Simple Poverty Scorecard® Poverty-Assessment Tool Burundi

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Abstract

The Simple Poverty Scorecard®-brand poverty-assessment tool for Burundi uses 10 low-cost indicators from the 2013/14 Living Conditions Survey to estimate the likelihood that a household has consumption below a given poverty line. Field workers can collect responses in about ten minutes. Accuracy is reported for a range of poverty lines. The scorecard is a practical way for pro-poor programs in Burundi to estimate poverty rates, to track changes in poverty rates over time, and to segment clients for differentiated treatment.

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Simple Poverty Scorecard® Poverty-Assessment Tool

			Name	Identifier
Interview ID:				
Interview date:		Participant:		
Country:	BDI	Field agent:		
Scorecard:	001	Service point:		
Sampling wgt.:		Number of household members:		

Indicator	Response	Points	Score
1. How many household members are 18-years-old or younger?	A. Six or more	0	
	B. Four, or five	3	
	C. Three	6	
	D. Two	9	
	E. One	13	
	F. Zero	19	
2. Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?	A. No	0	
	B. Yes	3	
	C. No members ages 7 to 16	6	
3. Among the household members 10-years-old or older who worked at least 1 hour in the past 7 days, how many had their main occupation (or their usual occupation) in the sector of agriculture, animal husbandry, or fishing?	A. Three or more	0	
	B. Two	5	
	C. One, or none	9	
4. If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?	A. Did not work	0	
	B. Worked in agriculture etc.	4	
	C. No male head/spouse	7	
	D. Worked in non-agriculture	11	
5. Can the (eldest) female head/spouse read and write a simple text in Kirundi, French, Swahili, or some other language?	A. No female head/spouse	0	
	B. No	1	
	C. Only Kirundi	2	
	D. French, but not Swahili or some other language (regardless of Kirundi)	4	
	E. Swahili or some other language (regardless of Kirundi and French)	7	
6. What toilet arrangement does the household use?	A. Open ditch, public latrine, a neighbor's toilet, or other	0	
	B. Unimproved latrine	4	
	C. Flush toilet (piped or hand-pour) or improved ventilated latrine	12	
7. What is the household's main cooking fuel?	A. Collected firewood, or dung	0	
	B. Purchased firewood, or other	1	
	C. Charcoal, LPG, electricity, kerosene, or does not cook	11	
8. What is the household's main source of lighting?	A. Burning wood, or other	0	
	B. Homemade kerosene lamp without glass (*bobèche*), or LPG	5	
	C. Kerosene lamp with glass, solar panel, or candles	9	
	D. Electricity, or generator	15	
9. Does your household currently have a cell phone?	A. No	0	
	B. Yes	7	
10. Does your household currently have a radio?	A. No	0	
	B. Yes	3	

Score:

Back-page Worksheet: Household Members, Ages, School Attendance, Work Status, and Work in Agriculture

Fill out the scorecard header first. Include the interview's unique identifier (if known), the interview date, and the sampling weight of the participant (if known). Then record the full name and the unique identification number of the participant (who may differ from the respondent), of the participant's field agent (who may differ from you the enumerator), and of the service point that the participant uses.

Then read to the respondent: *Please tell me the first names (or nicknames) and ages of all the members of your household, starting with the head and his/her (eldest) spouse/partner. A* household *is a group of people or a single person—regardless of blood or marital relationship—who usually share meals, submit to the authority of one member of the household (known as the* head*), and who share income and expenses. The group of people usually live under the same roof.*

Write down the name/nickname and age of each member, marking the head, his/her sex, and the head's (eldest) spouse/conjugal partner (if he/she exists). You need to know a member's precise age only if it may be close to 7, 10, or 16. Record the number of household members in the scorecard header next to "Number of household members:", and then circle the answer to the first scorecard indicator.

For each member ages 7 to 16, ask whether he/she currently (in the current school year) goes to school or to an educational institution, and mark the response. Then circle the answer to the second indicator. Mark "C. No members ages 7 to 16" if no members are ages 7 to 16. Mark "B. Yes" if there are members ages 7 to 16 and if they all go to school. Mark "A. No" if there are members ages 7 to 16 but at least one does not go to school.

For each member who is at least 10-years-old, ask whether he/she worked for at least 1 hour in the past 7 days, and rccord the response. For each member who worked, then ask whether he/she had his/her main occupation (or his/her usual occupation) in the sector of agriculture, animal husbandry, or fishing, and record the response. Then circle the answers to the third and fourth scorecard indicators.

Always keep in mind and apply the detailed instructions in the "Interview Guidelines".

First name (or nickname)	Is [NAME] the head or the (eldest) spouse/conjugal partner of the head?	How old is [NAME]?	If [NAME] is 7- to 16-years-old, does he/she currently (in the current school year) go to school?	If [NAME] is at least 10-years-old, then did he/she work at least 1 hour in the past 7 days?	If [NAME] worked, then was his/her main occupation (or his/her usual occupation) in the sector of agriculture, animal husbandry, or fishing?
1.	Male head Female head		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
2.	(Eldest) spouse/partner Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
3.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
4.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
5.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
6.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
7.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
8.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
9.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
10.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
11.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
12.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
13.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
Number of household members:		—	—	—	Number who work in agriculture:

Look-up table to convert scores to poverty likelihoods: 2013-definition national poverty lines

	Poverty likelihood (%)			
		National (2013 def.)		
Score	**Food**	**100%**	**150%**	**200%**
0–16	71.8	92.3	98.5	98.9
17–20	70.9	91.2	97.9	98.6
21–23	55.0	86.1	94.9	98.1
24–25	49.2	84.7	94.8	98.1
26–27	47.8	82.5	92.9	97.9
28–29	46.8	81.0	92.9	97.8
30–31	31.8	78.1	92.9	97.8
32–33	31.8	72.3	91.9	97.8
34–35	31.0	70.5	87.9	96.0
36–37	25.8	66.3	85.0	94.0
38–39	18.9	52.5	81.8	94.0
40–41	15.6	49.1	76.1	90.7
42–43	13.4	38.4	68.6	83.5
44–45	11.1	35.2	65.3	82.1
46–47	9.4	32.9	63.7	82.1
48–51	6.1	29.6	63.7	80.8
52–56	3.7	19.9	47.0	69.8
57–67	3.3	11.8	28.2	45.3
68–100	0.9	5.2	12.4	24.9

Look-up table to convert scores to poverty likelihoods: 2013-definition international 2005 and 2011 PPP lines

	Poverty likelihood (%)					
	Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
Score	**$1.25**	**$2.00**	**$2.50**	**$5.00**	**$1.90**	**$3.10**
0–16	96.4	98.9	99.5	100.0	95.1	98.9
17–20	94.0	98.6	99.4	100.0	93.6	98.6
21–23	91.5	97.7	99.0	99.9	89.8	97.0
24–25	89.7	97.7	99.0	99.9	87.4	97.0
26–27	87.6	97.6	99.0	99.9	85.9	96.9
28–29	87.3	97.5	99.0	99.9	84.8	96.9
30–31	86.6	97.5	98.9	99.9	84.5	96.9
32–33	84.5	97.5	98.7	99.9	79.0	96.9
34–35	80.1	94.9	98.7	99.9	76.2	94.3
36–37	75.1	92.1	96.2	99.9	70.9	91.6
38–39	67.7	92.1	96.1	99.8	62.6	91.6
40–41	62.3	89.2	94.7	99.2	58.6	87.5
42–43	55.7	80.7	89.4	99.1	46.5	78.7
44–45	48.9	79.6	86.9	98.9	41.7	76.7
46–47	45.6	77.9	86.4	98.7	38.3	75.9
48–51	44.4	77.2	85.7	98.7	36.2	75.0
52–56	31.6	64.9	78.5	98.7	25.4	62.1
57–67	15.9	40.9	56.1	91.3	13.4	37.9
68–100	7.3	19.1	31.2	72.5	5.9	17.6

Look-up table to convert scores to poverty likelihoods: 2013-definition relative and percentile-based poverty lines

	Poverty likelihood (%)					
	Poorest 1/2	Percentile-based lines (2013 def.)				
Score	< 100% Natl.	20th	40th	50th	60th	80th
0–16	68.9	51.8	77.2	82.5	88.9	97.9
17–20	68.2	51.8	77.0	81.5	88.5	96.8
21–23	53.0	31.9	61.4	70.9	80.6	93.9
24–25	49.6	29.0	58.7	68.6	80.6	93.7
26–27	44.5	27.5	55.8	66.3	77.3	92.4
28–29	43.2	24.7	53.1	64.2	74.6	92.2
30–31	28.9	17.5	38.8	53.0	68.8	91.2
32–33	28.9	17.5	38.8	53.0	67.1	89.6
34–35	28.9	15.8	38.8	53.0	67.1	86.4
36–37	25.4	13.8	34.2	47.8	59.3	82.5
38–39	19.2	8.4	24.9	34.9	45.8	78.7
40–41	17.6	8.4	22.9	34.9	45.8	71.2
42–43	13.7	8.0	17.3	24.5	32.2	63.8
44–45	10.3	4.5	13.9	21.0	29.7	60.6
46–47	8.8	2.4	12.4	18.5	26.7	58.3
48–51	5.6	2.0	8.6	12.6	20.3	58.3
52–56	3.1	1.2	5.0	9.9	13.6	42.7
57–67	2.4	1.1	2.8	5.8	7.6	23.3
68–100	0.6	0.3	0.6	1.6	2.6	9.8

Simple Poverty Scorecard® Poverty-Assessment Tool Burundi

1. Introduction

The Simple Poverty Scorecard poverty-assessment tool is a low-cost, transparent way for pro-poor programs in Burundi to estimate the likelihood that a household has consumption below a given poverty line, to estimate a population's poverty rate at a point in time, to track the annual rate of change in a population's poverty rate, and to segment participants for differentiated treatment.

The direct approach to poverty assessment via consumption surveys is difficult and costly. A case in point is Burundi's 2013/14 Living Standards Survey (*Ênquête sur les Conditions de Vie des Ménages du Burundi*, ECVMB) that was done by the *Institut de Statistiques et d'Études Économiques du Burundi* (ISTEEBU). Enumerators in the ECVMB visited each interviewed household four times, spending a total of about 1.3 days with each household. They asked about 1,100 questions, many of which had additional follow-up questions, and/or were asked for each household member. Members of the interviewed household who had money to spend were instructed to keep a spending diary for about 12 days.

In comparison, the indirect approach of the scorecard poverty-assessment tool is quick and low-cost. It uses 10 verifiable indicators drawn from the 2013/14 ECVMB (such as "What is the household's main cooking fuel?" and "Does your household

currently have a radio?") to get a score that is correlated with poverty status as measured by the exhaustive ECVMB survey.

The scorecard differs from "proxy-means tests" (Coady, Grosh, and Hoddinott, 2004) in that it is transparent, it is freely available,[1] and it is tailored to the capabilities and purposes not of national governments but rather of local pro-poor organizations. The feasible poverty-assessment options for such organizations 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 estimates from these approaches may be costly, their accuracy is unknown, and they are not comparable across places, organizations, nor time.

The scorecard can be used to estimate the share of a program's participants who are below a given poverty line (for example, Burundi's 2013-definition national line). USAID microenterprise partners in Burundi can use the scorecard with the $1.90/day 2011 PPP line to report how many of their participants are "very poor".[2] The scorecard can also be used to estimate the annual rate of change in a poverty rate. For all these applications, the scorecard is a consumption-based, objective tool. While consumption surveys are costly even for governments, some pro-poor organizations may be able to

[1] The Simple Poverty Scorecard poverty-assessment tool for Burundi is not, however, in the public domain. Copyright is held by Microfinance Risk Management, L.L.C.
[2] USAID defines a household as *very poor* if its daily per-capita consumption is less than the highest of the $1.90/day 2011 PPP line (BIF1,216, Table 1) or the line that marks the poorest half of people below 100% of the 2013-definition national line (BIF656).

implement a low-cost poverty-assessment tool to help with monitoring poverty and (if desired) segmenting clients for differentiated treatment.

The statistical approach here aims to be understood by non-specialists. After all, if program 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 pro-poor organizations. This is not because these tools do not work, but because they are often presented (when they are presented at all) 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", straightforward, transparent approaches are usually about as accurate as complex, opaque 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 straightforward 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 2013/14 ECVMB from Burundi's ISTEEBU. Indicators are selected to be:

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

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-adult-equivalent or per-capita consumption 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.

Third, the scorecard can estimate the annual rate of change in a poverty rate. With two independent samples from the same population, this 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 the annual rate of change in a poverty rate 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. 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 a poverty line of BIF1,321 per adult equivalent per day that is applied to data from the 2013/14 ECVMB. Scores from this one scorecard are calibrated with this same data to poverty likelihoods for 16 poverty lines.

The scorecard is constructed using data from about three-fifths of the households in the 2013/14 ECVMB. Data from that same three-fifths of households is also used to calibrate scores to poverty likelihoods for the 16 poverty lines. Data from the other two-fifths 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.

Given their assumptions, all three scorecard-based estimators (the poverty likelihood of a household, the poverty rate of a population at a point in time, and the annual rate of change in a population's poverty rate) are *unbiased*. That is, their average matches the true value 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 to some unknown extent 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 after 2013/14 (because the relationships between indicators and poverty change over time).[3]

Thus, while the indirect-scorecard 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 correct, ignoring sampling variation.) There are errors because the scorecard 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.

The error in the scorecard's estimated poverty rate at a point in time (that is, the average of differences between estimated and observed values across 1,000 bootstrap samples of $n = 16{,}384$ from the validation sample) for 100% of the 2013-definition national poverty line is –0.4 percentage points. The average across all 16 poverty lines of the absolute values of the average error is about 0.5 percentage points, and the maximum of the absolute values of the average error is 1.1 percentage points. These estimation errors are due to sampling variation, not bias; the average difference would be zero if the whole 2013/14 ECVMB were to be repeatedly re-fielded and re-divided

[3] Important cases include nationally representative samples at a later point in time and sub-national populations that are not nationally representative (Schreiner, forthcoming; Diamond *et al.*, 2016; Tarozzi and Deaton, 2009).

into sub-samples before repeating the entire process of constructing and validating the resulting scorecards.

With $n = 16{,}384$, the 90-percent confidence intervals are ± 0.6 percentage points or smaller. For $n = 1{,}024$, the 90-percent intervals are ± 2.5 percentage points or smaller.

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 the annual rate of change in a population's poverty rate. Section 8 covers targeting. The last section is a summary.

The "Interview Guidelines" (found after the References) tells how to ask questions—and how to interpret responses—so as to mimic practice in Burundi's 2013/14 ECVMB as closely as possible. These "Guidelines" (and the "Back-page Worksheet") are integral parts of the Simple Poverty Scorecard tool for Burundi.

2. Data and poverty lines

This section presents the data used to construct and validate the scorecard. It also documents Burundi's 2013 definition of *poverty*, as well as 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 three-fifths of the 6,681 households for whom there is consumption data in the 2013/14 ECVMB, Burundi's most-recent national household consumption survey.

The data from the three-fifths of observations from the 2013/14 ECVMB 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 two-fifths of households from the 2013/14 ECVMB 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. It is also used to test out-of-sample targeting accuracy.

Field work for the ECVMB ran from 1 December 2013 to 31 March 2014. Consumption is in units of BIF per adult equivalent or per person per day in prices in Bujumbura-Mairie on average during the period of field work.

2.2 Poverty rates at the household, person, and participant level

A *poverty rate* is the share of units in households in which total household consumption (divided by the number of household members or by the number of adult equivalents 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-adult-equivalent or per-capita consumption 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[4] average of poverty statuses (or estimated poverty likelihoods) across households with participants. This is $\frac{1 \cdot 1 + 1 \cdot 0}{1 + 1} = \frac{1}{2} = 0.5 = 50$ percent. In the "$1 \cdot 1$" term in the numerator, the first "1" is the first household's weight, and the second "1" represents the first household's poverty status (poor) or its estimated poverty likelihood. In the "$1 \cdot 0$" term in the numerator, the "1" is the second household's weight, and the "0" represents the second household's

[4] The examples here assume simple random sampling at the household level. This means that each household has the same weight, taken here to be one (1).

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[5] average of poverty statuses (or estimated poverty likelihoods) for households with participants, or $\frac{3 \cdot 1 + 4 \cdot 0}{3 + 4} = \frac{3}{7} = 0.43 = 43$ percent. In the "$3 \cdot 1$" 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 "$4 \cdot 0$" 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.

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

[5] Given simple random sampling at the household level, a household's person-level weight is the number of people in that household.

the participant-weighted average[6] 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 "$1 \cdot 1$" 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 "$2 \cdot 0$" 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—assuming simple random sampling at the household level—the weights are the number of relevant units in the household. When reporting, organizations should make explicit the unit of analysis—whether households, household members, or participants—and explain why that unit is relevant.

Table 1 reports poverty lines and poverty rates for households and people in the 2013/14 ECVMB for Burundi as a whole, for the construction/calibration sample, and for the validation sample. For all of Burundi and for each of its 17 provinces, Table 2 reports poverty lines and poverty rates for households and people by urban/rural/all.

[6] Given simple random sampling at the household level, a household's participant-level weight is the number of participants in that household.

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 these are the rates reported by the government of Burundi.[7] Furthermore, popular discussions and policy discourse usually proceed in terms of person-level rates, and the goal of pro-poor programs is to help people (not households) to improve their well-being.

2.3 Definitions of *poverty*, and poverty lines

A household's *poverty status* as poor or non-poor depends on whether its per-capita or per-adult-equivalent consumption is below a given poverty line. Thus, a definition of *poverty* is a poverty line together with a measure of consumption.

[7] In fact, ISTEEBU (2015) reports adult-equivalent-level poverty rates, so its figures differ slightly from this paper's person-level rates. It does not make sense to give more weight to the poverty of an adult male than to the poverty of a child or adult female just because the average male needs more food. In principle, each person's well-being should count the same, regardless of age, sex, body weight, or activity level.

Because pro-poor programs in Burundi may want to use different or various poverty lines, this paper calibrates scores from its single 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^{th}-percentile) line
- Second-quintile (40^{th}-percentile) line
- Median (50^{th}-percentile) line
- Third-quintile (60^{th}-percentile) line
- Fourth-quintile (80^{th}-percentile) line

2.3.1 2013-definition national poverty line

ISTEEBU (2015, pp. 34–36) presents the 2013 definition of *consumption*. Burundi's 2013-definition national poverty line (usually called here "100% of the 2013-definition national line") is derived using Ravallion's (1998) cost-of-basic-needs approach.

The first step is defining the minimum standard for food consumption as the cost of 2,100 Calories from a basket of 46 food items that represent 82 percent of total food expenditure and whose relative shares are based on the average expenditure for each item in the 2013/14 ECVMB (ISTEEBU, 2015, p. 36). This cost is then adjusted for differences in food prices—taken from the ECVMB—across Burundi's 17 provinces.

Each province's food poverty line is in units of BIF per adult equivalent per day in prices in Bujumbura-Mairie on average during the ECVMB field work. On average for Burundi as a whole, the food line is BIF911 per adult equivalent per day, giving a household-level poverty rate of 28.9 percent and a person-level poverty rate of 34.1 percent (Table 1).

The 100% of the 2013-definition national (food-plus-non-food) line is defined as the food line, plus a minimum standard of non-food consumption. This is taken as the non-food consumption in the 2013/14 ECVMB of households whose *total* consumption (not *food* consumption) is at the food line.[8] Just as for the food line, the cost of this minimum standard of non-food consumption is adjusted for province-level differences in prices. On average for Burundi as a whole, 100% of the national (food-plus-non-food) 2013-definition poverty line is BIF1,452 per adult equivalent per day, giving a household-level poverty rate of 58.3 percent and a person-level poverty rate of 64.9 percent (Table 1).[9]

150% and 200% of the 2013-definition national line are multiples of 100% of the 2013-definition national line.

[8] This is found via regression (ISTEEBU, 2015, p. 37).

[9] This person-level rate of 64.9 percent differs from the 64.4 percent in ISTEEBU (2015, p. 8). ISTEEBU reports an adult-equivalent rate even though the person-level rate makes more sense. Also, the average national line here of BIF1,452 does not match ISTEEBU's (p. 8) value of BIF636,510 ÷ 365 = BIF1,743, which is the line for Bujumbura-Mairie. The average line for Burundi overall is lower because prices are lower outside of the capital.

2.3.2 2013-definition 2005 and 2011 PPP poverty lines

International 2005 and 2011 PPP lines are derived from:

- PPP exchange rates for Burundi for "individual consumption expenditure by households":
  - 2005:[10] BIF447.036 per $1.00
  - 2011:[11] BIF487.327 per $1.00
- Consumer Price Index (CPI):[12]
  - Calendar-year 2005 average: 117.10
  - Calendar-year 2011 average: 208.26
  - Average Dec. 2013 to March 2014 (ECVMB field work): 273.53
- All-Burundi and provincial person-weighted price deflators:[13]
  - All-Burundi: 0.8324
  - Bujumbura-Mairie 1.0000
  - Bujumbura-Rural 0.7921
  - Bubanza 0.8187
  - Bururi 0.9121
  - Cankuzo 0.8155
  - Cibitoke 0.8667
  - Gitega 0.8602
  - Karusi 0.7527
  - Kayanza 0.8167
  - Kirundo 0.8150
  - Makamba 0.8356
  - Muramvya 0.8253
  - Muyinga 0.8408
  - Mwaro 0.8149
  - Ngozi 0.7691
  - Rutana 0.7890
  - Ruyigi 0.7862

[10] World Bank, 2008.

[11] `iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=BDI_3&PPP0=487.327&PL0=1.90&Y0=2013&NumOfCountries=1`, retrieved 24 October 2017.

[12] The monthly CPI series from ISTEEBU is re-based to December 2003 = 100.

[13] ISTEEBU provides the deflators with the data for the 2013/14 ECVMB.

2.3.2.1 $1.25/day 2005 PPP line

For a given province in Burundi, the 2013-definition $1.25/day 2005 PPP line in prices in Bujumbura-Mairie on average during the 2013/14 ECVMB field work is

$$\frac{\$1.25 \cdot 2005 \text{ PPP factor} \cdot \left(\frac{\text{CPI}_{\text{ECVMB 13/14}}}{\text{CPI}_{2005}}\right) \cdot \text{Provincial deflator}}{\text{Average all - Burundi deflator}}.$$

For the example of the province of Bujumbura-Rural, the 2013-definition $1.25/day 2005 PPP line is

$$\frac{\$1.25 \cdot \left(\frac{\text{BIF447.036}}{\$1}\right) \cdot \left(\frac{273.53}{117.10}\right) \cdot 0.7921}{0.8324} = \text{BIF1,242}.$$

The all-Burundi 2013-definition $1.25/day 2005 PPP line is the person-weighted average of the 17 provincial lines. This is BIF1,305 per person per day, with a household-level poverty rate of 67.5 percent and a person-level poverty rate of 73.7 percent (Table 1).[14]

The 2013-definition lines for $2.00/day, $2.50/day, and $5.00/day are multiples of the $1.25/day line.

[14] The World Bank's PovcalNet does not report a $1.25/day 2005 PPP line nor a $1.25/day 2005 PPP poverty rate for Burundi based on the 2013/14 ECVMB.

2.3.2.2 $1.90/day 2011 PPP line

Given the parameters presented in the previous sub-section, the 2013-definition $1.90/day 2011 PPP line for a given province is

$$\frac{\$1.90 \cdot 2011 \text{ PPP factor} \cdot \left(\frac{\text{CPI}_{\text{ECVMB 13/14}}}{\text{CPI}_{2011}}\right) \cdot \text{Provincial deflator}}{\text{Average all - Burundi deflator}}$$

For the example of the province of Bujumbura-Rural, the 2013-definition $1.90/day 2011 PPP line is

$$\frac{\$1.90 \cdot \left(\frac{\text{BIF}487.327}{\$1}\right) \cdot \left(\frac{273.53}{208.26}\right) \cdot 0.7921}{0.8324} = \text{BIF}1{,}157.$$

The all-Burundi 2013-definition $1.90/day 2011 PPP line is the person-weighted average of the 17 provincial lines. This is BIF1,216 per person per day, with a household-level poverty rate of 63.7 percent and a person-level poverty rate of 70.3 percent (Table 1).

For comparison, the World Bank's PovcalNet[15] reports a slightly lower $1.90/day 2011 PPP line for the 2013/14 ECVMB (BIF1,205 versus 1,216) and a higher person-level poverty rate (73.7 percent versus 70.3). The reasons for the differences are not clear because PovcalNet does not report:

- The time/place of its price units
- Whether/how it adjusts for regional differences in prices
- How it deflates 2011 PPP factors over time
- Whether it uses the same data as ISTEEBU (2015)[16]

Because this paper documents its derivation of the $1.90/day 2011 PPP line, Schreiner (2014b) argues that its figures are to be preferred over those of PovcalNet.

The 2013-definition line for $3.10/day 2011 PPP is a multiple of the $1.90/day line.

[15] `iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=BDI_3&PPP0=487.327&PL0=1.90&Y0=2013&NumOfCountries=1`, retrieved 24 October 2017.
[16] World Bank (2016) uses the same national line with a modified measure of consumption.

2.3.3 USAID "very poor" line

Microenterprise programs in Burundi who use the scorecard to report the number of their participants who are "very poor" to USAID should use the 2013-definition $1.90/day 2011 PPP line. This is because USAID defines the "very poor" as those people in households whose daily per-capita consumption is below the highest of the following two poverty lines (U.S. Congress, 2004):

- The line that marks the poorest half of people below 100% of the 2013-definition national line (BIF656, with a person-level poverty rate of 32.5 percent, Table 1)
- The 2013-definition $1.90/day 2011 PPP line (BIF1,216, with a person-level poverty rate of 70.3 percent)

2.3.4 Percentile-based lines

The scorecard also supports percentile-based poverty lines for Burundi. This facilitates a number of types of analyses. For example, the second-quintile (40^{th}-percentile) line might be used to help track Burundi's progress toward 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, can also be used to look at the relationship of consumption with health outcomes (or anything else related with the distribution of consumption). The scorecard thus offers an alternative for health-equity analyses that typically have used a "wealth index" such as that supplied with the data from the Demographic and Health Surveys (Rutstein and Johnson, 2004) to compare some estimate of wealth with health outcomes.

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

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

Unlike the scorecard, 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 poverty standard whose definition is external to the tool itself (consumption 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. 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 provide comparable estimates under a single definition of *poverty*.

3. Scorecard construction

For Burundi, about 70 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 whether the female head/spouse can read and write)
- Housing (such as the household's toilet arrangement)
- Ownership of durable assets (such as cell phones or radios)
- Employment (such as the whether the male head/spouse works in agriculture)

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.[17]

One possible application of the scorecard is to estimate the annual rate of change in poverty through time. Thus, when selecting indicators—and holding other considerations constant—preference is given to more sensitive indicators. For example, the possession of a cell phone or radio is probably more likely to change in response to changes in poverty than is the age of the male head/spouse.

The scorecard itself is built using an all-Burundi average poverty line of BIF1,321 per adult equivalent per day and Logit regression on the construction sub-sample. Indicator selection is based on 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).

[17] The uncertainty coefficient is *not* used when selecting scorecard indicators. It is just a way to order the candidate indicators listed in Table 3.

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 consumption, variety among types of 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 consumption, 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[18] 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 straightforward, common-sense, and acceptable to users.

The single scorecard here applies to all of Burundi. Segmenting poverty-assessment tools by urban/rural does not improve targeting accuracy much. This is documented for nine countries in Sub-Saharan Africa (Brown, Ravaillon, and van de Walle, 2016)[19], 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).

[18] The statistical criterion for selecting an indicator is not the p values of its coefficients but rather the indicator's contribution to the ranking of households by poverty status.
[19] The nine countries are Burkina Faso, Ethiopia, Ghana, Malawi, Mali, Niger, Nigeria, Tanzania, and Uganda. On average across these countries when targeting people in the lowest quintile or in the lowest two quintiles of scores and when 20 or 40 percent of people are poor, segmenting by urban/rural increased the number of poor people correctly targeted by about one per 200 or one per 400 poor people (Schreiner, 2017d).

4. Practical guidelines for scorecard use

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 scorecard projects fail, the reason is not usually statistical inaccuracy but rather the failure of an organization to decide to do what is needed to integrate the scorecard 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 cost, 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, the scorecard does not imply a lot of additional work and if the whole process generally seems to them to make sense.

To this end, Burundi's scorecard fits on one page. The construction process, indicators, and points are straightforward and transparent. 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 Burundi scorecard would:

- Record the interview identifier, interview date, country code ("BDI"), scorecard code ("001") and the sampling weight assigned to the household of the participant by the organization's survey design (if known)
- Record the names and identifiers of the participant (who is not necessarily the same as the respondent), of the field agent (who is not necessarily the same as the enumerator) who is the organization's main point of contact with the participant, and of the organizational service point that is relevant for the participant
- Complete the "Back-page Worksheet" with each household member's first name (or nickname), age, school attendance, general work status, and work status in agriculture. Also note who is the male head/spouse (if he exists) and who is the female head/spouse (if she exists)
- Based on what has been recorded on the "Back-page Worksheet", record household size (that is, the number of household members) in the scorecard header next to "Number of household members:"
- Based on what has 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 been recorded on the "Back-page Worksheet", mark the response to the second scorecard indicator ("Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?")
- Based on what has been recorded on the "Back-page Worksheet", mark the response to the third scorecard indicator ("Among the household members 10-years-old or older who worked at least 1 hour in the past 7 days, how many had their main occupation (or their usual occupation) in the sector of agriculture, animal husbandry, or fishing?")

- Based on what has been recorded on the "Back-page Worksheet", mark the response to the fourth scorecard indicator ("If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?")
- Read the rest of the scorecard indicators to the respondent one-by-one.
- Circle the household's responses and their points, and write each point value in the far right-hand column
- Add up the points to get a total score
- Implement targeting policy (if any) based on the score
- 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 organizations 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).[20] IRIS Center (2007a) and Toohig (2008) are useful nuts-and-bolts guides for budgeting, training field workers and supervisors, logistics, sampling, interviewing, piloting, recording data, and controlling quality. Schreiner (2014a) explains how to compute estimates and analyze them.

In particular, while collecting scorecard indicators is relatively easier than alternative ways of assessing poverty, it is still absolutely difficult. Training and explicit

[20] 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.

definitions of the terms and concepts in the scorecard are essential, and field workers should scrupulously study and follow the "Interview Guidelines" found after the References in this paper, as these "Guidelines"—along with the "Back-page Worksheet"—are integral parts of the Simple Poverty Scorecard tool.[21]

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 incontrovertible as whether a household owns an automobile. At the same time, Grosh and Baker (1995) suggest that gross underreporting 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 is done in Mexico in the second stage of its targeting process, most false self-reports can be corrected (or avoided in the first place) by field workers who make a home visit. This is the recommended procedure for organizations who use the scorecard for targeting in Burundi.

[21] 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 Burundi's ISTEEBU did in the 2013/14 ECVMB.

In terms of implementation and sampling design, an organization must make choices about:

- Who will do the interviews
- Where interviews will be done
- 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 the scorecard 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 organization'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 use of the scorecard will inform an issue that matters to the organization.

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

- Employees of the organization
- Third parties

There is only one correct, on-label way to do interviews: they should be done in-person, at the sampled household's residence, with an enumerator trained to follow the "Interview Guidelines". This is how Burundi's ISTEEBU did interviews in the 2013/14 ECVMB, and this provides the most-accurate and most-consistent data (and thus the best poverty-rate estimates).

Of course, it is possible to do interviews in other ways such as:

- Without an enumerator (for example, respondents fill out paper or web forms on their own or answer questions sent via e-mail, text messaging, or automated interactive voice-response systems)
- Away from the residence (for example, at an organizational service point or at a group-meeting place)
- Not in-person (for example, an enumerator interviewing by phone)

While such off-label methods may reduce costs, they also affect responses (Schreiner, 2015a) and thus reduce the accuracy of scorecard estimates. This is why interviewing by a trained enumerator at the residence is recommended and why off-label methods are not recommended.

In some contexts—such as when field agents do not already visit participants periodically at home anyway—an organization might judge that the lower costs an off-label approach are enough to compensate for less-accurate estimates. The business wisdom of off-label methods depends on context-specific factors that organizations must judge for themselves. To judge carefully, organizations who are considering off-label methods should do a test to check how responses differ with an off-label method versus with a trained enumerator at the residence.

Responses, scores, and poverty likelihoods can be recorded by enumerators 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[22]

[22] The author of this paper can support pro-poor organizations that want to set up a system to collect data with portable electronic devices in the field or to capture data in a database at the office once paper forms come in from the field. Support is also available for automating the calculation of estimates and for generating basic reports.

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 a chance to meaningfully inform questions that matter to the organization, 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 estimating change)
- Every three years (or at any other fixed or variable time interval, allowing estimating change)
- Each time a field worker visits a participant at home (allowing estimating change)

When a scorecard is applied more than once in order to estimate the annual rate of change 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 Simple Poverty Scorecard tool for Bangladesh (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. The loan officers record responses on paper in the field before sending the forms 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 Burundi, 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 easy-to-use look-up tables. For the example of 100% of the 2013-definition national line, scores of 38–39 have a poverty likelihood of 52.5 percent, and scores of 40–41 have a poverty likelihood of 49.1 percent (Table 4).

The poverty likelihood associated with a score varies by poverty line. For example, scores of 38–39 are associated with a poverty likelihood of 52.5 percent for 100% of the 2013-definition national line but of 62.6 percent for the 2013-definition $1.90/day 2011 PPP line.[23]

[23] From Table 4 on, many tables have 16 versions, one for each of the 16 supported 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 2013-def. 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-adult-equivalent or per-capita consumption below a given poverty line.

For the example of 100% of the 2013-definition national line (Table 5), there are 10,319 (normalized) households in the calibration sub-sample with a score of 38–39. Of these, 5,417 (normalized) are below the poverty line. The estimated poverty likelihood associated with a score of 38–39 is then 52.5 percent, because 5,417 ÷ 10,319 = 52.5 percent.

To illustrate with 100% of the 2013-definition national line and a score of 40–41, there are 6,886 (normalized) households in the calibration sub-sample, of whom 3,382 (normalized) are below the line (Table 5). The poverty likelihood for this score range is then 3,382 ÷ 6,886 = 49.1 percent.

The same method is used to calibrate scores with estimated poverty likelihoods for all 16 poverty lines.[24]

[24] To ensure that poverty likelihoods never increase as scores increase, likelihoods across pairs of adjacent scores may be 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 monetary poverty lines and from survey data on consumption. 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 Burundi scorecard are transformed coefficients from a Logit regression, (untransformed) scores are not converted to poverty likelihoods via the Logit formula of 2.718281828^{score} x $(1 + 2.718281828^{score})^{-1}$. This is because the Logit formula is esoteric 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 population's true value. Given the assumptions above, the scorecard also produces unbiased estimates of poverty rates at a point in time and unbiased estimates of the annual rate of change in poverty rates between two points in time.[25]

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 Burundi's population. Thus, scorecard estimates will generally have errors when applied after March 2014 (the last month of field work for the 2013/14 ECVBM) or when applied with sub-groups that are not nationally representative.

[25] 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 Burundi as a whole? To find out, the scorecard is applied to 1,000 bootstrap samples of size $n = 16{,}384$ with the validation sample. Bootstrapping means to:

- Score each household in the validation sample
- Draw a bootstrap sample *with replacement* from the 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 consumption 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 errors, that is, the average of differences between estimated versus observed poverty likelihoods. It also shows confidence intervals for the differences.

For 100% of the 2013-definition national line and on average across bootstrap samples in the validation sample, the estimated poverty likelihood for scores of 38–39 (52.5 percent, Table 4) is too low by 3.9 percentage points. For scores of 40–41, the estimate is too low by 2.7 percentage points.[26]

[26] 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

The 90-percent confidence interval for the differences for scores of 38–39 is ±3.5 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 –7.4 and –0.4 percentage points (because –3.9 – 3.5 = –7.4, and –3.9 + 3.5 = –0.4). In 950 of 1,000 bootstraps (95 percent), the difference is –3.9 ± 3.7 percentage points, and in 990 of 1,000 bootstraps (99 percent), the difference is –3.9 ± 4.7 percentage points.

A few of the absolute errors between estimated and observed poverty likelihoods in Table 6 for 100% of the 2013-definition national line are large. There are differences because the validation sample is a single sample that—thanks to sampling variation—differs in distribution from the construction/calibration sub-samples and from Burundi'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 just below the targeting cut-off. This mitigates the effects of error and sampling variation on targeting (Friedman, 1997). Section 8 below looks at targeting accuracy in detail.

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samples were repeatedly drawn from the population and split into sub-samples before repeating the entire process of scorecard construction/calibration and validation.

In addition, if estimates of populations' 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 2013/14 in Burundi, although it will hold less well for samples from sub-national populations and 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 ECVMB field work in March 2014. That is, the scorecard may fit the construction/calibration data from 2013/14 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 2013/14 ECVMB construction/calibration data but not in the overall population of Burundi. 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 consumption 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 the sampled households.

To illustrate, suppose a program samples three households on 1 January 2019 and that they have scores of 20, 30, and 40, corresponding to poverty likelihoods of 91.2, 78.1, and 49.1 percent (100% of the 2013-definition national line, Table 4). The population's estimated poverty rate is the households' average poverty likelihood of $(91.2 + 78.1 + 49.1) \div 3 = 72.8$ percent.[27]

Be careful; the population's estimated 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 78.1 percent. This differs from the 72.8 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 segmentation. There are a few contexts in which the analysis of scores is appropriate, but, in general, the

[27] This example assumes simple random sampling (or a census) and analysis at the level of households so that each household's household-level weight is one (1). The weights would differ by household if there were stratified sampling or if the analysis were at the level of the participant or the person.

safest rule to follow is: If you are not completely sure what to do, then use poverty likelihoods, not scores.

Scores from the scorecard are calibrated with data from the 2013/14 ECVMB 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 scorecard applied to 1,000 bootstraps of n = 16,384 from the validation sample and 100% of 2013-definition national line, the average error (difference between the estimate and observed value in the 2013/14 ECVMB) for a poverty rate at a point in time is –0.4 percentage points (Table 8, summarizing Table 7 across all poverty lines). Across all 16 poverty lines in the validation sample, the maximum of the absolute values of the average error is 1.1 percentage points, and the average of the absolute values of the average error is about 0.5 percentage points. At least part of these differences is due to sampling variation in the division of the 2013/14 ECVMB 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 scorecard and 100% of the 2013-definition national line in the validation sample, the error is –0.4 percentage points, so the corrected estimate in the three-household example above is 72.8 – (–0.4) = 73.2 percent.

In terms of precision, the 90-percent confidence interval for a population's estimated poverty rate at a point in time with $n = 16{,}384$ is ±0.6 percentage points or smaller 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 0.6 percentage points of the observed value.

For example, suppose that the (uncorrected) average poverty likelihood in a sample of $n = 16{,}384$ with the scorecard and 100% of the 2013-definition national line is 72.8 percent. Then estimates in 90 percent of such samples would be expected to fall in the range of 72.8 – (–0.4) – 0.6 = 72.6 percent to 72.8 – (–0.4) + 0.6 = 73.8 percent, with the most likely observed value being the corrected estimate in the middle of this range, that is, 72.8 – (–0.4) = 73.2 percent. This is because the original (uncorrected) estimate is 72.8 percent, the average error is –0.4 percentage points, and the 90-percent confidence interval for 100% of the 2013-definition national line in the validation sample with this sample size is ±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" samples) a Normal distribution and can be characterized by their error (average difference vis-à-vis observed values), together with their standard error (precision).

Schreiner (2008) proposes an approach to deriving a formula for the standard errors of estimated poverty rates at a point in time from indirect estimation via a poverty-assessment tool. 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.*, ± 0.02 for ± 2 percentage points),

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

σ 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,

ϕ 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, Burundi's 2013/14 ECVMB gives a direct-measure household-level poverty rate for 100% of the 2013-definition national line in the validation sample of $\hat{p}$ = 58.1 percent (Table 1).[28] If this measure came from a sample of n = 16,384 households from a population N of 2,022,016 (the number of households in Burundi in 2013/14 according to the ECVMB sampling weights), then the finite population correction ϕ is $\sqrt{\frac{2{,}022{,}016 - 16{,}384}{2{,}022{,}016 - 1}} = 0.9959$, which is close to $\phi = 1$. If the desired confidence level is 90-percent ($z = 1.64$), then the confidence interval $\pm c$ is

$$\pm z \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}} = \pm 1.64 \cdot \sqrt{\frac{0.581 \cdot (1 - 0.581)}{16{,}384}} \cdot \sqrt{\frac{2{,}022{,}016 - 16{,}384}{2{,}022{,}016 - 1}} = \pm 0.630$$

percentage points. (If ϕ were taken as 1, then the interval would be ±0.632 percentage points.)

Unlike the 2013/14 ECVMB, however, the scorecard does not measure poverty directly, so this formula is not applicable. To derive a formula for the 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 validation sample. For example, with n = 16,384 and 100% of the 2013-definition national line in the validation sample, the 90-percent confidence interval is ±0.597 percentage points.[29]

[28] The analysis here ignores that poverty-rate estimates from the ECVMB are themselves based on a sample and so have their own sampling distribution.
[29] Due to rounding, Table 7 displays 0.6, not 0.597.

Thus, the 90-percent confidence interval with $n = 16{,}384$ is ± 0.597 percentage points for the scorecard and ± 0.630 percentage points for direct measurement. The ratio of the two intervals is $0.597 \div 0.630 = 0.95$.

Now consider the same exercise, but with $n = 8{,}192$. The confidence interval under direct measurement and 100% of the 2013-definition national line in the validation sample is $\pm 1.64 \cdot \sqrt{\frac{0.581 \cdot (1 - 0.581)}{8{,}192}} \cdot \sqrt{\frac{2{,}022{,}016 - 8{,}192}{2{,}022{,}016 - 1}} = \pm 0.892$ percentage points. The empirical confidence interval with the scorecard (Table 7) is ± 0.832 percentage points. Thus for $n = 8{,}192$, the ratio of the two intervals is $0.832 \div 0.892 = 0.93$.

This ratio of 0.93 for $n = 8{,}192$ is close to the ratio of 0.95 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 validation sample turns out to be 0.94, implying that confidence intervals for indirect estimates of poverty rates via Burundi's scorecard and 100% of the 2013-definition national line are—for a given sample size—about 6-percent narrower than confidence intervals for direct estimates via the 2013/14 ECVMB. This 0.94 appears in Table 8 as the "α factor for precision" because if $\alpha = 0.94$, then the formula for approximate confidence intervals c for the scorecard is $\pm c = \pm z \cdot \alpha \cdot \sigma$. That is, the formula for the approximate standard error σ for point-in-time estimates of poverty rates via the scorecard is $\alpha \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}}$.

In general, α can be more or less than 1.00. When α is less than 1.00, it means that the scorecard is more precise than direct measurement. It turns out that α is less than 1.00 for 12 of the 16 poverty lines in Table 8, and its hightest value is 1.06.

The formula relating confidence intervals with standard errors for the scorecard can be rearranged to give a formula for determining sample size before estimation. If $\widetilde{p}$ is the expected poverty rate before estimation, 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 $n = N \cdot \left(\frac{z^2 \cdot \alpha^2 \cdot \widetilde{p} \cdot (1 - \widetilde{p})}{z^2 \cdot \alpha^2 \cdot \widetilde{p} \cdot (1 - \widetilde{p}) + c^2 \cdot (N - 1)} \right)$. If the population N is "large" relative to the sample size n, then the finite-population correction factor ϕ can be taken as one (1), and the formula becomes

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

To illustrate how to use this, suppose the population N is 2,022,016 (the number of households in Burundi in 2013/14), suppose $c = 0.04608$, $z = 1.64$ (90-percent confidence), and the relevant poverty line is 100% of the 2013-definition national line so that the most sensible expected poverty rate $\widetilde{p}$ is Burundi's overall poverty rate for that line in 2013/14 (58.3 percent at the household level, Table 1). The α factor is 0.94 (Table 8). Then the sample-size formula gives

$$n = 2{,}022{,}016 \cdot \left(\frac{1.64^2 \cdot 0.94^2 \cdot 0.583 \cdot (1 - 0.583)}{1.64^2 \cdot 0.94^2 \cdot 0.583 \cdot (1 - 0.583) + 0.04608^2 \cdot (2{,}022{,}016 - 1)} \right) = 273,$$

which not far from the sample size of 256 observed for these parameters in Table 7 for

100% of the 2013-definition national line. Taking the finite population correction factor ϕ as one (1) gives the same result, as $n = \left(\frac{0.94 \cdot 1.64}{0.04608}\right)^2 \cdot 0.583 \cdot (1 - 0.583) = 273$.[30]

Of course, the α factors in Table 8 are specific to Burundi, its poverty lines, its poverty rates, and this scorecard. The derivation of the formulas for standard errors using the α factors, however, is valid for any poverty-assessment tool following the approach in this paper.

[30] 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 Burundi should report using the 2013-definition $1.90/day 2011 PPP line. Given the α factor of 0.92 for this line (Table 8), an expected before-measurement household-level poverty rate of 63.7 percent (the all-Burundi rate for this line in 2013/14, Table 1), and a confidence level of 90 percent ($z = 1.64$), then $n = 300$ implies a confidence interval of $\pm 1.64 \cdot 0.92 \cdot \sqrt{\frac{0.637 \cdot (1 - 0.637)}{300}} = \pm 4.2$ percentage points.

In practice after the end of field work for the ECVMB in March 2014, a program would select a poverty line (say, 100% of the 2013-definition 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, ± 2.0 percentage points, or $c = \pm 0.02$), make an assumption about $\widetilde{p}$ (perhaps based on a previous estimate such as the household-level poverty rate for 100% of the 2013-definition national line for Burundi of 58.3 percent in the 2013/14 ECVMB in Table 1), look up α (here, 0.94 in Table 8), assume that the scorecard will still work in the future and for sub-groups that are not nationally representative,[31] and then compute the required sample size. In this illustration,

$$n = 10{,}000 \cdot \left(\frac{1.64^2 \cdot 0.94^2 \cdot 0.583 \cdot (1 - 0.583)}{1.64^2 \cdot 0.94^2 \cdot 0.583 \cdot (1 - 0.583) + 0.02^2 \cdot (10{,}000 - 1)} \right) = 1{,}263.$$

[31] 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 March 2014 will resemble that in the 2013/14 ECVMB with deterioration over time and across non-nationally representative sub-groups 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 of households from the population.

With only data from the 2013/14 ECVMB, this paper cannot test estimates of the annual rate of change in poverty rates for Burundi, and it can only suggest approximate formulas for standard errors. Nonetheless, the relevant concepts are presented here because, in practice, pro-poor programs in Burundi can apply the scorecard to collect their own data and estimate change through time.

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

The scorecard can estimate change. Of course, poverty could get better or worse, and the scorecard 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 knowledge or assumptions about 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 must come from beyond the scorecard.

7.2 Estimating annual rates of change in poverty rates

Consider the illustration begun in the previous section. On 1 January 2019, an organization samples three households who score 20, 30, and 40 and so have poverty likelihoods of 91.2, 78.1, and 49.1 percent (100% of the 2013-definition national line, Table 4). Given the known average error for this line in the validation sample of –0.4 percentage points (Table 8), the corrected baseline estimated poverty rate is the households' average poverty likelihood of [(91.2 + 78.1 + 49.1) ÷ 3] – (–0.4) = 73.2 percent.

After baseline, two sampling approaches are possible for the follow-up round:

- 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 2022, the organization 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 84.7, 70.5, and 35.2 percent, 100% of the 2013-definition national line, Table 4). Adjusting for the known average error, the average poverty likelihood at follow-up is [(84.7 + 70.5 + 35.2) ÷ 3] – (–0.4) = 63.9 percent, a reduction in the poverty rate of 73.2 – 63.9 = 9.3 percentage points.[32] Supposing that exactly three years passed between the average baseline interview and the average follow-up interview, the estimated annual rate of decrease in the poverty rate is 9.3 ÷ 3 = 3.1 percentage points

[32] 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.

per year. That is, about one in 32 participants in this hypothetical example cross the poverty line each year.[33] Among those who start below the line, about one in 24 (3.1 ÷ 73.2 = 4.2 percent) on net end up above the line each year.[34]

Alternatively, suppose that the same three original households who were scored at baseline are scored again on 1 January 2022. Given scores of 25, 35, and 45, their follow-up poverty likelihoods are 84.7, 70.5, and 35.2 percent. The average across households of the difference in each given household's baseline poverty likelihood and its follow-up poverty likelihood is [(91.2 – 84.7) + (78.1 – 70.5) + (49.1 – 35.2)] ÷ 3 = 9.3 percentage points.[35] Assuming in this example that there are exactly three years between each household's interviews, the estimated annual rate of decrease in the poverty rate is (again) 9.3 ÷ 3 = 3.1 percentage points per year.

Given the assumptions of the scorecard, both approaches give unbiased estimates of the annual rate of change in poverty rates. In general and in practice, 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).

[33] This is a net figure; some start above the line and end below it, and vice versa.
[34] The scorecard does not reveal the reasons for this change.
[35] In this approach, the error for this line in Table 8 should *not* be subtracted off.

7.3 Precision for estimated change in two independent samples

For two equal-sized independent samples, 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 σ of a poverty-assessment tool'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,[36] and α 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.

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

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

[36] 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 interviews (not twice as many) as does estimating a poverty rate at a point in time.

With the available data for Burundi, it is not possible to estimate values of α here. Nevertheless, this α has been estimated for 18 countries (Schreiner 2017a, 2017b, 2017c, 2016a, 2016b, 2016c, 2016d, 2015b, 2015c, 2015d, 2015e, 2013a, 2013b, 2012c, 2010, 2009a, 2009b, and Chen and Schreiner, 2009). The unweighted average of α across countries—after averaging α across poverty lines and pairs of survey rounds within each country—is 1.08. This rough figure is as reasonable as any to use for Burundi.

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 ± 2 percentage points ($\pm c = \pm 0.02$), the poverty line is 100% of the 2013-definition national line, $\alpha = 1.08$, $\hat{p} = 0.583$ (the household-level poverty rate in 2013/14 for 100% of the 2013-definition national line in Table 1), and the population N is large enough relative to the expected sample size n that the finite population correction ϕ can be taken as one (1). Then the baseline sample size is $n = 2 \cdot \left(\frac{1.08 \cdot 1.64}{0.02} \right)^2 \cdot 0.583 \cdot (1 - 0.583) \cdot 1 =$ 3,814, and the follow-up sample size is also 3,814.

7.4 Precision of estimates of change for one sample, scored twice

Analogous to previous derivations, the general formula relating the confidence interval $\pm c$ to the standard error σ when using a scorecard to estimate change for a single sample of households, all of whom are scored at two points in time, is:[37]

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

where z, c, α, 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 Burundi, it is not possible to estimate values of α here.

The formula for confidence intervals can be rearranged to give a formula for sample size before estimation. This requires an estimate (based on information available before estimation) of the expected shares of all households who cross the poverty line $\tilde{p}_{12}$ and $\tilde{p}_{21}$. Before estimation, 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:

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

[37] See McNemar (1947) and Johnson (2007). John Pezzullo helped find this formula.

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

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

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

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

In Peru (the only source of a data-based estimate, Schreiner, 2009c), the average α 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 ±2.0 percentage points ($\pm c = \pm 0.02$), the poverty line is 100% of the 2013-definition national line, the sample will first be scored in 2019 and then again in 2022 ($y = 3$), and the population N is so large relative to the expected sample size n that the finite population correction ϕ can be taken as one (1). The pre-baseline household-level poverty rate p_{2019} is taken as 58.3 percent (Table 1), and α is assumed to be 1.30. Then the baseline sample size is $n = 2 \cdot \left(\frac{1.30 \cdot 1.64}{0.02}\right)^2 \cdot \left[-0.02 + 0.016 \cdot 3 + 0.47 \cdot 0.583 \cdot (1 - 0.583)\right] \cdot 1 = 3{,}234$. The same group of 3,234 households is scored at follow-up as well.

8. Targeting

When a program uses the scorecard 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* (having a score at or below a targeting cut-off) and *poverty status* (having consumption below a poverty line). Poverty status is a fact that is defined by whether consumption 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*,[38] not as *poor*. After all, unless all targeted households have poverty likelihoods of 100 percent, some of them are non-poor (their consumption is above a given poverty line). In the context of the scorecard, the terms *poor* and *non-poor* have specific definitions. Using these same terms for targeting status is incorrect and misleading.

[38] Others 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 consumption below an externally-defined poverty line). Examples of acceptable labels include *Groups A, B, and C*; *Households with scores of 29 or less, 30 to 69, or 70 or more*; and *Households who qualify for reduced fees, or who do not qualify.*

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

Table 9 depicts these four possible targeting outcomes. Targeting accuracy varies by the cut-off score. A higher cut-off has better inclusion and better undercoverage (but worse exclusion and worse leakage); a lower cut-off has better exclusion and better leakage (but worse inclusion and 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 10 shows the distribution of households by targeting outcome for Burundi. For an example cut-off of 39 or less, outcomes for 100% of the 2013-definition national line in the validation sample are:

- Inclusion: 47.6 percent are below the line and correctly targeted
- Undercoverage: 10.5 percent are below the line and mistakenly not targeted
- Leakage: 14.7 percent are above the line and mistakenly targeted
- Exclusion: 27.1 percent are above the line and correctly not targeted

Increasing the cut-off to 41 or less improves inclusion and undercoverage but worsens leakage and exclusion:

- Inclusion: 50.1 percent are below the line and correctly targeted
- Undercoverage: 8.0 percent are below the line and mistakenly not targeted
- Leakage: 17.2 percent are above the line and mistakenly targeted
- Exclusion: 24.7 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 10 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 the scorecard—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 10 shows the hit rate for all cut-offs for the scorecard. For 100% of the 2013-definition national line in the validation sample, total net benefit—under the hit rate—is greatest (74.8) for a cut-off of 39 or less or 41 or less, with about three in four households in Burundi 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 x Households correctly included) + (1 x Households correctly excluded).[39]

[39] Table 10 also reports BPAC, the Balanced Poverty Accuracy Criterion adopted by USAID for certifying poverty-assessment tools. IRIS Center (2005) made BPAC to consider accuracy in terms of the errors in estimated poverty rates and in terms of targeting inclusion. BPAC = (Inclusion – |Undercoverage – Leakage|) x [100 ÷ (Inclusion + Undercoverage)]. Schreiner (2014b) explains why BPAC does not add information over-and-above that provided by the other, more-standard measures here.

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 11 ("% targeted HHs who are poor") shows, for the scorecard applied to the validation sample, the expected poverty rate among households who score at or below a given cut-off. For the example of 100% of the 2013-definition national line, targeting households in the validation sample who score 39 or less would target 62.4 percent of all households (second column) and would be associated with a poverty rate among those targeted of 76.4 percent (third column).

Table 11 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 2013-definition national line with the validation sample and a cut-off of 39 or less, 82.0 percent of all poor households are covered.

The final targeting measure in Table 11 is the number of successfully targeted poor households for each non-poor household mistakenly targeted (right-most column). For 100% of the 2013-definition national line with the validation sample and a cut-off of 39 or less, covering about 3.2 poor households means leaking to 1 non-poor household.

9. Conclusion

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

- The likelihood that a household has consumption below a given poverty line
- The poverty rate of a population at a point in time
- The annual rate of change in the poverty rate of a population

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

The scorecard is constructed with data from about three-fifths of the observations on households in Burundi's 2013/14 ECVMB. Those households' scores are then calibrated to poverty likelihoods for 16 poverty lines. The scorecard's accuracy (errors and standard errors) for targeting and for estimating poverty rates at a point in time is tested out-of-sample on data that is not used in scorecard construction.

When the scorecard is applied to the 16 poverty lines in the validation sample, the maximum absolute value of the average error for point-in-time estimates of poverty rates is 1.1 percentage points, and the average of the absolute values of the average error across the 16 lines is about 0.5 percentage points. Corrected estimates may be had by subtracting the known error for a given poverty line from original, uncorrected estimates.

For $n = 16{,}384$ and 90-percent confidence, the precision of point-in-time estimates of poverty rates is ± 0.6 percentage points or better. With $n = 1{,}024$, the 90-percent confidence intervals are ± 2.5 percentage points or smaller.

If an organization 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 an organization's managers feel so daunted by a poverty-assessment tool'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 program managers to understand and to trust the scorecard and by allowing non-specialists to add up scores quickly in the field.

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

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Interview Guidelines

The excerpts quoted here are taken from:

l'Institut de Statistiques et d'Études Économiques du Burundi. (2013) « Manuel d'Instructions aux Enquêteurs », [the *Manual*].

The *Manual* has four parts, each with its own set of page numbers. The three parts that are cited here are referred to as:

- *Manual (Employment)*
- *Manual (QUIBB)*
- *Manual (Expenditure)*

Basic interview instructions

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

In the scorecard header, fill in the number of household members based on the list you have compiled as part of the "Back-page Worksheet".

Do not directly ask the first scorecard indicator ("How many household members are 18-years-old or younger?"). Instead, fill in the appropriate answer based on the number of household members who are 18-years-old or younger that you have listed on the "Back-page Worksheet".

Do not directly ask the second scorecard indicator ("Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?"). Instead, fill in the appropriate answer based on the information that you have already collected on the "Back-page Worksheet".

Do not directly ask the third scorecard indicator ("Among the household members 10-years-old or older who worked at least 1 hour in the past 7 days, how many had their main occupation (or their usual occupation), in the sector of agriculture, animal husbandry, or fishing?"). Instead, fill in the appropriate answer based on the number of household members who work in agriculture that you have listed on the "Back-page Worksheet".

Do not directly ask the fourth scorecard indicator ("If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?"). Instead, fill in the appropriate answer based on the work status and sector of work of the male head/spouse that you have listed on the "Back-page Worksheet".

Ask all of the other scorecard questions directly of the respondent except question 5 ("Can the female head/spouse read and write a simple text in Kirundi, French, Swahili, or some other language?"). For this question, follow instead the specific directions as discussed later in these « Guidelines ».

General interviewing advice

Study these "Guidelines" carefully, and carry them with you while you work. Follow the instructions in these "Guidelines" (including this one).

According to page 2 of the *Manual (Employment)*, "This *Manual* is your guide for your work as an enumerator. It gives the instructions for how to do your job. Master its material. . . . In the field, you should follow the instructions here exactly."

Remember that the respondent need not be the same person as the household member who is a participant with your organization. Likewise, the "field agent" to be recorded in the scorecard header is not necessarily the same as the enumerator who is conducting the interview. Rather, the "field agent" is the employee of the pro-poor program with whom the participant has an on-going relationship. If the program does not have such a field agent, then the relevant spaces in the scorecard header may be left blank.

Read each question word-for-word, in the order presented in the scorecard (except as noted in these "Guidelines").

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:

2. Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?	A. No	0	
	B. Yes	3	3
	C. No members ages 7 to 16	6	

To help to reduce errors, you should circle the response option, the printed points, and the hand-written points that correspond to the response.

When completing the "Back-page Worksheet", you should circle all the relevant responses for each household member. This example has 5 members.

First name (or nickname)	Is [NAME] the head or the (eldest) spouse/conjugal partner of the head?	How old is [NAME]?	If [NAME] is 7- to 16-years-old, does he/she currently (in the current school year) go to school?	If [NAME] is at least 10-years-old, then did he/she work at least 1 hour in the past 7 days?	If [NAME] worked, then was his/her main occupation (or his/her usual occupation) in the sector of agriculture, animal husbandry, or fishing?
1. Claude	Male head Female head	48	<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
2. Mariette	(Eldest) spouse/partner Other	46	<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
3. Immaculée	Other	18	<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
4. Evariste	Other	16	<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
5. Daphrose	Other	8	<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
. . .	. . .	. . .	. . .	. . .	. . .
13.	Other		<7 or >16 No Yes	<10 No Yes	<10 Did not work No Yes
Number of household members: 5		—	—	—	Number who work in agriculture: 2

In this example, the household has five members :

- Claude is a 48-year-old male who is the head of the household. His (only) wife is Mariette. Claude worked in the past 7 days in his job as a teacher in a public school. He did not work in the family's corn field
- Mariette is a 46-year-old female who is the (only) wife of Claude. She worked in the past 7 days, planting corn in the family's field
- Immaculée is the 18-year-old daughter of Claude and Mariette. She no longer goes to school. She helped plant corn in the family's field in the past 7 days
- Evariste is the 16-year-old son of Claude and Mariette. He has dropped out of school, and he did not do any agricultural work in the past 7 days
- Daphrose is the 8-year-old daughter of Claude and Mariette. She goes to school and plays with her friends

In terms of the scorecard indicators whose responses are based completely on information compiled on the "Back-page Worksheet":

- The number of household members to be recorded in the scorecard header next to "Number of household members:" is five
- The answer to the first scorecard indicator ("How many household members are 18-years-old or younger?") is "C. Three" (because the three children are 18-years-old or younger)
- The answer to the second scorecard indicator ("Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?") is "A. No" (because there are two household members—Evariste and Daphrose—in this age range, but only one currently atttends school)
- The answer to the third scorecard indicator ("Among the household members 10-years-old or older who worked at least 1 hour in the past 7 days, how many had their main occupation (or their usual occupation) in the sector of agriculture, animal husbandry, or fishing?") is "B. Two" (because two of the household members who are at least 10-years-old—Mariette and Immaculée—worked in agriculture in the past 7 days
- The answer to the fourth scorecard indicator ("If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?") is "D. Worked in non-agriculture" (because Claude, the male head/spouse, worked in the past 7 days, but he did not work in agriculture)

When an issue comes up that is not addressed here, its resolution should be left to the unaided judgment of the enumerator, as that apparently was the practice of Burundi's *Institut de Statistiques et d'Études Économiques* in the 2013/14 ECVMB. That is, an organization using the scorecard should not promulgate any definitions or 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 each individual enumerator.

Do not read the response options to the respondent. Simply 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.

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 be inaccurate and thus that verification might improve data accuracy. 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 can 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 a response may be inaccurate.

In general, the application of the scorecard should mimic as closely as possible the application of the 2013/14 ECVMB by Burundi's *Institut de Statistiques et d'Études Économiques*. For example, interviews should take place in respondents' homesteads because the 2013/14 ECVMB took place in respondents' homesteads.

Translation:
As of this writing, the scorecard itself, the "Back-page Worksheet", and these "Guidelines" are available only in French, Kirundi, Swahili, and English. There are not yet official, standard translations to other local languages spoken in Burundi. Users should check `SimplePovertyScorecard.com` to see what translations have been completed since this writing.

If there is no official, standard translation to a given local language, then users should contact the author of this document for help in creating such a translation. In particular, the translation of scorecard indicators should follow as closely as possible the meaning of the original French wording in the 2013/14 ECVMB questionnaire. Likewise, the *Enumerator Manual* for the 2013/14 ECVMB was written in French, so these "Guidelines" must be translated from the *Manual*'s original French, not from these English "Guidelines" here.

Job of the enumerator

According to page 9 of the *Manual (Employment)*, "You as the enumerator play a pivotal role in the survey because you are the one who collects data from the respondents. Thus, the success (or failure) of [the scorecard] rests on how well you do your job.

"In general, your responsabilities as an enumerator are to:

- "Follow the instructions in these 'Guidelines' [including this one]
- Check [the scorecard] after each interview to make sure that there are responses to all the questions and that all the responses are clearly marked"

Prohibitions

According to page 9 of the *Manual (Employment)*, you should not:

- "Divulge to third parties any information received from a respondent; keep all responses strictly confidential. In the same way, do not show [scorecards]—whether blank or filled in—to anyone who is not on [your organization's] survey team. In sum, do not say anything to third parties about [the scorecard] nor about any responses to [scorecard indicators]
- Ask for information that is not part of [the scorecard]
- Take someone with you to an interview who is not a member of [your organization's] survey team. Also, do not hire a third party to do the tasks assigned to you
- Ask the responding household for food, drink, or money
- Engage in debate about politics, religion, or anything else that does not come straight from [the scorecard]. Do not wear clothes with political slogans, and do not act or speak as if you have any particular political view or association
- Fill out [a scorecard] with responses of your own invention, without actually interviewing the sampled household

How to do an interview

According to pages 9 to 11 of the *Manual (Employment)*, "Successful interviewing is an art, not a mechanical process. Each interview is different and provides new information. Thus, it is your job to make the interview process pleasant and interesting for the respondent. Some basic principles for success are listed below.

"*Make a good first impression.* Dress appropriately, and begin by greeting the responding household with a smile and a pleasant 'Good morning'. Then introduce yourself. For example, you might say: 'My name is <your name>. I am an employee of <your organization>. We are doing a short survey about how [people in the households in which our participants live are doing in terms of their living conditions]. In this context, I would like to ask you some questions.'

"*Always be positive.* Do not make excuses or act ashamed. Avoid saying things like 'Are you very busy?', 'Could you give me a few minutes?', or 'I am sorry to bother you, but could I impose on you to answer a few questions for me?' These types of questions run the risk of encouraging the respondent to refuse to cooperate even before the interview starts.

"*Highlight that all responses are strictly confidential.* "If the respondent is reluctant to answer some questions, then tell him/her that all the data collected by the survey will be kept strictly confidential, that the data will be used only for statistical purposes, that any reports will only contain aggregate data, and that no one will ever mention the names of specific people nor associate responses with any particular household. Assure him/her that you are strictly prohibited from sharing the responses with unauthorized people and that the responses will be used by [your organization] to [inform decisions meant to improve your products and services].

"When you are in the presence of anyone who is not a member of the survey team, be sure not to talk about any household's responses nor to show any household's completed [scorecard].

"Make sure that all interviews are done in private and out-of-earshot of anyone who is not a member of the responding household. Also make sure that any responses that you record come from the responding household (and not, for example, from a neighbor). In general, do all you can to tell (and to show) the responding household that you merit their trust and that you will keep their responses confidential. Explain the purpose of the survey. The goal is help members of the responding household to feel at ease and so to give honest answers.

"*Neutrality.* Being polite, some respondents tend to give responses that they assume are what you would like to hear. Therefore, you must be completely neutral when asking questions. Do nothing that might lead the respondent to feel that he/she has given a 'good' or 'bad' response, whether by your tone of voice, the look on your face, or your body language. Do not give the impression that you approve or disapprove of anything that the respondent says.

If the respondent gives an ambiguous answer, then try to probe in a neutral fashion, asking questions such as 'Could you please explain a little more?' or 'I beg your

pardon, but I did not understand. Could you please say it again?'. Finally, try to avoid pre-conceived ideas and prejudices/stereotypes about what a respondent may or may not know, be able to do, or think.

"*Read the questions as written and in the order given.* In all interviews and with all respondents, read the questions as written and in the order given [except as noted in these "Guidelines"]. If a respondent does not understand a question, then read it again, slowly and clearly. If the respondent still does not understand, then reword the question, being careful not to stray from the original meaning.

"*Be tactful with reluctant respondents.* If the respondent seems uninterested, distracted, contradicts something that he/she said previously, or refuses to answer some questions, then try—tactfully—to revive his/her interest and trust.

"*Do not rush the interview.* Ask questions slowly so that the respondent understands what you are asking. After asking a question, wait: give the respondent time to think. If the respondent feels that he/she does not have enough time to reflect and to discover his/her own opinion, then he/she may give sloppy or frivolous answers, or just punt by saying, 'I don't know'. Even when the respondent takes his/her time to answer, you as the enumerator should not pressure him/her nor feel that it is necessary to call off the interview and to resume it at another time.

"*Keep your appointments with households.* If at all possible, follow a set schedule. Show up on-time. Only the responding household can change an appointment; you, as the enumerator, cannot. Do your best to be available and flexible, and try to pursuade the household to be at home at the arranged time. You must help the household to understand that it must plan carefully so as to be at home at the appointed time."

<u>How to ask questions</u>

According to pages 13 to 14 of the *Manual (Employment)*, "You must read each question exactly as it appears in [the scorecard] [except as noted elsewhere in these "Guidelines"]. When you read a question, be sure to speak slowly and clearly so that the respondent can hear you well and so has a better chance to understand the meaning. In some cases, you will have to repeat the question to make sure that the respondent understands. When you do repeat a question, do not paraphrase it; rather, echo it word-for-word.

"If the respondent still does not understand after you have repeated a question once, then you may have no choice but to re-phrase the question. Of course, you should be careful to keep the question's original intent and meaning.

"In some cases, you will have to ask follow-up questions (*probes*) in order to get an adequate response. When probing, be sure that you do so in a neutral way, that you do not suggest any particular answer, and that you do not influence the respondent in any way. Neutral probing requires skill and tact; it is one of the most difficult parts of your job as an enumerator."

Who should be the respondent?

Remember that the respondent does not need to be the same person as the household member who is a participant with your organization.

According to page 9 of the *Manual (QUIBB)*, "The main respondent should be the head of the household or his/her representative (for example, his/her spouse/conjugal partner, oldest son or daughter, or brother or sister). Other members of the interviewed household can provide complementary information or clarifications to assist the main respondent, especially for questions that deal with those other members."

Note that the head of the household may or may not be the same person who is a participant with your organization. This is fine; the respondent does not need to be the same as the participant in your organization (although the respondent can be that person).

According to pages 9 to 10 of the *Manual (QUIBB)*, "The *head of the household* is the household's main decision-maker, and his/her authority is recognized by the other members of the household. The head of the household may or may not be the main income-earner. In many African societies, the oldest adult male is often considered to be the head of the household, even if he is not the main income-earner.

"As the main decision-maker, the head is the most-knowledgable person in terms what is going on in the household, so usually he/she is the most appropriate respondent. Nevertheless, for some questions the head may not have the knowledge required to provide accurate responses, for example, if he/she is not the main income earner, or if other household members have their own areas of particular expertise with regards to the household's activities. In such cases, other members of the household may help the head to respond during the interview. For example, older children may know the exact educational level of the younger members of the household better than the head does."

Guidelines for each scorecard indicator

1. How many household members are 18-years-old or younger?
    A. Six or more
    B. Four, or five
    C. Three
    D. Two
    E. One
    F. Zero

Do not ask this question directly of the respondent. Instead, mark the response based on the information you gather about the number of household members who are 18-years-old or younger on the "Back-page Worksheet".

According to page 9 of the *Manual (QUIBB)*, a *household* is "a group of people [or a single person]—regardless of blood or marital relationships—who usually share meals, recognize the authority of one member of the household (the *head*), and who share income and expenses. The group of people usually live under the same roof."

Criteria for identifying a household

According to page 9 of the *Manual (Expenditure)*, "The definition of *household* is the simultaneous fulfillment of all of the following four criteria:

- "The members of the household live in the same residence
- The members usually share meals. In urban areas, this is usually the evening meal
- The members share all or part of their individual resources to satisfy the household's basic needs. That is, all or part of the resources provided by a given household member serve to benefit the other members of the household to some degree
- All the members recognize the authority of one member who is considered to be the *de facto* head. This is the most objective way to identify the head"

According to page 9 of the *Manual (QUIBB)*, "A *household member* is anyone who has lived with the household for at least six of the past 12 months [or who currently lives with the household and who plans to stay for a total duration of at least six months].

The following two examples are people who have not yet lived with the household for at least six months yet who are still counted as household members because they currently live with the household and plan to stay for a total duration of at least six months :

- "New-borns who are children of a member of the household
- Spouses who leave the households of their parents to form a new household, people who have joined a household for work-related reasons, people who have changed their residence, and so on

"In some cases, it is not obvious whether a person in a certain situation should be counted as a member of a particular household. The following examples can serve as guides to several such cases:

- "A household may consist of a single person who lives alone
- The members of a household need not be related to each other by blood or marriage
- Some members of a household may not live together with other members of the household in the same building or compound. For example, some members—due to a lack of space—may stay in rooms in a neighboring compound. These people are still members of the household because they fulfill all the other conditions. In particular, they share meals, share income and expenses, and recognize the authority of the head
- If more than one wife of a polygamous man live in the same compound but have their own residences within that compound (or live in a neighboring compound), then those wives may be the heads of their own distinct households, or they may be members of a household that includes their husband as well as none, one, or more of his other wives. If the wives have distinct households, then the husband is counted as a member of the household in which he spends the most time. If the husband divides his time equally between households, then he is counted as a member (and as the head) of the household of his first wife
- Lodgers do not count as members of the household from whom they buy room and board. In the same way, domestic servants [who do not reside in the household of their employer] are not counted as members of their employer's household
- Apprentices and domestic servants who live in the household of their employer are considered to be members of that household"

According to page 4 of the *Manual (Employment)*, "A *household* is a group of people [or a single person]—regardless of blood or marital relationship—who [usually] live under the same roof (or in the same compound), who share meals, who recognize the authority of one member of the household (called the *head*), and who share income or living expenses to at least some degree.

"To count as *usually living* with the household, a person must live with the household for a [total expected] period of at least six months.

"Seen another way, a *household* can be defined as a group of people in which each member fulfills at least one of the following criteria:

- They share a residence (a given person may contribute to covering the costs of the residence, or he/she may not contribute and rely on others to cover the costs)
- They share at least one meal per week
- They depend on the household to cover their expenses in at least two of the following three categories:
  - Food
  - Shelter
  - Other expenses"

The *Manual (Employment)* (pages 4–5) addresses a number of specific cases where it may be difficult to determine whether a person is a household member.

- *A single person living alone (unmarried, widow/widower, or divorced)* who covers his/her own living expenses with his/her own resources is counted as a one-person household
- A young, single person who takes room and board with a household (perhaps one headed by a relative, perhaps one headed by a non-relative) who has his/her own income (from a wage/salary job, from self-employment, or whatever) and who gives some of his/her income to the head of the host household is counted as:
  - A member of the host household (if he/she gives most of his/her income to the head and allows the head to decide how to use it)
  - A one-person household (if he/she pays only for his/her room and board and keeps the rest of his/her income to do with as he/she pleases)
- *Someone who is completely dependent on the household* for shelter, meals, and other basic needs. Examples include a child who lives with his/her parents, or a young man who has moved to the city to look for a job and who lives with a relative. Such people are counted as members of the household where they live
- *A relative or aging parent with low or no income* who lives with (and is supported by) a more fortunate relative should be counted as a member of the household where he/she lives

- *A woman and her children who live and eat apart from their husband/father* (regardless of whether he has other wives) who stops by occasionally (to visit, to share a meal, or to pick up food that his wife sometimes makes for him) should be counted as members of the household in which the woman is the head. The polygamous husband should not be counted as a member of the household in which his wife is the head
- *A polygamous man who lives with some of his wives in a single compound* should be counted as a member (along with his co-resident wives) of the household where he lives
- *The wives of a polygamous man who live with their children in separate compounds* should be counted separate households in which each wife is the head of her own household. The polygamous man is counted as a member (and as the head) of the household where he stays
- *A household temporarily without any resources that is « rescued » by another household* (for example, within the same compound) from whom the devastated household receives money for food (or from whom the devastated household receives as gifts its meals, shelter, and other basic needs) should be counted as a separate household apart from its benefactor household
- *Young people living together as roommates* (for example, college students, or young people from a rural area who have moved to the city to seek work) should be counted as:
  - A single household (if they share both meals and the residence)
  - A single household (if they share meals and if they live in separate residences that are in the same compound)
  - Separate households (if the share a residence but do not share meals)
- *A maid or domestic servant* should be counted as:
  - A member of her employer's household (if the employer provides for her food, shelter, and other basic needs)
  - A member of some household other than her employer's household (if the employer provides for her food but not for her shelter)
  - A member of some household other than her employer's household (if the employer does not provide for her food, regardless of whether the employer provides for her shelter)

When determining the household to which a given person belongs, it helps to keep in mind the following:

- The concept of *family* (a social unit defined by blood or marital relationships) differs from the concept of *household* (an economic unit defined by sharing relationships)
- A single household may occupy several residences or buildings within a given compound
- In general, a divorced person should not be counted as a member of the household in which his/her former spouse is currently a member
- Students who live apart from their parents should be treated in the same way as divorced people. That is, such students should not be counted as members of their parents' household, even if their parents live in the same metropolitan area"

According to page 10 of the *Manual (QUIBB)*, "When listing household members, make sure you count everyone. . . . To ensure that your list is complete, pay extra attention to three categories of people who are often mistakenly omitted or mistakenly included:

- Household members who are temporarily absent from the residence and who nevertheless meet the criteria to qualify as members of the household
- Domestic servants and lodgers usually are members of a household other than that of their employer; if so, they should not be listed as members of the employer's household. Neverthless, if there is no reason to believe that a domestic servant or a lodger is a household member elsewhere, then the person should be counted as a member of the interviewed household and included in the list. For example, this is the case for domestic servants who live in their employer's household and who share meals with the other members of the employer's household
- New-born babies and toddlers as well as elderly people are sometimes overlooked"

According to page 10 of the *Manual (QUIBB)*, "The order for listing household members is as follows:

- First, list the head of the household, followed by his wife or wives, according to their rank
- Second, list all other household members, from the youngest to the oldest
- In the case of a polygamous man who has more than one wife who is a member of the interviewed household, list the children of the first wife from the youngest to the oldest. Then list the children of the second wife in the same way . . . Then list all the other members of the household [from youngest to oldest]"

2. Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?
    A. No
    B. Yes
    C. No members ages 7 to 16

Do not ask this question directly of the respondent. Instead, mark the response based on the information you already gathered about household members, their ages, and their school attendance on the "Back-page Worksheet".

When figuring out how to mark the appropriate response, keep in mind that this indicator can be viewed as a combination of two questions:

- Are there any household members ages 7 to 16?
- Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?

Mark the response on the scorecard according to the combination of responses the two questions above:

Are there any household members ages 7 to 16?	**Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution?**	**Response**
No	N/A	C
Yes	No	A
No	N/A	C
Yes	Yes	B

3. Among the household members 10-years-old or older who worked at least 1 hour in the past 7 days, how many had their main occupation (or their usual occupation) in the sector of agriculture, animal husbandry, or fishing?
    A. Three or more
    B. Two
    C. One, or none

Do not ask this question directly of the respondent. Instead, mark the response based on the information you already gathered on the "Back-page Worksheet" about the number of members of the household who work in agriculture.

According to page 6 of the *Manual (Employment)*, *work* is "doing a economic activity for at least one hour in the past 7 days. As defined by the system of national accounts, an *economic activity* produces potentially marketable goods or services. This includes both goods and services that are offered up for sale as well as goods and services that are not offered up for sale."

According to page 19 of the *Manuel (Employment)*, "Chores that someone does in his/her own home do not count as *work* [for the purposes of this question]."

The following economic activities *do* count as *work* for the purposes of this question:

- "Domestic service: Paid domestic-service work for another household
- Helping in a household business: Working in a business owned by a member of the household that is remunerated in-cash or in-kind
- A student who also works: A student who also has an economic activity (for example, painting people's portraits or tutoring younger students) is counted as [working]
- Non-domestic service: Paid service work for another household that is not performed in the other household's residence"

According to page 21 of the *Manual (Employment)*, "The *main occupation* is that which a person performed during the 7 days preceeding the interview or the occupation that a person usually performs.

"Determining someone's main occupation may be difficult if the person has more than one economic activity. In general, you as the interviewer should record as the main occupation the one that the respondent reports as such. If someone has more than one economic activity and if the respondent cannot designate one of them as the main activity, then you as the interviewer should record the one in which the person works the most hours. If the respondent cannot tell you the activity in which the person works the most hours, then you should record the one which provides the most income."

4. If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?
    A. Did not work
    B. Worked in agriculture etc.
    C. No male head/spouse
    D. Worked in non-agriculture

Do not ask this question directly of the respondent. Instead, mark the response based on the information you gathered on the "Back-page Worksheet" about the male head/spouse (and whether he exists), whether he works, and whether he works in the agricultural sector or the non-agricultural sector.

Remember that you already know the name of the male head/spouse (and whether he exists) from compiling the "Back-page Worksheet". Thus, if there is a male head/spouse, do not mechanically ask, "If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?". Instead, use the actual name of the male head/spouse, for example: "If Claude worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing?" If there is no male head/spouse, then mark "C. No male head/spouse" and go to the next question.

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

According to page 19 of the *Manuel (Employment)*, "Chores that someone does in his/her own home do not count as *work* [for the purposes of this question]."

The following economic activities *do* count as *work* for the purposes of this question:

- "Domestic service: Paid domestic-service work for another household
- Helping in a household business: Working in a business owned by a member of the household that is remunerated in-cash or in-kind
- A student who also works: A student who also has an economic activity (for example, painting people's portraits or tutoring younger students) is counted as [working]
- Non-domestic service: Paid service work for another household that is not performed in the other household's residence"

According to page 21 of the *Manual (Employment)*, "The *main occupation* is that which a person performed during the 7 days preceeding the interview or the occupation that a person usually performs.

"Determining someone's main occupation may be difficult if the person has more than one economic activity. In general, you as the interviewer should record as the main occupation the one that the respondent reports as such. If someone has more than one economic activity and if the respondent cannot designate one of them as the main activity, then you as the interviewer should record the one in which the person works the most hours. If the respondent cannot tell you the activity in which the person works the most hours, then you should record the one which provides the most income."

Note that the head of the household may or may not be the same person who is a participant with your organization. This is fine; the respondent does not need to be the same as the participant in your organization (although the respondent can be that person).

According to pages 9 to 10 of the *Manual (QUIBB)*, "The *head of the household* is the household's main decision-maker, and his/her authority is recognized by the other members of the household. The head of the household may or may not be the main income-earner. In many African societies, the oldest adult male is often considered to be the head of the household, even if he is not the main income-earner.

"As the main decision-maker, the head is the most-knowledgable person in terms what is going on in the household, so usually he/she is the most appropriate respondent. Nevertheless, for some questions the head may not have the knowledge required to provide accurate responses, for example, if he/she is not the main income earner, or if other household members have their own areas of particular expertise with regards to the household's activities. In such cases, other members of the household may help the head to respond during the interview. For example, older children may know the exact educational level of the younger members of the household better than the head does."

5. Can the female head/spouse read and write a simple text in Kirundi, French, Swahili, or some other language?
    A. No female head/spouse
    B. No
    C. Only Kirundi
    D. French, but not Swahili or some other language (regardless of Kirundi)
    E. Swahili or some other language (regardless of Kirundi and French)

According to page 17 of the *Manual (QUIBB)*, "If the (eldest) female head/spouse can read but cannot write [in a given language, then she is not counted as being able to read and write in that language.]

"[The scorecard] does not provide for a rigorous test to determine whether the (eldest) female head/spouse and read and write. You as the enumerator should simply accept the response provided by the respondent."

Do not read the question as it is written on the scorecard. Instead, read the following series of three questions in the order listed:

- Can the (eldest) female head/spouse read and write a simple text in Kirundi?
- Can the (eldest) female head/spouse read and write a simple text in French?
- Can the (eldest) female head/spouse read and write a simple text in Swahili or in some other language?

Mark the response option that corresponds the combination of the responses to the three questions as follows:

Kirundi?	**French?**	**Swahili or some other language?**	**Response**
No	No	No	B
Yes	No	No	C
No	Yes	No	D
Yes	Yes	No	D
No	No	Yes	E
Yes	No	Yes	E
No	Yes	Yes	E
Yes	Yes	Yes	E

Remember that you already know the name of the (eldest) female head/spouse (and whether she exists) from compiling the "Back-page Worksheet". Thus, if there is a female head/spouse, do not mechanically ask, "Can the (eldest) female head/spouse read and write a simple text in Kirundi, French, Swahili, or some other language?". Instead, use the actual name of the (eldest) female head/spouse, for example: "Can Mariette read and write a simple text in Kirundi, French, Swahili, or some other language?" If there is no female head/spouse, then mark "A. No female head/spouse" and go to the next question.

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

- The household head, if the head is female
- The (oldest) 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

Note that the head of the household may or may not be the same person who is a participant with your organization. This is fine; the respondent does not need to be the same as the participant in your organization (although the respondent can be that person).

According to pages 9 to 10 of the *Manual (QUIBB)*, "The *head of the household* is the household's main decision-maker, and his/her authority is recognized by the other members of the household. The head of the household may or may not be the main income-earner. In many African societies, the oldest adult male is often considered to be the head of the household, even if he is not the main income-earner.

"As the main decision-maker, the head is the most-knowledgable person in terms what is going on in the household, so usually he/she is the most appropriate respondent. Nevertheless, for some questions the head may not have the knowledge required to provide accurate responses, for example, if he/she is not the main income earner, or if other household members have their own areas of particular expertise with regards to the household's activities. In such cases, other members of the household may help the head to respond during the interview. For example, older children may know the exact educational level of the younger members of the household better than the head does."

6. What toilet arrangement does the household use?
    A. Open ditch, public latrine, a neighbor's toilet, or other
    B. Unimproved latrine
    C. Flush toilet (piped or hand-pour) or improved ventilated latrine

According to page 20 of the *Manual (QUIBB)*, "The response option ['open ditch'] corresponds to households without a toilet arrangement. Such households urinate and defecate on the ground or 'in the bush', or they may somtimes use a neighbor's toilet arrangement. Mark "A. Open ditch, public latrine, a neighbor's toilet, or other" for any household that does not have a toilet arrangement in its residence, yard, courtyard, or field.

"A *flush toilet* washes waste away via pipes. The water for flushing can come from a pipe or by poured in with a bucket. The waste is carried away by a sewer system or collected in a septic tank that is emptied once it fills up.

"An *unimproved latrine* is a man-made hole that collects waste. The hole may be covered or uncovered.

"*Improved pit latrines* are pit latrines with additional features (such as a pipe-chimney that allows gases to escape)."

According to page 14 of the *Manual (Employment)*, "You should circle 'A. Open ditch, public latrine, a neighbor's toilet, or other' if the respondent's answer does not match up with any of the other pre-coded response options.

7. What is the household's main cooking fuel?
    A. Collected firewood, or dung
    B. Purchased firewood, or other
    C. Charcoal, LPG, electricity, kerosene, or does not cook

According to page 20 of the *Manual (QUIBB)*, "If the household says that it uses more than one type of fuel for cooking, then record the type that is most commonly used."

According to page 14 of the *Manual (Employment)*, "You should circle 'B. Purchased firewood, or other' if the respondent's answer does not match up with any of the other pre-coded response options.

8. What is the household's main source of lighting?
    A. Burning wood, or other
    B. Homemade kerosene lamp without glass (*bobèche*), or LPG
    C. Kerosene lamp with glass, solar panel, or candles
    D. Electricity, or generator

According to page 20 of the *Manual (QUIBB)*, "a [*bobèche*] is a home-made kerosene lamp without glass. For example, it may be made from an old coffee can, a empty bottle, or an old jar of jam into which oil or kerosene is poured and a wick is placed.

"A *kerosene lamp with glass* is like a *bobèche*, but it has been made in a factory."

According to page 14 of the *Manual (Employment)*, "You should circle 'B. Purchased firewood, or other' if the respondent's answer does not match up with any of the other pre-coded response options.

9. Does your household currently have a cell phone?
    A. No
    B. Yes

According to Jeanine Niyukuri, Director of ISTEEBU's *Département des Etudes et Statistiques Démographiques et Sociales*, you should count only cell phones that are in good working order. Also count otherwise-working cell phones which the household cannot currently use to make or receive calls due to the household's lacking minutes or a service subscription. Do not count broken cell phones, even if they are reparable and even if the household plans to have them repaired.

According to Niyukuri, the key is ownership, not use. For the purposes of this question, count only cell phones that the interviewed household owns (even if the interviewed household does not use them); do not count cell phones that the interviewed household does not own (even if the interviewed household uses them). For example, if the interviewed household owns a cell phone that has been lent to a neighbor or relative for their use, then it should still be counted. But if the interviewed household has a rented or borrowed cell phone that it does not own (such as a cell phone that is owned by a cell-phone service provider and that must be returned when the contract ends), then it should not be counted.

According to Niyukuri, cell phones that the household uses in a business that it runs should be counted (for example, if the household runs a telephone kiosk).

Finally, Niyukuri said that cell phones in working condition that the household reports as being owned should be counted, even if they were obtained via a loan or a rent-to-own agreement that has not yet been paid-off.

According to page 21 of the *Manual (QUIBB)*, "It does not matter which household member has the cell phone."

10. Does your household currently have a radio?
    A. No
    B. Yes

According to Jeanine Niyukuri, Director of ISTEEBU's *Département des Etudes et Statistiques Démographiques et Sociales*, you should count only radios that are in good working order. Also count otherwise-working radios which the household cannot currently use (for example, because there are no batteries or other source of electricity). Do not count broken radios, even if they are reparable and even if the household plans to have them repaired.

According to Niyukuri, the key is ownership, not use. For the purposes of this question, count only radios that the interviewed household owns (even if the interviewed household does not use them); do not count radios that the interviewed household does not own (even if the interviewed household uses them). For example, if the interviewed household owns a radio that has been lent to a neighbor or relative for their use, then it should still be counted. But if the interviewed household has a rented or borrowed radio that it does not own, then it should not be counted.

According to Niyukuri, radios that the household uses in a business that it runs should be counted (for example, if the household plays a radio to entertain clients in a restaurant that it runs).

Finally, Niyukuri said that radios in working condition that the household reports as being owned should be counted, even if they were obtained via a loan or a rent-to-own agreement that has not yet been paid-off.

According to page 21 of the *Manual (QUIBB)*, "It does not matter which household member has the radio."

Table 1: National poverty lines (2013 definition), poverty rates, and sample sizes for all of Burundi and for the construction and validation samples, by households and people in 2013/14

Sample	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
					National (2013 def.)		
				Food	100%	150%	200%
All of Burundi							
	Line	People		911	1,452	2,177	2,903
	Rate	Households	6,681	28.9	58.3	77.2	86.9
	Rate	People		34.1	64.9	82.1	90.1
Construction/calibration:							
(Selecting indicators and points, and associating scores with poverty likelihoods)							
	Rate	Households	4,020	28.9	58.5	77.2	86.9
Validation:							
(Measuring accuracy)							
	Rate	Households	2,661	28.8	58.1	77.3	87.0

Source: 2013/14 ECVMB

Poverty lines are BIF per-adult-equivalent per-day.

Poverty lines are BIF in average prices in Bujumbura-Mairie from Dec. 2013 to March 2014.

Table 1: International 2005 and 2011 PPP poverty lines (2013 definition), poverty rates, and sample sizes for all of Burundi and for the construction and validation samples, by households and people in 2013/14

	Line or	Households or		Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
Sample	**Rate**	**People**	***n***	**$1.25**	**$2.00**	**$2.50**	**$5.00**	**$1.90**	**$3.10**
All of Burundi									
	Line	People		1,305	2,088	2,611	5,221	1,216	1,984
	Rate	Households	6,681	67.5	85.1	89.9	98.0	63.7	83.7
	Rate	People		73.7	89.2	93.0	98.8	70.3	88.0
Construction/calibration:									
(Selecting indicators and points, and associating scores with poverty likelihoods)									
	Rate	Households	4,020	67.7	85.1	90.0	97.8	63.7	83.9
Validation:									
(Measuring accuracy)									
	Rate	Households	2,661	67.2	85.2	89.8	98.2	63.7	83.4

Source: 2013/14 ECVMB

Poverty lines are BIF per-person per-day.

Poverty lines are BIF in average prices in Bujumbura-Mairie from Dec. 2013 to March 2014.

Table 1: Relative and percentile-based poverty lines (2013 definition), poverty rates, and sample sizes for all of Burundi and for the construction and validation samples, by households and people in 2013/14

Sample	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
All of Burundi									
	Line	People		656	522	733	853	997	1,536
	Rate	Households	6,681	27.8	16.6	34.4	43.4	52.9	74.4
	Rate	People		32.5	20.0	40.0	50.0	60.0	80.0
Construction/calibration:									
(Selecting indicators and points, and associating scores with poverty likelihoods)									
	Rate	Households	4,020	27.6	16.6	34.3	43.4	52.9	74.5
Validation:									
(Measuring accuracy)									
	Rate	Households	2,661	28.0	16.5	34.5	43.5	52.9	74.3

Source: 2013/14 ECVMB

Poverty lines are BIF per-person per-day.

Poverty lines are BIF in average prices in Bujumbura-Mairie from Dec. 2013 to March 2014.

Table 2 (All of Burundi): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		1,020	1,626	2,438	3,251
	Rate	Households	2,086	8.6	23.7	40.3	55.2
	Rate	People		11.7	28.1	46.5	60.7
Rural							
	Line	People		899	1,433	2,149	2,866
	Rate	Households	4,595	31.0	62.0	81.2	90.4
	Rate	People		36.6	68.9	86.0	93.3
All							
	Line	People		911	1,452	2,177	2,903
	Rate	Households	6,681	28.9	58.3	77.2	86.9
	Rate	People		34.1	64.9	82.1	90.1

Source and definitions: See Table 1 and text.

Table 2 (All of Burundi): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,462	2,339	2,923	5,847	1,362	2,222
	Rate	Households	2,086	30.2	50.5	61.6	88.3	27.0	48.1
	Rate	People		35.4	57.7	68.7	91.9	31.8	55.2
Rural									
	Line	People		1,288	2,061	2,577	5,153	1,200	1,958
	Rate	Households	4,595	71.5	88.8	93.0	99.0	67.6	87.5
	Rate	People		77.8	92.6	95.6	99.5	74.4	91.5
All									
	Line	People		1,305	2,088	2,611	5,221	1,216	1,984
	Rate	Households	6,681	67.5	85.1	89.9	98.0	63.7	83.7
	Rate	People		73.7	89.2	93.0	98.8	70.3	88.0

Source and definitions: See Table 1 and text.

Table 2 (All of Burundi): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		735	585	821	955	1,116	1,720
	Rate	Households	2,086	7.9	5.0	9.7	13.9	18.3	36.9
	Rate	People		10.8	6.9	13.0	17.8	22.9	42.7
Rural									
	Line	People		647	515	724	842	984	1,516
	Rate	Households	4,595	29.9	17.8	37.0	46.6	56.7	78.5
	Rate	People		34.8	21.4	42.9	53.5	64.0	84.0
All									
	Line	People		656	522	733	853	997	1,536
	Rate	Households	6,681	27.8	16.6	34.4	43.4	52.9	74.4
	Rate	People		32.5	20.0	40.0	50.0	60.0	80.0

Source and definitions: See Table 1 and text.

Table 2 (Bujumbura-Mairie): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		1,094	1,744	2,616	3,488
	Rate	Households	616	5.2	17.4	32.7	48.1
	Rate	People		7.9	20.7	38.8	53.4
Rural							
	Line	People		—	—	—	—
	Rate	Households	—	—	—	—	—
	Rate	People		—	—	—	—
All							
	Line	People		1,094	1,744	2,616	3,488
	Rate	Households	616	5.2	17.4	32.7	48.1
	Rate	People		7.9	20.7	38.8	53.4

Source and definitions: See Table 1 and text.

Table 2 (Bujumbura-Mairie): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,568	2,509	3,136	6,272	1,461	2,384
	Rate	Households	616	22.9	42.2	54.2	84.5	19.4	39.5
	Rate	People		27.4	49.8	62.3	88.5	23.1	46.8
Rural									
	Line	People		—	—	—	—	—	—
	Rate	Households	—	—	—	—	—	—	—
	Rate	People		—	—	—	—	—	—
All									
	Line	People		1,568	2,509	3,136	6,272	1,461	2,384
	Rate	Households	616	22.9	42.2	54.2	84.5	19.4	39.5
	Rate	People		27.4	49.8	62.3	88.5	23.1	46.8

Source and definitions: See Table 1 and text.

Table 2 (Bujumbura-Mairie): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		788	627	881	1,025	1,197	1,845
	Rate	Households	616	4.3	2.7	5.2	8.8	11.5	29.0
	Rate	People		6.6	4.1	7.9	12.0	15.2	34.5
Rural									
	Line	People		—	—	—	—	—	—
	Rate	Households	—	—	—	—	—	—	—
	Rate	People		—	—	—	—	—	—
All									
	Line	People		788	627	881	1,025	1,197	1,845
	Rate	Households	616	4.3	2.7	5.2	8.8	11.5	29.0
	Rate	People		6.6	4.1	7.9	12.0	15.2	34.5

Source and definitions: See Table 1 and text.

Table 2 (Bujumbura-Rural): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		867	1,381	2,072	2,763
	Rate	Households	106	10.1	25.9	40.4	61.6
	Rate	People		14.5	33.6	50.0	69.6
Rural							
	Line	People		867	1,381	2,072	2,763
	Rate	Households	286	11.4	35.6	62.7	79.6
	Rate	People		14.0	43.1	71.7	85.2
All							
	Line	People		867	1,381	2,072	2,763
	Rate	Households	392	11.3	35.2	61.8	78.9
	Rate	People		14.1	42.8	70.8	84.6

Source and definitions: See Table 1 and text.

Table 2 (Bujumbura-Rural): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,242	1,987	2,484	4,968	1,157	1,888
	Rate	Households	106	30.0	61.4	74.0	92.3	27.7	58.2
	Rate	People		38.1	69.1	80.5	96.4	36.3	67.0
Rural									
	Line	People		1,242	1,987	2,484	4,968	1,157	1,888
	Rate	Households	286	48.7	76.1	83.9	97.8	44.0	74.2
	Rate	People		57.3	83.7	89.3	98.9	52.7	82.6
All									
	Line	People		1,242	1,987	2,484	4,968	1,157	1,888
	Rate	Households	392	47.9	75.5	83.5	97.6	43.4	73.6
	Rate	People		56.5	83.1	89.0	98.8	52.0	82.0

Source and definitions: See Table 1 and text.

Table 2 (Bujumbura-Rural): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		624	497	698	812	948	1,462
	Rate	Households	106	8.2	4.1	13.0	14.1	16.8	43.8
	Rate	People		12.1	5.5	19.0	20.3	23.1	54.3
Rural									
	Line	People		624	497	698	812	948	1,462
	Rate	Households	286	9.4	2.0	13.9	21.6	30.1	58.6
	Rate	People		11.1	2.5	16.9	26.4	37.3	67.5
All									
	Line	People		624	497	698	812	948	1,462
	Rate	Households	392	9.3	2.1	13.9	21.3	29.6	58.0
	Rate	People		11.1	2.7	17.0	26.2	36.7	67.0

Source and definitions: See Table 1 and text.

Table 2 (Bubanza): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		896	1,428	2,142	2,855
	Rate	Households	103	32.5	56.5	77.1	90.4
	Rate	People		39.0	64.7	81.5	92.8
Rural							
	Line	People		896	1,428	2,142	2,855
	Rate	Households	274	25.5	53.6	79.1	91.3
	Rate	People		32.0	62.9	84.7	93.9
All							
	Line	People		896	1,428	2,142	2,855
	Rate	Households	377	25.9	53.7	79.0	91.2
	Rate	People		32.5	63.1	84.5	93.8

Source and definitions: See Table 1 and text.

Table 2 (Bubanza): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,284	2,054	2,567	5,135	1,196	1,951
	Rate	Households	103	65.8	92.5	96.3	100.0	63.3	90.6
	Rate	People		72.0	95.0	97.3	100.0	70.2	93.7
Rural									
	Line	People		1,284	2,054	2,567	5,135	1,196	1,951
	Rate	Households	274	67.4	90.1	95.0	98.9	64.4	89.3
	Rate	People		75.0	93.8	97.1	99.4	72.7	93.3
All									
	Line	People		1,284	2,054	2,567	5,135	1,196	1,951
	Rate	Households	377	67.3	90.3	95.1	99.0	64.4	89.3
	Rate	People		74.8	93.9	97.1	99.5	72.5	93.3

Source and definitions: See Table 1 and text.

Table 2 (Bubanza): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		645	513	721	839	980	1,511
	Rate	Households	103	35.9	22.7	37.8	47.2	56.0	73.9
	Rate	People		42.7	27.7	44.8	56.0	63.9	80.2
Rural									
	Line	People		645	513	721	839	980	1,511
	Rate	Households	274	25.4	14.6	31.7	39.4	52.7	78.8
	Rate	People		31.9	18.5	38.8	48.4	62.4	86.0
All									
	Line	People		645	513	721	839	980	1,511
	Rate	Households	377	26.1	15.1	32.1	39.9	52.9	78.5
	Rate	People		32.6	19.1	39.2	48.9	62.5	85.6

Source and definitions: See Table 1 and text.

Table 2 (Bururi): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		998	1,591	2,386	3,181
	Rate	Households	97	13.6	40.0	50.1	64.8
	Rate	People		17.5	48.1	58.5	69.7
Rural							
	Line	People		998	1,591	2,386	3,181
	Rate	Households	262	19.0	49.5	72.5	88.6
	Rate	People		23.4	57.1	77.7	92.1
All							
	Line	People		998	1,591	2,386	3,181
	Rate	Households	359	18.6	48.9	70.9	86.9
	Rate	People		23.0	56.6	76.5	90.7

Source and definitions: See Table 1 and text.

Table 2 (Bururi): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,430	2,288	2,860	5,721	1,333	2,174
	Rate	Households	97	45.2	61.9	71.1	92.0	43.2	61.0
	Rate	People		53.4	69.7	75.9	96.2	52.2	69.1
Rural									
	Line	People		1,430	2,288	2,860	5,721	1,333	2,174
	Rate	Households	262	56.5	86.8	93.2	99.2	54.0	83.6
	Rate	People		63.6	90.5	96.0	99.8	60.9	88.0
All									
	Line	People		1,430	2,288	2,860	5,721	1,333	2,174
	Rate	Households	359	55.7	85.1	91.6	98.7	53.3	82.1
	Rate	People		63.0	89.3	94.8	99.6	60.4	86.8

Source and definitions: See Table 1 and text.

Table 2 (Bururi): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		719	572	804	935	1,092	1,683
	Rate	Households	97	13.6	9.5	14.5	18.2	30.1	47.8
	Rate	People		17.5	12.8	17.9	24.3	39.0	56.2
Rural									
	Line	People		719	572	804	935	1,092	1,683
	Rate	Households	262	18.9	10.5	25.0	34.2	45.0	68.9
	Rate	People		22.7	12.6	29.3	40.5	52.1	74.3
All									
	Line	People		719	572	804	935	1,092	1,683
	Rate	Households	359	18.5	10.4	24.2	33.1	44.0	67.5
	Rate	People		22.3	12.6	28.6	39.5	51.3	73.2

Source and definitions: See Table 1 and text.

Table 2 (Cankuzo): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		893	1,422	2,133	2,844
	Rate	Households	39	3.5	6.4	16.6	43.7
	Rate	People		6.2	8.2	23.4	56.0
Rural							
	Line	People		893	1,422	2,133	2,844
	Rate	Households	336	44.7	72.4	89.4	95.8
	Rate	People		51.3	79.3	92.3	96.8
All							
	Line	People		893	1,422	2,133	2,844
	Rate	Households	375	43.9	71.1	87.9	94.8
	Rate	People		50.3	77.8	90.8	95.9

Source and definitions: See Table 1 and text.

Table 2 (Cankuzo): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,279	2,046	2,557	5,115	1,191	1,944
	Rate	Households	39	11.0	37.1	46.7	78.2	7.9	35.3
	Rate	People		16.4	46.2	58.3	94.1	9.9	42.6
Rural									
	Line	People		1,279	2,046	2,557	5,115	1,191	1,944
	Rate	Households	336	82.4	95.0	97.3	100.0	79.0	94.4
	Rate	People		87.0	96.4	97.8	100.0	84.8	96.2
All									
	Line	People		1,279	2,046	2,557	5,115	1,191	1,944
	Rate	Households	375	81.0	93.9	96.4	99.6	77.6	93.2
	Rate	People		85.5	95.3	97.0	99.9	83.2	95.0

Source and definitions: See Table 1 and text.

Table 2 (Cankuzo): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		643	511	718	836	976	1,505
	Rate	Households	39	3.5	3.5	3.5	3.5	6.4	16.6
	Rate	People		6.2	6.2	6.2	6.2	8.2	23.4
Rural									
	Line	People		643	511	718	836	976	1,505
	Rate	Households	336	43.7	23.4	50.5	58.0	68.2	86.9
	Rate	People		51.0	26.6	57.8	65.9	75.2	90.8
All									
	Line	People		643	511	718	836	976	1,505
	Rate	Households	375	42.9	23.0	49.5	57.0	67.0	85.5
	Rate	People		50.0	26.2	56.7	64.7	73.8	89.3

Source and definitions: See Table 1 and text.

Table 2 (Cibitoke): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		949	1,511	2,267	3,023
	Rate	Households	102	23.6	37.4	70.0	80.8
	Rate	People		33.2	47.8	75.6	84.9
Rural							
	Line	People		949	1,511	2,267	3,023
	Rate	Households	275	29.0	55.6	76.2	85.3
	Rate	People		32.9	60.4	80.2	87.3
All							
	Line	People		949	1,511	2,267	3,023
	Rate	Households	377	28.7	54.8	75.9	85.1
	Rate	People		32.9	59.8	80.0	87.1

Source and definitions: See Table 1 and text.

Table 2 (Cibitoke): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,359	2,174	2,718	5,436	1,266	2,066
	Rate	Households	102	57.1	76.2	87.7	99.4	54.4	75.0
	Rate	People		67.2	82.2	92.0	99.7	64.1	81.2
Rural									
	Line	People		1,359	2,174	2,718	5,436	1,266	2,066
	Rate	Households	275	65.5	85.3	91.0	98.1	61.0	84.6
	Rate	People		70.4	87.9	92.9	99.3	65.6	87.3
All									
	Line	People		1,359	2,174	2,718	5,436	1,266	2,066
	Rate	Households	377	65.1	84.9	90.8	98.2	60.7	84.1
	Rate	People		70.2	87.6	92.9	99.3	65.5	87.0

Source and definitions: See Table 1 and text.

Table 2 (Cibitoke): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		683	543	764	888	1,038	1,599
	Rate	Households	102	22.4	15.2	29.2	30.2	36.5	66.9
	Rate	People		31.3	22.3	38.2	39.6	46.6	73.8
Rural									
	Line	People		683	543	764	888	1,038	1,599
	Rate	Households	275	27.2	18.3	31.3	42.2	51.4	73.4
	Rate	People		31.7	21.4	36.0	47.6	56.9	78.8
All									
	Line	People		683	543	764	888	1,038	1,599
	Rate	Households	377	26.9	18.1	31.2	41.6	50.7	73.1
	Rate	People		31.6	21.4	36.1	47.2	56.4	78.6

Source and definitions: See Table 1 and text.

Table 2 (Gitega): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		941	1,500	2,250	3,000
	Rate	Households	97	9.0	22.3	34.9	48.7
	Rate	People		11.5	28.8	39.9	56.1
Rural							
	Line	People		941	1,500	2,250	3,000
	Rate	Households	284	37.0	74.7	90.2	96.9
	Rate	People		45.2	82.4	94.0	98.6
All							
	Line	People		941	1,500	2,250	3,000
	Rate	Households	381	35.5	72.0	87.3	94.3
	Rate	People		43.3	79.3	90.9	96.1

Source and definitions: See Table 1 and text.

Table 2 (Gitega): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,349	2,158	2,698	5,395	1,257	2,050
	Rate	Households	97	26.8	46.6	57.2	94.5	25.9	43.9
	Rate	People		33.3	53.1	64.6	97.9	32.4	50.6
Rural									
	Line	People		1,349	2,158	2,698	5,395	1,257	2,050
	Rate	Households	284	84.1	94.6	97.4	99.4	79.8	93.5
	Rate	People		90.0	97.4	98.8	99.8	86.2	96.8
All									
	Line	People		1,349	2,158	2,698	5,395	1,257	2,050
	Rate	Households	381	81.1	92.1	95.3	99.2	77.0	90.9
	Rate	People		86.7	94.8	96.8	99.7	83.0	94.1

Source and definitions: See Table 1 and text.

Table 2 (Gitega): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		678	539	758	881	1,030	1,587
	Rate	Households	97	8.1	3.3	10.0	11.1	18.1	33.2
	Rate	People		10.6	4.3	12.9	13.8	23.0	37.6
Rural									
	Line	People		678	539	758	881	1,030	1,587
	Rate	Households	284	34.8	19.8	44.7	58.5	70.9	87.6
	Rate	People		41.3	25.6	52.0	67.1	79.8	92.7
All									
	Line	People		678	539	758	881	1,030	1,587
	Rate	Households	381	33.4	18.9	42.9	56.0	68.1	84.8
	Rate	People		39.5	24.4	49.7	64.0	76.5	89.5

Source and definitions: See Table 1 and text.

Table 2 (Karusi): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		824	1,313	1,969	2,625
	Rate	Households	107	18.7	30.4	49.1	62.1
	Rate	People		21.4	35.1	52.7	68.9
Rural							
	Line	People		824	1,313	1,969	2,625
	Rate	Households	285	33.7	66.7	83.2	91.5
	Rate	People		41.4	75.4	89.3	95.7
All							
	Line	People		824	1,313	1,969	2,625
	Rate	Households	392	33.4	65.8	82.4	90.8
	Rate	People		41.0	74.4	88.4	95.1

Source and definitions: See Table 1 and text.

Table 2 (Karusi): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,180	1,888	2,361	4,721	1,100	1,794
	Rate	Households	107	38.5	58.2	71.3	91.1	35.3	56.1
	Rate	People		43.1	65.1	79.9	97.1	40.4	62.8
Rural									
	Line	People		1,180	1,888	2,361	4,721	1,100	1,794
	Rate	Households	285	75.2	89.1	94.5	99.6	72.4	87.7
	Rate	People		83.5	94.4	97.2	99.9	80.5	93.3
All									
	Line	People		1,180	1,888	2,361	4,721	1,100	1,794
	Rate	Households	392	74.3	88.4	94.0	99.4	71.5	86.9
	Rate	People		82.6	93.7	96.8	99.9	79.6	92.6

Source and definitions: See Table 1 and text.

Table 2 (Karusi): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		593	472	663	771	901	1,389
	Rate	Households	107	16.8	11.4	21.5	23.8	29.0	44.9
	Rate	People		20.3	15.2	24.1	27.7	34.4	50.2
Rural									
	Line	People		593	472	663	771	901	1,389
	Rate	Households	285	34.9	22.9	40.2	52.6	60.3	82.3
	Rate	People		42.7	27.9	49.0	62.5	69.8	88.8
All									
	Line	People		593	472	663	771	901	1,389
	Rate	Households	392	34.4	22.6	39.7	51.9	59.5	81.4
	Rate	People		42.1	27.6	48.4	61.6	69.0	87.8

Source and definitions: See Table 1 and text.

Table 2 (Kayanza): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		894	1,424	2,136	2,848
	Rate	Households	79	19.9	47.2	61.6	79.1
	Rate	People		25.5	51.1	66.5	85.6
Rural							
	Line	People		894	1,424	2,136	2,848
	Rate	Households	293	42.5	73.4	88.5	95.5
	Rate	People		48.7	78.7	91.6	97.1
All							
	Line	People		894	1,424	2,136	2,848
	Rate	Households	372	41.2	71.8	86.9	94.5
	Rate	People		47.2	76.8	89.9	96.4

Source and definitions: See Table 1 and text.

Table 2 (Kayanza): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,281	2,049	2,561	5,122	1,193	1,947
	Rate	Households	79	56.8	76.7	80.3	100.0	53.7	72.9
	Rate	People		59.0	82.2	86.4	100.0	57.5	79.1
Rural									
	Line	People		1,281	2,049	2,561	5,122	1,193	1,947
	Rate	Households	293	80.9	96.0	96.8	99.1	77.5	95.4
	Rate	People		85.3	97.1	98.0	99.7	83.2	96.5
All									
	Line	People		1,281	2,049	2,561	5,122	1,193	1,947
	Rate	Households	372	79.5	94.8	95.8	99.2	76.1	94.1
	Rate	People		83.6	96.1	97.2	99.8	81.5	95.4

Source and definitions: See Table 1 and text.

Table 2 (Kayanza): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		644	512	720	837	978	1,507
	Rate	Households	79	19.2	15.3	25.6	32.3	41.8	59.9
	Rate	People		25.1	18.9	32.0	38.2	48.2	62.1
Rural									
	Line	People		644	512	720	837	978	1,507
	Rate	Households	293	40.4	24.6	50.2	59.2	68.0	86.2
	Rate	People		45.0	27.8	56.6	65.2	74.1	89.9
All									
	Line	People		644	512	720	837	978	1,507
	Rate	Households	372	39.1	24.1	48.8	57.6	66.5	84.6
	Rate	People		43.7	27.2	54.9	63.4	72.4	88.1

Source and definitions: See Table 1 and text.

Table 2 (Kirundo): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		892	1,421	2,132	2,842
	Rate	Households	107	9.9	30.0	55.1	71.9
	Rate	People		9.0	29.7	61.0	74.8
Rural							
	Line	People		892	1,421	2,132	2,842
	Rate	Households	283	41.5	69.9	87.9	92.2
	Rate	People		50.1	77.3	92.4	95.6
All							
	Line	People		892	1,421	2,132	2,842
	Rate	Households	390	40.9	69.2	87.3	91.8
	Rate	People		49.4	76.4	91.8	95.2

Source and definitions: See Table 1 and text.

Table 2 (Kirundo): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,278	2,045	2,556	5,112	1,191	1,943
	Rate	Households	107	41.2	66.6	78.6	93.3	40.7	63.4
	Rate	People		41.0	70.5	80.8	96.3	40.0	68.1
Rural									
	Line	People		1,278	2,045	2,556	5,112	1,191	1,943
	Rate	Households	283	78.4	91.2	93.3	98.9	74.8	90.3
	Rate	People		84.5	95.0	96.4	99.5	82.1	94.4
All									
	Line	People		1,278	2,045	2,556	5,112	1,191	1,943
	Rate	Households	390	77.8	90.8	93.1	98.8	74.2	89.9
	Rate	People		83.7	94.5	96.1	99.4	81.3	93.9

Source and definitions: See Table 1 and text.

Table 2 (Kirundo): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		642	511	718	835	976	1,504
	Rate	Households	107	10.6	5.0	11.4	17.3	25.7	52.9
	Rate	People		9.5	4.5	10.3	15.3	23.5	58.7
Rural									
	Line	People		642	511	718	835	976	1,504
	Rate	Households	283	41.1	27.0	47.5	56.5	65.6	84.6
	Rate	People		49.6	33.5	56.0	64.7	73.5	88.9
All									
	Line	People		642	511	718	835	976	1,504
	Rate	Households	390	40.6	26.6	46.8	55.8	64.9	84.0
	Rate	People		48.9	33.0	55.2	63.7	72.5	88.4

Source and definitions: See Table 1 and text.

Table 2 (Makamba): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		915	1,457	2,186	2,914
	Rate	Households	96	9.7	28.6	48.2	59.9
	Rate	People		11.5	30.6	54.2	67.8
Rural							
	Line	People		915	1,457	2,186	2,914
	Rate	Households	271	20.1	54.0	76.5	87.3
	Rate	People		26.3	64.8	83.5	91.7
All							
	Line	People		915	1,457	2,186	2,914
	Rate	Households	367	19.8	53.3	75.7	86.6
	Rate	People		25.9	63.9	82.7	91.1

Source and definitions: See Table 1 and text.

Table 2 (Makamba): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,310	2,096	2,620	5,241	1,221	1,992
	Rate	Households	96	37.3	58.6	65.2	89.3	34.4	57.1
	Rate	People		40.7	65.9	73.1	93.6	37.1	64.2
Rural									
	Line	People		1,310	2,096	2,620	5,241	1,221	1,992
	Rate	Households	271	66.4	84.5	88.8	100.0	62.0	83.2
	Rate	People		76.0	91.0	93.3	100.0	72.8	89.9
All									
	Line	People		1,310	2,096	2,620	5,241	1,221	1,992
	Rate	Households	367	65.6	83.8	88.1	99.7	61.2	82.5
	Rate	People		75.1	90.4	92.8	99.8	71.8	89.2

Source and definitions: See Table 1 and text.

Table 2 (Makamba): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		658	524	736	856	1,000	1,542
	Rate	Households	96	9.1	4.2	11.4	21.0	24.3	42.0
	Rate	People		10.9	4.0	13.1	23.6	27.5	47.1
Rural									
	Line	People		658	524	736	856	1,000	1,542
	Rate	Households	271	17.3	7.3	30.6	36.6	48.4	73.0
	Rate	People		22.3	8.9	38.0	45.0	58.5	82.1
All									
	Line	People		658	524	736	856	1,000	1,542
	Rate	Households	367	17.1	7.2	30.1	36.2	47.8	72.2
	Rate	People		22.0	8.8	37.3	44.4	57.6	81.2

Source and definitions: See Table 1 and text.

Table 2 (Muramvya): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		903	1,439	2,159	2,878
	Rate	Households	107	8.9	24.2	55.4	67.8
	Rate	People		9.4	27.4	59.9	72.3
Rural							
	Line	People		903	1,439	2,159	2,878
	Rate	Households	287	13.1	48.5	73.5	87.5
	Rate	People		16.1	57.7	80.8	92.0
All							
	Line	People		903	1,439	2,159	2,878
	Rate	Households	394	13.0	48.0	73.1	87.1
	Rate	People		16.0	57.1	80.4	91.6

Source and definitions: See Table 1 and text.

Table 2 (Muramvya): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,294	2,071	2,588	5,176	1,206	1,967
	Rate	Households	107	37.3	65.0	74.5	97.2	31.4	62.0
	Rate	People		41.4	70.9	79.1	98.0	34.8	67.9
Rural									
	Line	People		1,294	2,071	2,588	5,176	1,206	1,967
	Rate	Households	287	62.0	86.0	92.3	98.9	56.3	83.8
	Rate	People		71.2	91.5	95.8	99.6	65.9	89.3
All									
	Line	People		1,294	2,071	2,588	5,176	1,206	1,967
	Rate	Households	394	61.4	85.6	91.9	98.8	55.7	83.3
	Rate	People		70.6	91.1	95.5	99.6	65.2	88.9

Source and definitions: See Table 1 and text.

Table 2 (Muramvya): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		650	518	727	846	988	1,523
	Rate	Households	107	7.5	2.9	10.5	15.5	23.3	48.9
	Rate	People		8.6	3.0	10.8	16.8	25.0	52.8
Rural									
	Line	People		650	518	727	846	988	1,523
	Rate	Households	287	12.9	3.6	18.1	28.1	40.9	70.1
	Rate	People		15.7	5.0	21.8	34.1	47.8	78.8
All									
	Line	People		650	518	727	846	988	1,523
	Rate	Households	394	12.8	3.6	17.9	27.9	40.6	69.6
	Rate	People		15.6	5.0	21.6	33.7	47.4	78.2

Source and definitions: See Table 1 and text.

Table 2 (Muyinga): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		920	1,466	2,199	2,932
	Rate	Households	94	15.2	42.5	60.0	71.0
	Rate	People		16.7	50.2	66.6	76.1
Rural							
	Line	People		920	1,466	2,199	2,932
	Rate	Households	276	43.0	81.0	92.4	96.1
	Rate	People		48.7	86.0	94.6	97.6
All							
	Line	People		920	1,466	2,199	2,932
	Rate	Households	370	42.5	80.4	91.9	95.7
	Rate	People		48.1	85.3	94.1	97.2

Source and definitions: See Table 1 and text.

Table 2 (Muyinga): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,318	2,109	2,637	5,274	1,228	2,004
	Rate	Households	94	49.7	68.1	78.1	89.4	49.2	66.7
	Rate	People		56.0	73.5	81.9	94.7	55.3	72.8
Rural									
	Line	People		1,318	2,109	2,637	5,274	1,228	2,004
	Rate	Households	276	87.1	95.3	96.5	99.4	84.1	94.6
	Rate	People		91.5	97.3	97.9	99.7	89.4	96.3
All									
	Line	People		1,318	2,109	2,637	5,274	1,228	2,004
	Rate	Households	370	86.5	94.9	96.3	99.2	83.6	94.2
	Rate	People		90.9	96.9	97.7	99.6	88.8	95.9

Source and definitions: See Table 1 and text.

Table 2 (Muyinga): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		663	527	741	862	1,007	1,551
	Rate	Households	94	14.4	11.4	17.7	22.0	34.0	57.0
	Rate	People		16.1	12.3	19.0	23.8	39.3	62.9
Rural									
	Line	People		663	527	741	862	1,007	1,551
	Rate	Households	276	43.3	27.9	52.4	64.2	73.8	90.6
	Rate	People		47.9	33.7	58.7	71.5	80.6	93.7
All									
	Line	People		663	527	741	862	1,007	1,551
	Rate	Households	370	42.8	27.7	51.8	63.6	73.2	90.1
	Rate	People		47.3	33.3	58.0	70.7	79.9	93.2

Source and definitions: See Table 1 and text.

Table 2 (Mwaro): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		892	1,421	2,132	2,842
	Rate	Households	53	9.2	27.7	50.6	62.1
	Rate	People		12.4	34.9	58.6	72.1
Rural							
	Line	People		892	1,421	2,132	2,842
	Rate	Households	341	15.5	40.1	67.8	76.5
	Rate	People		21.5	50.1	76.4	83.2
All							
	Line	People		892	1,421	2,132	2,842
	Rate	Households	394	15.4	39.9	67.6	76.3
	Rate	People		21.4	49.9	76.2	83.0

Source and definitions: See Table 1 and text.

Table 2 (Mwaro): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,278	2,044	2,556	5,111	1,191	1,942
	Rate	Households	53	38.9	59.4	73.4	100.0	32.0	57.6
	Rate	People		48.5	65.9	82.0	100.0	40.0	64.4
Rural									
	Line	People		1,278	2,044	2,556	5,111	1,191	1,942
	Rate	Households	341	52.2	74.4	81.0	94.6	45.9	72.7
	Rate	People		61.2	81.8	87.2	96.4	55.3	80.9
All									
	Line	People		1,278	2,044	2,556	5,111	1,191	1,942
	Rate	Households	394	52.0	74.2	80.9	94.7	45.7	72.5
	Rate	People		61.0	81.6	87.2	96.4	55.1	80.7

Source and definitions: See Table 1 and text.

Table 2 (Mwaro): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		642	511	718	835	976	1,504
	Rate	Households	53	7.9	5.6	9.2	14.5	19.3	46.5
	Rate	People		10.5	6.6	12.4	17.5	23.8	54.2
Rural									
	Line	People		642	511	718	835	976	1,504
	Rate	Households	341	12.0	5.6	17.7	25.4	34.2	62.4
	Rate	People		17.2	8.1	24.8	34.5	43.9	71.5
All									
	Line	People		642	511	718	835	976	1,504
	Rate	Households	394	11.9	5.6	17.6	25.3	34.1	62.2
	Rate	People		17.1	8.1	24.7	34.3	43.6	71.3

Source and definitions: See Table 1 and text.

Table 2 (Ngozi): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		842	1,341	2,012	2,682
	Rate	Households	92	9.9	32.3	58.1	68.2
	Rate	People		11.0	34.5	61.6	68.8
Rural							
	Line	People		842	1,341	2,012	2,682
	Rate	Households	285	22.3	50.7	72.2	86.1
	Rate	People		25.6	57.3	78.2	89.6
All							
	Line	People		842	1,341	2,012	2,682
	Rate	Households	377	21.5	49.5	71.3	85.0
	Rate	People		24.5	55.7	77.0	88.1

Source and definitions: See Table 1 and text.

Table 2 (Ngozi): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,206	1,930	2,412	4,824	1,124	1,833
	Rate	Households	92	41.0	65.5	76.5	96.2	36.3	65.5
	Rate	People		43.5	66.7	76.9	96.9	39.5	66.7
Rural									
	Line	People		1,206	1,930	2,412	4,824	1,124	1,833
	Rate	Households	285	61.3	83.2	90.0	99.7	56.4	81.6
	Rate	People		68.1	87.8	93.8	99.9	63.5	86.2
All									
	Line	People		1,206	1,930	2,412	4,824	1,124	1,833
	Rate	Households	377	60.0	82.1	89.2	99.4	55.2	80.6
	Rate	People		66.3	86.3	92.6	99.7	61.7	84.8

Source and definitions: See Table 1 and text.

Table 2 (Ngozi): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		606	482	678	788	921	1,419
	Rate	Households	92	10.8	6.4	15.5	25.7	29.6	52.4
	Rate	People		11.6	7.3	16.6	27.9	31.8	55.1
Rural									
	Line	People		606	482	678	788	921	1,419
	Rate	Households	285	20.3	12.9	26.1	34.3	44.9	68.7
	Rate	People		23.2	15.2	30.3	39.7	52.5	75.2
All									
	Line	People		606	482	678	788	921	1,419
	Rate	Households	377	19.7	12.5	25.4	33.7	44.0	67.7
	Rate	People		22.4	14.7	29.3	38.9	51.0	73.7

Source and definitions: See Table 1 and text.

Table 2 (Rutana): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		864	1,376	2,064	2,752
	Rate	Households	89	1.5	13.0	36.3	50.4
	Rate	People		1.2	17.9	42.5	55.0
Rural							
	Line	People		864	1,376	2,064	2,752
	Rate	Households	272	30.4	61.4	79.4	90.0
	Rate	People		38.1	69.5	86.4	93.6
All							
	Line	People		864	1,376	2,064	2,752
	Rate	Households	361	29.6	60.1	78.2	88.9
	Rate	People		37.1	68.0	85.1	92.5

Source and definitions: See Table 1 and text.

Table 2 (Rutana): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,237	1,979	2,474	4,949	1,153	1,881
	Rate	Households	89	20.9	46.3	54.9	87.9	16.5	46.3
	Rate	People		27.6	52.8	59.3	91.5	23.7	52.8
Rural									
	Line	People		1,237	1,979	2,474	4,949	1,153	1,881
	Rate	Households	272	71.5	88.1	95.2	99.9	66.1	86.1
	Rate	People		80.1	93.4	97.1	99.9	75.7	91.4
All									
	Line	People		1,237	1,979	2,474	4,949	1,153	1,881
	Rate	Households	361	70.1	86.9	94.1	99.5	64.7	85.0
	Rate	People		78.7	92.3	96.0	99.7	74.2	90.4

Source and definitions: See Table 1 and text.

Table 2 (Rutana): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		622	495	695	808	945	1,456
	Rate	Households	89	0.0	0.0	3.4	5.3	11.3	34.6
	Rate	People		0.0	0.0	6.1	8.4	15.8	43.1
Rural									
	Line	People		622	495	695	808	945	1,456
	Rate	Households	272	30.7	17.4	34.4	44.3	52.7	78.5
	Rate	People		38.5	23.4	42.1	54.1	62.5	85.8
All									
	Line	People		622	495	695	808	945	1,456
	Rate	Households	361	29.8	16.9	33.5	43.2	51.6	77.3
	Rate	People		37.4	22.7	41.1	52.8	61.1	84.6

Source and definitions: See Table 1 and text.

Table 2 (Ruyigi): National poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)			
				National (2013 def.)			
				Food	100%	150%	200%
Urban							
	Line	People		860	1,371	2,057	2,742
	Rate	Households	102	11.4	35.0	48.8	63.5
	Rate	People		11.6	38.7	49.8	67.6
Rural							
	Line	People		860	1,371	2,057	2,742
	Rate	Households	285	49.1	78.6	92.5	96.1
	Rate	People		56.5	85.0	95.6	97.5
All							
	Line	People		860	1,371	2,057	2,742
	Rate	Households	387	48.3	77.8	91.7	95.4
	Rate	People		55.6	84.0	94.7	96.9

Source and definitions: See Table 1 and text.

Table 2 (Ruyigi): International 2005 and 2011 PPP poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
				$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Urban									
	Line	People		1,233	1,972	2,466	4,931	1,149	1,874
	Rate	Households	102	41.6	58.8	72.5	87.7	41.6	56.1
	Rate	People		44.4	62.5	77.7	92.7	44.4	59.9
Rural									
	Line	People		1,233	1,972	2,466	4,931	1,149	1,874
	Rate	Households	285	84.2	96.1	96.7	98.8	82.1	95.8
	Rate	People		90.9	97.5	97.8	99.2	88.8	97.4
All									
	Line	People		1,233	1,972	2,466	4,931	1,149	1,874
	Rate	Households	387	83.4	95.3	96.2	98.6	81.2	95.0
	Rate	People		89.9	96.8	97.4	99.1	87.9	96.6

Source and definitions: See Table 1 and text.

Table 2 (Ruyigi): Relative and percentile-based poverty lines (2013 definition) and poverty rates for households and people for Urban, Rural, and All in 2013/14

Area	Line or Rate	Households or People	n	Poverty lines and poverty rates (%)					
				Poorest 1/2	Percentile-based lines (2013 def.)				
				< 100% Natl.	20th	40th	50th	60th	80th
Urban									
	Line	People		620	493	693	806	941	1,451
	Rate	Households	102	8.3	5.6	11.8	20.7	31.7	43.7
	Rate	People		8.2	5.8	11.8	21.1	33.5	46.4
Rural									
	Line	People		620	493	693	806	941	1,451
	Rate	Households	285	47.4	30.4	55.5	62.3	71.8	89.7
	Rate	People		54.6	36.9	63.6	71.1	79.9	94.6
All									
	Line	People		620	493	693	806	941	1,451
	Rate	Households	387	46.6	29.9	54.6	61.5	71.0	88.8
	Rate	People		53.6	36.3	62.6	70.1	78.9	93.6

Source and definitions: See Table 1 and text.

Table 3: Poverty indicators

Uncertainty coefficient	Indicator (Responses ordered starting with those linked with higher poverty likelihoods)
840	What is the household's main source of lighting? (Burning wood, or other; Homemade kerosene lamp without glass (*bobèche*), or LPG; Kerosene lamp with glass, solar panel, or candles; Electricity, or generator)
836	What is the household's main cooking fuel? (Collected firewood, or dung; Purchased firewood, or other; Charcoal, LPG, electricity, kerosene, or does not cook)
770	What is the main construction material of the floor of the residence? (Wood, earth, or other; Tile, or cement)
698	What is the highest grade that the male head/spouse has passed? (Never went to school/none, pre-school, or day-care; SIL/grande section, or CP/CPS ; CE1 ; CE2 ; CM1 ; No male head/spouse ; CM2, $6^{\text{ième}}$ or 1^{er} A.T., $5^{\text{ième}}$ or $2^{\text{ième}}$ A.T., $4^{\text{ème}}$ or $3^{\text{ème}}$ A.T., or $3^{\text{ème}}$ or $4^{\text{ème}}$ A.T. ; 2^{nde} G. or T, $1^{\text{ère}}$ G. or T, Tle G. or T, or $1^{\text{ère}}$ année Univ. or higher)
634	How many household members are 18-years-old or younger? (Six or more; Four, or five; Three; Two; One; Zero)
615	How many household members are there? (Eight or more; Seven; Six; Five; Four; Three; Two; One)
602	How many household members are 16-years-old or younger? (Five or more; Four; Three; Two; One; Zero)
579	How many household members are 17-years-old or younger? (Five or more; Four; Three; Two; One; Zero)
571	How many household members are 15-years-old or younger? (Five or more; Four; Three; Two; One; Zero)
567	Do all household members ages 7 to 13 currently go to school or to an educational institution? (No; Yes; No members ages 7 to 13)
564	How many household members are 14-years-old or younger? (Five or more; Four; Three; Two; One; Zero)
560	Do all household members ages 7 to 16 currently (in the current school year) go to school or to an educational institution? (No; Yes; No members ages 7 to 16)
555	What is the highest grade that the (eldest) female head/spouse has passed? (Never went to school/none, pre-school, or day-care; SIL/grande section, CP/CPS, CE1, CE2, CM1, or CM2 ; No female head/spouse; $6^{\text{ième}}$ or 1^{er} A.T., or higher)

Table 3 (cont.): Poverty indicators

Uncertainty coefficient	Indicator (Responses ordered starting with those linked with higher poverty likelihoods)
554	Do all household members ages 7 to 15 currently go to school or to an educational institution? (No; Yes; No members ages 7 to 15)
551	Do all household members ages 7 to 12 currently go to school or to an educational institution? (No; Yes; No members ages 7 to 12)
542	Do all household members ages 7 to 11 currently go to school or to an educational institution? (No; Yes; No members ages 7 to 11)
541	How many household members are 14-years-old or younger? (Five or more; Four; Three; Two; One; Zero)
516	How many household members are 12-years-old or younger? (Five or more; Four; Three; Two; One; Zero)
493	What is your main source of drinking water? (Well with hand pump, water truck, unimproved well, spring, river, lake, or water hole, rainwater, or other; Improved well or spring, or borewell; Public stand-pipe,or other public faucet; Faucet inside the residence, faucet in the yard or compound, private faucet outside of the yard or compound, faucet of a neighbor, re-seller of water from a faucet, or bottled water)
493	Can the male head/spouse read and write a simple text in Kirundi, French, Swahili or some other language? (None; Only Kirundi; No male head/spouse; French, but not Swahili or some other language (regardless of Kirundi); Swahili, but not some other language (regardless of Kirundi or French); French, but not Swahili or some other language (regardless of Kirundi))
492	Can the female head/spouse read and write a simple text in Kirundi, French, Swahili, or some other language? (No; No female head/spouse; Only Kirundi; French, but not Swahili or some other language (regardless of Kirundi); Swahili or some other language (regardless of Kirundi and French))
486	Do all household members ages 7 to 17 currently go to school or to an educational institution? (No; Yes; No members ages 7 to 17)
484	Do all household members ages 7 to 18 currently go to school or to an educational institution? (No; Yes; No members ages 7 to 18)

Table 3 (cont.): Poverty indicators

Uncertainty coefficient	Indicator (Responses ordered starting with those linked with higher poverty likelihoods)
472	What is the occupational status of the (eldest) female head/spouse in her main occupation in the past 7 days (or her usual main occupation)? (No female head/spouse; Does not work; Unpaid family worker, or unpaid apprentice/intern; Self-employed, or casual laborer; C-level executive, engineer, middle manager, white-collar worker, skilled employee, semi-skilled employee, paid apprentice/intern, or owner of a business with employees)
468	How many household members are 12-years-old or younger? (Four or more; Three; Two; One; Zero)
467	Does your household currently have a cell phone? (No; Yes)
456	If the male head/spouse worked at least 1 hour in the past 7 days, then was his main occupation (or in his usual occupation) in the sector of agriculture, animal husbandry, or fishing? (Did not work; Worked in agriculture etc.; No male head/spouse; Worked in non-agriculture)
448	What toilet arrangement does the household use? (Open ditch, public latrine, a neighbor's toilet, or other; Unimproved latrine; Flush toilet (piped or hand-pour) or improved ventilated latrine)
443	Did any household member work as casual laborer in his/her main occupation in the past 7 days (or his/her usual main occupation)? (Yes; No)
442	Can the male head/spouse read and write a simple text in French? (No; No male head/spouse; Yes)
440	Is the main occupation of the (eldest) female head/spouse in the past 7 days (or her usual main occupation) in agriculture, animal husbandry, or fishing? (No female head/spouse; Does not work; Worked in agriculture; Worked in non-agriculture)
435	What kind of residence do you have? (Mini-studio; Other; House within a compound; Traditional detached house, apartment, or modern detached house)
419	Can the (eldest) female head/spouse read and write a simple text in some language other than Kirundi, French, or Swahili? (No; No female head/spouse; Yes)
419	Can the male head/spouse read and write in some language other than Kirundi, French, or Swahili? (No; No male head/spouse; Yes)
417	How many household members are 11-years-old or younger? (Four or more; Three; Two; One; Zero)

Table 3 (cont.): Poverty indicators

Uncertainty coefficient	Indicator (Responses ordered starting with those linked with higher poverty likelihoods)
395	How many hoes does your household currently have? (One; Two; Three or more; None)
386	What is the occupational status of the male head/spouse in his main occupation in the past 7 days (or his usual main occupation)? (Self-employed, unpaid family worker, or unpaid apprentice/intern; Does not work; Casual laborer, semi-skilled wage/salary worker, or paid apprentice/intern; No male head/spouse; C-level executive, engineer, middle manager, white-collar worker, skilled employee, or owner of a business with employees)
372	What is the tenancy status of the household in its residence? (Owned (without title); Owned (with title); Rent, rent-ro-own, housed by employer, or in free housing owned by a relative or friend)
371	Does you household currently have a television? (No; Yes)
340	Can the male head/spouse read and write a simple text in Swahili? (No; No male head/spouse; Yes)
326	Can the male head/spouse read and write a simple text in Kirundi? (No; Yes; No male head/spouse)
318	What is the main construction material of the walls of the residence? (Packed earth, planks, thatch/straw/leaves, corrugated tin, or other; Plain bricks or mud bricks; Concrete, cinder blocks, baked bricks, or worked stone)
312	Can the (eldest) female head/spouse read and write a simple text in French? (No; No female head/spouse; Yes)
306	Can the (eldest) female head/spouse read and writea simple text in Swahili? (No; No female head/spouse; Yes)
301	Does you household currently have a living-room set or dining-room set? No; Yes)
296	How many eating utensils does your household currently have? (None; One; Two; Three; Four; Five, Six or more)
293	Does you household currently have an electric iron? (No; Yes)
260	Does you household currently have a wardrobe or cabinet? (No; Yes)
216	Can the (eldest) female head/spouse read and write a simple text in Kirundi? (No; Yes; No female head/spouse)

Table 3 (cont.): Poverty indicators

Uncertainty coefficient	Indicator (Responses ordered starting with those linked with higher poverty likelihoods)
205	How many rooms are usually used for sleeping? (One, or none; Two; Three or more)
202	What is the area of the residence in square meters? (15 or less; 16 to 20; 21 to 25; 26 to 30; 31 to 35; 36 to 40; 41 to 45; 46 to 50; 51 to 60; 61 to 75; 76 or more)
195	In the past 7 days, how many household members have worked for at least 1 hour? (Three or more; Two; One; None)
173	Does the household head have a spouse/conjugal partner? (Oui; Female head without a spouse/partner; Male head without a spouse/partner)
167	What is the main construction material of the roof of the residence? (Thatch/straw/leaves, or other; Corrugated tin/tile, cement, or earth)
159	How many household members are 6-years-old or younger? (Three or more; Two; One; Zero)
154	In their main occupation in the past 7 days (or their usual main occupation), did any household members earn a wage or salary working as an executive, engineer (or similar), middle manager, white-collar worker, skilled worker, semi-skilled worker, or apprentice/intern (paid)?) (No; Yes)
144	What is the marital status of the male head/spouse? (Co-habiting (monogamous or polygamous), widower, or divorced or separated; Married (legally or informally); No male head/spouse; Single/never-married)
130	Among the household members 10-years-old or older who worked at least 1 hour in the past 7 days, how many had their main occupation (or their usual occupation) in the sector of agriculture, animal husbandry, or fishing? (Three or more; Two; One, or none)
126	Does you household currently have a refrigerator or freezer? (No; Yes)
118	What is the marital status of the (eldest) female head/spouse? (Co-habiting (monogamous), or single/never-married; Married (legally or informally); Co-habiting (polygamous); Widow, or divorced or separated; No female head/spouse)
103	Does you household currently have a laptop or desktop computer? (No; Yes)

Table 3 (cont.): Poverty indicators

Uncertainty coefficient	Indicator (Responses ordered starting with those linked with higher poverty likelihoods)
94	In their main occupation in the past 7 days (or their usual main occupation), was the male head/spouse or the (eldest) female head/spouse self-employed in a sector other than agriculture, animal husbandry, or fishing? (No; Yes)
93	Does you household currently have a large mortar and pestle? (Yes; No)
91	Does your household currently have a radio? (No; Yes)
56	Does you household currently have a motorcyle/scooter? (No; Yes)
40	Does you household currently have an automobile? (No; Yes)
36	How many rooms does your residence have? (One, two, or none; Three; Four; Five; Six or more)
12	Does any household member have a handicap? (Yes; No)
3	Does you household currently have a bicycle, motorcycle/scooter, or automobile? (No; Yes)

Source: 2013/14 ECVMB with an average poverty line of BIF1,321 per-ault-equivalent per-day

Tables for
100% of the 2013-Definition National Poverty Line

(and Tables Pertaining
to All Poverty Lines)

Table 4 (100% of the 2013-def. national line)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	92.3
17–20	91.2
21–23	86.1
24–25	84.7
26–27	82.5
28–29	81.0
30–31	78.1
32–33	72.3
34–35	70.5
36–37	66.3
38–39	52.5
40–41	49.1
42–43	38.4
44–45	35.2
46–47	32.9
48–51	29.6
52–56	19.9
57–67	11.8
68–100	5.2

Table 5 (100% of the 2013-def. national line): Derivation of estimated poverty likelihoods associated with scores

Score	Households in range and < poverty line		All households in range		Poverty likelihood (%)
0–16	4,057	÷	4,397	=	92.3
17–20	7,837	÷	8,595	=	91.2
21–23	7,226	÷	8,394	=	86.1
24–25	5,933	÷	7,004	=	84.7
26–27	6,660	÷	8,076	=	82.5
28–29	7,170	÷	8,855	=	81.0
30–31	7,754	÷	9,925	=	78.1
32–33	7,246	÷	10,017	=	72.3
34–35	7,379	÷	10,465	=	70.5
36–37	6,506	÷	9,816	=	66.3
38–39	5,417	÷	10,319	=	52.5
40–41	3,382	÷	6,886	=	49.1
42–43	3,634	÷	9,456	=	38.4
44–45	2,011	÷	5,710	=	35.2
46–47	2,145	÷	6,518	=	32.9
48–51	2,418	÷	8,160	=	29.6
52–56	1,064	÷	5,353	=	19.9
57–67	730	÷	6,172	=	11.8
68–100	424	÷	8,135	=	5.2

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

Table 6 (100% of the 2013-def. national line): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–3.9	2.4	2.5	2.7
17–20	+8.3	2.7	3.3	4.1
21–23	–1.5	1.8	2.2	2.8
24–25	–1.8	2.2	2.6	3.3
26–27	–3.4	2.7	2.9	3.1
28–29	–5.6	3.6	3.9	4.3
30–31	+9.2	2.5	2.9	3.9
32–33	–4.9	3.4	3.6	4.1
34–35	–7.7	4.8	5.0	5.5
36–37	+13.5	3.1	3.7	4.8
38–39	–3.9	3.5	3.7	4.7
40–41	–2.7	3.1	3.8	5.0
42–43	+7.4	2.7	3.2	4.4
44–45	–14.6	9.0	9.2	9.9
46–47	+0.5	3.1	3.7	4.9
48–51	+3.8	3.2	3.9	4.9
52–56	–1.9	2.8	3.2	4.2
57–67	+3.7	1.5	1.8	2.5
68–100	–0.8	1.5	1.8	2.3

Table 7 (100% of the 2013-def. national line): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
n	**Error**	**90-percent**	**95-percent**	**99-percent**
1	+0.1	72.6	78.9	89.7
4	0.0	36.4	42.9	54.2
8	+0.1	26.0	31.9	37.8
16	–0.2	18.2	21.5	29.5
32	–0.5	13.9	16.6	21.7
64	–0.3	9.9	11.4	14.2
128	–0.3	6.8	7.8	11.0
256	–0.5	4.6	5.6	7.3
512	–0.5	3.3	3.9	5.4
1,024	–0.5	2.5	3.0	3.8
2,048	–0.5	1.7	2.0	2.6
4,096	–0.4	1.2	1.5	2.0
8,192	–0.4	0.8	1.0	1.3
16,384	–0.4	0.6	0.7	0.9

Table 8 (National lines (2013 def.)): Errors in estimated poverty rates at a point in time (average of differences between estimated and observed values for households in 1,000 bootstrap samples of $n = 16{,}384$ from the validation sample), precision, and the α factor for precision

	Poverty lines			
		National (2013 def.)		
	Food	**100%**	**150%**	**200%**
Error (estimate minus observed value)	+0.3	–0.4	–1.1	–0.6
Precision of estimate	0.6	0.6	0.5	0.4
Alpha factor for precision	1.00	0.94	0.87	0.81

Results pertain to the 2013/14 scorecard applied to the 2013/14 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 ± percentage points.

Errors 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 (International 2005 and 2011 PPP poverty lines (2013 def.)): Errors in estimated poverty rates at a point in time (average of differences between estimated and observed values for households in 1,000 bootstrap samples of n = 16,384 from the validation sample), precision, and the α factor for precision

	Poverty lines					
	Intl. 2005 PPP (2013 def.)				Intl. 2011 PPP (2013 def.)	
	$1.25	$2.00	$2.50	$5.00	$1.90	$3.10
Error (estimate minus observed value)	–0.1	–0.5	+0.2	–0.3	–0.7	–0.1
Precision of estimate	0.6	0.4	0.3	0.1	0.6	0.4
Alpha factor for precision	0.90	0.81	0.81	0.80	0.92	0.83

Results pertain to the 2013/14 scorecard applied to the 2013/14 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 ± percentage points.

Errors 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 poverty lines (2013 def.)): Errors in estimated poverty rates at a point in time (average of differences between estimated and observed values for households in 1,000 bootstrap samples of $n = 16{,}384$ from the validation sample), precision, and the α factor for precision

	Poverty lines					
	Poorest 1/2	Percentile-based lines (2013 def.)				
	< 100% Natl.	20th	40th	50th	60th	80th
Error (estimate minus observed value)	–0.4	0.0	–0.7	–1.1	–0.8	–0.2
Precision of estimate	0.6	0.5	0.6	0.6	0.6	0.5
Alpha factor for precision	1.00	1.06	1.02	0.97	0.94	0.89

Results pertain to the 2013/14 scorecard applied to the 2013/14 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 ± percentage points.

Errors 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 (All poverty lines): Possible targeting outcomes

Observed poverty status	Targeting segment: Targeted	Targeting segment: Non-targeted
Poor	**Inclusion** Poor correctly targeted	**Undercoverage** Poor mistakenly not targeted
Non-poor	**Leakage** Non-poor mistakenly targeted	**Exclusion** Non-poor correctly not targeted

Table 10 (100% of the 2013-def. national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.2	53.9	0.3	41.6	45.9	–85.0
<=20	8.5	49.6	0.9	40.9	49.4	–69.1
<=23	13.3	44.8	1.7	40.2	53.5	–51.2
<=25	17.0	41.1	2.3	39.5	56.5	–37.5
<=27	21.3	36.9	3.3	38.6	59.8	–21.1
<=29	26.4	31.7	4.3	37.5	64.0	–1.5
<=31	31.1	27.0	6.5	35.4	66.5	+18.4
<=33	36.3	21.8	8.3	33.6	70.0	+39.2
<=35	41.2	16.9	10.1	31.7	73.0	+59.4
<=37	44.4	13.7	12.4	29.5	73.9	+74.1
<=39	47.6	10.5	14.7	27.1	74.8	+74.6
<=41	50.1	8.0	17.2	24.7	74.8	+70.4
<=43	51.9	6.3	20.9	21.0	72.8	+64.0
<=45	53.8	4.4	23.4	18.5	72.3	+59.8
<=47	55.3	2.8	26.4	15.5	70.7	+54.5
<=51	56.3	1.8	30.0	11.9	68.2	+48.4
<=56	57.3	0.8	33.8	8.1	65.4	+41.9
<=67	57.8	0.3	37.6	4.3	62.1	+35.3
<=100	58.1	0.0	41.9	0.0	58.1	+27.9

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (100% of the 2013-def. national line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	94.3	7.3	16.6:1
<=20	9.4	90.0	14.6	9.0:1
<=23	15.0	88.5	22.9	7.7:1
<=25	19.3	87.9	29.2	7.3:1
<=27	24.6	86.5	36.6	6.4:1
<=29	30.8	85.9	45.5	6.1:1
<=31	37.7	82.7	53.6	4.8:1
<=33	44.6	81.5	62.5	4.4:1
<=35	51.4	80.3	71.0	4.1:1
<=37	56.8	78.2	76.4	3.6:1
<=39	62.4	76.4	82.0	3.2:1
<=41	67.3	74.5	86.2	2.9:1
<=43	72.7	71.3	89.2	2.5:1
<=45	77.1	69.7	92.5	2.3:1
<=47	81.7	67.6	95.1	2.1:1
<=51	86.3	65.3	96.9	1.9:1
<=56	91.1	62.9	98.6	1.7:1
<=67	95.4	60.6	99.5	1.5:1
<=100	100.0	58.1	100.0	1.4:1

Tables for
the 2013-Definition Food Poverty Line

Table 4 (Food line (2003 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	71.8
17–20	70.9
21–23	55.0
24–25	49.2
26–27	47.8
28–29	46.8
30–31	31.8
32–33	31.8
34–35	31.0
36–37	25.8
38–39	18.9
40–41	15.6
42–43	13.4
44–45	11.1
46–47	9.4
48–51	6.1
52–56	3.7
57–67	3.3
68–100	0.9

Table 6 (Food line (2003 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	+3.1	3.3	3.9	4.9
17–20	+5.1	3.1	3.5	4.7
21–23	–2.1	3.0	3.4	4.5
24–25	+5.5	3.3	3.9	5.2
26–27	–5.6	4.3	4.5	5.2
28–29	+6.4	2.7	3.3	4.3
30–31	–9.2	5.9	6.0	6.7
32–33	–7.6	5.1	5.3	5.8
34–35	+9.2	2.2	2.6	3.4
36–37	+3.3	2.3	2.7	3.7
38–39	–7.8	5.1	5.4	5.9
40–41	+2.6	2.1	2.5	3.6
42–43	+7.4	1.3	1.5	2.0
44–45	–2.6	2.5	2.9	3.9
46–47	–5.6	4.1	4.3	4.8
48–51	+4.6	0.6	0.8	1.1
52–56	+1.6	0.9	1.0	1.3
57–67	+3.3	0.0	0.0	0.0
68–100	+0.8	0.1	0.1	0.1

Table 7 (Food line (2003 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.9	61.7	76.0	81.2
4	–1.0	35.3	41.9	54.4
8	–0.2	26.1	30.6	37.5
16	+0.4	19.3	22.5	28.7
32	+0.3	14.1	16.1	20.1
64	+0.2	9.5	11.3	14.1
128	+0.4	6.8	8.0	10.3
256	+0.2	4.7	5.6	7.4
512	+0.3	3.2	3.7	5.0
1,024	+0.2	2.3	2.8	3.6
2,048	+0.3	1.6	1.9	2.4
4,096	+0.3	1.2	1.4	1.8
8,192	+0.3	0.8	1.0	1.3
16,384	+0.3	0.6	0.7	0.9

Table 10 (Food line (2003 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	3.1	25.8	1.4	69.7	72.8	–73.9
<=20	6.3	22.6	3.2	68.0	74.2	–45.6
<=23	9.5	19.4	5.6	65.6	75.0	–15.0
<=25	11.5	17.4	7.9	63.3	74.8	+6.9
<=27	14.1	14.7	10.4	60.7	74.8	+34.2
<=29	16.6	12.3	14.2	56.9	73.5	+50.7
<=31	19.2	9.6	18.4	52.7	72.0	+36.2
<=33	21.8	7.0	22.8	48.4	70.2	+21.0
<=35	23.3	5.5	28.1	43.1	66.4	+2.7
<=37	24.7	4.1	32.1	39.1	63.8	–11.1
<=39	26.3	2.6	36.1	35.0	61.3	–25.3
<=41	26.9	1.9	40.4	30.8	57.7	–40.1
<=43	27.3	1.5	45.4	25.7	53.0	–57.5
<=45	27.8	1.0	49.3	21.9	49.7	–70.9
<=47	28.6	0.3	53.1	18.0	46.6	–84.1
<=51	28.7	0.1	57.6	13.6	42.3	–99.7
<=56	28.8	0.0	62.2	8.9	37.8	–115.8
<=67	28.8	0.0	66.5	4.6	33.5	–130.7
<=100	28.8	0.0	71.2	0.0	28.8	–146.7

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (Food line (2003 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	68.5	10.6	2.2:1
<=20	9.4	66.3	21.7	2.0:1
<=23	15.0	62.9	32.8	1.7:1
<=25	19.3	59.4	39.8	1.5:1
<=27	24.6	57.5	49.0	1.4:1
<=29	30.8	53.8	57.4	1.2:1
<=31	37.7	51.1	66.7	1.0:1
<=33	44.6	48.9	75.6	1.0:1
<=35	51.4	45.4	80.9	0.8:1
<=37	56.8	43.5	85.7	0.8:1
<=39	62.4	42.1	91.0	0.7:1
<=41	67.3	40.0	93.3	0.7:1
<=43	72.7	37.5	94.7	0.6:1
<=45	77.1	36.1	96.5	0.6:1
<=47	81.7	35.0	99.1	0.5:1
<=51	86.3	33.3	99.5	0.5:1
<=56	91.1	31.7	100.0	0.5:1
<=67	95.4	30.2	100.0	0.4:1
<=100	100.0	28.8	100.0	0.4:1

Tables for
150% of the 2013-Definition National Poverty Line

Table 4 (150% of national line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	98.5
17–20	97.9
21–23	94.9
24–25	94.8
26–27	92.9
28–29	92.9
30–31	92.9
32–33	91.9
34–35	87.9
36–37	85.0
38–39	81.8
40–41	76.1
42–43	68.6
44–45	65.3
46–47	63.7
48–51	63.7
52–56	47.0
57–67	28.2
68–100	12.4

Table 6 (150% of national line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of $n = 16{,}384$ from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–0.6	0.5	0.5	0.7
17–20	+0.9	0.9	1.1	1.5
21–23	–1.3	1.2	1.3	1.7
24–25	–2.6	1.8	1.9	2.0
26–27	–5.1	2.9	2.9	3.0
28–29	–2.8	1.8	1.9	2.0
30–31	+0.1	1.3	1.5	2.0
32–33	–3.8	2.3	2.3	2.5
34–35	–3.5	2.4	2.5	2.9
36–37	+1.5	2.1	2.5	3.5
38–39	–2.4	2.2	2.6	3.2
40–41	+0.7	2.7	3.3	4.1
42–43	+4.5	2.8	3.6	4.5
44–45	–13.9	8.3	8.6	9.1
46–47	+1.2	3.2	4.0	5.2
48–51	+13.1	3.2	3.8	4.7
52–56	+3.1	3.1	3.7	5.2
57–67	–5.0	4.3	4.7	5.4
68–100	–5.7	4.2	4.5	5.1

Table 7 (150% of national line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.3	67.4	76.2	91.3
4	–0.6	30.1	36.0	45.7
8	–0.6	20.3	24.7	32.8
16	–0.8	15.2	17.7	24.2
32	–1.0	11.0	12.7	16.7
64	–1.0	7.6	8.9	11.2
128	–1.0	5.3	6.3	8.5
256	–1.1	3.6	4.3	5.9
512	–1.1	2.7	3.0	4.1
1,024	–1.1	2.0	2.3	3.0
2,048	–1.1	1.3	1.5	2.1
4,096	–1.1	0.9	1.2	1.6
8,192	–1.1	0.6	0.7	1.0
16,384	–1.1	0.5	0.6	0.8

Table 10 (150% of national line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	72.9	0.1	22.7	27.1	–88.5
<=20	9.2	68.1	0.2	22.5	31.7	–75.9
<=23	14.6	62.7	0.4	22.3	36.9	–61.6
<=25	18.8	58.5	0.6	22.2	40.9	–50.7
<=27	23.8	53.4	0.8	22.0	45.8	–37.4
<=29	29.6	47.6	1.1	21.6	51.2	–21.8
<=31	35.9	41.4	1.7	21.0	56.9	–4.8
<=33	42.3	34.9	2.3	20.5	62.8	+12.5
<=35	48.5	28.8	2.9	19.8	68.3	+29.3
<=37	53.0	24.3	3.8	18.9	71.9	+42.1
<=39	57.6	19.7	4.8	17.9	75.5	+55.3
<=41	61.3	15.9	6.0	16.8	78.1	+66.5
<=43	64.8	12.4	7.9	14.8	79.6	+78.0
<=45	68.1	9.1	9.0	13.7	81.8	+88.0
<=47	70.8	6.5	10.9	11.8	82.6	+85.8
<=51	72.9	4.3	13.3	9.4	82.3	+82.7
<=56	75.2	2.1	15.9	6.8	82.0	+79.4
<=67	76.5	0.8	18.9	3.8	80.3	+75.5
<=100	77.3	0.0	22.7	0.0	77.3	+70.6

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (150% of national line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	98.3	5.7	57.9:1
<=20	9.4	97.5	11.9	38.4:1
<=23	15.0	97.0	18.9	32.5:1
<=25	19.3	97.0	24.3	32.0:1
<=27	24.6	96.9	30.8	31.6:1
<=29	30.8	96.3	38.4	26.0:1
<=31	37.7	95.4	46.5	20.6:1
<=33	44.6	95.0	54.8	18.8:1
<=35	51.4	94.3	62.7	16.6:1
<=37	56.8	93.3	68.6	13.9:1
<=39	62.4	92.3	74.5	12.0:1
<=41	67.3	91.1	79.4	10.3:1
<=43	72.7	89.1	83.9	8.2:1
<=45	77.1	88.3	88.2	7.6:1
<=47	81.7	86.6	91.6	6.5:1
<=51	86.3	84.5	94.4	5.5:1
<=56	91.1	82.5	97.3	4.7:1
<=67	95.4	80.2	99.0	4.0:1
<=100	100.0	77.3	100.0	3.4:1

Tables for
200% of the 2013-Definition National Poverty Line

Table 4 (200% of national line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	98.9
17–20	98.6
21–23	98.1
24–25	98.1
26–27	97.9
28–29	97.8
30–31	97.8
32–33	97.8
34–35	96.0
36–37	94.0
38–39	94.0
40–41	90.7
42–43	83.5
44–45	82.1
46–47	82.1
48–51	80.8
52–56	69.8
57–67	45.3
68–100	24.9

Table 6 (200% of national line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of $n = 16{,}384$ from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–0.5	0.4	0.5	0.6
17–20	+1.0	0.9	1.0	1.5
21–23	–1.2	0.8	0.8	0.8
24–25	–0.8	0.7	0.8	1.1
26–27	–0.9	0.7	0.7	0.9
28–29	–0.9	0.7	0.7	0.8
30–31	–1.1	0.8	0.8	0.9
32–33	–1.5	0.9	0.9	0.9
34–35	–1.8	1.2	1.2	1.3
36–37	–1.7	1.4	1.5	1.8
38–39	–0.8	1.1	1.3	1.8
40–41	–2.6	2.1	2.2	2.6
42–43	+3.1	2.3	2.9	4.1
44–45	–6.2	4.0	4.2	4.5
46–47	+0.6	2.4	2.8	3.5
48–51	+10.3	3.1	3.6	4.4
52–56	–0.4	3.0	3.6	4.6
57–67	+3.4	3.8	4.4	5.5
68–100	–7.3	5.4	5.7	6.5

Table 7 (200% of national line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–1.0	55.5	69.1	86.6
4	–0.2	22.4	28.1	38.6
8	–0.2	15.3	18.4	24.0
16	–0.5	11.3	13.4	18.0
32	–0.6	8.1	9.5	12.2
64	–0.6	5.9	6.8	8.9
128	–0.6	4.1	4.9	6.1
256	–0.6	2.7	3.3	4.0
512	–0.6	2.1	2.4	3.0
1,024	–0.6	1.4	1.7	2.2
2,048	–0.6	1.0	1.2	1.5
4,096	–0.6	0.7	0.8	1.0
8,192	–0.5	0.5	0.6	0.7
16,384	–0.6	0.4	0.4	0.5

Table 10 (200% of national line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	82.6	0.0	12.9	17.4	–89.8
<=20	9.3	77.7	0.2	12.8	22.1	–78.5
<=23	14.8	72.2	0.2	12.7	27.6	–65.7
<=25	19.1	68.0	0.3	12.7	31.7	–55.9
<=27	24.2	62.8	0.4	12.6	36.8	–43.9
<=29	30.3	56.7	0.5	12.5	42.8	–29.8
<=31	37.1	50.0	0.6	12.4	49.5	–14.1
<=33	43.9	43.2	0.7	12.3	56.1	+1.6
<=35	50.4	36.6	1.0	12.0	62.4	+17.0
<=37	55.5	31.5	1.2	11.7	67.3	+29.1
<=39	60.8	26.3	1.6	11.3	72.1	+41.5
<=41	65.3	21.7	2.0	11.0	76.3	+52.4
<=43	69.7	17.3	3.0	10.0	79.7	+63.7
<=45	73.5	13.6	3.7	9.3	82.8	+73.0
<=47	77.0	10.0	4.7	8.3	85.3	+82.4
<=51	80.3	6.8	6.0	6.9	87.2	+91.4
<=56	83.7	3.4	7.4	5.6	89.2	+91.5
<=67	85.5	1.5	9.9	3.1	88.6	+88.7
<=100	87.0	0.0	13.0	0.0	87.0	+85.1

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (200% of national line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	99.1	5.1	112.3:1
<=20	9.4	98.3	10.7	58.1:1
<=23	15.0	98.5	17.0	65.4:1
<=25	19.3	98.6	21.9	68.0:1
<=27	24.6	98.5	27.8	66.4:1
<=29	30.8	98.4	34.8	61.7:1
<=31	37.7	98.4	42.6	63.1:1
<=33	44.6	98.4	50.4	60.8:1
<=35	51.4	98.1	58.0	52.5:1
<=37	56.8	97.8	63.8	44.9:1
<=39	62.4	97.4	69.8	37.3:1
<=41	67.3	97.1	75.1	33.2:1
<=43	72.7	95.9	80.1	23.2:1
<=45	77.1	95.2	84.4	20.0:1
<=47	81.7	94.3	88.5	16.5:1
<=51	86.3	93.0	92.2	13.3:1
<=56	91.1	91.9	96.1	11.3:1
<=67	95.4	89.7	98.3	8.7:1
<=100	100.0	87.0	100.0	6.7:1

Tables for
the $1.25/day 2005 PPP Poverty Line (2013-Definition)

Table 4 ($1.25/day 2005 PPP line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	96.4
17–20	94.0
21–23	91.5
24–25	89.7
26–27	87.6
28–29	87.3
30–31	86.6
32–33	84.5
34–35	80.1
36–37	75.1
38–39	67.7
40–41	62.3
42–43	55.7
44–45	48.9
46–47	45.6
48–51	44.4
52–56	31.6
57–67	15.9
68–100	7.3

Table 6 ($1.25/day 2005 PPP line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–2.6	1.5	1.5	1.6
17–20	+1.3	1.7	2.1	2.9
21–23	+0.4	1.7	1.9	2.5
24–25	–0.7	2.1	2.4	3.0
26–27	–4.9	3.1	3.2	3.5
28–29	–4.0	2.7	2.8	3.0
30–31	+4.4	2.0	2.4	3.2
32–33	–5.5	3.4	3.5	3.9
34–35	–7.8	4.7	4.8	5.1
36–37	+8.7	3.1	3.7	4.9
38–39	–0.7	2.8	3.4	4.4
40–41	+2.4	3.1	3.7	4.8
42–43	+15.0	2.9	3.4	4.5
44–45	–13.6	8.4	8.7	9.3
46–47	+0.5	3.3	4.3	5.3
48–51	+8.6	3.4	4.0	5.2
52–56	+3.0	2.8	3.5	4.6
57–67	–2.0	2.9	3.4	4.5
68–100	–1.7	1.8	2.2	2.8

Table 7 ($1.25/day 2005 PPP line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
n	Error	90-percent	95-percent	99-percent
1	0.0	67.8	77.5	91.2
4	+0.4	33.6	40.4	52.0
8	+0.3	23.6	28.1	37.3
16	0.0	17.9	20.4	26.2
32	–0.2	12.6	15.1	18.4
64	0.0	9.0	10.6	14.3
128	+0.1	6.3	7.5	9.0
256	0.0	4.3	5.0	6.8
512	0.0	3.1	3.7	5.1
1,024	–0.1	2.2	2.7	3.5
2,048	–0.1	1.5	1.7	2.3
4,096	–0.1	1.1	1.3	1.7
8,192	0.0	0.8	0.9	1.3
16,384	–0.1	0.6	0.7	0.9

Table 10 ($1.25/day 2005 PPP line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	62.9	0.1	32.7	37.0	–86.8
<=20	9.0	58.2	0.4	32.4	41.4	–72.5
<=23	14.1	53.1	0.9	31.8	45.9	–56.6
<=25	18.0	49.2	1.3	31.5	49.5	–44.4
<=27	22.7	44.5	1.9	30.9	53.6	–29.7
<=29	28.2	39.0	2.6	30.2	58.4	–12.3
<=31	33.8	33.5	3.9	28.9	62.7	+6.2
<=33	39.8	27.4	4.7	28.0	67.9	+25.6
<=35	45.6	21.6	5.8	27.0	72.6	+44.3
<=37	49.4	17.8	7.3	25.4	74.9	+58.0
<=39	53.3	14.0	9.1	23.7	76.9	+72.0
<=41	56.2	11.0	11.1	21.7	77.8	+83.5
<=43	58.6	8.7	14.2	18.6	77.2	+78.9
<=45	61.1	6.2	16.1	16.7	77.8	+76.1
<=47	63.1	4.1	18.6	14.2	77.3	+72.4
<=51	64.6	2.7	21.7	11.0	75.6	+67.7
<=56	66.0	1.2	25.1	7.7	73.7	+62.7
<=67	66.8	0.5	28.6	4.2	70.9	+57.5
<=100	67.2	0.0	32.8	0.0	67.2	+51.3

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 ($1.25/day 2005 PPP line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	97.9	6.5	46.0:1
<=20	9.4	95.7	13.4	22.4:1
<=23	15.0	93.8	21.0	15.2:1
<=25	19.3	93.3	26.8	13.9:1
<=27	24.6	92.4	33.8	12.2:1
<=29	30.8	91.6	41.9	10.9:1
<=31	37.7	89.7	50.2	8.7:1
<=33	44.6	89.4	59.3	8.4:1
<=35	51.4	88.7	67.8	7.9:1
<=37	56.8	87.1	73.5	6.7:1
<=39	62.4	85.4	79.3	5.9:1
<=41	67.3	83.5	83.6	5.1:1
<=43	72.7	80.5	87.1	4.1:1
<=45	77.1	79.2	90.8	3.8:1
<=47	81.7	77.3	93.9	3.4:1
<=51	86.3	74.8	96.0	3.0:1
<=56	91.1	72.5	98.1	2.6:1
<=67	95.4	70.0	99.3	2.3:1
<=100	100.0	67.2	100.0	2.1:1

Tables for
the $2.00/day 2005 PPP Poverty Line (2013-Definition)

Table 4 ($2.00/day 2005 PPP line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	98.9
17–20	98.6
21–23	97.7
24–25	97.7
26–27	97.6
28–29	97.5
30–31	97.5
32–33	97.5
34–35	94.9
36–37	92.1
38–39	92.1
40–41	89.2
42–43	80.7
44–45	79.6
46–47	77.9
48–51	77.2
52–56	64.9
57–67	40.9
68–100	19.1

Table 6 ($2.00/day 2005 PPP line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–0.5	0.4	0.5	0.6
17–20	+1.0	0.9	1.0	1.5
21–23	–1.6	1.0	1.0	1.0
24–25	–0.6	0.8	0.9	1.2
26–27	–1.2	0.9	0.9	1.0
28–29	–1.2	0.8	0.9	1.0
30–31	0.0	0.8	0.9	1.2
32–33	–1.8	1.0	1.0	1.1
34–35	–3.8	2.1	2.2	2.2
36–37	–1.8	1.6	1.7	2.2
38–39	–2.1	1.6	1.7	1.9
40–41	–4.2	2.9	3.0	3.3
42–43	+0.1	2.4	2.8	4.0
44–45	–9.5	5.6	5.8	6.2
46–47	+4.9	2.9	3.3	4.3
48–51	+13.7	3.2	3.7	5.2
52–56	+5.0	3.2	3.9	5.2
57–67	+2.4	3.6	4.3	5.3
68–100	–5.0	4.1	4.4	4.8

Table 7 ($2.00/day 2005 PPP line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.3	56.1	74.2	89.3
4	+0.1	23.9	31.3	41.3
8	–0.1	16.2	19.4	26.3
16	–0.4	11.6	14.4	18.5
32	–0.5	8.2	10.1	13.0
64	–0.6	6.0	7.5	9.4
128	–0.6	4.4	5.2	6.6
256	–0.6	2.9	3.4	4.3
512	–0.6	2.1	2.5	3.2
1,024	–0.6	1.5	1.8	2.4
2,048	–0.6	1.0	1.3	1.7
4,096	–0.6	0.7	0.9	1.2
8,192	–0.5	0.5	0.6	0.8
16,384	–0.5	0.4	0.4	0.6

Table 10 ($2.00/day 2005 PPP line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	80.7	0.0	14.8	19.2	–89.5
<=20	9.3	75.9	0.2	14.7	24.0	–78.0
<=23	14.8	70.3	0.2	14.6	29.4	–64.9
<=25	19.0	66.1	0.3	14.5	33.5	–55.0
<=27	24.2	61.0	0.4	14.4	38.6	–42.8
<=29	30.2	54.9	0.5	14.3	44.6	–28.3
<=31	36.9	48.2	0.7	14.1	51.0	–12.4
<=33	43.7	41.4	0.9	14.0	57.7	+3.7
<=35	50.4	34.8	1.0	13.8	64.2	+19.5
<=37	55.4	29.8	1.4	13.4	68.8	+31.7
<=39	60.5	24.6	1.9	13.0	73.5	+44.3
<=41	65.1	20.0	2.2	12.6	77.8	+55.5
<=43	69.5	15.6	3.2	11.6	81.1	+67.1
<=45	73.3	11.9	3.9	11.0	84.2	+76.6
<=47	76.5	8.7	5.2	9.6	86.1	+85.7
<=51	79.4	5.8	6.9	7.9	87.3	+91.9
<=56	82.3	2.8	8.7	6.1	88.4	+89.7
<=67	84.0	1.1	11.3	3.5	87.5	+86.7
<=100	85.2	0.0	14.8	0.0	85.2	+82.6

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 ($2.00/day 2005 PPP line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	99.1	5.2	112.3:1
<=20	9.4	98.3	10.9	58.1:1
<=23	15.0	98.5	17.4	64.2:1
<=25	19.3	98.3	22.3	59.0:1
<=27	24.6	98.3	28.4	59.4:1
<=29	30.8	98.3	35.5	56.5:1
<=31	37.7	98.0	43.4	50.1:1
<=33	44.6	98.0	51.3	50.2:1
<=35	51.4	98.0	59.1	49.0:1
<=37	56.8	97.5	65.0	38.8:1
<=39	62.4	97.0	71.1	32.2:1
<=41	67.3	96.7	76.5	29.7:1
<=43	72.7	95.6	81.6	21.5:1
<=45	77.1	95.0	86.0	18.9:1
<=47	81.7	93.6	89.8	14.6:1
<=51	86.3	92.0	93.2	11.5:1
<=56	91.1	90.4	96.7	9.4:1
<=67	95.4	88.1	98.7	7.4:1
<=100	100.0	85.2	100.0	5.7:1

Tables for
the $2.50/day 2005 PPP Poverty Line (2013-Definition)

Table 4 ($2.50/day 2005 PPP line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	99.5
17–20	99.4
21–23	99.0
24–25	99.0
26–27	99.0
28–29	99.0
30–31	98.9
32–33	98.7
34–35	98.7
36–37	96.2
38–39	96.1
40–41	94.7
42–43	89.4
44–45	86.9
46–47	86.4
48–51	85.7
52–56	78.5
57–67	56.1
68–100	31.2

Table 6 ($2.50/day 2005 PPP line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	+0.1	0.4	0.5	0.6
17–20	+1.8	0.9	1.0	1.5
21–23	–0.7	0.5	0.5	0.5
24–25	+0.8	0.8	0.9	1.2
26–27	+0.2	0.6	0.7	0.9
28–29	–0.3	0.3	0.4	0.5
30–31	–0.7	0.5	0.5	0.5
32–33	–1.1	0.6	0.6	0.6
34–35	–0.5	0.4	0.5	0.5
36–37	–2.2	1.4	1.4	1.6
38–39	+0.7	1.1	1.3	1.7
40–41	–1.0	1.4	1.6	2.2
42–43	+4.7	2.1	2.6	3.6
44–45	–6.6	4.0	4.1	4.3
46–47	+3.5	2.5	2.8	3.7
48–51	+7.7	2.8	3.4	4.1
52–56	+3.5	2.7	3.4	4.7
57–67	+1.3	3.8	4.4	5.9
68–100	–7.6	5.7	6.0	6.6

Table 7 ($2.50/day 2005 PPP line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.6	38.8	65.1	83.1
4	+0.6	21.2	25.9	38.0
8	+0.6	14.3	17.5	23.2
16	+0.3	10.3	12.3	16.1
32	+0.3	7.4	8.5	11.7
64	+0.2	5.1	6.1	8.1
128	+0.1	3.7	4.5	5.5
256	+0.1	2.5	2.8	3.8
512	+0.1	1.8	2.2	2.9
1,024	+0.2	1.2	1.5	2.0
2,048	+0.2	0.9	1.1	1.4
4,096	+0.2	0.6	0.7	1.0
8,192	+0.2	0.4	0.5	0.7
16,384	+0.2	0.3	0.4	0.5

Table 10 ($2.50/day 2005 PPP line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	85.4	0.0	10.2	14.6	–90.1
<=20	9.3	80.5	0.2	10.0	19.3	–79.2
<=23	14.9	74.9	0.2	10.0	24.9	–66.7
<=25	19.1	70.7	0.3	9.9	29.0	–57.2
<=27	24.2	65.6	0.4	9.8	34.0	–45.7
<=29	30.3	59.5	0.4	9.8	40.1	–31.9
<=31	37.2	52.6	0.5	9.7	46.9	–16.7
<=33	44.1	45.7	0.5	9.7	53.7	–1.3
<=35	50.8	39.0	0.6	9.6	60.4	+13.8
<=37	56.0	33.8	0.8	9.4	65.5	+25.6
<=39	61.3	28.5	1.1	9.1	70.4	+37.7
<=41	66.1	23.7	1.3	8.9	75.0	+48.5
<=43	70.7	19.1	2.0	8.2	78.9	+59.7
<=45	74.7	15.1	2.4	7.8	82.4	+69.0
<=47	78.4	11.4	3.3	6.9	85.3	+78.3
<=51	82.0	7.8	4.3	5.9	87.8	+87.4
<=56	85.6	4.2	5.5	4.7	90.4	+93.9
<=67	88.0	1.8	7.4	2.8	90.8	+91.8
<=100	89.8	0.0	10.2	0.0	89.8	+88.6

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 ($2.50/day 2005 PPP line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	99.1	4.9	112.3:1
<=20	9.4	98.3	10.3	58.1:1
<=23	15.0	98.7	16.5	78.2:1
<=25	19.3	98.5	21.2	67.6:1
<=27	24.6	98.5	27.0	66.1:1
<=29	30.8	98.6	33.8	68.0:1
<=31	37.7	98.7	41.4	76.4:1
<=33	44.6	98.8	49.1	84.5:1
<=35	51.4	98.8	56.5	82.6:1
<=37	56.8	98.7	62.4	74.3:1
<=39	62.4	98.3	68.3	56.4:1
<=41	67.3	98.1	73.6	52.6:1
<=43	72.7	97.2	78.7	34.6:1
<=45	77.1	96.8	83.2	30.6:1
<=47	81.7	95.9	87.3	23.6:1
<=51	86.3	95.0	91.3	19.0:1
<=56	91.1	94.0	95.3	15.7:1
<=67	95.4	92.2	98.0	11.9:1
<=100	100.0	89.8	100.0	8.8:1

Tables for
the $5.00/day 2005 PPP Poverty Line (2013-Definition)

Table 4 ($5.00/day 2005 PPP line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	100.0
17–20	100.0
21–23	99.9
24–25	99.9
26–27	99.9
28–29	99.9
30–31	99.9
32–33	99.9
34–35	99.9
36–37	99.9
38–39	99.8
40–41	99.2
42–43	99.1
44–45	98.9
46–47	98.7
48–51	98.7
52–56	98.7
57–67	91.3
68–100	72.5

Table 6 ($5.00/day 2005 PPP line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	0.0	0.0	0.0	0.0
17–20	+1.1	0.6	0.7	0.9
21–23	–0.1	0.0	0.0	0.0
24–25	–0.1	0.0	0.0	0.0
26–27	–0.1	0.0	0.0	0.0
28–29	–0.1	0.0	0.0	0.0
30–31	–0.1	0.0	0.0	0.0
32–33	–0.1	0.0	0.0	0.0
34–35	–0.1	0.0	0.0	0.0
36–37	+0.3	0.2	0.3	0.4
38–39	–0.2	0.1	0.1	0.1
40–41	–0.8	0.4	0.4	0.4
42–43	–0.9	0.4	0.4	0.4
44–45	–1.1	0.6	0.6	0.6
46–47	+0.4	0.7	0.8	1.1
48–51	–1.3	0.7	0.7	0.7
52–56	+6.6	2.0	2.4	3.1
57–67	–1.7	1.7	1.9	2.4
68–100	–14.9	8.4	8.5	8.8

Table 7 ($5.00/day 2005 PPP line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
n	Error	90-percent	95-percent	99-percent
1	+0.4	4.4	13.8	61.3
4	–0.2	7.4	11.7	22.9
8	–0.3	5.6	8.6	15.3
16	–0.2	4.2	5.7	9.0
32	–0.3	3.1	4.2	5.6
64	–0.3	2.2	2.6	3.5
128	–0.3	1.4	1.7	2.3
256	–0.3	1.1	1.3	1.8
512	–0.3	0.8	0.9	1.3
1,024	–0.3	0.6	0.7	0.8
2,048	–0.3	0.4	0.4	0.6
4,096	–0.3	0.3	0.3	0.4
8,192	–0.3	0.2	0.2	0.3
16,384	–0.3	0.1	0.2	0.2

Table 10 ($5.00/day 2005 PPP line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.5	93.7	0.0	1.8	6.3	–90.9
<=20	9.4	88.8	0.1	1.8	11.1	–80.8
<=23	15.0	83.2	0.1	1.8	16.7	–69.4
<=25	19.3	78.9	0.1	1.8	21.0	–60.7
<=27	24.5	73.7	0.1	1.8	26.3	–50.0
<=29	30.7	67.5	0.1	1.8	32.5	–37.4
<=31	37.6	60.6	0.1	1.8	39.4	–23.4
<=33	44.5	53.7	0.1	1.8	46.3	–9.2
<=35	51.3	46.8	0.1	1.8	53.1	+4.6
<=37	56.7	41.5	0.1	1.7	58.4	+15.6
<=39	62.3	35.9	0.1	1.7	64.0	+27.0
<=41	67.2	31.0	0.1	1.7	68.9	+37.0
<=43	72.7	25.5	0.1	1.7	74.4	+48.1
<=45	77.0	21.1	0.1	1.7	78.8	+57.0
<=47	81.5	16.7	0.2	1.6	83.1	+66.2
<=51	86.1	12.1	0.2	1.6	87.7	+75.6
<=56	90.6	7.6	0.5	1.3	91.9	+85.0
<=67	94.5	3.7	0.9	0.9	95.4	+93.4
<=100	98.2	0.0	1.8	0.0	98.2	+98.1

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 ($5.00/day 2005 PPP line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	100.0	4.6	Only poor targeted
<=20	9.4	99.4	9.6	164.1:1
<=23	15.0	99.6	15.3	262.0:1
<=25	19.3	99.7	19.6	337.0:1
<=27	24.6	99.8	25.0	428.7:1
<=29	30.8	99.8	31.3	537.1:1
<=31	37.7	99.8	38.3	657.3:1
<=33	44.6	99.9	45.3	778.4:1
<=35	51.4	99.9	52.3	897.5:1
<=37	56.8	99.8	57.7	631.5:1
<=39	62.4	99.9	63.5	694.0:1
<=41	67.3	99.9	68.5	748.8:1
<=43	72.7	99.9	74.0	809.3:1
<=45	77.1	99.9	78.5	841.7:1
<=47	81.7	99.8	83.0	428.8:1
<=51	86.3	99.8	87.7	419.6:1
<=56	91.1	99.4	92.2	177.7:1
<=67	95.4	99.1	96.2	106.3:1
<=100	100.0	98.2	100.0	54.0:1

Tables for
the $1.90/day 2011 PPP Poverty Line (2013-Definition)

Table 4 ($1.90/day 2011 PPP line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	95.1
17–20	93.6
21–23	89.8
24–25	87.4
26–27	85.9
28–29	84.8
30–31	84.5
32–33	79.0
34–35	76.2
36–37	70.9
38–39	62.6
40–41	58.6
42–43	46.5
44–45	41.7
46–47	38.3
48–51	36.2
52–56	25.4
57–67	13.4
68–100	5.9

Table 6 ($1.90/day 2011 PPP line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–3.9	2.2	2.2	2.3
17–20	+2.9	1.9	2.2	3.1
21–23	–0.7	1.7	1.9	2.6
24–25	–2.5	2.2	2.5	3.0
26–27	–0.5	2.0	2.3	3.0
28–29	–4.8	3.2	3.3	3.6
30–31	+6.0	2.2	2.6	3.5
32–33	–7.7	4.7	4.8	5.1
34–35	–8.2	4.9	5.1	5.4
36–37	+9.9	3.2	3.7	5.2
38–39	+0.7	2.9	3.6	4.9
40–41	+3.1	3.1	3.8	4.7
42–43	+9.8	2.8	3.3	4.1
44–45	–16.3	9.7	10.0	10.8
46–47	–1.7	3.3	4.2	5.1
48–51	+4.5	3.4	4.1	5.2
52–56	+1.9	2.8	3.3	4.6
57–67	–3.2	3.0	3.3	4.4
68–100	–2.2	2.0	2.2	2.8

Table 7 ($1.90/day 2011 PPP line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.3	70.4	79.7	92.0
4	–0.5	36.1	43.3	54.8
8	–0.4	25.8	29.3	38.8
16	–0.5	18.6	21.4	27.1
32	–0.8	13.0	15.5	21.2
64	–0.6	9.3	11.0	14.4
128	–0.5	6.4	7.4	10.1
256	–0.7	4.4	5.2	7.3
512	–0.7	3.2	3.9	5.4
1,024	–0.7	2.3	2.8	3.8
2,048	–0.7	1.6	1.8	2.5
4,096	–0.7	1.2	1.4	1.8
8,192	–0.7	0.8	0.9	1.2
16,384	–0.7	0.6	0.7	0.9

Table 10 ($1.90/day 2011 PPP line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	59.3	0.1	36.2	40.6	–86.1
<=20	8.9	54.7	0.5	35.8	44.7	–71.2
<=23	13.9	49.7	1.1	35.2	49.2	–54.5
<=25	17.8	45.9	1.5	34.8	52.6	–41.7
<=27	22.1	41.5	2.4	33.9	56.0	–26.6
<=29	27.5	36.2	3.3	33.0	60.5	–8.5
<=31	32.8	30.8	4.8	31.5	64.3	+10.7
<=33	38.7	25.0	5.9	30.4	69.1	+30.8
<=35	44.1	19.6	7.3	29.0	73.2	+50.0
<=37	47.7	15.9	9.1	27.3	75.0	+64.1
<=39	51.3	12.4	11.1	25.2	76.4	+78.5
<=41	54.0	9.7	13.3	23.0	76.9	+79.0
<=43	56.1	7.6	16.7	19.6	75.7	+73.8
<=45	58.3	5.3	18.8	17.5	75.9	+70.5
<=47	60.2	3.5	21.5	14.8	75.0	+66.2
<=51	61.5	2.2	24.8	11.5	73.0	+61.0
<=56	62.6	1.1	28.5	7.8	70.4	+55.3
<=67	63.3	0.4	32.1	4.2	67.5	+49.6
<=100	63.7	0.0	36.3	0.0	63.7	+42.9

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 ($1.90/day 2011 PPP line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	97.9	6.9	46.0:1
<=20	9.4	94.5	14.0	17.3:1
<=23	15.0	92.7	21.9	12.7:1
<=25	19.3	92.1	28.0	11.7:1
<=27	24.6	90.1	34.8	9.1:1
<=29	30.8	89.3	43.2	8.4:1
<=31	37.7	87.2	51.6	6.8:1
<=33	44.6	86.8	60.8	6.6:1
<=35	51.4	85.8	69.3	6.1:1
<=37	56.8	84.0	75.0	5.3:1
<=39	62.4	82.2	80.5	4.6:1
<=41	67.3	80.2	84.7	4.0:1
<=43	72.7	77.1	88.0	3.4:1
<=45	77.1	75.6	91.6	3.1:1
<=47	81.7	73.6	94.5	2.8:1
<=51	86.3	71.2	96.5	2.5:1
<=56	91.1	68.7	98.3	2.2:1
<=67	95.4	66.3	99.4	2.0:1
<=100	100.0	63.7	100.0	1.8:1

Tables for
the $3.10/day 2011 PPP Poverty Line (2013-Definition)

Table 4 ($3.10/day 2011 PPP line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	98.9
17–20	98.6
21–23	97.0
24–25	97.0
26–27	96.9
28–29	96.9
30–31	96.9
32–33	96.9
34–35	94.3
36–37	91.6
38–39	91.6
40–41	87.5
42–43	78.7
44–45	76.7
46–47	75.9
48–51	75.0
52–56	62.1
57–67	37.9
68–100	17.6

Table 6 ($3.10/day 2011 PPP line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of $n = 16{,}384$ from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–0.5	0.4	0.5	0.6
17–20	+1.0	0.9	1.0	1.5
21–23	–2.3	1.3	1.3	1.4
24–25	–1.3	1.0	1.1	1.2
26–27	–1.7	1.1	1.2	1.3
28–29	–1.4	1.0	1.0	1.1
30–31	+1.2	1.0	1.2	1.6
32–33	–2.4	1.3	1.3	1.4
34–35	–3.1	1.9	1.9	2.0
36–37	+4.2	2.0	2.3	3.1
38–39	–1.3	1.3	1.5	2.1
40–41	–3.8	2.7	2.9	3.1
42–43	+1.9	2.6	3.0	4.1
44–45	–9.2	5.6	5.8	6.1
46–47	+6.2	2.9	3.5	4.6
48–51	+14.9	3.3	3.8	4.9
52–56	+3.0	3.2	3.9	5.2
57–67	+1.3	3.6	4.4	5.3
68–100	–5.5	4.3	4.6	5.1

Table 7 ($3.10/day 2011 PPP line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	+0.4	56.9	76.8	89.7
4	+0.5	25.6	33.2	42.1
8	+0.4	17.6	20.9	26.9
16	+0.1	12.6	14.8	19.3
32	0.0	8.9	10.8	13.6
64	0.0	6.6	7.6	10.1
128	–0.1	4.4	5.5	7.1
256	–0.1	3.2	3.8	4.9
512	–0.1	2.2	2.6	3.5
1,024	–0.1	1.6	1.9	2.5
2,048	–0.1	1.1	1.3	1.7
4,096	–0.1	0.8	1.0	1.2
8,192	0.0	0.6	0.7	0.8
16,384	–0.1	0.4	0.5	0.6

Table 10 ($3.10/day 2011 PPP line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	79.0	0.0	16.6	21.0	–89.3
<=20	9.3	74.1	0.2	16.4	25.7	–77.5
<=23	14.8	68.6	0.2	16.4	31.2	–64.2
<=25	19.0	64.4	0.3	16.3	35.3	–54.0
<=27	24.2	59.2	0.4	16.2	40.3	–41.6
<=29	30.2	53.2	0.6	16.0	46.2	–26.9
<=31	36.7	46.7	0.9	15.7	52.4	–10.8
<=33	43.5	39.9	1.1	15.6	59.1	+5.7
<=35	50.1	33.3	1.3	15.3	65.3	+21.7
<=37	54.8	28.6	2.0	14.6	69.4	+33.8
<=39	59.9	23.5	2.5	14.1	73.9	+46.6
<=41	64.3	19.1	3.0	13.6	77.9	+57.8
<=43	68.5	14.9	4.2	12.4	80.9	+69.4
<=45	72.1	11.3	5.0	11.6	83.7	+78.9
<=47	75.1	8.3	6.6	10.0	85.2	+88.1
<=51	77.9	5.5	8.4	8.2	86.0	+89.9
<=56	80.8	2.6	10.3	6.3	87.0	+87.6
<=67	82.3	1.1	13.0	3.6	85.9	+84.4
<=100	83.4	0.0	16.6	0.0	83.4	+80.1

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 ($3.10/day 2011 PPP line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	99.1	5.3	112.3:1
<=20	9.4	98.3	11.1	58.1:1
<=23	15.0	98.5	17.8	64.2:1
<=25	19.3	98.3	22.8	59.0:1
<=27	24.6	98.3	29.0	56.9:1
<=29	30.8	98.1	36.2	51.1:1
<=31	37.7	97.6	44.1	40.1:1
<=33	44.6	97.6	52.2	41.4:1
<=35	51.4	97.4	60.0	37.7:1
<=37	56.8	96.5	65.7	27.7:1
<=39	62.4	95.9	71.8	23.6:1
<=41	67.3	95.6	77.1	21.5:1
<=43	72.7	94.2	82.2	16.2:1
<=45	77.1	93.5	86.4	14.3:1
<=47	81.7	92.0	90.1	11.4:1
<=51	86.3	90.2	93.4	9.2:1
<=56	91.1	88.7	96.8	7.8:1
<=67	95.4	86.3	98.7	6.3:1
<=100	100.0	83.4	100.0	5.0:1

Tables for
the Line Marking the Poorest Half of People
below 100% of the 2013-Definition National Line

Table 4 (Line marking poorest half of people below 100% of the 2013-def. national line): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	68.9
17–20	68.2
21–23	53.0
24–25	49.6
26–27	44.5
28–29	43.2
30–31	28.9
32–33	28.9
34–35	28.9
36–37	25.4
38–39	19.2
40–41	17.6
42–43	13.7
44–45	10.3
46–47	8.8
48–51	5.6
52–56	3.1
57–67	2.4
68–100	0.6

Table 6 (Line marking poorest half of people below 100% of the 2013-def. national line): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	+0.5	3.2	3.8	4.8
17–20	+4.2	3.0	3.7	4.7
21–23	–5.6	4.3	4.6	5.1
24–25	+4.2	3.4	4.0	5.1
26–27	–3.6	3.4	3.7	4.7
28–29	+0.7	2.8	3.2	4.4
30–31	–8.0	5.2	5.4	6.0
32–33	–13.2	8.0	8.2	8.6
34–35	+9.1	2.1	2.5	3.2
36–37	+6.8	2.3	2.6	3.4
38–39	–4.6	3.5	3.7	4.2
40–41	–1.6	2.4	2.8	4.1
42–43	+6.9	1.4	1.7	2.1
44–45	–1.0	2.2	2.6	3.5
46–47	+0.6	1.6	1.9	2.6
48–51	+0.9	1.5	1.7	2.5
52–56	+1.0	0.9	1.0	1.3
57–67	+2.4	0.0	0.0	0.0
68–100	+0.6	0.0	0.0	0.0

Table 7 (Line marking poorest half of people below 100% of the 2013-def. national line): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–2.0	63.8	75.3	80.1
4	–1.5	34.4	40.9	52.4
8	–1.1	26.4	30.8	39.4
16	–0.3	18.7	22.2	28.0
32	–0.4	13.4	15.4	19.6
64	–0.4	9.6	11.1	14.3
128	–0.3	6.7	7.8	10.1
256	–0.5	4.8	5.8	7.3
512	–0.5	3.2	3.8	5.1
1,024	–0.5	2.3	2.6	3.4
2,048	–0.4	1.6	1.8	2.4
4,096	–0.4	1.2	1.4	2.0
8,192	–0.4	0.8	1.0	1.3
16,384	–0.4	0.6	0.7	0.9

Table 10 (Line marking poorest half of people below 100% of the 2013-def. national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	3.0	25.0	1.4	70.5	73.6	–73.2
<=20	6.2	21.9	3.3	68.7	74.8	–44.3
<=23	9.4	18.7	5.7	66.3	75.7	–12.9
<=25	11.4	16.7	8.0	64.0	75.4	+9.6
<=27	13.8	14.2	10.7	61.2	75.0	+36.9
<=29	16.3	11.7	14.4	57.6	73.9	+48.6
<=31	18.7	9.3	18.9	53.1	71.8	+32.6
<=33	21.4	6.6	23.1	48.8	70.3	+17.5
<=35	22.9	5.2	28.5	43.5	66.3	–1.8
<=37	24.0	4.0	32.7	39.3	63.3	–16.8
<=39	25.4	2.6	37.0	35.0	60.4	–31.9
<=41	26.4	1.7	40.9	31.0	57.4	–46.1
<=43	26.8	1.2	46.0	26.0	52.8	–64.0
<=45	27.2	0.8	49.9	22.1	49.3	–78.0
<=47	27.7	0.3	54.0	18.0	45.7	–92.7
<=51	27.9	0.1	58.4	13.6	41.5	–108.3
<=56	28.0	0.0	63.0	8.9	37.0	–125.0
<=67	28.0	0.0	67.3	4.6	32.7	–140.4
<=100	28.0	0.0	72.0	0.0	28.0	–156.9

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (Line marking poorest half of people below 100% of the 2013-def. national line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	67.9	10.8	2.1:1
<=20	9.4	65.1	22.0	1.9:1
<=23	15.0	62.3	33.4	1.6:1
<=25	19.3	58.7	40.5	1.4:1
<=27	24.5	56.2	49.3	1.3:1
<=29	30.8	53.1	58.3	1.1:1
<=31	37.6	49.8	66.9	1.0:1
<=33	44.6	48.1	76.5	0.9:1
<=35	51.4	44.5	81.6	0.8:1
<=37	56.8	42.4	85.8	0.7:1
<=39	62.4	40.7	90.7	0.7:1
<=41	67.3	39.2	94.1	0.6:1
<=43	72.7	36.8	95.6	0.6:1
<=45	77.1	35.3	97.2	0.5:1
<=47	81.7	33.9	98.9	0.5:1
<=51	86.3	32.3	99.6	0.5:1
<=56	91.1	30.8	100.0	0.4:1
<=67	95.4	29.4	100.0	0.4:1
<=100	100.0	28.0	100.0	0.4:1

Tables for the First-Quintile (20th-Percentile) Poverty Line, 2013-Definition

Table 4 (First-quintile (20^{th}-percentile) line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	51.8
17–20	51.8
21–23	31.9
24–25	29.0
26–27	27.5
28–29	24.7
30–31	17.5
32–33	17.5
34–35	15.8
36–37	13.8
38–39	8.4
40–41	8.4
42–43	8.0
44–45	4.5
46–47	2.4
48–51	2.0
52–56	1.2
57–67	1.1
68–100	0.3

Table 6 (First-quintile (20th-percentile) line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–8.2	5.8	6.0	6.8
17–20	+2.5	3.1	3.7	5.0
21–23	–8.0	5.5	5.7	6.2
24–25	+8.9	2.4	3.0	3.9
26–27	–2.1	3.1	3.5	4.3
28–29	+0.3	2.2	2.6	3.3
30–31	–6.6	4.4	4.7	5.2
32–33	–4.5	3.5	3.6	4.1
34–35	+11.4	0.9	1.1	1.4
36–37	+3.8	1.7	1.9	2.5
38–39	–2.3	2.1	2.3	3.2
40–41	–1.7	1.9	2.2	3.0
42–43	+7.9	0.1	0.1	0.1
44–45	–1.1	1.6	1.9	2.5
46–47	–2.4	1.8	1.9	2.3
48–51	+1.3	0.4	0.4	0.6
52–56	+1.1	0.1	0.1	0.1
57–67	+1.1	0.0	0.0	0.0
68–100	+0.3	0.0	0.0	0.0

Table 7 (First-quintile (20th-percentile) line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.5	57.2	67.2	71.7
4	–1.0	29.5	35.2	45.7
8	–0.3	21.9	25.9	33.1
16	+0.3	15.8	18.7	23.1
32	+0.2	11.0	13.1	17.0
64	+0.1	8.3	9.3	12.3
128	+0.1	5.8	6.7	8.8
256	–0.1	4.0	4.9	6.2
512	0.0	2.8	3.4	4.3
1,024	0.0	2.0	2.4	3.2
2,048	0.0	1.4	1.6	2.1
4,096	0.0	1.0	1.2	1.6
8,192	0.0	0.7	0.9	1.1
16,384	0.0	0.5	0.6	0.8

Table 10 (First-quintile (20th-percentile) line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	2.5	14.0	2.0	81.5	84.0	–57.9
<=20	4.8	11.7	4.6	78.9	83.7	–13.6
<=23	7.0	9.5	8.1	75.4	82.4	+33.3
<=25	7.9	8.6	11.4	72.1	80.0	+31.0
<=27	9.3	7.2	15.3	68.2	77.5	+7.6
<=29	10.8	5.7	20.0	63.5	74.4	–20.8
<=31	12.4	4.2	25.3	58.2	70.5	–53.1
<=33	13.7	2.8	30.8	52.6	66.4	–86.6
<=35	14.2	2.3	37.2	46.3	60.5	–125.3
<=37	14.8	1.7	41.9	41.5	56.4	–153.9
<=39	15.4	1.1	47.0	36.5	51.9	–184.4
<=41	15.9	0.6	51.4	32.1	48.0	–211.1
<=43	15.9	0.6	56.8	26.7	42.6	–243.9
<=45	16.2	0.3	61.0	22.5	38.7	–269.0
<=47	16.5	0.1	65.2	18.2	34.7	–295.0
<=51	16.5	0.0	69.8	13.7	30.2	–322.5
<=56	16.5	0.0	74.5	8.9	25.5	–351.3
<=67	16.5	0.0	78.9	4.6	21.1	–377.3
<=100	16.5	0.0	83.5	0.0	16.5	–405.3

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (First-quintile (20th-percentile) line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	55.7	15.1	1.3:1
<=20	9.4	51.2	29.3	1.1:1
<=23	15.0	46.4	42.3	0.9:1
<=25	19.3	41.0	48.0	0.7:1
<=27	24.6	37.9	56.4	0.6:1
<=29	30.8	35.2	65.6	0.5:1
<=31	37.7	32.8	74.8	0.5:1
<=33	44.6	30.8	83.2	0.4:1
<=35	51.4	27.6	85.9	0.4:1
<=37	56.8	26.1	89.8	0.4:1
<=39	62.4	24.7	93.3	0.3:1
<=41	67.3	23.6	96.3	0.3:1
<=43	72.7	21.9	96.4	0.3:1
<=45	77.1	21.0	97.9	0.3:1
<=47	81.7	20.1	99.6	0.3:1
<=51	86.3	19.1	99.9	0.2:1
<=56	91.1	18.1	100.0	0.2:1
<=67	95.4	17.3	100.0	0.2:1
<=100	100.0	16.5	100.0	0.2:1

Tables for the Second-Quintile (40th-Percentile) Poverty Line, 2013-Definition

Table 4 (Second-quintile (40th-percentile) line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	77.2
17–20	77.0
21–23	61.4
24–25	58.7
26–27	55.8
28–29	53.1
30–31	38.8
32–33	38.8
34–35	38.8
36–37	34.2
38–39	24.9
40–41	22.9
42–43	17.3
44–45	13.9
46–47	12.4
48–51	8.6
52–56	5.0
57–67	2.8
68–100	0.6

Table 6 (Second-quintile (40th-percentile) line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–4.4	3.4	3.7	4.3
17–20	+8.8	3.1	3.5	4.8
21–23	–0.8	3.0	3.6	4.4
24–25	+6.1	3.3	4.1	5.5
26–27	–1.7	3.0	3.6	4.5
28–29	+2.7	2.8	3.3	4.2
30–31	–8.5	5.6	5.8	6.2
32–33	–8.6	5.7	5.9	6.2
34–35	+2.1	2.6	3.2	4.4
36–37	+1.1	2.8	3.4	4.5
38–39	–6.6	4.6	5.0	5.3
40–41	+2.4	2.5	3.0	3.9
42–43	+7.0	1.7	2.1	2.6
44–45	–1.6	2.5	3.0	4.1
46–47	–3.0	2.8	3.1	3.5
48–51	–4.8	3.8	4.0	4.3
52–56	+1.0	1.2	1.4	1.6
57–67	+2.7	0.1	0.1	0.1
68–100	+0.6	0.0	0.0	0.0

Table 7 (Second-quintile (40th-percentile) line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.7	66.9	72.0	84.3
4	–0.5	37.7	43.0	55.2
8	–0.4	27.0	31.5	39.8
16	–0.1	20.2	23.2	29.6
32	–0.5	14.0	17.0	21.4
64	–0.6	9.6	11.6	14.8
128	–0.5	7.4	8.7	11.0
256	–0.7	5.4	6.1	8.2
512	–0.7	3.4	4.0	5.2
1,024	–0.7	2.4	2.8	3.6
2,048	–0.7	1.6	1.9	2.7
4,096	–0.7	1.2	1.5	2.0
8,192	–0.7	0.9	1.1	1.3
16,384	–0.7	0.6	0.7	1.0

Table 10 (Second-quintile (40th-percentile) line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	3.5	31.1	1.0	64.4	67.9	–77.0
<=20	6.8	27.7	2.6	62.9	69.7	–52.9
<=23	10.3	24.3	4.7	60.7	71.0	–26.7
<=25	12.6	21.9	6.7	58.7	71.4	–7.5
<=27	15.5	19.0	9.1	56.4	71.9	+16.0
<=29	18.5	16.0	12.3	53.2	71.7	+42.7
<=31	21.6	13.0	16.1	49.4	70.9	+53.5
<=33	24.6	9.9	20.0	45.5	70.1	+42.2
<=35	27.1	7.5	24.3	41.1	68.2	+29.7
<=37	29.0	5.5	27.8	37.7	66.7	+19.6
<=39	30.8	3.7	31.6	33.9	64.7	+8.6
<=41	31.9	2.7	35.5	30.0	61.8	–2.6
<=43	32.5	2.1	40.3	25.2	57.6	–16.6
<=45	33.1	1.4	44.0	21.4	54.5	–27.4
<=47	33.9	0.7	47.9	17.6	51.5	–38.5
<=51	34.3	0.3	52.0	13.5	47.7	–50.5
<=56	34.5	0.0	56.5	8.9	43.5	–63.6
<=67	34.5	0.0	60.8	4.6	39.2	–76.1
<=100	34.5	0.0	65.5	0.0	34.5	–89.4

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (Second-quintile (40th-percentile) line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	77.4	10.0	3.4:1
<=20	9.4	72.5	19.8	2.6:1
<=23	15.0	68.4	29.8	2.2:1
<=25	19.3	65.3	36.5	1.9:1
<=27	24.6	63.1	44.9	1.7:1
<=29	30.8	60.2	53.6	1.5:1
<=31	37.7	57.3	62.4	1.3:1
<=33	44.6	55.2	71.3	1.2:1
<=35	51.4	52.7	78.4	1.1:1
<=37	56.8	51.1	84.0	1.0:1
<=39	62.4	49.4	89.2	1.0:1
<=41	67.3	47.3	92.2	0.9:1
<=43	72.7	44.6	94.0	0.8:1
<=45	77.1	42.9	95.8	0.8:1
<=47	81.7	41.4	98.0	0.7:1
<=51	86.3	39.7	99.3	0.7:1
<=56	91.1	37.9	100.0	0.6:1
<=67	95.4	36.2	100.0	0.6:1
<=100	100.0	34.5	100.0	0.5:1

Tables for the Median (50^{th}-Percentile) Poverty Line, 2013-Definition

Table 4 (Median (50^{th}-percentile) line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	82.5
17–20	81.5
21–23	70.9
24–25	68.6
26–27	66.3
28–29	64.2
30–31	53.0
32–33	53.0
34–35	53.0
36–37	47.8
38–39	34.9
40–41	34.9
42–43	24.5
44–45	21.0
46–47	18.5
48–51	12.6
52–56	9.9
57–67	5.8
68–100	1.6

Table 6 (Median (50^{th}-percentile) line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of $n = 16{,}384$ from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–2.2	2.3	2.9	3.8
17–20	+3.9	2.9	3.5	4.5
21–23	–4.3	3.4	3.7	3.9
24–25	+3.1	3.2	3.9	4.8
26–27	–0.1	3.0	3.6	4.5
28–29	–5.6	4.0	4.3	4.8
30–31	–2.1	2.6	3.1	4.1
32–33	–9.4	6.0	6.2	6.5
34–35	–3.8	3.2	3.5	4.3
36–37	+8.3	3.1	3.6	4.6
38–39	–1.5	2.8	3.5	4.8
40–41	+6.4	2.8	3.4	4.6
42–43	+7.3	2.2	2.6	3.3
44–45	–7.6	5.4	5.8	6.5
46–47	–3.9	3.3	3.6	4.2
48–51	–4.0	3.4	3.7	4.2
52–56	–1.0	2.2	2.6	3.3
57–67	+2.2	1.0	1.2	1.6
68–100	+1.0	0.4	0.5	0.7

Table 7 (Median (50th-percentile) line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.3	65.7	74.9	86.3
4	–0.8	37.7	44.1	55.2
8	–0.4	26.7	31.5	40.4
16	–0.4	20.1	24.0	29.7
32	–0.7	14.0	15.7	20.4
64	–0.8	10.0	12.1	14.5
128	–0.9	7.1	8.3	10.6
256	–1.1	5.0	5.9	8.4
512	–1.1	3.4	4.1	5.6
1,024	–1.1	2.5	3.0	3.9
2,048	–1.1	1.7	2.0	2.7
4,096	–1.1	1.3	1.5	1.9
8,192	–1.1	0.9	1.0	1.3
16,384	–1.1	0.6	0.7	1.0

Table 10 (Median (50th-percentile) line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	3.7	39.9	0.8	55.7	59.4	–81.2
<=20	7.6	35.9	1.8	54.7	62.3	–60.8
<=23	11.7	31.8	3.3	53.1	64.8	–38.6
<=25	14.6	29.0	4.8	51.7	66.2	–22.2
<=27	17.9	25.6	6.6	49.8	67.7	–2.4
<=29	22.0	21.6	8.8	47.6	69.6	+21.1
<=31	25.6	18.0	12.1	44.4	69.9	+45.2
<=33	29.5	14.0	15.0	41.4	71.0	+65.5
<=35	33.2	10.4	18.2	38.2	71.4	+58.1
<=37	35.4	8.1	21.3	35.1	70.6	+51.0
<=39	37.6	6.0	24.8	31.7	69.2	+43.0
<=41	39.1	4.5	28.3	28.2	67.2	+35.1
<=43	40.1	3.5	32.7	23.8	63.8	+25.0
<=45	41.2	2.4	36.0	20.5	61.7	+17.4
<=47	42.2	1.3	39.5	17.0	59.2	+9.3
<=51	42.8	0.7	43.5	13.0	55.8	+0.2
<=56	43.3	0.3	47.8	8.7	52.0	–9.7
<=67	43.5	0.0	51.9	4.6	48.1	–19.1
<=100	43.5	0.0	56.5	0.0	43.5	–29.6

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (Median (50th-percentile) line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	82.6	8.5	4.8:1
<=20	9.4	80.9	17.5	4.2:1
<=23	15.0	77.9	26.9	3.5:1
<=25	19.3	75.3	33.4	3.0:1
<=27	24.6	73.0	41.2	2.7:1
<=29	30.8	71.4	50.5	2.5:1
<=31	37.7	67.9	58.7	2.1:1
<=33	44.6	66.3	67.9	2.0:1
<=35	51.4	64.5	76.1	1.8:1
<=37	56.8	62.4	81.4	1.7:1
<=39	62.4	60.2	86.3	1.5:1
<=41	67.3	58.0	89.7	1.4:1
<=43	72.7	55.1	92.0	1.2:1
<=45	77.1	53.4	94.5	1.1:1
<=47	81.7	51.7	96.9	1.1:1
<=51	86.3	49.6	98.3	1.0:1
<=56	91.1	47.5	99.4	0.9:1
<=67	95.4	45.6	99.9	0.8:1
<=100	100.0	43.5	100.0	0.8:1

Tables for the Third-Quintile (60^{th}-Percentile) Poverty Line, 2013-Definition

Table 4 (Third-quintile (60^{th}-percentile) line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	88.9
17–20	88.5
21–23	80.6
24–25	80.6
26–27	77.3
28–29	74.6
30–31	68.8
32–33	67.1
34–35	67.1
36–37	59.3
38–39	45.8
40–41	45.8
42–43	32.2
44–45	29.7
46–47	26.7
48–51	20.3
52–56	13.6
57–67	7.6
68–100	2.6

Table 6 (Third-quintile (60th-percentile) line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–6.6	3.8	3.9	4.1
17–20	+6.9	2.8	3.3	4.2
21–23	–4.0	3.0	3.2	3.6
24–25	–1.9	2.4	2.8	3.5
26–27	–3.0	2.7	2.8	3.7
28–29	–10.8	6.3	6.4	6.8
30–31	+3.1	2.6	3.0	3.9
32–33	–6.1	4.1	4.5	4.9
34–35	–4.2	3.2	3.4	4.0
36–37	+12.9	3.1	3.8	5.2
38–39	+1.0	2.9	3.6	5.0
40–41	+6.9	3.2	3.7	5.0
42–43	+8.6	2.4	2.9	3.8
44–45	–16.8	10.1	10.5	11.0
46–47	+3.0	2.6	3.2	4.2
48–51	–3.2	3.2	3.8	4.8
52–56	–0.9	2.3	2.7	3.7
57–67	+2.4	1.2	1.4	1.8
68–100	–0.8	1.2	1.3	1.8

Table 7 (Third-quintile (60th-percentile) line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	–0.2	72.5	79.3	90.5
4	–0.4	37.0	43.6	56.4
8	–0.2	27.6	31.2	42.9
16	–0.3	19.2	22.9	30.7
32	–0.6	13.8	16.5	21.2
64	–0.6	9.5	11.6	14.3
128	–0.6	6.9	7.7	10.3
256	–0.8	4.7	5.5	7.9
512	–0.8	3.3	3.8	4.9
1,024	–0.8	2.5	2.9	3.6
2,048	–0.8	1.7	2.0	2.6
4,096	–0.8	1.2	1.5	2.0
8,192	–0.8	0.9	1.0	1.3
16,384	–0.8	0.6	0.7	1.0

Table 10 (Third-quintile (60^{th}-percentile) line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.1	48.8	0.3	46.7	50.9	–83.7
<=20	8.3	44.6	1.1	45.9	54.3	–66.4
<=23	13.0	40.0	2.1	45.0	57.9	–47.1
<=25	16.4	36.6	3.0	44.1	60.5	–32.5
<=27	20.3	32.6	4.2	42.8	63.2	–15.1
<=29	25.4	27.5	5.4	41.7	67.1	+6.1
<=31	29.9	23.1	7.8	39.3	69.2	+27.6
<=33	34.8	18.2	9.8	37.3	72.1	+49.9
<=35	39.3	13.7	12.1	34.9	74.2	+71.3
<=37	42.0	10.9	14.7	32.3	74.4	+72.2
<=39	44.8	8.2	17.6	29.4	74.2	+66.7
<=41	46.7	6.2	20.6	26.5	73.2	+61.1
<=43	48.1	4.8	24.6	22.4	70.5	+53.5
<=45	49.8	3.1	27.3	19.7	69.5	+48.4
<=47	50.9	2.0	30.8	16.3	67.2	+41.9
<=51	51.8	1.1	34.5	12.6	64.4	+34.9
<=56	52.5	0.5	38.6	8.4	60.9	+27.1
<=67	52.8	0.2	42.6	4.5	57.2	+19.5
<=100	52.9	0.0	47.1	0.0	52.9	+11.1

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (Third-quintile (60th-percentile) line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	92.5	7.8	12.3:1
<=20	9.4	88.2	15.7	7.5:1
<=23	15.0	86.1	24.5	6.2:1
<=25	19.3	84.7	30.9	5.5:1
<=27	24.6	82.8	38.4	4.8:1
<=29	30.8	82.5	48.0	4.7:1
<=31	37.7	79.4	56.5	3.8:1
<=33	44.6	78.1	65.7	3.6:1
<=35	51.4	76.4	74.2	3.2:1
<=37	56.8	74.0	79.4	2.9:1
<=39	62.4	71.8	84.6	2.5:1
<=41	67.3	69.4	88.3	2.3:1
<=43	72.7	66.1	90.9	2.0:1
<=45	77.1	64.6	94.1	1.8:1
<=47	81.7	62.4	96.2	1.7:1
<=51	86.3	60.0	97.8	1.5:1
<=56	91.1	57.6	99.1	1.4:1
<=67	95.4	55.3	99.7	1.2:1
<=100	100.0	52.9	100.0	1.1:1

Tables for the Fourth-Quintile (80th-Percentile) Poverty Line, 2013-Definition

Table 4 (Fourth-quintile (80th-percentile) line (2013 def.)): Scores and their associated estimates of poverty likelihoods

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–16	97.9
17–20	96.8
21–23	93.9
24–25	93.7
26–27	92.4
28–29	92.2
30–31	91.2
32–33	89.6
34–35	86.4
36–37	82.5
38–39	78.7
40–41	71.2
42–43	63.8
44–45	60.6
46–47	58.3
48–51	58.3
52–56	42.7
57–67	23.3
68–100	9.8

Table 6 (Fourth-quintile (80th-percentile) line (2013 def.)): Errors in estimates of a household's poverty likelihood (average of differences between estimated and observed values in 1,000 bootstraps of n = 16,384 from the validation sample) by score range, with confidence intervals

	Difference between estimate and observed value			
		Confidence interval (±percentage points)		
Score	Error	90-percent	95-percent	99-percent
0–16	–1.3	0.8	0.9	0.9
17–20	+3.5	1.7	2.1	2.9
21–23	–3.5	2.1	2.2	2.3
24–25	–3.7	2.3	2.4	2.5
26–27	–3.8	2.4	2.5	2.6
28–29	–3.2	2.1	2.2	2.3
30–31	+3.5	1.6	1.9	2.5
32–33	–4.8	2.9	3.0	3.2
34–35	–3.9	2.6	2.8	3.0
36–37	+0.6	2.2	2.5	3.6
38–39	–2.8	2.5	2.8	3.5
40–41	+0.1	2.9	3.4	4.5
42–43	+14.1	3.0	3.6	4.8
44–45	–5.2	4.2	4.5	5.1
46–47	+7.3	3.3	4.0	5.7
48–51	+11.8	3.4	4.0	5.4
52–56	–3.9	3.5	4.0	5.0
57–67	–0.4	3.1	3.6	4.8
68–100	–8.5	5.7	6.1	6.4

Table 7 (Fourth-quintile (80th-percentile) line (2013 def.)): Errors in estimates of households' poverty rates at a point in time (average of differences between estimated and observed values in 1,000 bootstraps of various sample sizes from the validation sample), with confidence intervals

Sample Size	Difference between estimate and observed value			
		Confidence interval (+percentage points)		
n	Error	90-percent	95-percent	99-percent
1	0.0	62.1	74.2	92.0
4	+0.2	32.0	38.1	46.9
8	+0.1	22.1	25.6	34.2
16	–0.1	15.9	18.9	23.4
32	–0.2	11.7	13.1	16.8
64	–0.2	7.9	9.4	12.8
128	–0.1	5.6	6.8	9.2
256	–0.2	3.9	4.6	6.2
512	–0.2	2.8	3.3	4.5
1,024	–0.2	2.0	2.4	3.1
2,048	–0.2	1.4	1.6	2.1
4,096	–0.2	1.0	1.1	1.4
8,192	–0.2	0.7	0.8	1.1
16,384	–0.2	0.5	0.6	0.8

Table 10 (Fourth-quintile (80^{th}-percentile) line (2013 def.)): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC, scorecard applied to the 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
<=16	4.4	69.9	0.1	25.6	30.0	–88.1
<=20	9.1	65.2	0.3	25.4	34.5	–75.0
<=23	14.5	59.8	0.6	25.1	39.6	–60.3
<=25	18.6	55.7	0.7	25.0	43.7	–48.9
<=27	23.6	50.7	1.0	24.7	48.3	–35.2
<=29	29.4	44.9	1.4	24.3	53.7	–19.0
<=31	35.3	39.0	2.4	23.3	58.6	–1.9
<=33	41.7	32.6	2.9	22.8	64.5	+16.1
<=35	47.7	26.6	3.7	22.0	69.7	+33.4
<=37	52.1	22.2	4.7	21.0	73.1	+46.5
<=39	56.6	17.7	5.8	19.9	76.4	+60.1
<=41	60.1	14.2	7.2	18.5	78.6	+71.5
<=43	63.1	11.2	9.6	16.0	79.1	+82.8
<=45	65.8	8.5	11.3	14.4	80.2	+84.8
<=47	68.2	6.1	13.5	12.2	80.5	+81.9
<=51	70.2	4.1	16.1	9.6	79.8	+78.3
<=56	72.5	1.9	18.6	7.1	79.5	+75.0
<=67	73.5	0.8	21.9	3.8	77.3	+70.6
<=100	74.3	0.0	25.7	0.0	74.3	+65.4

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100.

Table 11 (Fourth-quintile (80th-percentile) line (2013 def.)): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted, scorecard applied to the 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
<=16	4.5	98.4	5.9	61.9:1
<=20	9.4	96.4	12.2	26.8:1
<=23	15.0	96.3	19.5	26.2:1
<=25	19.3	96.4	25.1	27.0:1
<=27	24.6	96.0	31.8	23.9:1
<=29	30.8	95.4	39.5	20.9:1
<=31	37.7	93.7	47.5	14.8:1
<=33	44.6	93.5	56.1	14.4:1
<=35	51.4	92.8	64.2	13.0:1
<=37	56.8	91.8	70.1	11.1:1
<=39	62.4	90.7	76.1	9.7:1
<=41	67.3	89.3	80.9	8.3:1
<=43	72.8	86.7	84.9	6.5:1
<=45	77.1	85.3	88.6	5.8:1
<=47	81.7	83.5	91.8	5.1:1
<=51	86.3	81.3	94.5	4.4:1
<=56	91.1	79.6	97.5	3.9:1
<=67	95.4	77.1	98.9	3.4:1
<=100	100.0	74.3	100.0	2.9:1