooms? (None; One; Two; Three or more)



**Table 3 (cont.): Poverty indicators**

<u>Uncertainty coefficient</u>	<u>Indicator (Responses ordered starting with those linked with higher poverty likelihoods)</u>
360	In their work in the past week, how many household members were farmers, skilled workers in agriculture, fishers, or unskilled labourers? (Two or more; One; None)
340	Are all household members ages 6 to 17 currenting going to school or day-care? (No; Yes; No members in age range)
340	Are all household members ages 6 to 16 currenting going to school or day-care? (No; Yes; No members in age range)
339	Are all household members ages 6 to 14 currenting going to school or day-care? (No; Yes; No members in age range)
332	In the last planting season, did any household member work as a self-employed farmer, whether with or without employees? (Yes; No)
330	Are all household members ages 6 to 18 currenting going to school or day-care? (No; Yes; No members in age range)
325	Are all household members ages 6 to 15 currenting going to school or day-care? (No; Yes; No members in age range)
325	Are all household members ages 6 to 13 currenting going to school or day-care? (No; Yes; No members in age range)
322	What is the main material of the roof? (Metal sheets, straw or palm leaves, scrap materials, false ceiling, or other; Mud or concrete shingles; Asbestos or fiberglass sheets, or concrete slab)
305	How many household members are 6-years-old or younger? (Two or more; One; None)
297	Are all household members ages 6 to 12 currenting going to school or day-care? (No; Yes; No members in age range)
283	Are all household members ages 6 to 11 currenting going to school or day-care? (No; Yes; No members in age range)
276	Can the female head/spouse read and write? (No; Yes; No female head/spouse)
265	What is the main material of the exterior walls? (Wattle and daub, wood, straw or palm leaves, scrap materials, or other; Adobe; Metal sheets; Concrete or mixed)

**Table 3 (cont.): Poverty indicators**

<u>Uncertainty coefficient</u>	<u>Indicator (Responses ordered starting with those linked with higher poverty likelihoods)</u>
258	In the past calendar-week, how many household members 18-years-old or older worked for at least one hour? (not counting household chores) (None, or one; Two; Three or more)
255	Does the household have a VCR or DVD? (No; Yes)
236	In their work in the past week, did any household members work as a farmer, skilled worker in agriculture, or in fishing? (Yes; No)
230	What is the marital status of the female head/spouse? (Cohabiting; Married; Separated; Single, never-married; Widowed; No female head/spouse; Divorced)
220	Does the household have an iron? (No; Yes)
217	What is the marital status of the male head/spouse? (Cohabiting; Married; No male head/spouse; Widowed; Divorced, separated, or single, never-married)
209	Does the household employ any domestic servants? (No; Yes)
187	Does the household have a radio or a stereo system? (None; Only radio; Stereo (regardless of radio))
176	What is the tenancy status of the household in its residence? (Owned free-and-clear on private land, squatter, or other; Lives rent-free, guardian of the residence, or owned free-and-clear on public land; Owned free-and-clear; Renter; Owned (with mortgage))
176	Does the household have a stereo system? (No; Yes)
164	Does the household have a television? (No; Yes)
164	What type of lighting does the residence have? (Tapped electricity from neighbor, kerosene, candles, solar panel, electrical generator, u otro; Electricity)
146	What is the structure of household headship? (Both male and female heads/spouses; Female head/spouse only; Male head/spouse only)
128	How many cell phones does the household use? (None; One; Two; Three or more)
109	Can the male head/spouse read and write? (No; Yes; No male head/spouse)
56	Does the household have water tank or cistern? (No; Yes)

**Table 3 (cont.): Poverty indicators**

<u>Uncertainty coefficient</u>	<u>Indicator (Responses ordered starting with those linked with higher poverty likelihoods)</u>
48	Does the household have motorcycle? (No; Yes)
47	Does the household share its toilet arrangement with other households? (Yes; No)
29	In the past calendar-week, did the male head/spouse work for at least one hour? (No; Yes; No male head/spouse)
27	In their work in the past week, did the male head/spouse or the female head/spouse work in a non-agricultural sector as a business owner or as a self-employed person? (No; Yes)
17	In their work in the past week, did any household member own a business or was self-employed? (Yes; No)
12	Does the household get a government subsidy for electricity? (Yes; No)
12	Does the household have a radio? (No; Yes)
8	In their work in the past week, did any household members work as an unpaid worker in a family business, worker in a cooperative, apprentice/intern, or as a domestic servant? (Yes; No)
6	Does the household get a government subsidy for gas? (Yes; No)

Source: 2014 EHPM and 100% of the national poverty line

**Tables for  
100% of the National Poverty Line  
  
(and Tables Pertaining  
to All Poverty Lines)**

**Table 4 (100% of the national line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	98.6
5-9	91.1
10-14	84.9
15-19	78.4
20-24	71.9
25-29	63.0
30-34	51.9
35-39	44.5
40-44	35.3
45-49	24.8
50-54	15.3
55-59	10.2
60-64	6.7
65-69	3.2
70-74	1.4
75-79	1.3
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 5 (100% of the national line): Derivation of estimated poverty likelihoods associated with scores**

Score	Households in range and < poverty line		All households in range		Poverty likelihood (%)
0-4	433	÷	439	=	98.6
5-9	949	÷	1,043	=	91.1
10-14	1,802	÷	2,121	=	84.9
15-19	2,404	÷	3,065	=	78.4
20-24	3,021	÷	4,202	=	71.9
25-29	4,276	÷	6,788	=	63.0
30-34	4,390	÷	8,450	=	51.9
35-39	4,726	÷	10,608	=	44.5
40-44	3,885	÷	11,020	=	35.3
45-49	3,066	÷	12,361	=	24.8
50-54	1,781	÷	11,632	=	15.3
55-59	867	÷	8,500	=	10.2
60-64	468	÷	6,955	=	6.7
65-69	129	÷	4,061	=	3.2
70-74	55	÷	3,927	=	1.4
75-79	36	÷	2,715	=	1.3
80-84	0	÷	952	=	0.0
85-89	0	÷	835	=	0.0
90-94	0	÷	304	=	0.0
95-100	0	÷	22	=	0.0

Number of all households normalized to sum to 100,000.

**Table 6 (100% of the national line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	-1.0	0.7	0.8	1.1
5-9	+12.7	7.4	8.8	10.6
10-14	+1.1	4.1	4.9	6.4
15-19	-4.7	4.0	4.3	5.0
20-24	+9.2	3.9	4.6	6.0
25-29	+0.1	3.2	3.7	4.7
30-34	-3.9	3.3	3.6	4.4
35-39	+0.5	2.6	3.0	3.9
40-44	+5.5	2.3	2.8	3.6
45-49	+3.7	1.8	2.2	2.7
50-54	+2.2	1.6	1.9	2.5
55-59	+0.7	1.7	2.0	2.6
60-64	+1.9	1.3	1.5	1.9
65-69	-7.0	5.0	5.3	5.9
70-74	+0.6	0.5	0.6	0.7
75-79	-2.6	2.4	2.6	3.1
80-84	0.0	0.0	0.0	0.0
85-89	-0.5	0.6	0.7	0.8
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (100% of the national line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+3.0	69.1	78.3	87.4
4	+0.4	37.8	44.7	55.3
8	+1.2	27.2	32.1	40.6
16	+1.4	18.9	22.9	29.9
32	+1.2	13.5	16.1	21.5
64	+1.2	9.6	11.4	15.4
128	+1.1	7.0	8.1	10.1
256	+1.2	4.7	5.6	7.4
512	+1.2	3.5	4.1	5.2
1,024	+1.3	2.4	2.8	3.7
2,048	+1.3	1.7	2.0	2.5
4,096	+1.3	1.2	1.4	1.9
8,192	+1.3	0.8	1.0	1.4
16,384	+1.2	0.6	0.8	1.0



**Table 8 (National lines): Average errors (differences between estimates and observed values) for households' poverty rates at a point in time, confidence intervals, and the  $\alpha$  factor for precision, 2014 scorecard applied to the 2014 validation sample**

	Poverty lines			
	<u>National</u>			
	<b>Food</b>	<b>100%</b>	<b>150%</b>	<b>200%</b>
Error (estimate minus observed value)	+1.0	+1.2	+0.7	+1.9
Precision of difference	0.3	0.6	0.8	0.7
Alpha factor for precision	0.82	1.01	1.17	1.28

Results pertain to the 2014 scorecard applied to the 2014 validation sample.

Differences between estimates and observed values are displayed in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of  $\pm$  percentage points.

Differences and precision estimated from 1,000 bootstraps with  $n = 16,384$ .

Alpha is estimated from 1,000 bootstrap samples of  $n = 256, 512, 1,024, 2,048, 4,096, 8,192, \text{ and } 16,384$ .

**Table 8 (International 2005 and 2011 lines): Average errors (differences between estimates and observed values) for households' poverty rates at a point in time, confidence intervals, and the  $\alpha$  factor for precision, 2014 scorecard applied to the 2014 validation sample**

	Poverty lines					
	Intl. 2005 PPP				Intl. 2011 PPP	
	\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Error (estimate minus observed value)	+0.5	+0.9	+1.6	+0.5	+0.7	+1.7
Precision of difference	0.1	0.3	0.4	0.7	0.2	0.4
Alpha factor for precision	0.76	0.87	0.87	1.09	0.75	0.89

Results pertain to the 2014 scorecard applied to the 2014 validation sample.

Differences between estimates and observed values are displayed in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of  $\pm$  percentage points.

Differences and precision estimated from 1,000 bootstraps with  $n = 16,384$ .

Alpha is estimated from 1,000 bootstrap samples of  $n = 256, 512, 1,024, 2,048, 4,096, 8,192,$  and  $16,384$ .

**Table 8 (Relative and percentile-based lines): Average errors (differences between estimates and observed values) for household’s poverty rates at a point in time, confidence intervals, and the  $\alpha$  factor for precision, 2014 scorecard applied to the 2014 validation sample**

	Poverty lines					
	Poorest half of people below 100% Natl. line	20th	40th	50th	60th	80th
Error (estimate minus observed value)	+1.1	+1.4	+1.1	+0.3	+0.8	+1.5
Precision of difference	0.4	0.4	0.6	0.7	0.7	0.7
Alpha factor for precision	0.90	0.89	1.02	1.07	1.16	1.28

Results pertain to the 2014 scorecard applied to the 2014 validation sample.

Differences between estimates and observed values are displayed in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of  $\pm$  percentage points.

Differences and precision estimated from 1,000 bootstraps with  $n = 16,384$ .

Alpha is estimated from 1,000 bootstrap samples of  $n = 256, 512, 1,024, 2,048, 4,096, 8,192,$  and  $16,384$ .

**Table 9 (National poverty lines): Average errors (differences between estimates and observed values) for changes in households' poverty rates for two independent samples between two points in time, confidence intervals, and the  $\alpha$  factor for precision, 2014 scorecard applied to the 2014 validation sample (baseline) and to all of the 2008 data (follow-up)**

	Poverty lines			
	National			
	Food	100%	150%	200%
Error (estimate minus observed value)	-0.5	+2.9	+7.3	+7.3
Precision of difference	0.4	0.9	1.0	1.0
Alpha factor for precision	0.91	1.05	1.11	1.23

New 2014 scorecard applied to the 2014 validation sample (baseline) and 2008 validation sample (follow-up).

Differences between estimates and observed values are displayed in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of  $\pm$  percentage points.

Differences and precision estimated from 1,000 bootstraps with  $n = 16,384$ .

Alpha is estimated from 1,000 bootstrap samples of  $n = 256, 512, 1,024, 2,048, 4,096, 8,192, \text{ and } 16,384$ .

**Table 9 (International 2005 and 2011 poverty lines): Average errors (differences between estimates and observed values) for changes in households' poverty rates for two independent samples between two points in time, confidence intervals, and the  $\alpha$  factor for precision, 2014 scorecard applied to the 2014 validation sample (baseline) and to all of the 2008 data (follow-up)**

	Poverty lines					
	Intl. 2005 PPP				Intl. 2011 PPP	
	\$1.25	\$2.00	\$2.50	\$5.00	\$1.90	\$3.10
Error (estimate minus observed value)	-0.1	+0.4	+0.8	+7.7	0.0	+1.0
Precision of difference	0.2	0.4	0.6	0.9	0.3	0.6
Alpha factor for precision	0.93	0.90	0.92	0.99	0.92	0.93

New 2014 scorecard applied to the 2014 validation sample (baseline) and 2008 validation sample (follow-up).

Differences between estimates and observed values are displayed in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of  $\pm$  percentage points.

Differences and precision estimated from 1,000 bootstraps with  $n = 16,384$ .

Alpha is estimated from 1,000 bootstrap samples of  $n = 256, 512, 1,024, 2,048, 4,096, 8,192, \text{ and } 16,384$ .

**Table 10 (All poverty lines): Possible targeting outcomes**

		<u>Targeting segment</u>	
		<u>Targeted</u>	<u>Non-targeted</u>
<u>Observed poverty status</u>	<u>Poor</u>	<u>Inclusion</u> Poor correctly targeted	<u>Undercoverage</u> Poor mistakenly not targeted
	<u>Non-poor</u>	<u>Leakage</u> Non-poor mistakenly targeted	<u>Exclusion</u> Non-poor correctly not targeted

**Table 11 (100% of the national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b><u>Inclusion:</u> Poor correctly targeted</b>	<b><u>Undercoverage:</u> Poor mistakenly not targeted</b>	<b><u>Leakage:</u> Non-poor mistakenly targeted</b>	<b><u>Exclusion:</u> Non-poor correctly not targeted</b>	<b><u>Hit rate</u> Inclusion + Exclusion</b>	<b><u>BPAC</u> See text</b>
<=4	0.4	31.4	0.0	68.2	68.6	-97.3
<=9	1.3	30.5	0.1	68.1	69.4	-91.1
<=14	3.2	28.6	0.4	67.8	70.9	-78.7
<=19	5.7	26.1	1.0	67.2	72.9	-61.2
<=24	8.6	23.2	2.3	65.9	74.4	-38.9
<=29	12.8	19.0	4.8	63.4	76.2	-4.2
<=34	17.3	14.5	8.8	59.4	76.7	+36.6
<=39	21.9	9.9	14.9	53.3	75.2	+53.3
<=44	25.7	6.1	22.1	46.1	71.8	+30.6
<=49	28.6	3.2	31.5	36.7	65.3	+0.9
<=54	30.2	1.6	41.5	26.7	56.9	-30.5
<=59	31.0	0.8	49.2	19.0	50.0	-54.8
<=64	31.4	0.4	55.8	12.4	43.8	-75.4
<=69	31.6	0.2	59.6	8.6	40.2	-87.4
<=74	31.7	0.1	63.5	4.7	36.4	-99.5
<=79	31.8	0.0	66.1	2.1	33.9	-107.8
<=84	31.8	0.0	67.0	1.1	32.9	-110.8
<=89	31.8	0.0	67.9	0.3	32.1	-113.4
<=94	31.8	0.0	68.2	0.0	31.8	-114.4
<=100	31.8	0.0	68.2	0.0	31.8	-114.4

**Table 12 (100% of the national line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	98.8	1.4	84.3:1
<=9	1.5	90.2	4.2	9.2:1
<=14	3.6	88.0	10.0	7.4:1
<=19	6.7	85.3	17.9	5.8:1
<=24	10.9	78.8	26.9	3.7:1
<=29	17.7	72.6	40.3	2.7:1
<=34	26.1	66.4	54.5	2.0:1
<=39	36.7	59.5	68.7	1.5:1
<=44	47.7	53.8	80.7	1.2:1
<=49	60.1	47.6	89.9	0.9:1
<=54	71.7	42.1	95.0	0.7:1
<=59	80.2	38.7	97.5	0.6:1
<=64	87.2	36.0	98.7	0.6:1
<=69	91.2	34.7	99.5	0.5:1
<=74	95.2	33.3	99.7	0.5:1
<=79	97.9	32.5	100.0	0.5:1
<=84	98.8	32.2	100.0	0.5:1
<=89	99.7	31.9	100.0	0.5:1
<=94	100.0	31.8	100.0	0.5:1
<=100	100.0	31.8	100.0	0.5:1



**Tables for  
the Food Poverty Line**

**Table 4 (Food line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	64.8
5-9	53.3
10-14	39.9
15-19	33.2
20-24	21.7
25-29	18.6
30-34	11.2
35-39	6.7
40-44	5.4
45-49	2.6
50-54	2.0
55-59	0.6
60-64	0.2
65-69	0.0
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (Food line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0–4	+16.7	11.9	14.2	19.4
5–9	+22.0	6.6	7.7	10.1
10–14	–2.6	5.1	6.1	7.7
15–19	+11.2	3.3	3.9	5.2
20–24	–5.9	4.6	5.0	5.7
25–29	+4.1	2.2	2.6	3.5
30–34	+1.6	1.5	1.7	2.6
35–39	+2.1	0.9	1.0	1.4
40–44	+1.8	0.7	0.9	1.1
45–49	–1.2	1.0	1.0	1.2
50–54	+1.0	0.4	0.5	0.7
55–59	+0.5	0.1	0.1	0.1
60–64	+0.2	0.0	0.0	0.0
65–69	0.0	0.0	0.0	0.0
70–74	0.0	0.0	0.0	0.0
75–79	0.0	0.0	0.0	0.0
80–84	0.0	0.0	0.0	0.0
85–89	0.0	0.0	0.0	0.0
90–94	0.0	0.0	0.0	0.0
95–100	0.0	0.0	0.0	0.0

**Table 7 (Food): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	-0.1	50.0	61.0	74.0
4	+0.6	19.4	25.7	34.0
8	+0.7	12.6	16.5	24.7
16	+0.9	8.9	11.0	14.3
32	+0.9	5.8	6.9	8.9
64	+1.0	4.4	5.1	6.7
128	+1.0	3.1	3.7	5.3
256	+0.9	2.2	2.5	3.6
512	+0.9	1.5	1.7	2.4
1,024	+1.0	1.1	1.4	1.7
2,048	+1.0	0.8	0.9	1.2
4,096	+1.0	0.5	0.7	0.8
8,192	+1.0	0.4	0.5	0.6
16,384	+1.0	0.3	0.3	0.4

**Table 11 (Food line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.3	7.3	0.2	92.2	92.5	-90.7
<=9	0.7	6.9	0.8	91.6	92.3	-71.1
<=14	1.6	6.0	2.0	90.4	92.0	-31.4
<=19	2.5	5.1	4.2	88.2	90.6	+20.2
<=24	3.6	4.0	7.3	85.2	88.8	+4.3
<=29	4.7	2.9	13.0	79.4	84.1	-71.3
<=34	5.6	1.9	20.5	72.0	77.6	-169.8
<=39	6.3	1.3	30.4	62.0	68.3	-300.9
<=44	6.9	0.7	40.8	51.6	58.5	-438.4
<=49	7.4	0.2	52.7	39.7	47.1	-594.6
<=54	7.6	0.0	64.2	28.3	35.8	-745.9
<=59	7.6	0.0	72.6	19.8	27.4	-857.7
<=64	7.6	0.0	79.6	12.8	20.4	-949.4
<=69	7.6	0.0	83.7	8.8	16.3	-1,002.9
<=74	7.6	0.0	87.6	4.8	12.4	-1,054.7
<=79	7.6	0.0	90.3	2.1	9.7	-1,090.5
<=84	7.6	0.0	91.3	1.2	8.7	-1,103.1
<=89	7.6	0.0	92.1	0.3	7.9	-1,114.1
<=94	7.6	0.0	92.4	0.0	7.6	-1,118.1
<=100	7.6	0.0	92.4	0.0	7.6	-1,118.4

**Table 12 (Food line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	61.5	3.6	1.6:1
<=9	1.5	47.8	9.3	0.9:1
<=14	3.6	44.5	21.1	0.8:1
<=19	6.7	36.8	32.3	0.6:1
<=24	10.9	33.2	47.6	0.5:1
<=29	17.7	26.4	61.5	0.4:1
<=34	26.1	21.6	74.4	0.3:1
<=39	36.7	17.2	83.2	0.2:1
<=44	47.7	14.4	90.9	0.2:1
<=49	60.1	12.3	97.6	0.1:1
<=54	71.7	10.6	99.8	0.1:1
<=59	80.2	9.5	100.0	0.1:1
<=64	87.2	8.7	100.0	0.1:1
<=69	91.2	8.3	100.0	0.1:1
<=74	95.2	8.0	100.0	0.1:1
<=79	97.9	7.7	100.0	0.1:1
<=84	98.8	7.7	100.0	0.1:1
<=89	99.7	7.6	100.0	0.1:1
<=94	100.0	7.6	100.0	0.1:1
<=100	100.0	7.6	100.0	0.1:1

**Tables for  
150% of the National Poverty Line**

**Table 4 (150% of national line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	99.5
5-9	97.3
10-14	95.8
15-19	95.1
20-24	90.9
25-29	84.8
30-34	79.7
35-39	72.4
40-44	65.0
45-49	52.5
50-54	40.9
55-59	31.2
60-64	24.2
65-69	18.0
70-74	10.1
75-79	8.4
80-84	4.6
85-89	4.1
90-94	0.0
95-100	0.0



**Table 6 (150% of national line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	-0.1	0.7	0.8	1.1
5-9	0.0	1.8	2.2	2.8
10-14	+0.5	2.1	2.5	3.2
15-19	+0.6	1.9	2.2	2.9
20-24	0.0	2.1	2.5	3.2
25-29	+0.9	2.3	2.8	3.6
30-34	-2.0	1.9	2.4	3.0
35-39	-2.9	2.4	2.6	3.2
40-44	+6.1	2.8	3.4	4.3
45-49	+6.2	2.5	3.0	3.6
50-54	+0.1	2.5	2.9	4.0
55-59	-4.8	3.7	4.0	4.4
60-64	+6.7	2.2	2.6	3.3
65-69	-9.9	6.9	7.3	8.0
70-74	+0.3	2.1	2.5	3.8
75-79	-4.5	3.9	4.3	5.2
80-84	-2.8	3.7	4.6	5.7
85-89	+3.6	0.6	0.7	0.8
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (150% of national line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+2.8	69.4	80.3	92.5
4	+0.2	42.3	50.0	61.2
8	+0.4	33.1	38.3	48.5
16	+0.8	22.8	27.1	34.8
32	+1.0	16.5	19.4	25.7
64	+0.9	12.2	14.2	18.7
128	+0.8	8.2	9.7	12.4
256	+0.8	5.8	7.0	8.9
512	+0.7	3.9	4.9	6.2
1,024	+0.8	2.9	3.5	4.7
2,048	+0.7	2.1	2.5	3.2
4,096	+0.7	1.5	1.7	2.1
8,192	+0.7	1.1	1.3	1.5
16,384	+0.7	0.8	0.9	1.1

**Table 11 (150% of national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.4	53.5	0.0	46.1	46.5	-98.4
<=9	1.4	52.4	0.0	46.1	47.5	-94.6
<=14	3.5	50.4	0.1	46.0	49.5	-86.9
<=19	6.4	47.5	0.3	45.8	52.1	-75.8
<=24	10.2	43.7	0.7	45.4	55.5	-61.0
<=29	15.9	38.0	1.8	44.3	60.2	-37.8
<=34	22.5	31.4	3.6	42.5	65.0	-9.8
<=39	30.1	23.8	6.6	39.5	69.5	+23.9
<=44	37.0	16.9	10.7	35.4	72.4	+57.3
<=49	43.2	10.7	16.9	29.2	72.4	+68.6
<=54	47.8	6.1	24.0	22.1	69.9	+55.5
<=59	50.6	3.3	29.7	16.5	67.0	+45.0
<=64	52.1	1.8	35.1	11.0	63.2	+34.9
<=69	53.0	0.9	38.3	7.9	60.8	+29.0
<=74	53.5	0.4	41.7	4.4	57.9	+22.6
<=79	53.8	0.1	44.1	2.0	55.8	+18.2
<=84	53.9	0.0	45.0	1.1	55.0	+16.6
<=89	53.9	0.0	45.8	0.3	54.2	+15.0
<=94	53.9	0.0	46.1	0.0	53.9	+14.5
<=100	53.9	0.0	46.1	0.0	53.9	+14.4

**Table 12 (150% of national line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	98.8	0.8	84.3:1
<=9	1.5	97.2	2.7	35.0:1
<=14	3.6	96.4	6.4	26.5:1
<=19	6.7	95.3	11.8	20.1:1
<=24	10.9	93.4	18.8	14.1:1
<=29	17.7	89.9	29.4	8.9:1
<=34	26.1	86.3	41.8	6.3:1
<=39	36.7	81.9	55.8	4.5:1
<=44	47.7	77.6	68.7	3.5:1
<=49	60.1	71.8	80.1	2.6:1
<=54	71.7	66.6	88.6	2.0:1
<=59	80.2	63.0	93.9	1.7:1
<=64	87.2	59.8	96.7	1.5:1
<=69	91.2	58.1	98.3	1.4:1
<=74	95.2	56.2	99.2	1.3:1
<=79	97.9	55.0	99.8	1.2:1
<=84	98.8	54.5	100.0	1.2:1
<=89	99.7	54.1	100.0	1.2:1
<=94	100.0	53.9	100.0	1.2:1
<=100	100.0	53.9	100.0	1.2:1

**Tables for  
200% of the National Poverty Line**

**Table 4 (200% of national line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	100.0
5-9	100.0
10-14	99.2
15-19	98.4
20-24	97.1
25-29	94.0
30-34	90.9
35-39	85.7
40-44	80.5
45-49	72.5
50-54	60.9
55-59	49.1
60-64	44.9
65-69	34.7
70-74	24.6
75-79	15.2
80-84	10.6
85-89	10.2
90-94	1.3
95-100	0.0

**Table 6 (200% of national line): Average errors**  
**(differences between estimated and observed poverty**  
**likelihoods) for households by score range, with**  
**confidence intervals, from 1,000 bootstraps of  $n =$**   
**16,384, 2014 scorecard applied to the 2014 validation**  
**sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+0.4	0.7	0.8	1.1
5-9	+0.8	1.0	1.1	1.4
10-14	+0.9	1.3	1.5	1.8
15-19	+0.5	1.3	1.5	2.1
20-24	+0.6	1.5	1.7	2.3
25-29	+0.9	1.6	1.9	2.4
30-34	-0.7	1.5	1.8	2.4
35-39	-4.7	3.0	3.2	3.4
40-44	+7.0	2.8	3.4	4.5
45-49	+3.7	2.3	2.7	3.4
50-54	+5.7	2.5	2.9	3.9
55-59	-2.2	2.8	3.2	4.2
60-64	+14.3	2.8	3.3	4.2
65-69	-7.3	5.6	6.1	6.8
70-74	+2.7	2.9	3.5	4.7
75-79	-16.4	10.4	10.8	11.8
80-84	-1.2	4.6	5.4	7.1
85-89	+9.7	0.6	0.7	0.8
90-94	+1.3	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (200% of national line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+2.1	67.8	78.1	85.5
4	+0.7	40.6	46.5	63.0
8	+0.8	30.8	36.6	44.2
16	+1.6	23.1	26.6	33.8
32	+1.8	16.4	19.4	25.0
64	+1.7	12.3	14.4	17.8
128	+1.7	8.6	10.3	13.9
256	+1.7	6.4	7.6	9.9
512	+1.8	4.2	5.1	6.5
1,024	+1.9	3.0	3.4	4.4
2,048	+1.9	2.1	2.5	3.2
4,096	+1.9	1.5	1.8	2.3
8,192	+1.9	1.1	1.3	1.7
16,384	+1.9	0.7	0.9	1.2



**Table 11 (200% of national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.4	68.1	0.0	31.4	31.9	-98.7
<=9	1.5	67.1	0.0	31.4	32.9	-95.7
<=14	3.6	65.0	0.0	31.4	34.9	-89.6
<=19	6.6	62.0	0.1	31.3	37.9	-80.7
<=24	10.6	57.9	0.2	31.2	41.8	-68.6
<=29	17.0	51.6	0.7	30.8	47.7	-49.5
<=34	24.6	43.9	1.5	30.0	54.6	-26.0
<=39	33.9	34.6	2.8	28.7	62.6	+3.1
<=44	42.6	25.9	5.1	26.3	69.0	+31.8
<=49	51.3	17.3	8.8	22.6	73.9	+62.5
<=54	58.0	10.6	13.8	17.7	75.6	+79.9
<=59	62.3	6.3	17.9	13.5	75.8	+73.9
<=64	65.1	3.5	22.1	9.4	74.4	+67.8
<=69	66.6	2.0	24.7	6.8	73.4	+64.0
<=74	67.6	0.9	27.5	3.9	71.6	+59.8
<=79	68.4	0.1	29.5	2.0	70.4	+57.0
<=84	68.5	0.0	30.3	1.1	69.7	+55.8
<=89	68.6	0.0	31.1	0.3	68.9	+54.6
<=94	68.6	0.0	31.4	0.0	68.6	+54.2
<=100	68.6	0.0	31.4	0.0	68.6	+54.1

**Table 12 (200% of national line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	98.8	0.6	84.3:1
<=9	1.5	98.9	2.1	93.5:1
<=14	3.6	98.6	5.2	72.0:1
<=19	6.7	98.3	9.6	59.6:1
<=24	10.9	97.8	15.5	44.4:1
<=29	17.7	96.1	24.8	24.8:1
<=34	26.1	94.3	35.9	16.7:1
<=39	36.7	92.4	49.5	12.2:1
<=44	47.7	89.3	62.2	8.3:1
<=49	60.1	85.4	74.8	5.8:1
<=54	71.7	80.8	84.5	4.2:1
<=59	80.2	77.7	90.9	3.5:1
<=64	87.2	74.7	94.9	2.9:1
<=69	91.2	73.0	97.1	2.7:1
<=74	95.2	71.1	98.7	2.5:1
<=79	97.9	69.9	99.8	2.3:1
<=84	98.8	69.3	100.0	2.3:1
<=89	99.7	68.8	100.0	2.2:1
<=94	100.0	68.6	100.0	2.2:1
<=100	100.0	68.6	100.0	2.2:1

**Tables for  
the \$1.25/day 2005 PPP Poverty Line**

**Table 4 (\$1.25/day line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	38.9
5-9	26.7
10-14	13.4
15-19	9.9
20-24	6.3
25-29	5.4
30-34	2.9
35-39	1.8
40-44	1.5
45-49	0.4
50-54	0.2
55-59	0.0
60-64	0.0
65-69	0.0
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (\$1.25/day line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+21.6	7.2	8.7	11.0
5-9	+15.1	4.2	5.0	6.3
10-14	+4.3	2.8	3.3	4.5
15-19	+0.3	2.5	3.1	3.9
20-24	-1.3	1.9	2.1	3.1
25-29	+2.8	0.8	0.9	1.2
30-34	+0.4	0.8	0.9	1.1
35-39	+0.2	0.5	0.6	0.8
40-44	+0.7	0.3	0.4	0.5
45-49	-0.2	0.3	0.4	0.4
50-54	+0.2	0.0	0.0	0.0
55-59	0.0	0.0	0.1	0.1
60-64	0.0	0.0	0.0	0.0
65-69	0.0	0.0	0.0	0.0
70-74	0.0	0.0	0.0	0.0
75-79	0.0	0.0	0.0	0.0
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (\$1.25/day line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	0.0	4.9	6.7	62.4
4	+0.1	8.4	15.1	26.0
8	+0.2	7.0	10.0	14.2
16	+0.4	4.6	6.1	8.8
32	+0.3	3.0	3.8	5.5
64	+0.4	2.1	2.5	3.9
128	+0.4	1.6	1.9	2.8
256	+0.4	1.1	1.3	1.7
512	+0.4	0.8	0.9	1.2
1,024	+0.5	0.5	0.6	0.9
2,048	+0.5	0.4	0.5	0.6
4,096	+0.5	0.3	0.3	0.4
8,192	+0.5	0.2	0.2	0.3
16,384	+0.5	0.1	0.2	0.2

**Table 11 (\$1.25/day line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.1	2.0	0.3	97.5	97.7	-74.0
<=9	0.3	1.8	1.2	96.7	97.0	-17.0
<=14	0.5	1.6	3.1	94.8	95.3	-43.1
<=19	0.8	1.3	5.8	92.0	92.9	-171.4
<=24	1.2	1.0	9.7	88.2	89.4	-351.1
<=29	1.4	0.7	16.2	81.6	83.1	-655.7
<=34	1.7	0.5	24.4	73.4	75.1	-1,037.8
<=39	1.9	0.3	34.8	63.0	64.9	-1,523.7
<=44	2.0	0.1	45.7	52.1	54.1	-2,030.9
<=49	2.1	0.0	58.0	39.9	42.0	-2,601.7
<=54	2.1	0.0	69.6	28.3	30.4	-3,143.3
<=59	2.1	0.0	78.1	19.8	21.9	-3,539.1
<=64	2.1	0.0	85.0	12.8	15.0	-3,863.2
<=69	2.1	0.0	89.1	8.8	10.9	-4,052.5
<=74	2.1	0.0	93.0	4.8	7.0	-4,235.5
<=79	2.1	0.0	95.7	2.1	4.3	-4,362.0
<=84	2.1	0.0	96.7	1.2	3.3	-4,406.4
<=89	2.1	0.0	97.5	0.3	2.5	-4,445.3
<=94	2.1	0.0	97.8	0.0	2.2	-4,459.5
<=100	2.1	0.0	97.9	0.0	2.1	-4,460.5

**Table 12 (\$1.25/day line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	26.9	5.5	0.4:1
<=9	1.5	20.2	13.9	0.3:1
<=14	3.6	14.8	24.8	0.2:1
<=19	6.7	12.7	39.4	0.1:1
<=24	10.9	11.0	55.5	0.1:1
<=29	17.7	8.2	67.2	0.1:1
<=34	26.1	6.5	78.9	0.1:1
<=39	36.7	5.1	87.5	0.1:1
<=44	47.7	4.2	93.9	0.0:1
<=49	60.1	3.5	99.1	0.0:1
<=54	71.7	3.0	99.6	0.0:1
<=59	80.2	2.7	100.0	0.0:1
<=64	87.2	2.5	100.0	0.0:1
<=69	91.2	2.4	100.0	0.0:1
<=74	95.2	2.3	100.0	0.0:1
<=79	97.9	2.2	100.0	0.0:1
<=84	98.8	2.2	100.0	0.0:1
<=89	99.7	2.2	100.0	0.0:1
<=94	100.0	2.1	100.0	0.0:1
<=100	100.0	2.1	100.0	0.0:1



**Tables for  
the \$2.00/day 2005 PPP Poverty Line**

**Table 4 (\$2.00/day line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	64.8
5-9	54.4
10-14	40.0
15-19	33.3
20-24	22.9
25-29	19.4
30-34	12.4
35-39	7.7
40-44	5.8
45-49	3.1
50-54	2.4
55-59	0.6
60-64	0.2
65-69	0.0
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (\$2.00/day line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+16.7	11.9	14.2	19.4
5-9	+22.4	6.5	8.1	10.0
10-14	-5.4	5.4	6.1	8.2
15-19	+10.0	3.4	4.0	5.4
20-24	-4.9	4.1	4.5	5.3
25-29	+3.5	2.3	2.7	3.7
30-34	+1.1	1.6	2.0	2.8
35-39	+1.8	1.1	1.3	1.6
40-44	+1.9	0.7	0.9	1.1
45-49	-0.7	0.8	0.9	1.2
50-54	+1.4	0.4	0.5	0.7
55-59	-0.9	0.9	1.0	1.2
60-64	+0.1	0.1	0.1	0.1
65-69	0.0	0.0	0.0	0.0
70-74	0.0	0.0	0.0	0.0
75-79	0.0	0.0	0.0	0.0
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (\$2.00/day line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+0.1	50.0	60.4	74.3
4	+0.4	21.4	26.5	41.5
8	+0.5	13.7	17.0	24.6
16	+0.7	9.4	11.5	15.4
32	+0.7	6.1	7.4	10.1
64	+0.8	4.7	5.5	7.4
128	+0.8	3.3	4.1	5.5
256	+0.8	2.4	2.8	3.7
512	+0.8	1.6	2.0	2.6
1,024	+0.8	1.2	1.4	2.0
2,048	+0.8	0.9	1.0	1.2
4,096	+0.8	0.6	0.7	0.9
8,192	+0.9	0.4	0.5	0.7
16,384	+0.9	0.3	0.4	0.5

**Table 11 (\$2.00/day line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.3	7.9	0.2	91.6	91.9	-91.4
<=9	0.7	7.5	0.8	91.0	91.8	-73.1
<=14	1.7	6.5	2.0	89.8	91.5	-35.9
<=19	2.6	5.6	4.1	87.7	90.3	+12.5
<=24	3.7	4.5	7.1	84.7	88.4	+13.0
<=29	4.9	3.3	12.8	79.0	83.9	-55.8
<=34	6.0	2.2	20.1	71.7	77.7	-145.3
<=39	6.8	1.4	30.0	61.8	68.6	-265.4
<=44	7.4	0.8	40.3	51.5	58.9	-391.8
<=49	7.9	0.3	52.2	39.6	47.6	-536.1
<=54	8.1	0.1	63.6	28.2	36.3	-676.0
<=59	8.2	0.0	72.0	19.8	28.0	-778.7
<=64	8.2	0.0	79.0	12.8	21.0	-863.4
<=69	8.2	0.0	83.0	8.8	17.0	-913.0
<=74	8.2	0.0	87.0	4.8	13.0	-960.9
<=79	8.2	0.0	89.7	2.1	10.3	-994.0
<=84	8.2	0.0	90.6	1.2	9.4	-1,005.6
<=89	8.2	0.0	91.5	0.3	8.5	-1,015.8
<=94	8.2	0.0	91.8	0.0	8.2	-1,019.5
<=100	8.2	0.0	91.8	0.0	8.2	-1,019.8

**Table 12 (\$2.00/day line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	61.5	3.3	1.6:1
<=9	1.5	48.7	8.8	0.9:1
<=14	3.6	45.8	20.1	0.8:1
<=19	6.7	38.4	31.2	0.6:1
<=24	10.9	34.4	45.6	0.5:1
<=29	17.7	27.7	59.6	0.4:1
<=34	26.1	23.0	73.2	0.3:1
<=39	36.7	18.4	82.5	0.2:1
<=44	47.7	15.5	90.4	0.2:1
<=49	60.1	13.2	96.9	0.2:1
<=54	71.7	11.3	98.9	0.1:1
<=59	80.2	10.2	99.9	0.1:1
<=64	87.2	9.4	100.0	0.1:1
<=69	91.2	9.0	100.0	0.1:1
<=74	95.2	8.6	100.0	0.1:1
<=79	97.9	8.4	100.0	0.1:1
<=84	98.8	8.3	100.0	0.1:1
<=89	99.7	8.2	100.0	0.1:1
<=94	100.0	8.2	100.0	0.1:1
<=100	100.0	8.2	100.0	0.1:1

**Tables for  
the \$2.50/day 2005 PPP Poverty Line**

**Table 4 (\$2.50/day line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	89.0
5-9	69.3
10-14	58.0
15-19	49.2
20-24	36.7
25-29	31.4
30-34	22.4
35-39	15.4
40-44	11.5
45-49	6.6
50-54	4.4
55-59	1.5
60-64	0.5
65-69	0.2
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0



**Table 6 (\$2.50/day line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval (+percentage points)		
		90-percent	95-percent	99-percent
0-4	+15.6	10.9	12.7	17.6
5-9	+20.6	7.6	9.2	11.6
10-14	+1.0	5.3	6.3	8.4
15-19	+6.3	4.4	5.2	6.6
20-24	-2.7	3.5	4.2	5.7
25-29	+3.4	2.7	3.4	4.4
30-34	+2.3	2.2	2.6	3.4
35-39	+3.5	1.7	2.0	2.5
40-44	+4.1	1.1	1.3	1.6
45-49	+0.2	1.0	1.2	1.5
50-54	+2.5	0.5	0.6	0.8
55-59	-0.7	0.9	1.0	1.3
60-64	+0.2	0.2	0.3	0.3
65-69	+0.2	0.0	0.0	0.0
70-74	-0.5	0.5	0.5	0.6
75-79	0.0	0.0	0.0	0.0
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (\$2.50/day line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Confidence interval ( $\pm$ percentage points)			
	Diff.	90-percent	95-percent	99-percent
1	+0.5	57.1	66.9	75.7
4	+1.1	24.8	32.2	47.1
8	+1.1	17.4	22.1	30.8
16	+1.3	12.2	14.6	20.5
32	+1.4	8.0	9.7	13.0
64	+1.5	5.9	7.0	9.5
128	+1.6	4.1	5.0	6.4
256	+1.6	3.1	3.5	4.9
512	+1.6	2.0	2.6	3.5
1,024	+1.6	1.5	1.8	2.5
2,048	+1.6	1.0	1.2	1.7
4,096	+1.6	0.7	0.9	1.2
8,192	+1.6	0.5	0.6	0.9
16,384	+1.6	0.4	0.4	0.6

**Table 11 (\$2.50/day line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.3	13.0	0.1	86.6	86.9	-94.1
<=9	1.0	12.4	0.5	86.1	87.1	-81.7
<=14	2.2	11.2	1.4	85.2	87.4	-56.5
<=19	3.7	9.7	3.0	83.7	87.3	-22.6
<=24	5.4	7.9	5.4	81.2	86.6	+22.0
<=29	7.4	6.0	10.3	76.3	83.7	+22.9
<=34	9.2	4.1	16.9	69.8	79.0	-26.4
<=39	10.6	2.7	26.1	60.6	71.2	-95.1
<=44	11.9	1.5	35.9	50.8	62.6	-168.6
<=49	12.8	0.6	47.3	39.3	52.1	-254.4
<=54	13.1	0.3	58.6	28.0	41.1	-338.9
<=59	13.3	0.1	66.9	19.7	33.0	-401.1
<=64	13.3	0.0	73.8	12.8	26.1	-452.8
<=69	13.3	0.0	77.9	8.7	22.1	-483.3
<=74	13.4	0.0	81.8	4.8	18.2	-512.5
<=79	13.4	0.0	84.5	2.1	15.5	-532.8
<=84	13.4	0.0	85.5	1.2	14.5	-539.9
<=89	13.4	0.0	86.3	0.3	13.7	-546.2
<=94	13.4	0.0	86.6	0.0	13.4	-548.5
<=100	13.4	0.0	86.6	0.0	13.4	-548.6

**Table 12 (\$2.50/day line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	79.1	2.6	3.8:1
<=9	1.5	65.3	7.2	1.9:1
<=14	3.6	61.2	16.5	1.6:1
<=19	6.7	55.1	27.5	1.2:1
<=24	10.9	50.0	40.7	1.0:1
<=29	17.7	41.7	55.1	0.7:1
<=34	26.1	35.3	69.1	0.5:1
<=39	36.7	29.0	79.7	0.4:1
<=44	47.7	24.8	88.8	0.3:1
<=49	60.1	21.2	95.5	0.3:1
<=54	71.7	18.3	98.1	0.2:1
<=59	80.2	16.6	99.5	0.2:1
<=64	87.2	15.3	99.8	0.2:1
<=69	91.2	14.6	99.8	0.2:1
<=74	95.2	14.0	100.0	0.2:1
<=79	97.9	13.6	100.0	0.2:1
<=84	98.8	13.5	100.0	0.2:1
<=89	99.7	13.4	100.0	0.2:1
<=94	100.0	13.4	100.0	0.2:1
<=100	100.0	13.4	100.0	0.2:1

**Tables for  
the \$5.00/day 2005 PPP Poverty Line**

**Table 4 (\$5.00/day line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	99.3
5-9	96.9
10-14	93.2
15-19	90.6
20-24	85.9
25-29	77.2
30-34	69.1
35-39	62.5
40-44	54.7
45-49	42.2
50-54	29.8
55-59	21.3
60-64	14.2
65-69	10.2
70-74	5.4
75-79	3.2
80-84	2.9
85-89	2.8
90-94	0.0
95-100	0.0

**Table 6 (\$5.00/day line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	-0.3	0.7	0.8	1.1
5-9	+0.4	2.0	2.5	3.3
10-14	-1.8	2.1	2.6	3.3
15-19	+1.8	2.9	3.5	4.3
20-24	+0.9	2.7	3.2	4.2
25-29	+0.9	2.7	3.2	4.3
30-34	-4.3	3.2	3.4	3.8
35-39	-6.0	4.1	4.3	4.8
40-44	+4.3	2.8	3.2	4.0
45-49	+6.4	2.2	2.6	3.5
50-54	+0.3	2.3	2.7	3.4
55-59	+1.7	2.2	2.7	3.5
60-64	+3.9	1.6	1.9	2.5
65-69	-8.3	5.9	6.3	6.8
70-74	-0.1	1.6	1.9	2.5
75-79	-3.9	3.4	3.6	4.1
80-84	-3.8	3.9	4.4	5.5
85-89	+2.3	0.6	0.7	0.8
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (\$5.00/day line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Confidence interval ( $\pm$ percentage points)			
	Diff.	90-percent	95-percent	99-percent
1	+3.2	69.7	77.9	92.6
4	0.0	40.8	49.4	60.7
8	+0.4	31.0	36.4	47.7
16	+0.5	21.1	24.7	31.8
32	+0.7	15.1	17.7	24.6
64	+0.6	10.8	12.7	17.6
128	+0.5	7.9	9.2	11.6
256	+0.6	5.6	6.6	8.2
512	+0.5	3.8	4.4	5.8
1,024	+0.6	2.6	3.3	4.2
2,048	+0.6	1.8	2.2	2.8
4,096	+0.6	1.3	1.6	2.0
8,192	+0.6	1.0	1.1	1.5
16,384	+0.5	0.7	0.8	1.0



**Table 11 (\$5.00/day line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.4	44.7	0.0	54.8	55.2	-98.1
<=9	1.4	43.8	0.1	54.8	56.2	-93.6
<=14	3.4	41.7	0.2	54.7	58.1	-84.4
<=19	6.2	39.0	0.5	54.3	60.5	-71.6
<=24	9.7	35.4	1.1	53.7	63.4	-54.4
<=29	14.9	30.3	2.8	52.1	67.0	-27.9
<=34	20.8	24.4	5.3	49.5	70.3	+3.8
<=39	27.4	17.8	9.4	45.5	72.8	+41.8
<=44	33.3	11.9	14.4	40.4	73.7	+68.0
<=49	38.0	7.2	22.1	32.7	70.8	+51.2
<=54	41.4	3.8	30.3	24.5	65.9	+32.9
<=59	43.1	2.0	37.1	17.7	60.9	+17.9
<=64	44.1	1.1	43.1	11.7	55.8	+4.6
<=69	44.7	0.5	46.6	8.2	52.9	-3.1
<=74	45.0	0.2	50.2	4.6	49.5	-11.2
<=79	45.1	0.1	52.8	2.0	47.1	-16.8
<=84	45.2	0.0	53.7	1.1	46.3	-18.8
<=89	45.2	0.0	54.5	0.3	45.5	-20.6
<=94	45.2	0.0	54.8	0.0	45.2	-21.3
<=100	45.2	0.0	54.8	0.0	45.2	-21.3

**Table 12 (\$5.00/day line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	98.8	1.0	84.3:1
<=9	1.5	96.3	3.2	26.1:1
<=14	3.6	95.4	7.6	20.9:1
<=19	6.7	92.4	13.6	12.2:1
<=24	10.9	89.5	21.5	8.6:1
<=29	17.7	84.4	33.0	5.4:1
<=34	26.1	79.7	46.0	3.9:1
<=39	36.7	74.5	60.6	2.9:1
<=44	47.7	69.7	73.7	2.3:1
<=49	60.1	63.3	84.2	1.7:1
<=54	71.7	57.8	91.7	1.4:1
<=59	80.2	53.8	95.5	1.2:1
<=64	87.2	50.5	97.5	1.0:1
<=69	91.2	48.9	98.8	1.0:1
<=74	95.2	47.2	99.5	0.9:1
<=79	97.9	46.1	99.8	0.9:1
<=84	98.8	45.7	100.0	0.8:1
<=89	99.7	45.3	100.0	0.8:1
<=94	100.0	45.2	100.0	0.8:1
<=100	100.0	45.2	100.0	0.8:1

**Tables for  
the \$1.90/day 2011 PPP Poverty Line**

**Table 4 (\$1.90/day line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	52.1
5-9	40.4
10-14	21.4
15-19	18.7
20-24	10.2
25-29	8.0
30-34	5.0
35-39	2.8
40-44	2.2
45-49	0.8
50-54	0.4
55-59	0.0
60-64	0.0
65-69	0.0
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (\$1.90/day line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+16.5	10.6	13.0	18.0
5-9	+25.5	4.5	5.4	6.8
10-14	+0.1	4.4	5.2	6.9
15-19	+4.3	2.8	3.4	4.5
20-24	-1.6	2.3	2.7	3.5
25-29	+3.6	1.0	1.1	1.5
30-34	-0.1	1.1	1.3	1.8
35-39	+0.8	0.6	0.7	0.9
40-44	+0.7	0.4	0.5	0.7
45-49	0.0	0.3	0.4	0.5
50-54	+0.3	0.1	0.1	0.1
55-59	0.0	0.0	0.1	0.1
60-64	0.0	0.0	0.0	0.0
65-69	0.0	0.0	0.0	0.0
70-74	0.0	0.0	0.0	0.0
75-79	0.0	0.0	0.0	0.0
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (\$1.90/day line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	-0.4	9.4	55.6	68.9
4	+0.2	13.5	18.8	28.0
8	+0.4	9.0	11.3	16.9
16	+0.5	5.9	7.5	10.8
32	+0.5	3.9	4.6	6.3
64	+0.7	2.8	3.4	4.5
128	+0.6	1.9	2.4	3.2
256	+0.6	1.4	1.6	2.1
512	+0.6	1.0	1.1	1.5
1,024	+0.7	0.7	0.8	1.1
2,048	+0.7	0.5	0.6	0.7
4,096	+0.6	0.3	0.4	0.5
8,192	+0.7	0.2	0.3	0.4
16,384	+0.7	0.2	0.2	0.3

**Table 11 (\$1.90/day line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.2	3.3	0.3	96.2	96.4	-82.3
<=9	0.4	3.1	1.0	95.4	95.9	-45.6
<=14	0.9	2.6	2.7	93.8	94.6	+23.0
<=19	1.4	2.2	5.3	91.2	92.6	-49.9
<=24	1.9	1.6	9.0	87.5	89.4	-153.6
<=29	2.4	1.2	15.3	81.2	83.5	-333.3
<=34	2.8	0.7	23.3	73.2	76.0	-559.5
<=39	3.1	0.4	33.6	62.8	65.9	-852.4
<=44	3.3	0.2	44.4	52.1	55.4	-1,157.6
<=49	3.5	0.0	56.6	39.9	43.3	-1,503.2
<=54	3.5	0.0	68.2	28.3	31.8	-1,831.6
<=59	3.5	0.0	76.7	19.8	23.3	-2,072.1
<=64	3.5	0.0	83.7	12.8	16.3	-2,269.1
<=69	3.5	0.0	87.7	8.8	12.3	-2,384.1
<=74	3.5	0.0	91.6	4.8	8.4	-2,495.3
<=79	3.5	0.0	94.4	2.1	5.6	-2,572.2
<=84	3.5	0.0	95.3	1.2	4.7	-2,599.2
<=89	3.5	0.0	96.1	0.3	3.9	-2,622.8
<=94	3.5	0.0	96.4	0.0	3.6	-2,631.5
<=100	3.5	0.0	96.5	0.0	3.5	-2,632.1

**Table 12 (\$1.90/day line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	42.2	5.2	0.7:1
<=9	1.5	29.6	12.4	0.4:1
<=14	3.6	24.5	25.0	0.3:1
<=19	6.7	20.6	38.9	0.3:1
<=24	10.9	17.6	54.2	0.2:1
<=29	17.7	13.3	66.7	0.2:1
<=34	26.1	10.8	79.9	0.1:1
<=39	36.7	8.4	87.4	0.1:1
<=44	47.7	7.0	94.3	0.1:1
<=49	60.1	5.8	98.7	0.1:1
<=54	71.7	4.9	99.8	0.1:1
<=59	80.2	4.4	100.0	0.0:1
<=64	87.2	4.1	100.0	0.0:1
<=69	91.2	3.9	100.0	0.0:1
<=74	95.2	3.7	100.0	0.0:1
<=79	97.9	3.6	100.0	0.0:1
<=84	98.8	3.6	100.0	0.0:1
<=89	99.7	3.5	100.0	0.0:1
<=94	100.0	3.5	100.0	0.0:1
<=100	100.0	3.5	100.0	0.0:1



**Tables for  
the \$3.10/day 2011 PPP Poverty Line**

**Table 4 (\$3.10/day line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	88.6
5-9	68.2
10-14	55.0
15-19	47.3
20-24	34.2
25-29	29.1
30-34	20.7
35-39	14.6
40-44	10.8
45-49	5.9
50-54	4.2
55-59	1.3
60-64	0.5
65-69	0.2
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (\$3.10/day line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+22.3	11.3	13.4	17.0
5-9	+21.5	7.6	8.8	11.3
10-14	-0.6	5.3	6.4	8.4
15-19	+7.4	4.3	5.2	6.7
20-24	-2.9	3.6	4.3	5.4
25-29	+3.3	2.8	3.3	4.5
30-34	+4.4	1.9	2.4	3.1
35-39	+3.1	1.6	2.0	2.6
40-44	+3.9	1.1	1.2	1.6
45-49	-0.1	1.0	1.1	1.5
50-54	+2.7	0.5	0.6	0.8
55-59	-0.9	0.9	1.0	1.3
60-64	+0.2	0.2	0.3	0.3
65-69	+0.2	0.0	0.0	0.0
70-74	-0.5	0.5	0.5	0.6
75-79	0.0	0.0	0.0	0.0
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (\$3.10/day line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+0.8	56.8	66.3	77.8
4	+1.2	23.8	30.6	45.9
8	+1.3	16.7	20.8	30.1
16	+1.4	11.5	13.9	20.0
32	+1.5	7.6	9.4	12.8
64	+1.6	5.5	6.8	9.3
128	+1.7	4.0	4.9	6.4
256	+1.6	3.0	3.5	4.5
512	+1.6	2.1	2.4	3.3
1,024	+1.7	1.5	1.7	2.3
2,048	+1.7	1.0	1.2	1.6
4,096	+1.7	0.7	0.9	1.2
8,192	+1.7	0.5	0.6	0.8
16,384	+1.7	0.4	0.5	0.6

**Table 11 (\$3.10/day line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.3	12.0	0.1	87.6	87.9	-93.8
<=9	0.9	11.4	0.6	87.1	88.0	-80.5
<=14	2.1	10.2	1.5	86.2	88.3	-53.6
<=19	3.5	8.8	3.2	84.5	88.0	-17.4
<=24	5.1	7.2	5.7	81.9	87.1	+29.9
<=29	6.9	5.4	10.8	76.9	83.8	+12.7
<=34	8.5	3.8	17.6	70.1	78.6	-42.7
<=39	9.8	2.5	26.9	60.8	70.7	-118.1
<=44	11.0	1.4	36.8	50.9	61.9	-198.5
<=49	11.8	0.5	48.3	39.4	51.2	-292.0
<=54	12.1	0.2	59.6	28.0	40.1	-384.0
<=59	12.3	0.1	68.0	19.7	32.0	-451.7
<=64	12.3	0.0	74.9	12.8	25.1	-507.8
<=69	12.3	0.0	78.9	8.7	21.0	-540.8
<=74	12.3	0.0	82.9	4.8	17.1	-572.5
<=79	12.3	0.0	85.6	2.1	14.4	-594.5
<=84	12.3	0.0	86.5	1.2	13.5	-602.2
<=89	12.3	0.0	87.4	0.3	12.6	-609.0
<=94	12.3	0.0	87.7	0.0	12.3	-611.5
<=100	12.3	0.0	87.7	0.0	12.3	-611.7

**Table 12 (\$3.10/day line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	74.4	2.7	2.9:1
<=9	1.5	62.1	7.5	1.6:1
<=14	3.6	58.8	17.2	1.4:1
<=19	6.7	52.7	28.5	1.1:1
<=24	10.9	47.2	41.7	0.9:1
<=29	17.7	39.1	56.0	0.6:1
<=34	26.1	32.7	69.2	0.5:1
<=39	36.7	26.8	79.9	0.4:1
<=44	47.7	23.0	89.0	0.3:1
<=49	60.1	19.6	95.8	0.2:1
<=54	71.7	16.9	98.1	0.2:1
<=59	80.2	15.3	99.5	0.2:1
<=64	87.2	14.1	99.8	0.2:1
<=69	91.2	13.5	99.8	0.2:1
<=74	95.2	12.9	100.0	0.1:1
<=79	97.9	12.6	100.0	0.1:1
<=84	98.8	12.5	100.0	0.1:1
<=89	99.7	12.4	100.0	0.1:1
<=94	100.0	12.3	100.0	0.1:1
<=100	100.0	12.3	100.0	0.1:1

**Tables for  
the Poverty Line Marking the Poorest Half of People  
below 100% of the National Poverty Line**

**Table 4 (Poorest half below 100% national line):  
 Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	89.5
5-9	73.3
10-14	63.1
15-19	53.4
20-24	43.7
25-29	35.1
30-34	26.2
35-39	17.8
40-44	12.9
45-49	8.2
50-54	4.9
55-59	1.9
60-64	1.2
65-69	0.7
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0



**Table 6 (Poorest half below 100% national line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+9.0	9.8	11.6	15.3
5-9	+12.0	8.0	9.5	12.3
10-14	+2.4	5.2	6.3	8.4
15-19	-4.4	4.5	5.5	7.2
20-24	+1.7	3.8	4.4	6.0
25-29	+4.8	2.8	3.4	4.8
30-34	+4.1	2.2	2.7	3.5
35-39	+1.7	1.9	2.2	3.0
40-44	+4.2	1.2	1.3	1.7
45-49	-1.9	1.7	1.8	2.1
50-54	+2.9	0.5	0.6	0.8
55-59	-1.0	1.0	1.2	1.4
60-64	-0.4	0.8	0.9	1.2
65-69	+0.7	0.0	0.0	0.0
70-74	-0.5	0.5	0.5	0.6
75-79	-3.6	2.8	3.0	3.4
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (Poorest half below 100% national line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+0.9	54.5	67.8	77.5
4	+0.9	28.8	35.2	48.9
8	+1.0	19.2	23.1	31.9
16	+1.0	13.7	16.4	22.2
32	+0.9	9.6	11.2	14.7
64	+1.0	6.6	7.9	10.4
128	+1.0	4.8	5.9	8.1
256	+1.0	3.4	4.2	5.3
512	+0.9	2.5	3.0	4.0
1,024	+1.0	1.7	2.1	2.8
2,048	+1.0	1.2	1.4	2.0
4,096	+1.0	0.9	1.0	1.4
8,192	+1.0	0.6	0.7	0.9
16,384	+1.1	0.4	0.5	0.7

**Table 11 (Poorest half below 100% national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.4	15.0	0.1	84.6	84.9	-94.7
<=9	1.1	14.3	0.4	84.2	85.3	-83.5
<=14	2.4	13.0	1.2	83.4	85.8	-61.0
<=19	4.1	11.3	2.6	82.1	86.2	-30.0
<=24	6.0	9.4	4.9	79.7	85.7	+9.5
<=29	8.1	7.2	9.5	75.1	83.2	+38.0
<=34	10.2	5.2	15.9	68.7	78.9	-3.5
<=39	12.0	3.4	24.8	59.9	71.8	-61.0
<=44	13.4	2.0	34.4	50.3	63.6	-123.5
<=49	14.6	0.8	45.5	39.1	53.7	-196.2
<=54	14.9	0.4	56.8	27.8	42.8	-269.4
<=59	15.2	0.2	65.0	19.6	34.8	-323.0
<=64	15.3	0.1	71.9	12.7	28.0	-367.7
<=69	15.3	0.1	75.9	8.7	24.0	-394.1
<=74	15.3	0.1	79.8	4.8	20.1	-419.5
<=79	15.4	0.0	82.5	2.1	17.5	-436.8
<=84	15.4	0.0	83.5	1.2	16.5	-443.0
<=89	15.4	0.0	84.3	0.3	15.7	-448.5
<=94	15.4	0.0	84.6	0.0	15.4	-450.4
<=100	15.4	0.0	84.6	0.0	15.4	-450.6

**Table 12 (Poorest half below 100% national line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	83.8	2.4	5.2:1
<=9	1.5	72.2	7.0	2.6:1
<=14	3.6	66.5	15.6	2.0:1
<=19	6.7	61.4	26.7	1.6:1
<=24	10.9	54.9	38.8	1.2:1
<=29	17.7	46.0	52.8	0.9:1
<=34	26.1	39.0	66.3	0.6:1
<=39	36.7	32.6	77.8	0.5:1
<=44	47.7	28.0	87.0	0.4:1
<=49	60.1	24.2	94.8	0.3:1
<=54	71.7	20.8	97.3	0.3:1
<=59	80.2	18.9	98.9	0.2:1
<=64	87.2	17.5	99.5	0.2:1
<=69	91.2	16.8	99.5	0.2:1
<=74	95.2	16.1	99.6	0.2:1
<=79	97.9	15.7	100.0	0.2:1
<=84	98.8	15.5	100.0	0.2:1
<=89	99.7	15.4	100.0	0.2:1
<=94	100.0	15.4	100.0	0.2:1
<=100	100.0	15.4	100.0	0.2:1

**Tables for  
the First-Quintile (20<sup>th</sup>-percentile) Poverty Line**

**Table 4 (First-quintile (20<sup>th</sup>-percentile) line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	92.8
5-9	75.7
10-14	64.9
15-19	55.2
20-24	45.7
25-29	37.0
30-34	28.8
35-39	20.1
40-44	14.5
45-49	9.0
50-54	5.2
55-59	3.3
60-64	1.5
65-69	0.8
70-74	0.0
75-79	0.0
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (First-quintile (20<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+9.2	9.9	11.3	15.6
5-9	+12.8	7.9	9.4	12.0
10-14	+2.5	5.2	6.3	8.2
15-19	-3.7	4.4	5.5	7.2
20-24	+3.0	3.9	4.4	6.1
25-29	+3.1	2.9	3.7	4.6
30-34	+4.8	2.3	2.8	3.5
35-39	+2.0	1.9	2.4	3.0
40-44	+5.2	1.2	1.4	1.8
45-49	-1.4	1.5	1.7	2.1
50-54	+2.9	0.5	0.6	0.8
55-59	+0.2	1.0	1.1	1.4
60-64	-0.1	0.8	0.9	1.2
65-69	+0.8	0.0	0.0	0.0
70-74	-0.5	0.5	0.5	0.6
75-79	-3.6	2.8	3.0	3.4
80-84	0.0	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (First-quintile (20<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+1.2	58.5	68.0	77.9
4	+1.2	29.2	35.6	50.2
8	+1.4	19.8	23.5	32.3
16	+1.4	14.0	16.6	23.3
32	+1.4	9.8	11.5	15.2
64	+1.4	7.0	7.9	10.3
128	+1.3	5.0	6.0	7.9
256	+1.3	3.5	4.1	5.5
512	+1.3	2.5	3.0	4.0
1,024	+1.3	1.8	2.2	2.8
2,048	+1.4	1.2	1.5	2.0
4,096	+1.4	0.9	1.0	1.4
8,192	+1.4	0.6	0.7	0.9
16,384	+1.4	0.4	0.5	0.6



**Table 11 (First-quintile (20<sup>th</sup>-percentile) line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	Inclusion: Poor correctly targeted	Undercoverage: Poor mistakenly not targeted	Leakage: Non-poor mistakenly targeted	Exclusion: Non-poor correctly not targeted	Hit rate Inclusion + Exclusion	BPAC See text
<=4	0.4	16.2	0.0	83.4	83.8	-95.0
<=9	1.1	15.5	0.4	83.1	84.2	-84.2
<=14	2.5	14.1	1.1	82.3	84.8	-63.2
<=19	4.3	12.3	2.4	81.0	85.3	-34.0
<=24	6.2	10.4	4.7	78.7	84.9	+2.9
<=29	8.6	8.0	9.0	74.4	83.0	+45.5
<=34	10.9	5.7	15.2	68.2	79.1	+8.2
<=39	12.9	3.7	23.9	59.6	72.4	-43.8
<=44	14.4	2.2	33.3	50.1	64.5	-100.8
<=49	15.7	0.9	44.4	39.0	54.7	-167.7
<=54	16.1	0.5	55.6	27.8	44.0	-235.2
<=59	16.4	0.2	63.8	19.6	36.0	-284.8
<=64	16.5	0.1	70.7	12.7	29.2	-326.2
<=69	16.5	0.1	74.7	8.7	25.2	-350.6
<=74	16.5	0.1	78.6	4.8	21.3	-374.2
<=79	16.6	0.0	81.3	2.1	18.7	-390.2
<=84	16.6	0.0	82.2	1.2	17.7	-395.9
<=89	16.6	0.0	83.1	0.3	16.9	-401.0
<=94	16.6	0.0	83.4	0.0	16.6	-402.8
<=100	16.6	0.0	83.4	0.0	16.6	-403.0

**Table 12 (First-quintile (20<sup>th</sup>-percentile) line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	89.2	2.4	8.2:1
<=9	1.5	76.3	6.8	3.2:1
<=14	3.6	69.6	15.1	2.3:1
<=19	6.7	64.1	25.8	1.8:1
<=24	10.9	57.0	37.4	1.3:1
<=29	17.7	48.8	52.0	1.0:1
<=34	26.1	41.7	65.6	0.7:1
<=39	36.7	35.0	77.6	0.5:1
<=44	47.7	30.2	87.0	0.4:1
<=49	60.1	26.1	94.7	0.4:1
<=54	71.7	22.5	97.3	0.3:1
<=59	80.2	20.5	98.9	0.3:1
<=64	87.2	18.9	99.5	0.2:1
<=69	91.2	18.1	99.5	0.2:1
<=74	95.2	17.4	99.7	0.2:1
<=79	97.9	16.9	100.0	0.2:1
<=84	98.8	16.8	100.0	0.2:1
<=89	99.7	16.6	100.0	0.2:1
<=94	100.0	16.6	100.0	0.2:1
<=100	100.0	16.6	100.0	0.2:1

**Tables for  
the Second-Quintile (40<sup>th</sup>-percentile) Poverty Line**

**Table 4 (Second-quintile (40<sup>th</sup>-percentile) line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	98.6
5-9	92.2
10-14	86.7
15-19	82.6
20-24	76.0
25-29	66.0
30-34	55.2
35-39	47.5
40-44	40.2
45-49	28.2
50-54	17.4
55-59	11.7
60-64	7.7
65-69	3.7
70-74	2.9
75-79	2.4
80-84	0.0
85-89	0.0
90-94	0.0
95-100	0.0

**Table 6 (Second-quintile (40<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	-1.0	0.7	0.8	1.1
5-9	+13.8	7.4	8.7	10.7
10-14	-2.1	3.1	3.8	5.2
15-19	-1.1	3.2	4.0	5.0
20-24	+8.0	3.8	4.6	5.8
25-29	+1.2	3.1	3.6	4.7
30-34	-3.0	2.8	3.3	4.3
35-39	-0.3	2.6	3.1	3.9
40-44	+6.3	2.4	2.8	3.9
45-49	+4.7	1.9	2.2	2.7
50-54	-0.4	1.9	2.2	3.0
55-59	-1.2	1.9	2.2	3.1
60-64	+2.3	1.3	1.5	2.0
65-69	-7.9	5.5	5.7	6.4
70-74	+1.9	0.5	0.6	0.8
75-79	-1.5	2.0	2.3	3.1
80-84	0.0	0.0	0.0	0.0
85-89	-0.5	0.6	0.7	0.8
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (Second-quintile (40<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+2.6	68.9	76.8	90.5
4	+0.1	39.1	48.0	59.9
8	+0.8	28.3	33.2	43.0
16	+1.0	20.0	22.7	30.8
32	+1.0	13.7	16.7	23.8
64	+1.1	9.9	11.9	16.2
128	+1.1	7.2	8.5	10.6
256	+1.1	5.0	5.8	7.7
512	+1.1	3.6	4.2	5.6
1,024	+1.1	2.4	2.9	3.8
2,048	+1.1	1.7	2.0	2.6
4,096	+1.1	1.3	1.5	2.0
8,192	+1.1	0.9	1.0	1.4
16,384	+1.1	0.6	0.8	1.0

**Table 11 (Second-quintile (40<sup>th</sup>-percentile) line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	Inclusion: Poor correctly targeted	Undercoverage: Poor mistakenly not targeted	Leakage: Non-poor mistakenly targeted	Exclusion: Non-poor correctly not targeted	Hit rate Inclusion + Exclusion	BPAC See text
<=4	0.4	34.1	0.0	65.4	65.9	-97.5
<=9	1.3	33.2	0.1	65.3	66.7	-91.8
<=14	3.2	31.3	0.4	65.1	68.3	-80.2
<=19	5.8	28.8	0.9	64.6	70.3	-64.0
<=24	8.8	25.7	2.0	63.4	72.2	-43.0
<=29	13.3	21.3	4.4	61.1	74.3	-10.5
<=34	18.0	16.5	8.1	57.4	75.4	+27.7
<=39	22.9	11.6	13.8	51.7	74.6	+60.1
<=44	27.3	7.3	20.5	45.0	72.2	+40.7
<=49	30.5	4.0	29.6	35.9	66.4	+14.3
<=54	32.5	2.0	39.2	26.2	58.8	-13.5
<=59	33.6	1.0	46.7	18.8	52.4	-35.1
<=64	34.0	0.5	53.2	12.3	46.3	-53.9
<=69	34.4	0.2	56.9	8.6	42.9	-64.7
<=74	34.5	0.1	60.7	4.7	39.2	-75.8
<=79	34.5	0.0	63.4	2.1	36.6	-83.4
<=84	34.5	0.0	64.3	1.1	35.7	-86.2
<=89	34.5	0.0	65.1	0.3	34.9	-88.5
<=94	34.5	0.0	65.4	0.0	34.6	-89.4
<=100	34.5	0.0	65.5	0.0	34.5	-89.5

**Table 12 (Second-quintile (40<sup>th</sup>-percentile) line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	98.8	1.3	84.3:1
<=9	1.5	90.5	3.9	9.5:1
<=14	3.6	89.5	9.3	8.5:1
<=19	6.7	86.6	16.7	6.4:1
<=24	10.9	81.1	25.5	4.3:1
<=29	17.7	75.1	38.4	3.0:1
<=34	26.1	69.0	52.2	2.2:1
<=39	36.7	62.5	66.4	1.7:1
<=44	47.7	57.1	78.9	1.3:1
<=49	60.1	50.8	88.3	1.0:1
<=54	71.7	45.3	94.1	0.8:1
<=59	80.2	41.8	97.2	0.7:1
<=64	87.2	39.0	98.5	0.6:1
<=69	91.2	37.7	99.5	0.6:1
<=74	95.2	36.2	99.7	0.6:1
<=79	97.9	35.3	100.0	0.5:1
<=84	98.8	34.9	100.0	0.5:1
<=89	99.7	34.7	100.0	0.5:1
<=94	100.0	34.6	100.0	0.5:1
<=100	100.0	34.5	100.0	0.5:1



**Tables for  
the Median (50<sup>th</sup>-percentile) Poverty Line**

**Table 4 (Median (50<sup>th</sup>-percentile) line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	99.3
5-9	95.8
10-14	92.2
15-19	89.4
20-24	84.4
25-29	75.5
30-34	67.5
35-39	60.2
40-44	52.7
45-49	39.7
50-54	28.4
55-59	20.1
60-64	12.9
65-69	9.0
70-74	5.4
75-79	3.2
80-84	2.3
85-89	0.7
90-94	0.0
95-100	0.0

**Table 6 (Median (50<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	-0.3	0.7	0.8	1.1
5-9	-0.7	2.0	2.5	3.3
10-14	-2.6	2.3	2.5	3.3
15-19	+2.5	3.1	3.7	4.9
20-24	+3.3	3.0	3.7	4.8
25-29	-0.1	2.7	3.2	4.1
30-34	-4.5	3.4	3.5	3.9
35-39	-6.7	4.5	4.7	5.1
40-44	+4.1	2.8	3.3	4.0
45-49	+4.8	2.2	2.6	3.5
50-54	+0.4	2.3	2.7	3.4
55-59	+2.9	2.1	2.5	3.1
60-64	+2.8	1.6	1.9	2.5
65-69	-9.0	6.3	6.6	7.1
70-74	+1.0	1.4	1.6	2.3
75-79	-3.9	3.4	3.6	4.1
80-84	-4.4	4.2	4.7	5.5
85-89	+0.2	0.6	0.7	0.8
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (Median (50<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+3.1	69.6	77.7	91.1
4	-0.5	40.9	49.3	59.7
8	0.0	31.1	36.5	47.2
16	+0.2	21.0	24.8	32.9
32	+0.4	15.0	17.3	24.9
64	+0.3	10.5	12.8	17.1
128	+0.3	7.6	9.0	11.7
256	+0.3	5.5	6.7	8.3
512	+0.3	3.7	4.5	5.8
1,024	+0.3	2.7	3.2	4.1
2,048	+0.3	1.8	2.1	2.8
4,096	+0.3	1.3	1.5	2.0
8,192	+0.3	0.9	1.1	1.5
16,384	+0.3	0.7	0.8	1.0

**Table 11 (Median (50<sup>th</sup>-percentile) line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	Inclusion: Poor correctly targeted	Undercoverage: Poor mistakenly not targeted	Leakage: Non-poor mistakenly targeted	Exclusion: Non-poor correctly not targeted	Hit rate Inclusion + Exclusion	BPAC See text
<=4	0.4	43.2	0.0	56.3	56.8	-98.0
<=9	1.4	42.2	0.1	56.3	57.7	-93.3
<=14	3.4	40.2	0.2	56.2	59.6	-83.9
<=19	6.1	37.5	0.6	55.8	61.9	-70.7
<=24	9.6	34.1	1.3	55.1	64.6	-53.2
<=29	14.7	29.0	3.0	53.4	68.0	-25.9
<=34	20.4	23.3	5.7	50.6	71.1	+6.5
<=39	26.8	16.9	9.9	46.4	73.2	+45.4
<=44	32.4	11.2	15.3	41.0	73.5	+65.0
<=49	37.0	6.7	23.1	33.2	70.2	+47.0
<=54	40.2	3.5	31.5	24.8	65.0	+27.8
<=59	41.7	1.9	38.5	17.8	59.6	+11.8
<=64	42.6	1.0	44.6	11.8	54.4	-2.0
<=69	43.2	0.5	48.1	8.3	51.5	-10.1
<=74	43.4	0.2	51.7	4.6	48.0	-18.5
<=79	43.6	0.1	54.3	2.0	45.6	-24.4
<=84	43.6	0.0	55.2	1.1	44.8	-26.4
<=89	43.7	0.0	56.0	0.3	44.0	-28.3
<=94	43.7	0.0	56.3	0.0	43.7	-29.0
<=100	43.7	0.0	56.3	0.0	43.7	-29.0

**Table 12 (Median (50<sup>th</sup>-percentile) line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	98.8	1.0	84.3:1
<=9	1.5	96.3	3.3	26.1:1
<=14	3.6	95.2	7.9	19.9:1
<=19	6.7	91.7	14.0	11.1:1
<=24	10.9	88.1	21.9	7.4:1
<=29	17.7	83.1	33.6	4.9:1
<=34	26.1	78.2	46.7	3.6:1
<=39	36.7	72.9	61.3	2.7:1
<=44	47.7	67.9	74.3	2.1:1
<=49	60.1	61.5	84.7	1.6:1
<=54	71.7	56.0	92.1	1.3:1
<=59	80.2	52.0	95.6	1.1:1
<=64	87.2	48.9	97.6	1.0:1
<=69	91.2	47.3	98.9	0.9:1
<=74	95.2	45.6	99.5	0.8:1
<=79	97.9	44.5	99.8	0.8:1
<=84	98.8	44.2	100.0	0.8:1
<=89	99.7	43.8	100.0	0.8:1
<=94	100.0	43.7	100.0	0.8:1
<=100	100.0	43.7	100.0	0.8:1

**Tables for  
the Third-Quintile (60<sup>th</sup>-percentile) Poverty Line**

**Table 4 (Third-quintile (60<sup>th</sup>-percentile) line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	99.5
5-9	97.2
10-14	95.7
15-19	93.9
20-24	90.2
25-29	84.6
30-34	79.0
35-39	72.0
40-44	64.4
45-49	52.0
50-54	40.4
55-59	30.4
60-64	23.9
65-69	17.2
70-74	9.7
75-79	8.3
80-84	4.6
85-89	4.1
90-94	0.0
95-100	0.0



**Table 6 (Third-quintile (60<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	-0.1	0.7	0.8	1.1
5-9	+0.1	1.9	2.2	2.9
10-14	+0.4	2.1	2.5	3.2
15-19	0.0	2.0	2.4	2.8
20-24	-0.6	2.1	2.5	3.2
25-29	+1.2	2.3	2.8	3.7
30-34	-1.3	2.1	2.4	3.1
35-39	-3.2	2.6	2.8	3.1
40-44	+5.7	2.8	3.4	4.4
45-49	+6.2	2.5	2.9	3.7
50-54	-0.3	2.5	2.9	3.9
55-59	-3.8	3.1	3.5	4.0
60-64	+7.0	2.2	2.6	3.3
65-69	-10.6	7.3	7.6	8.3
70-74	+2.3	1.8	2.1	2.7
75-79	-4.6	4.0	4.3	5.2
80-84	-2.8	3.7	4.6	5.7
85-89	+3.6	0.6	0.7	0.8
90-94	0.0	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (Third-quintile (60<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+2.7	69.3	80.3	92.1
4	+0.1	42.0	49.9	61.2
8	+0.4	32.8	37.9	46.3
16	+0.9	22.7	26.5	35.0
32	+1.0	16.3	19.3	25.4
64	+0.9	12.1	14.1	18.3
128	+0.8	8.1	9.6	12.7
256	+0.8	5.9	7.0	9.1
512	+0.8	3.9	4.8	6.1
1,024	+0.9	2.9	3.4	4.7
2,048	+0.8	2.0	2.4	3.3
4,096	+0.8	1.5	1.7	2.3
8,192	+0.8	1.1	1.3	1.6
16,384	+0.8	0.7	0.9	1.1

**Table 11 (Third-quintile (60<sup>th</sup>-percentile) line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.4	52.9	0.0	46.7	47.1	-98.4
<=9	1.4	51.9	0.0	46.7	48.1	-94.5
<=14	3.5	49.8	0.1	46.6	50.0	-86.7
<=19	6.3	47.0	0.3	46.4	52.7	-75.6
<=24	10.1	43.2	0.8	45.9	56.1	-60.6
<=29	15.8	37.5	1.9	44.8	60.6	-37.2
<=34	22.4	30.9	3.7	43.0	65.3	-9.0
<=39	29.9	23.4	6.8	39.9	69.8	+25.0
<=44	36.8	16.5	10.9	35.8	72.6	+58.6
<=49	42.8	10.5	17.2	29.5	72.3	+67.6
<=54	47.4	5.9	24.3	22.4	69.7	+54.3
<=59	50.1	3.2	30.1	16.6	66.7	+43.5
<=64	51.6	1.7	35.6	11.1	62.7	+33.2
<=69	52.4	0.8	38.8	7.9	60.4	+27.2
<=74	52.9	0.4	42.3	4.4	57.3	+20.6
<=79	53.2	0.1	44.7	2.0	55.2	+16.2
<=84	53.3	0.0	45.6	1.1	54.4	+14.5
<=89	53.3	0.0	46.4	0.3	53.6	+13.0
<=94	53.3	0.0	46.7	0.0	53.3	+12.4
<=100	53.3	0.0	46.7	0.0	53.3	+12.4

**Table 12 (Third-quintile (60<sup>th</sup>-percentile) line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>% all HHs who are targeted</b>	<b>% targeted HHs who are poor</b>	<b>% poor HHs who are targeted</b>	<b>Poor HHs targeted per non-poor HH targeted</b>
<=4	0.4	98.8	0.8	84.3:1
<=9	1.5	96.9	2.7	31.6:1
<=14	3.6	96.1	6.5	24.8:1
<=19	6.7	94.8	11.9	18.2:1
<=24	10.9	93.1	19.0	13.4:1
<=29	17.7	89.4	29.6	8.4:1
<=34	26.1	85.7	42.0	6.0:1
<=39	36.7	81.4	56.1	4.4:1
<=44	47.7	77.1	69.0	3.4:1
<=49	60.1	71.3	80.4	2.5:1
<=54	71.7	66.1	88.9	1.9:1
<=59	80.2	62.5	94.0	1.7:1
<=64	87.2	59.2	96.8	1.4:1
<=69	91.2	57.5	98.4	1.4:1
<=74	95.2	55.6	99.2	1.3:1
<=79	97.9	54.4	99.8	1.2:1
<=84	98.8	53.9	100.0	1.2:1
<=89	99.7	53.5	100.0	1.1:1
<=94	100.0	53.3	100.0	1.1:1
<=100	100.0	53.3	100.0	1.1:1

**Tables for  
the Fourth-Quintile (80<sup>th</sup>-percentile) Poverty Line**

**Table 4 (Fourth-quintile (80<sup>th</sup>-percentile) line): Estimated poverty likelihoods associated with scores**

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0-4	100.0
5-9	100.0
10-14	99.8
15-19	99.4
20-24	98.1
25-29	96.3
30-34	93.6
35-39	90.9
40-44	86.1
45-49	79.2
50-54	69.8
55-59	58.0
60-64	53.9
65-69	46.1
70-74	30.2
75-79	23.6
80-84	16.3
85-89	15.9
90-94	11.5
95-100	0.0

**Table 6 (Fourth-quintile (80<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty likelihoods) for households by score range, with confidence intervals, from 1,000 bootstraps of  $n = 16,384$ , 2014 scorecard applied to the 2014 validation sample**

Score	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
0-4	+0.4	0.7	0.8	1.1
5-9	0.0	0.0	0.0	0.0
10-14	+0.6	0.8	0.9	1.1
15-19	+1.2	1.3	1.4	2.0
20-24	+0.4	1.3	1.5	2.0
25-29	-0.5	0.8	1.0	1.3
30-34	+0.1	1.4	1.6	2.2
35-39	-4.1	2.4	2.5	2.7
40-44	+1.4	2.0	2.4	3.3
45-49	+1.7	2.0	2.4	3.2
50-54	+4.8	2.5	2.8	4.1
55-59	-3.3	3.1	3.4	4.4
60-64	+16.8	3.1	3.6	4.8
65-69	-1.3	3.9	4.8	6.5
70-74	-1.3	3.6	4.4	5.5
75-79	-11.1	7.8	8.2	8.9
80-84	+3.9	4.8	5.5	7.3
85-89	+13.2	1.6	2.0	2.5
90-94	+11.5	0.0	0.0	0.0
95-100	0.0	0.0	0.0	0.0

**Table 7 (Fourth-quintile (80<sup>th</sup>-percentile) line): Average errors (differences between estimated and observed poverty rates) at a point in time by sample size, with confidence intervals, for 1,000 bootstraps of various sample sizes, 2014 scorecard applied to the 2014 validation sample**

Sample Size <i>n</i>	Difference between estimate and observed value			
	Diff.	Confidence interval ( $\pm$ percentage points)		
		90-percent	95-percent	99-percent
1	+1.4	62.6	70.0	86.3
4	+0.8	39.3	47.8	62.0
8	+1.0	29.8	35.4	46.5
16	+1.4	21.4	24.8	32.6
32	+1.2	15.1	18.2	22.6
64	+1.1	11.4	13.1	17.0
128	+1.3	8.1	9.7	12.7
256	+1.3	5.8	6.8	9.1
512	+1.5	4.0	4.7	6.4
1,024	+1.5	2.8	3.2	4.4
2,048	+1.5	2.0	2.5	3.2
4,096	+1.5	1.4	1.7	2.2
8,192	+1.5	1.0	1.2	1.5
16,384	+1.5	0.7	0.8	1.1



**Table 11 (Fourth-quintile (80<sup>th</sup>-percentile) line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, 2014 scorecard applied to the 2014 validation sample**

<b>Targeting cut-off</b>	<b>Inclusion: Poor correctly targeted</b>	<b>Undercoverage: Poor mistakenly not targeted</b>	<b>Leakage: Non-poor mistakenly targeted</b>	<b>Exclusion: Non-poor correctly not targeted</b>	<b>Hit rate Inclusion + Exclusion</b>	<b>BPAC See text</b>
<=4	0.4	74.1	0.0	25.4	25.9	-98.8
<=9	1.5	73.1	0.0	25.4	26.9	-96.0
<=14	3.6	71.0	0.0	25.4	29.0	-90.4
<=19	6.6	68.0	0.1	25.4	31.9	-82.2
<=24	10.7	63.9	0.2	25.3	36.0	-71.1
<=29	17.2	57.4	0.4	25.0	42.2	-53.2
<=34	25.1	49.5	1.0	24.4	49.6	-31.3
<=39	34.9	39.7	1.8	23.6	58.5	-3.9
<=44	44.3	30.2	3.4	22.0	66.4	+23.5
<=49	53.9	20.7	6.2	19.2	73.2	+52.9
<=54	61.7	12.9	10.0	15.4	77.1	+78.9
<=59	66.9	7.7	13.3	12.1	79.0	+82.1
<=64	70.3	4.3	16.9	8.5	78.8	+77.4
<=69	72.0	2.5	19.2	6.2	78.3	+74.3
<=74	73.5	1.1	21.7	3.7	77.2	+70.9
<=79	74.4	0.2	23.5	1.9	76.3	+68.5
<=84	74.5	0.1	24.3	1.1	75.6	+67.4
<=89	74.6	0.0	25.1	0.3	74.9	+66.3
<=94	74.6	0.0	25.4	0.0	74.6	+65.9
<=100	74.6	0.0	25.4	0.0	74.6	+65.9

**Table 12 (Fourth-quintile (80<sup>th</sup>-percentile) line): Share of all households who are targeted (that is, score at or below a cut-off), the share of targeted households who are poor (that is, have income below the poverty line), the share of poor households who are targeted, and the number of poor households who are successfully targeted (inclusion) per non-poor household mistakenly targeted (leakage), 2014 scorecard applied to the 2014 validation sample**

Targeting cut-off	% all HHs who are targeted	% targeted HHs who are poor	% poor HHs who are targeted	Poor HHs targeted per non-poor HH targeted
<=4	0.4	98.8	0.6	84.3:1
<=9	1.5	99.7	2.0	286.9:1
<=14	3.6	99.3	4.8	146.3:1
<=19	6.7	98.9	8.8	89.3:1
<=24	10.9	98.6	14.4	69.0:1
<=29	17.7	97.5	23.1	39.3:1
<=34	26.1	96.2	33.7	25.5:1
<=39	36.7	95.1	46.8	19.4:1
<=44	47.7	92.9	59.5	13.1:1
<=49	60.1	89.7	72.3	8.7:1
<=54	71.7	86.0	82.7	6.1:1
<=59	80.2	83.4	89.7	5.0:1
<=64	87.2	80.6	94.3	4.2:1
<=69	91.2	79.0	96.6	3.8:1
<=74	95.2	77.2	98.5	3.4:1
<=79	97.9	76.0	99.7	3.2:1
<=84	98.8	75.4	99.9	3.1:1
<=89	99.7	74.8	100.0	3.0:1
<=94	100.0	74.6	100.0	2.9:1
<=100	100.0	74.6	100.0	2.9:1