Simple Poverty Scorecard® Poverty-Assessment Tool Benin

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Cette grille (et une autre grille mis à jour) en Français est disponble en
`SimplePovertyScorecard.com`
This scorecard (and a newer one) is at `SimplePovertyScorecard.com`

Abstract

The Simple Poverty Scorecard®-brand poverty-assessment tool uses ten low-cost indicators from Benin's 2010 Integrated Household Living Standards Survey to estimate the likelihood that a household has expenditure below a given poverty line. Field workers can collect responses in about ten minutes. The scorecard's accuracy is reported for a range of poverty lines. The scorecard is a practical way for pro-poor programs in Benin to measure poverty rates, to track changes in poverty rates over time, and to segment clients for targeted services.

Acknowledgements

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Simple Poverty Scorecard® Poverty-Assessment Tool

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

Indicator	Response	Points	Score
1. Department (as observed)	A. Littoral	0	
	B. Mono	1	
	C. Zou, Atlantique, or Collines	3	
	D. Couffo	4	
	E. Plateau	7	
	F. Ouémé	11	
	G. Donga, or Borgou	12	
	H. Alibori	13	
	I. Atakora	14	
2. Main material of the exterior walls of the main building (as observed)	A. Earth, stone, wood/planks, palm leaves/bamboo, or other	0	
	B. Mud plastered with cement	1	
	C. Bricks	4	
3. How many household members are there?	A. Eight or more	0	
	B. Seven	6	
	C. Six	10	
	D. Five	14	
	E. Four	20	
	F. Three	30	
	G. Two	40	
	H. One	48	
4. Does the female head/spouse know how to read and write with understanding in French?	A. No	0	
	B. Yes	3	
	C. There is no female head/spouse	3	
5. What is the main source of energy for lighting in your household?	A. Kerosene	0	
	B. Electricity, LPG, oil, solar energy, electric generator (community or private), or other	4	
6. Out of all the rooms available to your household, how many do household members use for sleeping?	A. One	0	
	B. Two	2	
	C. Three or more	5	
7. What is the main cooking fuel used in your household?	A. Firewood, or straw	0	
	B. Charcoal, electricity, LPG, kerosene, or other	3	
8. Does your household have a motorcycle, scooter, or automobile?	A. No	0	
	B. Yes	5	
9. How many mobile telephones does your household have?	A. None	0	
	B. One	2	
	C. Two or more	9	
10. Has the household owned (including as an inheritance) or rented any sub-divided, developed, or irrigated land in the past 12 months?	A. Does not own etc.	0	
	B. Does own etc., but land is not sub-divided, developed, or irrigated	2	
	C. Does own etc., and some land is sub-divided, developed, or irrigated	5	

Score:

Look-up table to convert scores to poverty likelihoods

Score	National			USAID	Intl. 2005 PPP	
	100%	150%	200%	'Extreme'	$1.25	$2.50
0–4	87.1	100.0	100.0	49.7	94.0	100.0
5–9	82.6	93.9	100.0	49.7	85.8	100.0
10–14	68.7	88.1	95.4	41.1	74.6	96.8
15–19	64.8	87.5	95.3	35.1	70.4	96.8
20–24	53.2	83.3	92.9	25.3	62.2	94.7
25–29	44.4	74.6	89.6	20.4	49.4	91.9
30–34	33.4	67.9	85.3	12.8	39.4	88.5
35–39	22.7	56.3	77.0	8.2	28.4	82.0
40–44	15.6	45.2	69.3	4.7	19.1	74.1
45–49	11.4	37.9	62.6	3.8	14.4	67.5
50–54	6.1	25.1	46.6	2.1	7.9	52.4
55–59	4.3	16.2	34.5	0.9	5.7	38.9
60–64	2.2	10.3	23.9	0.5	3.1	28.0
65–69	1.1	4.9	15.5	0.3	1.1	18.6
70–74	1.1	3.4	12.0	0.2	1.1	15.1
75–79	0.3	2.4	5.5	0.1	0.3	6.1
80–84	0.0	1.3	5.1	0.0	0.0	6.1
85–89	0.0	0.5	1.9	0.0	0.0	2.3
90–94	0.0	0.0	0.0	0.0	0.0	0.0
95–100	0.0	0.0	0.0	0.0	0.0	0.0

Poverty likelihood (%)

Simple Poverty Scorecard® Poverty-Assessment Tool Benin

1. Introduction

Pro-poor programs in Benin can use the Simple Poverty Scorecard poverty-assessment tool to estimate the likelihood that a household has expenditure below a given poverty line, to measure groups' poverty rates at a point in time, to track changes in groups' poverty rates over time, and to segment clients for targeted services.

The direct approach to poverty measurement via surveys is difficult and costly, asking households about a lengthy list of expenditure items. As a case in point, Benin's 2010 Integrated Household Living Standards Survey (*Enquête Modulaire Intégrée sur les Conditions de Vie des Ménages*, EMICoV) runs 76 pages. Enumerators visit each household 5 times over a 13-day period, with the total interview lasting an estimated 130 minutes. Households track their daily food consumption in a 48-page diary, and they also report less-frequent expenditures based on their recall for periods of up to a year.

In contrast, the indirect approach via the scorecard is simple, quick, and inexpensive. It uses ten verifiable indicators (such as "Does the female head/spouse know how to read and write with understanding in French?" or "What is the main cooking fuel used in your household?") to get a score that is highly correlated with poverty status as measured by the exhaustive survey.

The scorecard here differs from "proxy means tests" (Coady, Grosh, and Hoddinott, 2002) in that it is tailored to the capabilities and purposes not of national governments but rather of local, pro-poor organizations. The feasible poverty-measurement options for these organizations are typically subjective and relative (such as participatory wealth ranking by skilled field workers) or blunt (such as rules based on land-ownership or housing quality). Measurements from these approaches are not comparable across organizations, they may be costly, and their bias and precision are unknown.

The scorecard can be used to measure the share of a pro-poor organization's participants who are below a given poverty line, such as the Millennium Development Goals' $1.25/day poverty line at 2005 purchase-power parity. It can be used by USAID microenterprise partners to report how many of its participants are among the poorest half of people below the national poverty line. It can also be used to measure movement across a poverty line over time. In all these cases, the scorecard provides an expenditure-based, objective tool with known accuracy. While expenditure surveys are costly even for governments, some small, local organizations may be able to implement an inexpensive scorecard that can serve for monitoring and targeting.

The statistical approach here aims to be understood by non-specialists. After all, if managers are to adopt the scorecard on their own and apply it to inform their decisions, they must first trust that it works. Transparency and simplicity build trust. Getting "buy-in" matters; proxy means tests and regressions on the "determinants of

poverty" have been around for three decades, but they are rarely used to inform decisions at the local level, not because they do not work, but because they are presented (when they are presented at all) as tables of regression coefficients incomprehensible to non-specialists (with cryptic indicator names such as "`LGHHSZ_2`", negative values, and many decimal places). Thanks to the predictive-modeling phenomenon known as the "flat maximum", simple scorecards can be about as accurate as complex ones.

The technical approach here 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 these accuracy tests are simple and commonplace in statistical practice and in the for-profit field of credit-risk scoring, they have rarely been applied to poverty-assessment tools.

The scorecard is based on the 2010 EMICoV conducted by Benin's *Institut National de la Statistique et de l'Analyse Economique* (INSAE). Indicators are selected to be:

- Inexpensive to collect, easy to answer quickly, and simple to verify
- Strongly correlated with poverty
- Liable to change over time as poverty status changes

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 five to ten minutes.

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

Second, the scorecard can estimate the poverty rate of a group of households at a point in time. This estimate is the average poverty likelihood among the households in the group.

Third, the scorecard can estimate changes in the poverty rate for a group of households (or for two independent samples of households that are representative of the same population) between two points in time. This estimate is the change in the average poverty likelihood of the group(s) of households over time.

The scorecard can also be used for targeting. To help managers choose the most appropriate targeting cut-off for their purposes, this paper reports several measures of targeting accuracy for a range of possible cut-offs.

This paper presents a single scorecard whose indicators and points are derived from household expenditure data and Benin's national poverty line. Scores from this one scorecard are calibrated to poverty likelihoods for six poverty lines.

The scorecard is constructed and calibrated using half of the data from the 2010 EMICoV, and its accuracy is validated on the other half of the data.

While all three scoring estimators are *unbiased* (that is, they match the true value on average in repeated samples when applied to the same population from which the scorecard was built), they are—like all predictive models—biased to some extent when applied to a different population.[1]

Thus, while the indirect scoring approach is less costly than the direct survey approach, it is also biased. (The survey approach is unbiased by definition.) There is bias because scoring must assume that the future relationships between indicators and poverty will be the same as in the data used to build the scorecard. Of course, this assumption—ubiquitous and inevitable in predictive modeling—holds only partly.

When applied to a validation sample with bootstraps of $n = 16{,}384$, the difference between scorecard estimates of groups' poverty rates and the true rates at a point in time is $+0.4$ percentage points for the national line, and the average absolute difference across all six lines is 0.4 percentage points. These differences are due to sampling variation and not bias; the average difference would be zero if the whole 2010 EMICoV were to be repeatedly redrawn and divided into sub-samples before repeating the entire process of building and validating scorecards.

The 90-percent confidence intervals for these estimates are ±0.6 percentage points or less. For $n = 1{,}024$, the 90-percent intervals are ±2.4 percentage points or less.

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[1] Important examples include nationally representative samples at a different point in time or non-nationally representative sub-groups (Tarozzi and Deaton, 2007).

Section 2 below describes data and poverty lines. Sections 3 and 4 describe scorecard construction and offer guidelines for use in practice. Sections 5 and 6 detail the estimation of households' poverty likelihoods and of groups' poverty rates at a point in time. Section 7 discusses estimating changes in poverty rates through time, and Section 8 covers targeting. Section 9 places the new scorecard here in the context of an existing exercise for Benin, and Section 10 is a summary.

2. Data and poverty lines

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

2.1 Data

The scorecard is based on data from 16,954 households who have expenditure data in the 2010 EMICoV conducted from 1 January 2010 to 24 June 2010. This is Benin's most recent available national expenditure survey.

For the purposes of the scorecard, the households in the 2010 EMICoV are randomly divided into two sub-samples:

- *Construction and calibration* for selecting indicators and points and for associating scores with poverty likelihoods
- *Validation* for measuring accuracy with data not used in construction or calibration

2.2 Poverty rates, poverty lines, and poverty status

2.2.1 Rates

As a general definition, the *poverty rate* is the share of people in a group who live in households whose total household expenditure (divided by the number of household members) is below a given poverty line.

Beyond this general definition, there two special cases, *household-level poverty rates* and *person-level poverty rates*. With household-level rates, each household is

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counted as if it had only one person, regardless of true household size, so all households are counted equally. With person-level rates (the "head-count index"), each household is weighted by the number of people in it, so larger households count more.

For example, consider a group of two households, the first with one member and the second with two members. Suppose further that the first household has per-capita expenditure above a poverty line (it is "non-poor") and that the second household has per-capita expenditure below a poverty line (it is "poor"). The household-level rate counts both households as if they had only one person and so gives a poverty rate of $1 \div (1 + 1) = 50$ percent. In contrast, the person-level rate weighs each household by the number of people in it and so gives a poverty rate of $2 \div (1 + 2) = 67$ percent.

Whether the household-level rate or the person-level rate is relevant depends on the situation. If an organization's "participants" include all the people in a household, then the person-level rate is relevant. Governments, for example, are concerned with the well-being of people, regardless of how those people are arranged in households, so governments typically report person-level poverty rates.

If an organization has only one "participant" per household, however, then the household-level rate may be relevant. For example, if a microlender has only one borrower in a household, then it might prefer to report household-level poverty rates.

Figure 1 reports poverty rates and poverty lines for Benin at both the household-level and the person-level.[2] The scorecard is constructed using the 2010 EMICoV and household-level lines, scores are calibrated to household-level poverty likelihoods, and accuracy is measured for household-level rates. This use of household-level rates reflects the belief that they are relevant for most pro-poor organizations.

Organizations can estimate person-level poverty rates by taking a household-size-weighted average of the household-level poverty likelihoods. It is also possible to construct a scorecard based on person-level lines, to calibrate scores to person-level likelihoods, and to measure accuracy for person-level rates, but it is not done here.

2.2.2 Poverty lines

The national poverty line used with Benin's 2010 EMICoV is documented in INSAE (2011). Distinct poverty lines are defined for urban and rural areas in each of Benin's 77 communes. No documentation has been found that explains how these national lines were derived.

The all-Benin national line (sometimes called here "100% of the national line) is XOF369 per person per day (Figure 1). This gives a household-level poverty rate of 26.2 percent and a person-level poverty rate of 35.2 percent. The national line is used to construct the scorecard.

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[2] Tables at the end of this document report poverty lines and rates (for households and people) by urban/rural/overall for Benin's 12 departments and 77 communes.

Because local pro-poor organizations may want to use different or various

poverty lines, this paper calibrates scores from its single scorecard to poverty likelihoods

for six lines:

- National
- 150% of national
- 200% of national
- USAID "extreme"
- $1.25/day 2005 PPP
- $2.50/day 2005 PPP

The USAID "extreme" line is defined as the median expenditure of people (not

households) below the national line (U.S. Congress, 2004).

The $1.25/day 2005 PPP line is derived from:

- 2005 PPP exchange rate for "individual consumption expenditure by households"
  (World Bank, 2008): XOF275.19 per $1.00
- Average[3] all-Benin Consumer Price Index from January to June of 2010 of 101.70874
- 2005 monthly average CPI of 88.12

Given this, the $1.25/day 2005 PPP line for Benin as a whole during the 2010

EMICoV is (Sillers, 2006):

$$\left(\text{2005 PPP exchange rate}\right) \cdot \$1.25 \cdot \left(\frac{\text{CPI}_{\text{Jan.-June 2010}}}{\text{CPI}_{\text{2005 average}}}\right) =$$

$$\left(\frac{\text{XOF275.19}}{\$1.00}\right) \cdot \$1.25 \cdot \left(\frac{101.70874}{88.2}\right) = \text{XOF397.}$$

The $2.50/day 2005 PPP line is twice the $1.25/day line.

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[3] In 2010, this CPI is January (100.8), February (100.4), March (101.1), April (102.3), May (102.9), and June (104.0, `http://edenpub.bceao.int/`), weighted by the shares of people covered by the EMICoV in January (0.0015), February (0.1728), March (0.3161), April (0.3349), May (0.1716), and June (0.0032).

The 2005 PPP lines just discussed apply to Benin as a whole. They are adjusted

for cost-of-living differences across urban and rural areas by commune using:

- L, the all-Benin \$1.25/day 2005 PPP poverty line
- i, an index to an urban or rural area in a commune
- N, the number of urban or rural areas in communes in Benin
- π_i, the national poverty line for area i
- w_i, the share of Benin's population who live in area i

The cost-of-living-adjusted 2005 PPP poverty line L_i for area i is then:

$$L_i = \frac{L \cdot \pi_i}{(\sum_{i=1}^{N} \pi_i \cdot w_i)/\sum_{i=1}^{N} w_i}.$$

2.2.3 Poverty status

A household's poverty status depends on whether its per-capita expenditure is

more or less than a given poverty line. The data received from INSAE has these fields:

- Per-capita aggregate household expenditure for each household
- National poverty lines by urban/rural for each commune
- A field labeled "ratio of per-capita expenditure to the national poverty line"
- Poverty status by the national poverty line

Poverty status by the national line has a value of one (poor) when the field

labeled "ratio of per-capita expenditure to the national poverty line" is less than one.

For 327 households, the poverty status implied by comparing the field for per-

capita expenditure directly with the national poverty line differs from the poverty status

implied by the field labeled "ratio of per-capita expenditure to the national poverty

line". Similar discrepancies also occur for hundreds of households with the other five

poverty lines.

Which fields should be used to determine poverty status? The national poverty lines by urban/rural at the commune level in the INSAE data match those in INSAE (2011). Likewise, the poverty status variable in the data that is derived from the field labeled "ratio of per-capita expenditure to the national poverty line" gives an all-Benin person-level poverty rate that matches the 35.2 percent in INSAE (2011).

When asked about the discrepancy in the data, INSAE said that they could not trace it to its source and that the poverty-scoring work here should use poverty status as implied by the fields for per-capita household expenditure and the national lines. Because following this advice would contradict the published poverty rates for Benin (although not by more than a percentage point or two), and because the correct measure of poverty status is uncertain, it was decided not to follow INSAE's advice but rather to use poverty status for the national line as implied by the field labeled "ratio of per-capita expenditure to the national poverty line". Poverty status for other lines is then found by comparing those lines with per-capita expenditure as derived by multiplying the national poverty line by the field labeled "ratio of per-capita expenditure to the national poverty line".

3. Scorecard construction

For Benin, about 100 potential indicators are initially prepared in the areas of:

- Family composition (such as household size)
- Education (such as literacy of the female head/spouse)
- Housing (such as wall material)
- Ownership of durable goods (such as motorcycles or scooters)
- Employment (such as number of household members working in agriculture)
- Agriculture (such as ownership of land)

Figure 2 lists the potential indicators, ordered by the entropy-based "uncertainty coefficient" that measures how well a given indicator predicts poverty on its own (Goodman and Kruskal, 1979).

The scorecard also aims to measure *changes* in poverty through time. This means that, when selecting indicators and holding other considerations constant, preference is given to more sensitive indicators. For example, the type of fuel used for cooking 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 the national poverty line and Logit regression on the construction sub-sample. Indicator selection uses both judgment and statistics. The first step is to use Logit to build one scorecard for each candidate indicator. Each scorecard statistical power is taken as "c", a measure of ability to rank by poverty status (SAS Institute Inc., 2004).

One of these one-indicator scorecards is then selected based on several factors (Schreiner *et al.*, 2004; Zeller, 2004), including improvement in accuracy, likelihood of

acceptance by users (determined by simplicity, cost of collection, and "face validity" in terms of experience, theory, and common sense), sensitivity to changes in poverty status, variety among indicators, and verifiability.

A series of two-indicator scorecards are then built, each based on the one-indicator scorecard selected from the first step, with a second candidate indicator added. The best two-indicator scorecard is then selected, again based on "c" and judgment. These steps are repeated until the scorecard has 10 indicators.

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 the Logit analogue to the common R^2-based stepwise least-squares regression. It differs from naïve stepwise in that the criteria for selecting indicators include not only statistical accuracy but also judgment and non-statistical factors. The use of non-statistical criteria can improve robustness through time and helps ensure that indicators are simple, sensible, and acceptable to users.

The single scorecard here applies to all of Benin. Evidence from India and Mexico (Schreiner, 2006 and 2005a), Sri Lanka (Narayan and Yoshida, 2005), and Jamaica (Grosh and Baker, 1995) suggests that segmenting scorecards by urban/rural does not improve targeting accuracy much, although it may improve the bias and precision of estimates of poverty rates (Tarozzi and Deaton, 2007).

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 scoring is actually used in practice (Schreiner, 2005b). When scoring 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 scoring in its processes and to learn to use it properly (Schreiner, 2002). After all, most reasonable scorecards have similar targeting accuracy, thanks to the empirical phenomenon known as the "flat maximum" (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 adopt it and use it properly. Of course, accuracy matters, but it is balanced against simplicity, ease-of-use, and "face validity". Programs are more likely to collect data, compute scores, and pay attention to the results if, in their view, scoring does not imply additional work and if the whole process generally seems to make sense.

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

- Only 10 indicators
- Only categorical indicators
- Simple weights (non-negative integers, no arithmetic beyond addition)

A field worker using the paper scorecard would:

- Record participant identifiers and household size
- Read each question from the scorecard
- Circle the response and its points
- Write the points in the far-right column
- Add up the points to get the total score
- Implement targeting policy (if any)
- Deliver the paper scorecard to a central office for data entry and filing

Of course, field workers must be trained. The quality of outputs depends on the quality of inputs. If organizations or field workers gather their own data and believe that they have an incentive to exaggerate poverty rates (for example, if 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).[4] IRIS Center (2007a) and Toohig (2008) are useful nuts-and-bolts guides for budgeting, training field workers and

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[4] If an organization does not want field workers to know the points associated with indicators, then it can use a version of the scorecard without points and apply the points later in a spreadsheet or database at the central office. Schreiner (2011a) argues that experience in Colombia (Camacho and Conover, 2011) suggests that hiding points does little to deter cheating and that cheating by an organization's central office can be more likely and more damaging than cheating by field agents and respondents.

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

In particular, while collecting scorecard indicators is relatively easier than alternatives, it is still absolutely difficult. Training and explicit definitions of terms and concepts in the scorecard is essential (see Appendix). For the example of Nigeria, Onwujekwe, Hanson, and Fox-Rushby (2006) found distressingly low inter-rater and test-retest correlations for indicators as seemingly simple and obvious as whether the household owns an automobile. At the same time, Grosh and Baker (1995) find 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) find that "underreporting [of asset ownership] is widespread but not overwhelming, except for a few goods . . . [and] overreporting is common for a few goods, which implies that self-reporting may lead to the exclusion of deserving households" (pp. 24–25). Still, as is done in Mexico in the second stage of its targeting process, most false self-reports can be corrected by field agents who verify responses with a home visit, and this is the suggested procedure for the scorecard in Benin.

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

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

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In general, the sampling design should follow from the organization's goals for

the exercise.

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

- Employees of the organization
- Third-party contractors

Responses, scores, and poverty likelihoods can be recorded:

- On paper in the field and then filed at an office
- On paper in the field and then keyed into a database or spreadsheet at an office
- On portable electronic devices in the field and downloaded to a database

Given a population relevant for a particular business question, the participants

to be scored can be:

- All participants
- A representative sample of all participants
- All participants in a representative sample of field offices
- A representative sample of all participants in a representative sample of offices

If not determined by other factors, the number of participants to be scored can

be derived from sample-size formulas (presented later) for a desired level of confidence

and a desired confidence interval.

Frequency of application can be:

- As a once-off project (precluding measuring change)
- Once a year (or at some other fixed time interval, allowing measuring change)
- Each time a field worker visits a participant at home (allowing measuring change)

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

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

An example set of choices are illustrated by BRAC and ASA, two microlenders in Bangladesh who each have more than 7 million participants and who are applying the Simple Poverty Scorecard tool for Bangladesh (Schreiner, 2013). Their design is that loan officers in a random sample of branches score all participants each time they visit a homestead (about once a year) as part of their standard due diligence prior to loan disbursement. Responses are recorded on paper in the field before being sent to a central office to be entered into a database. ASA's and BRAC's sampling plans cover 50,000–100,000 participants each.

5. Estimates of household poverty likelihoods

The sum of scorecard points for a household is called the *score*. For Benin, 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 below a line, the scores themselves have only relative units. For example, doubling the score increases the likelihood of being above a given poverty line, but it does not double the likelihood.

To get absolute units, scores must be converted to *poverty likelihoods*, that is, probabilities of being below a poverty line. This is done via simple look-up tables. For the example of the national line, scores of 25–29 have a poverty likelihood of 44.4 percent, and scores of 30–34 have a poverty likelihood of 33.4 percent (Figure 3).

The poverty likelihood associated with a score varies by poverty line. For example, scores of 25–29 are associated with a poverty likelihood of 44.4 percent for the national line but 89.6 percent for 200% of the national line.[5]

5.1 Calibrating scores with poverty likelihoods

A given score is non-parametrically 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 are below a given poverty line.

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[5] Starting with Figure 3, many figures have six versions, one for each of the six poverty lines. To keep them straight, they are grouped by poverty line. Single tables pertaining to all poverty lines are placed with the tables for the national line.

For the example of the national line (Figure 4), there are 12,214 (normalized) households in the calibration sub-sample with a score of 25–29, of whom 5,421 (normalized) are below the poverty line. The estimated poverty likelihood associated with a score of 25–29 is then 44.4 percent, because $5{,}421 \div 12{,}214 = 44.4$ percent.

To illustrate with the national line and a score of 30–34, there are 12,529 (normalized) households in the calibration sample, of whom 4,180 (normalized) are below the line (Figure 4). Thus, the poverty likelihood for this score is $4{,}180 \div 12{,}529 = 33.4$ percent.

The same method is used to calibrate scores with estimated poverty likelihoods for the other five poverty lines.[6]

Figure 5 shows, for all scores, the likelihood that expenditure falls in a range demarcated by two adjacent poverty lines. For example, the daily expenditure of a person in a household with a score of 25–29 falls in the following ranges with probability:

- 20.4 percent   below the USAID "extreme" line
- 24.0 percent   between the USAID "extreme" line and 100% of the national line
- 5.0 percent   between 100% of the national line and $1.25/day
- 25.2 percent   between $1.25/day and 150% of the national line
- 15.0 percent   between 150% and 200% of the national line
- 2.2 percent   between 200% of the national line and $2.50/day
- 8.1 percent   above $2.50/day

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[6] To ensure that poverty likelihoods never increase as scores increase, it is sometimes necessary to iteratively combine likelihoods across series of adjacent scores before grouping scores into ranges. This preserves unbiasedness, and it keeps users from balking when sampling variation in score ranges with few households leads to higher scores being linked with higher poverty likelihoods.

Even though the scorecard is constructed partly based on judgment, the calibration process produces poverty likelihoods that are objective, that is, derived from survey data on expenditure and quantitative poverty lines. The poverty likelihoods would be objective even if indicators and/or points were selected without any data at all. In fact, objective scorecards of proven accuracy are often constructed using only expert judgment (Fuller, 2006; Caire, 2004; Schreiner *et al.*, 2004). 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 this depends on using data in score calibration, not on using data (and nothing else) in scorecard construction.

Although the points in the Benin scorecard are transformed coefficients from a Logit regression, 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. In the field, going from scores to poverty likelihoods in this way requires no arithmetic at all, just a look-up table. This non-parametric 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 and as long as the scorecard is applied to households that are representative of the same population from which the scorecard was constructed, then this calibration process produces unbiased estimates of poverty likelihoods. *Unbiased* means that in repeated samples from the same population, the average estimate matches the true poverty likelihood. The scorecard also produces unbiased estimates of poverty rates at a point in time and of changes in poverty rates between two points in time.[7]

Of course, the relationship between indicators and poverty does change to some unknown extent with time and also across sub-groups in Benin's population, so the scorecard will generally be biased when applied after June 2010 (the last month of fieldwork for the 2010 EMICoV) or when applied with non-nationally representative sub-groups.

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[7] This follows because these estimates of groups' 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 constant relationships between indicators and poverty through time and the assumption of a sample that is representative of Benin overall? To measure, the scorecard is applied to 1,000 bootstrap samples of size $n = 16,384$ from the validation sub-sample. Bootstrapping entails (Efron and Tibshirani, 1993):

- Score each household in the validation sample
- Draw a new bootstrap sample *with replacement* from the validation sample
- For each score, compute the true poverty likelihood in the bootstrap sample, that is, the share of households with the score and expenditure below a poverty line
- For each score, record the difference between the estimated poverty likelihood (Figure 3) and the true poverty likelihood in the bootstrap sample
- Repeat the previous three steps 1,000 times
- For each score, report the average difference between estimated and true poverty likelihoods across the 1,000 bootstrap samples
- For each score, report the two-sided interval containing the central 900, 950, or 990 differences between estimated and true poverty likelihoods

For each score range and for $n = 16,384$, Figure 6 shows the average difference between estimated and true poverty likelihoods as well as confidence intervals for the differences.

For the national line, the average poverty likelihood across bootstrap samples for scores of 25–29 in the validation sample is too high by 4.6 percentage points. For scores of 30–34, the estimate is too high by 1.1 percentage points.[8]

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[8] 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 range would be zero if samples were repeatedly drawn from the population and split into sub-samples before repeating the entire process of scorecard construction/calibration and validation.

The 90-percent confidence interval for the differences for scores of 25–29 is ±1.8 percentage points (Figure 6). This means that in 900 of 1,000 bootstraps, the difference between the estimate and the true value is between +2.8 and +6.4 percentage points (because +4.6 – 1.8 = +2.8, and +4.6 + 1.8 = +6.4). In 950 of 1,000 bootstraps (95 percent), the difference is +4.6 ±2.1 percentage points, and in 990 of 1,000 bootstraps (99 percent), the difference is +4.6 ±2.9 percentage points.

For some scores, Figure 6 shows differences—sometimes large ones—between estimated poverty likelihoods and true values. This is because the validation sub-sample is a single sample that—thanks to sampling variation—differs in distribution from the construction/calibration sub-samples and from Benin's population. For targeting, however, what matters is less the difference in all score ranges and more the difference in score ranges just above and below the targeting cut-off. This mitigates the effects of bias and sampling variation on targeting (Friedman, 1997). Section 8 below looks at targeting accuracy in detail.

In addition, if estimates of groups' poverty rates are to be usefully accurate, then errors for individual households must largely balance out. This is generally the case, as discussed in the next section.

Another possible source of differences between estimates and true values is overfitting. The scorecard here is unbiased, but it may still be *overfit* when applied after the end of the EMICoV fieldwork in June 2010. That is, it may fit the data from the 2010 EMICoV so closely that it captures not only some timeless patterns but also some

random patterns that, due to sampling variation, show up only in the 2010 EIMCoV. Or the scorecard may be overfit in the sense that it is not robust to changes in the relationships between indicators and poverty over time or when it is applied to non-nationally representative samples.

Overfitting can be mitigated by simplifying the scorecard and by not relying only on data but rather also considering experience, judgment, and theory. 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 cancel out in the estimates of groups' poverty rates (see later sections). Furthermore, at least some of the differences will 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 cost-of-living adjustments across time and geography. These factors can be addressed only by improving data quantity and quality (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 group's poverty rate at a point in time

A group's estimated poverty rate at a point in time is the average of the estimated poverty likelihoods of the individual households in the group.

To illustrate, suppose a program samples three households on Jan. 1, 2012 and that they have scores of 20, 30, and 40, corresponding to poverty likelihoods of 53.2, 33.4, and 15.6 percent (national line, Figure 3). The group's estimated poverty rate is the households' average poverty likelihood of $(53.2 + 33.4 + 15.6) ÷ 3 = 34.1$ percent.

Be careful; the group's poverty rate is *not* the poverty likelihood associated with the average score. Here, the average score is 30, which corresponds to a poverty likelihood of 33.4 percent. This differs from the 34.1 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, not cardinal numbers, and so scores cannot be added up or averaged across households. Only two operations are valid for scores: conversion to poverty likelihoods and comparison—if desired—with a cut-off for targeting. Always analyze poverty likelihoods, never scores.

6.1   Accuracy of estimated poverty rates at a point in time

For the Benin scorecard applied to the validation sample with $n = 16,384$, the absolute differences between the estimated poverty rate at a point in time and the true rate are 0.7 percentage points or less (Figure 8, summarizing Figure 7 across poverty lines). The average absolute difference across the six poverty lines is 0.4 percentage

points. At least part of these differences is due to sampling variation in the division of the 2010 EMICoV into two sub-samples.

When estimating poverty rates at a point in time, the bias reported in Figure 8 should be subtracted from the average poverty likelihood to make the estimate unbiased. For Benin's scorecard and the national line, bias is +0.4 percentage points, so the unbiased estimate in the three-household example above is $34.1 - 0.4 = 33.7$ percent.

In terms of precision, the 90-percent confidence interval for a group's estimated poverty rate at a point in time with $n = 16,384$ is ±0.7 percentage points or less (Figure 8). This means that in 900 of 1,000 bootstraps of this size, the estimate (after subtracting off bias) is within 0.7 percentage points or less of the true value.

For example, if the average poverty likelihood in a sample of $n = 16,384$ with the Benin scorecard and the national line is 34.1 percent, then estimates in 90 percent of samples of $n = 16,384$ would be expected to fall in the range of $34.1 - 0.4 - 0.6 = 33.1$ percent to $34.1 - 0.4 + 0.6 = 34.3$ percent, with the most likely true value being the unbiased estimate in the middle of this range ($34.1 - 0.4 = 33.7$ percent). This is because the original (biased) estimate is 34.1 percent, bias is +0.4 percentage points, and the 90-percent confidence interval for the national line is ±0.6 percentage points.

6.2 Formula for standard errors for estimates of poverty rates

How precise are the point-in-time estimates? Because they are averages of binary

(0/1, or poor/non-poor) variables, the estimates (in "large" samples) have a Normal

distribution and can be characterized by their average difference vis-à-vis true values

together with the standard error of the average difference.

To derive a formula for the standard errors of estimated poverty rates at a point

in time from indirect measurement via scorecards (Schreiner, 2008a), first note that the

textbook formula (Cochran, 1977) that relates confidence intervals with standard errors

in the case of direct measurement of rates is $\pm c = \pm z \cdot \sigma$, 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 $\begin{cases} 1.28 \text{ for confidence levels of 80 percent} \\ 1.64 \text{ for confidence levels of 90 percent} \\ 1.96 \text{ for confidence levels of 95 percent} \end{cases}$,

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

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

ϕ is the finite population correction factor of $\sqrt{\dfrac{N - n}{N - 1}}$,

N is the population size, and

n is the sample size.

For example, Benin's 2010 EMICoV estimates a household-level poverty rate for

the national line of $\hat{p} = 26.2$ percent (Figure 1) by direct measurement. If this estimate

came from a sample of $n = 16{,}384$ households from a population N of $1{,}286{,}483$ households (Benin's actual population size), then the finite population correction ϕ is

$$\sqrt{\frac{1{,}286{,}483 - 16{,}384}{1{,}286{,}483 - 1}} = 0.9936, \text{ which can be taken as one (1). If the desired confidence}$$

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

$$\pm z \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}} = \pm 1.64 \cdot \sqrt{\frac{0.262 \cdot (1 - 0.262)}{16{,}384}} \cdot 1 = \pm 0.563 \text{ percentage points.}$$

The scorecard, however, does not measure poverty directly, so this formula is not immediately applicable. To derive a formula for the Benin scorecard, consider Figure 7, which reports empirical confidence intervals c for the differences for the scorecard applied to 1,000 bootstrap samples of various sample sizes from the validation sample. For example, with $n = 16{,}384$ and the national line, the 90-percent confidence interval is 0.560 percentage points.[9]

Thus, the 90-percent confidence interval with $n = 16{,}384$ is 0.560 percentage points for the Benin scorecard and 0.563 percentage points for direct measurement. The ratio of the two intervals is $0.560 \div 0.563 = 0.99$.

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[9] Due to rounding, Figure 7 displays 0.6, not 0.560.

Now consider the same case, but with $n = 8{,}192$. The confidence interval under

direct measurement is $\pm 1.64 \cdot \sqrt{\dfrac{0.262 \cdot (1 - 0.262)}{8{,}192}} \cdot 1 = \pm 0.797$ percentage points. The

empirical confidence interval with the Benin scorecard (Figure 7) is 0.800 percentage

points. Thus for $n = 8{,}192$, the ratio of the two intervals is $0.800 \div 0.797 = 1.00$.

This ratio of 1.00 for $n = 8{,}192$ is not far from the ratio of 0.99 for $n = 16{,}384$.

Across all sample sizes of 256 or more in Figure 7, the average ratio turns out to be

0.95, implying that confidence intervals for indirect estimates of poverty rates via the

Benin scorecard and this poverty line are about 5 percent narrower than confidence

intervals for direct estimates via the 2010 EMICoV. This 0.95 appears in Figure 8 as

the "α factor" because if $\alpha = 0.95$, then the formula for confidence intervals c for the

Benin poverty is $\pm c = \pm z \cdot \alpha \cdot \sigma$. That is, the formula for the standard error σ for point-

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

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. This occurs for all six

poverty lines in Figure 8.

The formula relating confidence intervals with standard errors for the scorecard

can be rearranged to give a formula for determining sample size before measurement.[10]

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[10] IRIS Center (2007a and 2007b) says that a sample size of $n = 300$ is sufficient for USAID reporting. If a scorecard is as precise as direct measurement, if the expected (before measurement) poverty rate is 50 percent, and if the confidence level is 90 percent, then $n = 300$ implies a confidence interval of ± 2.2 percentage points. In fact,

If $\tilde{p}$ is the expected poverty rate before measurement, then the formula for sample size n from a population of size N that is based on the desired confidence level that corresponds to z and the desired confidence interval $\pm c$ is

$n = N \cdot \left(\dfrac{z^2 \cdot \alpha^2 \cdot \tilde{p} \cdot (1 - \tilde{p})}{z^2 \cdot \alpha^2 \cdot \tilde{p} \cdot (1 - \tilde{p}) + c^2 \cdot (N - 1)} \right)$. If the population N is "large" relative to the sample size n, then the finite population correction factor ϕ can be taken as one and

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

To illustrate how to use this, suppose the population N is 1,286,483 (as for Benin overall), suppose $c = 0.04130$, $z = 1.64$ (90-percent confidence), and the relevant poverty line is the national line so that the most sensible expected poverty rate $\tilde{p}$ is Benin's overall poverty rate for the national line (26.2 percent) and the α factor is 0.95. Then the sample-size formula gives

$n = 1{,}286{,}483 \cdot \left(\dfrac{1.64^2 \cdot 0.95^2 \cdot 0.262 \cdot (1 - 0.262)}{1.64^2 \cdot 0.95^2 \cdot 0.262 \cdot (1 - 0.262) + 0.04130^2 \cdot (1{,}286{,}483 - 1)} \right) = 276$, not

far from as the sample size of 256 observed for these parameters in Figure 7 for the national line. Taking the finite population correction factor ϕ as one gives the same

answer, as $n = \left(\dfrac{0.95 \cdot 1.64}{0.04130} \right)^2 \cdot 0.262 \cdot (1 - 0.262) = 276$.

USAID has not specified confidence levels or intervals. Furthermore, the expected poverty rate may not be 50 percent, and the scorecard could be more or less precise than direct measurement.

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

In practice after the end of fieldwork for the EMICoV in June 2010, an organization would select a poverty line (say, the national line), note their population size (say, $N = 10{,}000$ participants), select a desired confidence level (say, 90 percent, or $z = 1.64$), select a desired confidence interval (say, ± 2.0 percentage points, or $c = 0.02$), make an assumption about $\widetilde{p}$ (perhaps based on a previous measurement such as the 26.2 percent national average in the 2010 EMICoV in Figure 1), look up α (here, 0.95), assume that the scorecard will still work in the future and/or for non-nationally representative sub-groups,[11] and then compute the required sample size. In this

illustration, $n = 10{,}000 \cdot \left(\dfrac{1.64^2 \cdot 0.95^2 \cdot 0.262 \cdot (1 - 0.262)}{1.64^2 \cdot 0.95^2 \cdot 0.262 \cdot (1 - 0.262) + 0.02^2 \cdot (10{,}000 - 1)} \right) = 1{,}051.$

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[11] This paper reports accuracy for the scorecard applied to the validation sample, but it cannot test accuracy for later years or for other groups. Performance after June 2010 will resemble that in the 2010 EMICoV with deterioration to the extent that the relationships between indicators and poverty status change over time.

7. Estimates of changes in group poverty rates over time

The change in a group's poverty rate between two points in time is estimated as the change in the average poverty likelihood of the households in the group. With data only from the 2010 EMICoV, this paper cannot test estimates of change over time for Benin, and it can only suggest approximate formulas for standard errors. Nevertheless, the relevant concepts are presented here because, in practice, pro-poor organizations can apply the scorecard to collect their own data and measure change through time.

7.1 Warning: Change is not impact

Scoring can estimate change. Of course, poverty could get better or worse, and scoring does not indicate what caused change. This point is often forgotten or confused, so it bears repeating: the scorecard simply estimates change, and it does not, in and of itself, indicate the reason for the change. In particular, estimating the impact of program participation requires knowing what would have happened to participants if they had not been participants. Knowing this 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 program impact only if there is some way to know what would have happened in the absence of the program. And that information must come from somewhere beyond the scorecard.

7.2   Calculating estimated changes in poverty rates over time

Consider the illustration begun in the previous section. On Jan. 1, 2012, a program samples three households who score 20, 30, and 40 and so have poverty likelihoods of 53.2, 33.4, and 15.6 percent (national line, Figure 3). Adjusting for the known bias of +0.4 percentage points,[12] the group's baseline estimated poverty rate is the households' average poverty likelihood of [(53.2 + 33.4 + 15.6) ÷ 3] − 0.4 = 33.7 percent.

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

- Score a new, independent sample, measuring change by cohort across samples
- Score the same sample at follow-up as at baseline

By way of illustration, suppose that a year later on Jan. 1, 2013, the program samples three additional households who are in the same cohort as the three households originally sampled (or suppose that the program scores the same three original households a second time) and finds that their scores are 25, 35, and 45 (poverty likelihoods of 44.4, 22.7, and 11.4 percent, national line, Figure 3). Correcting for bias, their average poverty likelihood at follow-up is now [(44.4 + 22.7 + 11.4) ÷ 3] − 0.4 = 25.8 percent, an improvement of 33.7 − 25.8 = 7.9 percentage points.[13]

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[12] When measuring change, it is not necessary to correct baseline and follow-up estimates for their known bias; the result is the same with or without the correction. Nevertheless, it is done here to avoid confusion with the point-in-time bias adjustment.
[13] Of course, such a huge reduction in poverty in one year is unlikely, but this is just an example to show how the scorecard can be used to estimate change.

Thus, about one in thirteen participants in this hypothetical example crossed the poverty line in 2012.[14] Among those who started below the line, about one in four 7.9 ÷ 33.7 = 23.4 percent on net ended up above the line.[15]

7.3   Accuracy for estimated change in two independent samples

With only the 2010 EMICoV, it is not possible to measure the accuracy of scorecard estimates of changes in groups' poverty rates over time. In practice, of course, local pro-poor organizations can still apply the Benin scorecard to estimate change. The rest of this section suggests approximate formulas for standard errors that may be used until there is additional data.

For two equal-sized independent samples, the same logic as above can be used to derive a formula relating the confidence interval c with the standard error σ of a scorecard's estimate of the change in poverty rates over time:

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

z, c, $\hat{p}$ and N are defined as above, n is the sample size at both baseline and follow-up,[16] 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.

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[14] This is a net figure; some people start above the line and end below it, and vice versa.
[15] The scorecard does not reveal the reasons for this change.
[16] This means that, for a given precision and with direct measurement, estimating the change in a poverty rate between two points in time requires four times as many measurements (not twice as many) as does estimating a poverty rate at a point in time.

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

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

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

For countries for which this α has been measured (Schreiner, 2010, 2009a, 2009b, 2009c, 2009d, 2009e, and 2008b; Schreiner and Woller, 2010a and 2010b; and Chen and Schreiner, 2009a and 2009b), the simple average of α across poverty lines and years for a given country and then across countries is 1.19. This is as reasonable a figure as any to use for Benin.

To illustrate the use of the formula above 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 ($c = 0.02$), the poverty line is the national line, $\alpha = 1.19$, $\hat{p} = 0.262$ (from Figure 1), and the population N is large enough relative to the expected sample size that the finite population correction factor ϕ can be taken as one. Then the baseline sample size

is $n = 2 \cdot \left(\frac{1.19 \cdot 1.64}{0.02} \right)^2 \cdot 0.262 \cdot (1 - 0.262) \cdot 1 = 3{,}683$, and the follow-up sample size is

also 3,683.

7.4 Accuracy for estimated change for one sample, scored twice

Analogous to previous derivations, the general formula relating the confidence interval c to the standard error σ when using a scorecard to estimate change for a single group of households, all of whom are scored at two points in time, is:[17]

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

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.

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

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

---

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

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

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

Given this, a sample-size formula for a group of households to whom the Benin scorecard is applied twice (once after June 2010 and then again later) is

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

In Peru (the only other country for which there is an estimate, Schreiner 2009a), 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 ($c = 0.02$), the poverty line is the national line, the sample will first be scored in 2012 and then again in 2015 ($y = 3$), and population N is so large relative to the expected sample size that the finite population correction factor ϕ can be taken as one. The pre-baseline poverty rate is 26.2 percent ($p_{2012} = 0.262$, Figure 1), and suppose $\alpha = 1.30$. Then the baseline sample size is

$$n = 2 \cdot \left(\frac{1.30 \cdot 1.64}{0.02}\right)^2 \cdot \left\{-0.02 + 0.016 \cdot 3 + 0.47 \cdot \left[0.262 \cdot (1 - 0.262)\right]\right\} \cdot 1 = 2{,}702. \text{ The}$$

same group of 2,702 households is scored at follow-up as well.

8. Targeting

When a program uses the scorecard for targeting, households with scores at or below a cut-off are labeled *targeted* and treated—for program purposes—as if they are below a given poverty line. Households with scores above a cut-off are labeled *non-targeted* and treated—for program purposes—as if they are above a given poverty line.

There is a distinction between *targeting status* (scoring at or below a targeting cut-off) and *poverty status* (expenditure below a poverty line). Poverty status is a fact that depends on whether expenditure 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 scorecard.

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 scorecard 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*). Figure 9 depicts these four possible targeting outcomes. Targeting accuracy varies by the cut-off score; a higher cut-off has better inclusion (but greater leakage), while a lower cut-off has better exclusion (but higher 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).

Figure 10 shows the distribution of households by targeting outcome for Benin.

For an example cut-off of 25–29, outcomes for the national line in the validation sample

are:

- Inclusion: 15.5 percent are below the line and correctly targeted
- Undercoverage: 10.6 percent are below the line and mistakenly not targeted
- Leakage: 14.8 percent are above the line and mistakenly targeted
- Exclusion: 59.0 percent are above the line and correctly not targeted

Increasing the cut-off to 30–34 improves inclusion and undercoverage but

worsens leakage and exclusion:

- Inclusion: 19.7 percent are below the line and correctly targeted
- Undercoverage: 6.5 percent are below the line and mistakenly not targeted
- Leakage: 23.2 percent are above the line and mistakenly targeted
- Exclusion: 50.6 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 Figure 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 scoring—should thoughtfully consider

how it values successful inclusion or 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 "Total Accuracy" (IRIS Center, 2005;

Grootaert and Braithwaite, 1998). With "Total Accuracy", total net benefit is the

number of households correctly included or correctly excluded:

Total Accuracy = 1 x Households correctly included   –
                  0 x Households mistakenly undercovered   –
                  0 x Households mistakenly leaked   +
                  1 x Households correctly excluded.

Figure 10 shows "Total Accuracy" for all cut-offs for the Benin scorecard. For the

national line in the validation sample, total net benefit is greatest (77.0) for a cut-off of

20–24, with more than three in four households in Benin correctly classified.

"Total Accuracy" weighs successful inclusion of households below the line the

same as successful exclusion of households above the line. If a program valued inclusion

more (say, twice as much) than exclusion, it could reflect this by setting the benefit for

inclusion to 2 and the benefit for exclusion to 1. Then the chosen cut-off would

maximize (2 x Households correctly included) + (1 x Households correctly excluded).[18]

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[18] Figure 10 also reports "BPAC", the Balanced Poverty Accuracy Criteria adopted by
USAID for certifying poverty-assessment tools. IRIS Center (2005) says that BPAC
considers accuracy in terms of estimated poverty rates and in terms of targeting
inclusion. BPAC = (Inclusion – |Undercoverage – Leakage|) x [100 ÷ (Inclusion +
Undercoverage)].

As an alternative to assigning benefits and costs to targeting outcomes and then choosing a cut-off to maximize total net benefit, a program could set a cut-off to achieve a desired poverty rate among targeted households. The third column of Figure 11 ("% targeted who are poor") shows, for the Benin 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 the national line, targeting households who score 29 or less would target 30.4 percent of all households (second column) and produce a poverty rate among those targeted of 51.2 percent (third column).

Figure 11 also reports two other measures of targeting accuracy. The first is a version of coverage ("% of poor who are targeted"). For the example of the national line in the validation sample and a cut-off of 29 or less, 59.4 percent of all poor households are covered.

The final targeting measure in Figure 11 is the number of successfully targeted poor households for each non-poor household mistakenly targeted (right-most column). For the national line in the validation sample and a cut-off of 29 or less, covering 1.0 poor households means leaking to 1 non-poor household.

9. Context of poverty-assessment tools in Benin

This section discusses an existing poverty-assessment tool for Benin in terms of its goals, methods, poverty definitions, indicators, cost, and accuracy. The advantages of the scorecard are its use of the latest available nationally representative data, its focus on feasibility for local, pro-poor organizations, its testing of bias and precision, and its reporting of formulas for standard errors.

Gwatkin *et al.* (2007) is the only other poverty-assessment tool for Benin. To construct it, they apply an approach used in 56 countries with Demographic and Health Surveys (Rutstein and Johnson, 2004). They use Principal Components Analysis to make an asset index from simple, low-cost indicators available for the 5,769 households in the Benin 2001 DHS. The PCA index is like the scorecard here except that, because the DHS does not collect data on income or expenditure, it is based on a different conception of poverty, its accuracy vis-à-vis expenditure-based poverty is unknown, and it can only be assumed to be a proxy for long-term wealth/economic status.[19] Well-known examples of the PCA asset-index approach include Ferguson *et al.* (2003), Sahn and Stifel (2000 and 2003), and Filmer and Pritchett (2001).

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[19] Nevertheless, the indicators are similar and the "flat maximum" is important, so carefully built PCA indices and expenditure-based poverty-assessment tools may pick up the same underlying construct (perhaps "permanent income", see Bollen, Glanville, and Stecklov, 2007), and may they rank households much the same. Tests of how well rankings correspond between PCA indexes and expenditure-based scorecards include Lindelow (2006), Wagstaff and Watanabe (2003), and Montgomery *et al.* (2000).

The 20 indicators in Gwatkin *et al.* are similar to those in the scorecard here in terms of their simplicity, low cost, and verifiability:

- Characteristics of the residence:
  — Type of walls
  — Type of floors
  — Type of roof
  — Source of drinking water
  — Arrangement for the disposal of water
  — Means of trash removal
  — Toilet arrangement
  — Fuel for cooking
  — Fuel for lighting
  — Presence of electricity
- Ownership of consumer durables:
  — Radios
  — Televisions
  — Refrigerators
  — Bicycles
  — Motorcycles or scooters
  — Cars or trucks
  — Boats
  — Telephones
- Presence of a domestic worker not related to the head
- Whether members of the household work their own or family's agricultural land

Gwatkin *et al.* discuss three basic uses for their index:

- Segmenting households by quintiles to see how health, population, and nutrition vary with socio-economic status
- Monitoring (via exit surveys) how well local health-service posts reach the poor
- Measuring coverage of health services via local, small-scale surveys

The first goal is akin to targeting, and the last two goals resemble the monitoring goals here, so the uses of the PCA index are similar to those of the scorecard here.

Still, the Gwatkin *et al.* index is more difficult and costly because it cannot be computed by hand in the field, as it has 148 point values (half of them negative, all with five decimal places) which must be added up to get a household's index.

Unlike the PCA index, the scorecard here is linked directly to an absolute, expenditure-based poverty line. Thus, while both approaches can rank households, only the scorecard can estimate expenditure-based poverty status.

In essence, Gwatkin *et al.*—like all PCA asset indices—define poverty in terms of the indicators in their index. Thus, the index is not a proxy standing in for something else (such as expenditure) but rather a direct measure of a non-expenditure-based definition of poverty. There is nothing wrong—and a lot right—about defining poverty in this way, but it is not as common as an expenditure-based definition.

10. Conclusion

Pro-poor programs in Benin can use the scorecard to segment clients for targeted services as well as to estimate:

- The likelihood that a household has expenditure below a given poverty line
- The poverty rate of a population at a point in time
- The change in the poverty rate of a population between two points in time
    The scorecard is inexpensive to use and can be understood by non-specialists. It is designed to be practical for local pro-poor organizations who want to improve how they monitor and manage their social performance.

The scorecard is built with half of the data from Benin's 2010 EMICoV, tested on the other half, and calibrated to six poverty lines.

Bias and precision are reported for estimates of households' poverty likelihoods, groups' poverty rates at a point in time, and changes in groups' poverty rates over time. Of course, the scorecard's estimates of changes are not the same as estimates of program impact. Targeting accuracy is also reported.

When the scorecard is applied to the validation sample with $n = 16{,}384$, the absolute difference between estimates versus true poverty rates for groups of households at a point in time is 0.7 percentage points or less and averages—across the six poverty lines—about 0.4 percentage points. In any case, unbiased estimates may be had by subtracting this known bias from original poverty-rate estimates. For $n = 16{,}384$ and 90-percent confidence, the precision of these differences is ± 0.6 percentage points or better.

If a program wants to use the scorecard for targeting, then the results here provide the information needed to select a 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 here focuses on transparency and ease-of-use. After all, a perfectly accurate scorecard is worthless if programs feel so daunted by its complexity or its cost that they do not even try to use it. For this reason, the scorecard is kept simple, using ten indicators that are inexpensive to collect and that are straightforward to verify. 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 related to poverty likelihoods via simple look-up tables, and targeting cut-offs are likewise simple to apply. The design attempts to facilitate adoption by helping managers understand and trust scoring and by allowing non-specialists to generate scores quickly in the field.

In summary, the scorecard is a practical, objective way for pro-poor programs in Benin to estimate poverty rates, track changes in poverty rates over time, and target services. The same approach can be applied in any country with similar data from a national income or expenditure survey.

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Appendix:
Guidelines for the Interpretation
of Scorecard Indicators

The following is taken from:

Institut National de la Statistique et de l'Analyse Economique. (2009) *Enquête de Suivi, Enquête Modulaire Intégrée sur les Conditions de Vie au Bénin (EMICoV), Manuel de l'Enquêteur*, Cotonou. (the *Manual*).

Advice for conducting the interview (according to pages 8–11):

Be neutral throughout the interview
Most people are polite. Therefore, they may tend to give the responses that they think that you would like to hear. For this reason, you must always be completely neutral when you ask the questions, both in your facial expression and in your tone of voice. Do not encourage the respondent to think that he or she has given the « correct » or « incorrect » answer. Never give the impression that you approve or disapprove of what the respondent says.

All the questions are carefully designed to be neutral. They do not suggest that any response is more likely or is more preferred than another. If you do not read the question in its entirety, you could destroy this neutrality.

If the respondent gives an ambiguous or unclear response, try to probe in a neutral fashion, posing questions such as:

- "Could you explain a little more?"
- "I do not understand; could you please repeat?"
- "Oh, there is no hurry. Take your time to think about it."

Do not ever suggest answers for the respondent
If the respondent says something that does not answer the question, do not attempt to help him or her by saying something like "I presume that you mean to say . . . Is that right?" Often, the respondent will claim to agree with your interpretation even if—in reality—that is not what was meant at all. Instead, you should probe for something that is more to the point in a way that allows the respondent to come up with an appropriate response. Unless the respondent requests it, you should never read the list of coded response options aloud, even if the respondent has difficulties answering.

Do not change the wording or the sequencing of the questions
Read all the questions word-for-word as they are written, and follow the order given in the survey instrument. If the respondent does not understand a question, you should repeat it slowly and clearly. If the respondent still does not understand, then you may reword the question, taking care not to modify its original meaning. Provide only the minimum amount of information needed to obtain an appropriate response.

Treat non-cooperative respondents with tact
Sometimes, the respondent will simply say, "I don't know", give an irrelevant answer, act bored or uninterested, contradict something that was said earlier, or go so far as to refuse to answer a question. In such cases, you should do what you can to revive the respondent's interest in the conversation. For example, if you suspect that the respondent is intimidated or scared, attempt to put him or her at ease before going on to the next question. Take a few moments to chat about other things that have nothing to do with the survey (for example, the town or the village where the respondent lives, his or her daily chores, etc.).

If the respondent gives irrelevant or long, drawn-out answers, do not try to put a stop to it brusquely or impolitely; rather, listen to what he or she has to say. Then gently try to guide the conversation back to the survey question. Maintain a cordial atmosphere during the entire interview. An interview's ambience is always better when the respondent feels that the enumerator is a nice person who is receptive, empathic, and who is not intimidating, that is, someone to whom the respondent can say anything without feeling shy or embarrassed. As noted already, the main challenge when conducting an interview is to find a way to be one-on-one with the respondent. This can be done if you succeed in finding an isolated place to conduct the interview.

If the respondent balks at answering a question—or outright refuses—try to overcome this, explaining to the respondent once again that this same question is being asked of everyone in the survey sample and that reporting on the responses will involve only summary measures for the entire sample. If the respondent still refuses, simply write "REFUSED" next to the question and continue with the next question as if nothing unusual has happened. If you successfully reach the end of the interview, you can then try to go back to fill in the blanks, but do not insist too much on getting an answer. Remember, the respondent cannot be forced to answer.

Do not have preconceived ideas
Avoid preconceived ideas about the respondent's abilities and knowledge. Do not assume, for example, that households in rural areas or households with little formal education or who are illiterate do not have certain types of expenditures.

In addition, remember that differences between yourself and the respondent can influence the quality of the interview. A respondent who believes that that you disagree with him or her may be afraid or wary of you. You should always behave and speak in a way that helps the respondent to feel at ease when speaking with you.

Do not rush the interview
Ask questions slowly so that the respondent understands what is being asked. After asking a question, wait, giving the respondent time to think. If the respondent feels hurried, or that his or her opinion is not accepted and respected, then the respondent may just say, "I don't know" or give a careless answer. If you suspect that the respondent is giving answers without thinking simply to get the interview over with, say, "There is no rush. Your opinion is very important, so please think about your answers carefully."

This survey collects data through face-to-face interviews. The enumerator's job is to visit the sampled households and to fill out the questionnaire. To do this well, the enumerator should possess certain moral and intellectual qualities, the most important of which are discussed below.

Moral qualities
Working with people to collect data requires that the enumerator observe certain basic principles:

- The first impression that the household has of the enumerator is of utmost importance. Therefore, the enumerator should be careful about how he or she presents himself or herself and should wear decent clothing
- All the norms of propriety should be respected when entering other people's houses. The occupants should be greeted and any other formalities—according to the customs of the local area—observed before any survey questions are asked
- Try to speak first with the head of the household, or, as appropriate, with the person in charge of the economic unit. If the head is absent, ask for permission to conduct the survey from his wife (wives) or his representative or whoever else is present and who has the authority to allow you to enter the residence and to interact with the household or the economic unit. (Avoid speaking first with young children or domestic servants.) Introduce yourself and clearly explain the purpose of the visit. Give assurances that all data that will be collected will be kept confidential . . . and that it will not be shared with the tax authorities. Explain that not all households are interviewed but rather that some households are selected at random

- Do not get discouraged if some respondents are reticent or respond in bad faith when asked to collaborate. In those cases, repeat (as many times as is necessary) the explanations given at the beginning related to the objectives of the survey
- Avoid taking advantage of the hospitality of the respondents to obtain food and drink

Intellectual qualities

Before going out to the field, the enumerator should familiarize himself or herself with the survey instrument and the instruction manual. The enumerator must understand the questions so that he or she can, when needed, translate them accurately and without missing a beat. When it is necessary to rely on an interpreter, the enumerator should make sure that the interpreter understands all the questions well. The enumerator should be constantly vigilant, keep a critical eye on the answers, correcting them by repeating the questions, and returning to them to ask again when they appear to contradict other responses. And all this must be done without annoying the interpreter.

Enumerator responsibilities

Do's

- Do attend all the training sessions and pay careful attention
- Do study the survey instrument and the other documents until you know them well
- Do study this ["Guide to the Interpretation of Indicators in the Scorecard"] and apply its rules and guidelines rigorously
- Do expect to work long and odd hours. You will have to adjust to the schedules of the respondents, so you may have to start work very early in the morning or continue working very late at night

Don'ts

- Do not comment on or gossip about the data collected during your survey work; keep the information confidential
- Do not go about your work accompanied by someone else who is not part of the survey team
- Do not ask the respondent questions about things that are not part of the survey
- Do not do things that are unrelated to your professional duties (for example, trying to sell things to the respondent)
- Do not quit your post
- Do not be absent for training or, later, for the actual field work

Information relating to specific indicators in the scorecard

1. <u>Department (as observed)</u>

Without asking the respondent, the enumerator should record the department where the household lives.

2. <u>Main material of the exterior walls of the main building (as observed)</u>

According to p. 44 in the *Manual*: "You usually will not have to ask this question because in most cases you can observe for yourself the main material of the walls, roof, and floor. If there is more than one type of material used, mark the main one (that which use used in most of the walls)."

3. <u>How many household members are there?</u>

According to pages 27–29 of the *Manual*, "an (ordinary) *household* is a group of people—whether or not related by blood—who recognize the authority of a single person (the *head of the household*) and who pool their resources and expenditures. Usually, the household members live under a single roof, in the same compound, or on the same lot."

"A *family* consists of blood relatives, whereas a *household* consists of people who live together, regardless of whether or not they are blood relatives. For example, three unrelated men who live in the same residence and who take their meals together are not considered a family, but they are considered a household.

"A *household member* is anyone usually lives in the household. Examples of households include:

- A man with his wife (or wives), with or without children
- A man with his wife (or wives) with their children and their adult parents
- A man with his wife (or wives) who live with their married children and who work together satisfy some of their basic needs and who recognize the authority of a single head
- A single man or a single woman with or without children who alone is responsible for providing food and other basic needs
- A man or a woman who is widowed or divorced, with or without children

- A person (such as a bachelor or a single woman) who rents a room and who does not take meals with another household is considered as an independent household
- A group of unmarried people who share a residence are to be considered as a single household if they all recognize a single person as their head. Otherwise, they are to be considered as distinct households.

"A *visitor* is someone who is not a household member, even though that person may have slept in the household the night before the interview and may be present at the time of the interview.
    "Sometimes it is difficult to determine who counts as a household member and who does not. Some examples are:

- A man has two wives who live in different places, and he stays with both of them at different times. The enumerator should ask where the man spends most of his time, and then count him as a member of that household.
- A woman declares that her husband is the head of the household but that he lives somewhere else. If the husband does not usually live with the household being interviewed, and if he did not sleep there the night before the interview, then he should not be counted as a household member
- Some people take their meals in one household and sleep in another. In such cases, the person should be considered to be a member of the household where he or she sleeps
- A person who lives alone constitutes a one-person household
- A domestic servant is counted as a household member if he or she usually lives in the household

"Note that someone who usually lives with the household may nevertheless have slept somewhere else on the night before the interview."

4. <u>Does the female head/spouse know how to read and write with understanding in French?</u>

According to p. 28 of the *Manual*, the *head of the household* is "the person who is considered to be responsible for the well-being of the household. This person may be determined by age (the oldest), by sex (usually, but not necessarily, a man), by economic status (the person who supports the household economically), or by other criteria. Usually, it is straightforward to identify the head of the household."

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

- The household head, if the head is a woman
- The spouse/partner/companion of the household head, if the head is a man
- Non existent, if neither of the previous two criteria are met

According to p. 29 of the *Manual*, "Given that polygamous marriages are common in Benin, the first/oldest wife is to be considered as the "head of the household" if her husband does not usually reside with the household or if he is deceased."

In general, this indicator pertains to whomever is the highest-ranking female in the household being interviewed. If the head of the household is male, then it pertains to the highest-ranking wife of the male head. The highest-ranking wife in that household may not be the male head's first wife, if that first wife resides in another household. Consider the following cases :

- A man has one wife, and they live in the same household. The wife is the female head/spouse
- A man has one wife, but he lives and works somewhere else and does not qualify as a household member in the household in which the wife is a member. The wife is the female head/spouse
- A man and his two wives all live together in a single household. The first wife is the female head/spouse
- A woman has a husband, but he lives in a different household with another wife. Regardless of whether the woman in the household being interviewed is the man's first or second wife, she is the female head/spouse in her household
- A man has three wives. He lives with his first wife, and his second and third wives live together in another household. The scorecard is being applied to the household of the second and third wives. The second wife is the female head/spouse

5. <u>What is the main source of energy for lighting in your household?</u>

According to p. 44 of the *Manual*, "If the household uses more than one type of source of energy for lighting, record the type that is used the most often."

6. <u>Out of all the rooms available to your household, how many do household members use for sleeping?</u>

According to p. 44 of the *Manual*, "this question seeks the number of rooms that the household has available for sleeping."

7. <u>What is the main cooking fuel used in your household?</u>

According to p. 44 of the *Manual*, "If the household uses more than one type of source of energy for cooking, record the type that is used most often."

8. <u>Does your household have a motorcycle, scooter, or automobile?</u>

According to p. 44 of the *Manual*, "If the respondent says that the asset in question (say, a radio) is broken, then the enumerator should try to determine for how long the item has been broken and whether it is expected to be repaired. If the asset is only temporarily out-of-order, then it should be counted as being possessed. Otherwise, it should not be counted."

9. <u>How many mobile telephones does your household have?</u>

According to p. 44 of the *Manual*, "If the respondent says that the asset in question (say, a radio) is broken, then the enumerator should try to determine for how long the item has been broken and whether it is expected to be repaired. If the asset is only temporarily out-of-order, then it should be counted as being possessed. Otherwise, it should not be counted."

10. <u>Has the household owned (including as an inheritance) or rented any sub-divided, developed, or irrigated land in the past 12 months?</u>

According to p. 33 of the *Manual*, "The goal is to determine who among the members of the household currently possess land or lots or who possessed land, lots, or agricultural plots in the past 12 months."

According to p. 114 of the *Manual*, "Irrigation could be either natural or man-made as long as the owner uses a drainage system to irrigate the land."

Figure 1: Sample sizes, poverty lines, and poverty rates for all of Benin by sub-sample, poverty line, and household-level/person-level

| | | Sample size | Poverty rates (% with expenditure below a poverty line) and poverty lines (XOF/person/day) | | | | | |
| | | | National line | | | USAID | Intl. 2005 PPP | |
	Level		100%	150%	200%	'Extreme'	$1.25/day	$2.50/day
<u>Poverty lines:</u>								
All Benin		16,954	369	553	737	274	397	794
<u>Poverty Rates:</u>								
<u>All Benin</u>	Households	16,954	26.2	50.2	66.7	11.8	30.4	69.0
	People		35.2	62.3	78.3	17.0	40.2	81.5
<u>Construction and calibration</u>								
Selecting indicators and points, and	Households	8,453	26.2	50.2	66.7	11.7	30.3	70.2
associating scores with likelihoods	People		35.5	62.6	78.5	17.1	40.5	81.6
<u>Validation</u>								
Measuring accuracy	Households	8,501	26.2	50.2	66.7	11.8	30.4	70.4
	People		34.9	61.9	78.2	16.9	39.8	81.3

Figure 2: Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
1,387	How many household members are there? (Eight or more; Seven; Six; Five; Four; Three; Two; One)
1,310	How many household members are 13-years-old or younger? (Five or more; Four; Three; Two; One; None)
1,289	How many household members are 12-years-old or younger? (Five or more; Four; Three; Two; One; None)
1,235	How many household members are 11-years-old or younger? (Five or more; Four; Three; Two; One; None)
1,123	How many household members are 15-years-old or younger? (Six or more; Five; Four; Three; Two; One; None)
1,121	How many household members are 18-years-old or younger? (Six or more; Five; Four; Three; Two; One; None)
1,118	How many household members are 16-years-old or younger? (Six or more; Five; Four; Three; Two; One; None)
1,114	How many household members are 17-years-old or younger? (Six or more; Five; Four; Three; Two; One; None)
1,095	How many household members are 14-years-old or younger? (Six or more; Five; Four; Three; Two; One; None)
890	How many household members are 6-years-old or younger? (Three or more; Two; One; None)
667	Do all household members ages 6 to 12 currently go to school? (No; Yes; No children ages 6 to 12)
664	Do all household members ages 6 to 14 currently go to school? (No; Yes; No children ages 6 to 14)
661	Do all household members ages 6 to 11 currently go to school? (No; Yes; No children ages 6 to 11)
651	Do all household members ages 6 to 15 currently go to school? (No; Yes; No children ages 6 to 15)
650	Do all household members ages 6 to 13 currently go to school? (No; Yes; No children ages 6 to 13)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
643	Do the male and female heads/spouses know how to read and write with understanding in French?(Neither; Only the male head/spouse; Only the female head/spouse; Both; There is no male head/spouse, and the female head/spouse cannot read and write with understanding in French; There is no male head/spouse, and the female head/spouse can read and write with understanding in French; There is no female head/spouse, and the male head/spouse cannot read and write with understanding in French; There is no female head/spouse, and the male head/spouse can read and write with understanding in French)
637	Do all household members ages 6 to 16 currently go to school? (No; Yes; No children ages 6 to 16)
625	Do all children 0 to 4 years of age have a birth certificate? Were all their births recorded in the birth registry? (No; No data; Yes; There are no children ages 0 to 4)
603	Do all household members ages 6 to 17 currently go to school? (No; Yes; No children ages 6 to 17)
584	Do all household members ages 6 to 18 currently go to school? (No; Yes; No children ages 6 to 18)
562	What is the highest level and class of education that the female head/spouse has completed? (None, kindergarten, pre-school, first grade, second grade, or no data; Third or fourth grade; Fifth or sixth grade, or the first or second year of Secondary 1; No female head/spouse; Third year of Secondary 1 or higher)
507	How old is the female head/spouse? (29 to 31; 32 to 34; 35 to 38; 26 to 28; 39 to 43; 44 to 50; 51 to 58; 59 or older; 25 or younger; No female head/spouse)
496	In what sector is principal activity of the female head/spouse (or what type of product does it produce)? (Agriculture, forestry, fishing, quarrying, and mining; Electricity, gas, and water, construction, retail and wholesale trade, transport and logistics, and hotels and restaurants; Manufacturing and repair; Information and communication, finance, insurance, and real estate, specialized, scientific, and technical professions, surveys and security, building maintenance and management, and landscaping, public administration and education, health care and social work, art, sport, and recreation, other services, or no data; No female head/spouse)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
481	What is the marital status of the female head/spouse? (Married, two wives or more; Married, one wife, or no data; Never-married, Divorced or separated, widowed, or cohabiting; No female head/spouse)
480	What is the name of the principal work, profession, or job that the female head/spouse did in the past week? (Skilled workers in agriculture and fishing; Others; No female head/spouse)
471	How is the female head/spouse paid in her main line of work? (In kind (products, food, lodging, etc.); Not remunerated; Business profits; By the day or hour worked, by the job, or on commission; Salary (monthly, bimonthly, or weekly); No female head/spouse)
447	What is the structure of household headship? (Both male and female heads/spouses; Female head/spouse only; Male head/spouse only)
440	What is the highest level and class of education that the male head/spouse has completed? (None, kindergarten, pre-school, first grade, second grade, or no data; Third to sixth grade; No male head/spouse; First to third years of Secondary 1; Fourth year of Secondary 1 or higher)
421	In their principal work, profession, or job in the past week, how many household members were skilled workers in agriculture and fishing? (Three or more; Two; One; None)
405	What religion does the female head/spouse practice? (Other traditional; Voodoo; Other protestant; Other religions, or no religion; Other Christian; Celeste; Islam; Catholic; Methodist; No female head/spouse)
397	In the past week, how many household members in their principal work, profession, or job worked in agriculture, forestry, fishing, quarrying, or mining? (Three or more; Two; One; None)
394	In the past week, how many household members have worked at least one hour? (Four or more; Three; Two; One; None)
373	What is the ethnicity or nationality of the female head/spouse? (Neighboring countries, other countries, other ethnicity, after birth, no data, or Adja and related; Yoa et Lokpa and related; Betamaribe and related; Fon and related; Peulh and related; Bariba and related; Yoruba and related; Dendi and related; No female head/spouse)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
364	In the past week, has the female head/spouse worked at least one hour? (Yes; No; No female head/spouse)
344	What is the marital status of the male head/spouse? (Married, two wives or more; Married, one wife, or no data; No male head/spouse; Widower or cohabiting; Never-married, or divorced or separated)
329	What is the name of the principal work, profession, or job that the male head/spouse did in the past week? (Skilled workers in agriculture and fishing; No male head/spouse; Service workers and shop and market sales workers; Craft and related trades workers; Plant and machine operators and assemblers, elementary occupations, armed forces and security, others and not otherwise specified; Legislators, senior officials and managers, professionals, technicians and associated professionals, or clerks)
312	In what sector is principal activity of the male head/spouse (or what type of product does it produce)? (Agriculture, forestry, fishing, quarrying, and mining; Information and communication; Health care and social work, art, sport, and recreation, other services, or no data; No male head/spouse; Manufacturing and repair, electricity, gas, and water, construction, retail and wholesale trade, or transport and logistics; Hotels and restaurants, finance, insurance, and real estate, specialized, scientific, and technical professions, surveys and security, building maintenance and management, and landscaping, public administration and education)
305	What type of toilet do most household members use? Do you share this toilet arrangement with other households? (No toilets used/on the ground, hanging latrine or stilts, composting toilet (ECOSAN), bucket/pail, or other; Shared pit latrine without slab; Private pit latrine without slab; Shared non-ventilated pit latrine with slab; Private non-ventilated pit latrine with slab; Shared ventilated pit latrine with slab; Private ventilated pit latrine with slab, automatic flush toilet, manual flush toilet)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
294	What type of toilet do most household members use? How many other households use these toilets? (No toilets used/on the ground; Hanging latrine or stilts, composting toilet, bucket/pail, or other; Pit latrine without slab shared with three other households, pit latrine without slab shared with four other households, pit latrine without slab shared with five other households; Private pit latrine without slab, pit latrine without slab shared with one other household, or pit latrine without slab shared with two other households; Non-ventilated pit latrine with slab shared with four other households, or non-ventilated pit latrine with slab shared with five other households; Private non-ventilated pit latrine with slab, non-ventilated pit latrine with slab shared with one other household, non-ventilated pit latrine with slab shared with two other households, or non-ventilated pit latrine with slab shared with three other households; Ventilated pit latrine with slab shared with three other households, ventilated pit latrine with slab shared with four other households, or ventilated pit latrine with slab shared with five other households; Private ventilated pit latrine with slab; Ventilated pit latrine with slab shared with one other household, ventilated pit latrine with slab shared with two other households, automatic flush toilet, or manual flush toilet)
287	What is the main source of energy for lighting in your household? (Kerosene; Electricity, LPG, oil, solar energy, electric generator (community or private), or other)
285	What type of toilet do most household members use? (No toilets used/on the ground; Pit latrine without slab, hanging latrine or stilts, composting toilet (ECOSAN), bucket/pail, or other; Non-ventilated pit latrine with slab; Ventilated pit latrine with slab, automatic flush toilet, or manual flush toilet)
278	Does your household have a television set and a VCR or DVD? (Neither; Television set, but no VCR or DVD; VCR or DVD, regardless of television set)
278	Main material of the exterior walls of the main building (as observed) (Earth, stone, wood/planks, palm leaves/bamboo, or other; Mud plastered with cement; Bricks)
275	Does your household have a fan? (No; Yes)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
271	What is the main cooking fuel used in your household? (Firewood, or straw; Charcoal, electricity, LPG, kerosene, or other)
268	What is the highest level and class of education that the male head/spouse has completed? (None, pre-school, kindergarten, first grade, or second grade; Third to sixth grade; No male head/spouse; Secondary 1 (one to three years); Secondary 1, four years, or more)
259	Does your household have a foam mattress? (No; Yes)
258	Does your household have a television set? (No; Yes)
241	Does your household have a VCR or DVD? (No; Yes)
233	How many beds and foam mattresses does your household have? (None; One; Two; Three or more)
229	How is the male head/spouse paid in his main line of work? (In kind (products, food, lodging, etc.); Business profits; By the day or hour worked, by the job, on commission, or is not remunerated; No male head/spouse; Salary (monthly, bimonthly, or weekly))
228	What is the main source of drinking water for the household? (Protected spring, river/creek/pond, rainwater in a cistern (covered or uncovered), other rainwater, water truck, bottled water, or other; Well with a hand- or foot-pump, public standpipe from another source, drilled well with a hand- or foot-pump, covered or protected well, unprotected well; Running water to the residence from another source, faucet of a neighbor, public standpipe from SONEB, running water to the residence from SONEB, running water in the courtyard, yard, or lot)
214	How many household members, in their main line of work, are remunerated via the profits from their business? (Two or more; One; None)
211	Department (as observed) (Littoral; Mono; Zou, Atlantique, or Collines; Couffo; Plateau; Ouémé; Donga or Borgou; Alibori; Atakora)
210	Does your household have an armchair? (No; Yes)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
182	Does the male head/spouse know how to read and write with understanding in French? (No; No male head/spouse; Yes)
179	How many mobile telephones does your household have? (None; One; Two or more)
165	Main material of the floor (as observed) (Earth/sand; Manure, wood/planks, palms/bamboo, parquet or polished wood, or other; Tile, cement, carpet)
157	How many beds does your household have? (None; One; Two or more)
157	Has the household owned (including as an inheritance) or rented a subdivided piece of land in the past 12 months? (No; Yes)
155	Where do you usually throw away your household trash? (In the yard, on the ground outside, or other; Buried, burned, public dumpster, private/NGO dumpster)
136	What is the area (in square meters) of land which the household has owned (including as an inheritance) or rented in the past 12 months? (None; 1 to 799; 800 to 9,999; 10,000; 10,001 to 20,000; 20,001 to 40,000; 40,001 or more)
133	Does your household have a motorcycle, scooter, or automobile? (Bicycle, but no motorcycle or scooter or automobile; None; Bicycle and motorcycle or scooter, but no automobile; Motorcycle or scooter, but no bicycle nor automobile; Automobile, regardless of bicycle or motorcycle or scooter)
130	Does your household have a refrigerator? (No; Yes)
127	Has the household owned (including as an inheritance) or rented any sub-divided, developed, or irrigated land in the past 12 months? (Does not own etc.; Does own etc., but land is not sub-divided, developed, or irrigated; Does own etc., and some land is sub-divided, developed, or irrigated)
122	How old is the male head/spouse? (43 to 48; 34 to 38; 49 to 53; 54 to 59; 29 to 33; 39 to 42; 60 to 64; 65 or older; No male head/spouse; 28 or younger)

Figure 2 (cont.): Poverty indicators by uncertainty coefficient

Uncertainty coefficient	Indicator (Answers ordered starting with those most strongly linked with higher poverty likelihoods)
119	Has the household owned (including as an inheritance) or rented a developed piece of land in the past 12 months?(No; Yes)
114	How many household members are, in their main line of work, paid by the day or hour, by the job, in kind (products, food, lodging, etc.), or are not remunerated? (Two or more; One; None)
114	Does your household have an electric iron? (No; Yes)
111	How many household members know how to read and write with understanding in French? (None; One; Two; Three or more)
111	What religion does the male head/spouse practice? (Other traditional; Voodoo; Other protestant; Other religions, or no religion; Other Christian; Celeste; Islam; Catholic; Methodist; No male head/spouse)
107	How many household members are, in their main line of work, paid a salary (monthly, bimonthly, or weekly)? (None; One or more)
98	In the past week, has the male head/spouse worked at least one hour? (Yes; No male head/spouse; No)
91	Do you share this toilet arrangement with other households? (Yes; No)

Source: 2010 EMICoV and the national poverty line

National Poverty Line Tables

(and Tables Pertaining to All Six Poverty Lines)

Figure 3 (National line): Estimated poverty likelihoods associated with scores

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–4	87.1
5–9	82.6
10–14	68.7
15–19	64.8
20–24	53.2
25–29	44.4
30–34	33.4
35–39	22.7
40–44	15.6
45–49	11.4
50–54	6.1
55–59	4.3
60–64	2.2
65–69	1.1
70–74	1.1
75–79	0.3
80–84	0.0
85–89	0.0
90–94	0.0
95–100	0.0

Figure 4 (National line): Derivation of estimated poverty likelihoods associated with scores

Score	Households below poverty line		All households at score		Poverty likelihood (estimated, %)
0–4	57	÷	65	=	87.1
5–9	569	÷	689	=	82.6
10–14	1,687	÷	2,456	=	68.7
15–19	3,614	÷	5,574	=	64.8
20–24	4,984	÷	9,364	=	53.2
25–29	5,421	÷	12,214	=	44.4
30–34	4,180	÷	12,529	=	33.4
35–39	2,506	÷	11,028	=	22.7
40–44	1,436	÷	9,197	=	15.6
45–49	963	÷	8,461	=	11.4
50–54	449	÷	7,384	=	6.1
55–59	303	÷	7,089	=	4.3
60–64	113	÷	5,223	=	2.2
65–69	46	÷	4,013	=	1.1
70–74	28	÷	2,435	=	1.1
75–79	4	÷	1,337	=	0.3
80–84	0	÷	574	=	0.0
85–89	0	÷	312	=	0.0
90–94	0	÷	55	=	0.0
95–100	0	÷	0	=	0.0

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

Figure 5: Distribution of household poverty likelihoods across expenditure ranges demarcated by poverty lines

Score	<USAID <XOF274	=>USAID and <100% Natl. =>XOF274 and <XOF369	=>100% Natl. and <$1.25/day =>XOF369 and <XOF397	=>$1.25/day and <150% Natl. =>XOF397 and <XOF553	=>150% Natl. and <200% Natl. =>XOF553 and <XOF737	=>200% Natl. and <$2.50/day =>XOF737 and <XOF794	=>$2.50/day =>XOF794
0–4	49.7	37.4	6.9	6.0	0.0	0.0	0.0
5–9	49.7	32.9	3.1	8.1	6.1	0.0	0.0
10–14	41.1	27.5	6.0	13.5	7.3	1.4	3.2
15–19	35.1	29.8	5.6	17.0	7.8	1.5	3.2
20–24	25.3	27.9	9.0	21.0	9.6	1.8	5.3
25–29	20.4	24.0	5.0	25.2	15.0	2.2	8.1
30–34	12.8	20.6	6.1	28.5	17.4	3.2	11.5
35–39	8.2	14.6	5.7	27.9	20.7	5.1	18.0
40–44	4.7	10.9	3.4	26.2	24.1	4.8	25.9
45–49	3.8	7.5	3.1	23.4	24.8	4.9	32.5
50–54	2.1	4.0	1.8	17.2	21.5	5.8	47.6
55–59	0.9	3.4	1.4	10.5	18.3	4.4	61.1
60–64	0.5	1.7	1.0	7.2	13.5	4.1	72.0
65–69	0.3	0.8	0.0	3.8	10.6	3.1	81.5
70–74	0.2	1.0	0.0	2.2	8.7	3.1	84.9
75–79	0.1	0.2	0.0	2.1	3.2	0.5	93.9
80–84	0.0	0.0	0.0	1.3	3.8	1.0	93.9
85–89	0.0	0.0	0.0	0.5	1.4	0.4	97.7
90–94	0.0	0.0	0.0	0.0	0.0	0.0	100.0
95–100	0.0	0.0	0.0	0.0	0.0	0.0	100.0

All poverty likelihoods in percentage units.

Figure 6 (National line): Bootstrapped differences between estimated and true poverty likelihoods for households in a large sample ($n = 16{,}384$) with confidence intervals, scorecard applied to the validation sample

Score	Diff.	Difference between estimate and true value Confidence interval (+/− percentage points)		
		90-percent	95-percent	99-percent
0–4	+13.8	21.3	27.4	32.4
5–9	+7.5	7.0	8.2	11.1
10–14	−3.2	3.7	4.6	6.1
15–19	+7.6	3.0	3.5	4.5
20–24	+0.5	2.2	2.6	3.4
25–29	+4.6	1.8	2.1	2.9
30–34	+1.1	1.7	2.0	2.5
35–39	−4.2	3.1	3.3	3.6
40–44	−2.8	2.3	2.4	2.7
45–49	−0.6	1.6	1.9	2.4
50–54	−0.2	1.2	1.4	1.9
55–59	+0.8	0.8	1.0	1.4
60–64	−0.6	0.9	1.0	1.3
65–69	−0.4	0.7	0.8	1.1
70–74	+1.1	0.0	0.0	0.0
75–79	+0.3	0.0	0.0	0.0
80–84	−0.3	0.5	0.6	0.8
85–89	+0.0	0.0	0.0	0.0
90–94	+0.0	0.0	0.0	0.0
95–100	+0.0	0.0	0.0	0.0

Figure 7 (National line): Differences and precision of differences for bootstrapped estimates of poverty rates for groups of households at a point in time, by sample size, scorecard applied to the validation sample

Sample Size n	Difference between estimate and true value			
	Diff.	Confidence interval (+/− percentage points)		
		90-percent	95-percent	99-percent
1	−1.2	65.3	74.6	82.7
4	+0.6	31.4	36.1	48.9
8	+0.7	21.7	26.1	35.1
16	+0.5	15.6	19.0	24.3
32	+0.5	11.8	13.8	18.4
64	+0.6	8.1	9.7	13.6
128	+0.5	5.6	7.0	9.1
256	+0.4	4.1	4.9	6.6
512	+0.5	2.9	3.6	4.7
1,024	+0.5	2.2	2.5	3.4
2,048	+0.4	1.5	1.8	2.4
4,096	+0.5	1.1	1.3	1.8
8,192	+0.4	0.8	0.9	1.2
16,384	+0.4	0.6	0.7	0.9

Figure 8 (All poverty lines): Differences, precision of differences, and the α factor for bootstrapped estimates of poverty rates for groups of households at a point in time, scorecard applied to the validation sample

		Poverty line					
		National line			USAID	Intl. 2005 PPP	
		100%	**150%**	**200%**	**'Extreme'**	**$1.25/day**	**$2.50/day**
Estimate minus true value							
Scorecard applied to validation sample		+0.4	+0.7	+0.5	−0.0	+0.4	+0.3
Precision of difference							
Scorecard applied to validation sample		0.6	0.6	0.6	0.4	0.6	0.5
α factor for sample size							
Scorecard applied to validation sample		0.95	0.92	0.90	0.94	0.94	0.91
Precision is measured as 90-percent confidence intervals in units of +/− percentage points.							
Differences and precision estimated from 500 bootstraps of size $n = 16,384$.							
α is estimated from 1,000 bootstrap samples of $n = 256, 512, 1,024, 2,048, 4,096, 8,192$, and 16,384.							
The USAID "extreme" line is in per-person units.							

Figure 9 (All poverty lines): Possible types of outcomes from targeting by poverty score

		Targeting segment	
		Targeted	**Non-targeted**
True poverty status	**Below poverty line**	**Inclusion** Under poverty line Correctly Targeted	**Undercoverage** Under poverty line Mistakenly Non-targeted
	Above poverty line	**Leakage** Above poverty line Mistakenly Targeted	**Exclusion** Above poverty line Correctly Non-targeted

Figure 10 (National line): Households by targeting classification and score, along with "Total Accuracy" and BPAC, scorecard applied to the validation sample

Score	Inclusion: < poverty line correctly targeted	Undercoverage: < poverty line mistakenly non-targeted	Leakage: => poverty line mistakenly targeted	Exclusion: => poverty line correctly non-targeted	Total Accuracy Inclusion + Exclusion	BPAC See text
0–4	0.0	26.1	0.0	73.8	73.9	−99.6
5–9	0.6	25.6	0.2	73.7	74.2	−94.9
10–14	2.4	23.8	0.9	73.0	75.3	−78.7
15–19	5.6	20.5	3.2	70.7	76.3	−44.9
20–24	10.7	15.5	7.5	66.4	77.0	+10.2
25–29	15.5	10.6	14.8	59.0	74.6	+43.4
30–34	19.7	6.5	23.2	50.6	70.3	+11.2
35–39	22.4	3.7	31.5	42.4	64.8	−20.3
40–44	24.2	2.0	38.9	34.9	59.1	−48.7
45–49	25.2	1.0	46.4	27.4	52.6	−77.3
50–54	25.6	0.5	53.3	20.5	46.2	−103.8
55–59	25.9	0.2	60.1	13.7	39.6	−129.8
60–64	26.1	0.1	65.2	8.6	34.7	−149.2
65–69	26.2	0.0	69.1	4.7	30.9	−164.2
70–74	26.2	0.0	71.6	2.3	28.4	−173.6
75–79	26.2	0.0	72.9	0.9	27.1	−178.7
80–84	26.2	0.0	73.5	0.4	26.5	−180.8
85–89	26.2	0.0	73.8	0.1	26.2	−182.0
90–94	26.2	0.0	73.8	0.0	26.2	−182.2
95–100	26.2	0.0	73.8	0.0	26.2	−182.2

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

Figure 11 (National line): For a given score cut-off, the percentage of all households who are targeted (that is, have a score equal to or less than the cut-off), the percentage of targeted households who are poor (that is, below the poverty line), the percentage of poor households who are targeted, and the number of poor households who are successfully targeted (coverage) per non-poor household mistakenly targeted (leakage), scorecard applied to the validation sample

Targeting cut-off	% all households who are targeted	% targeted who are poor	% of poor who are targeted	Poor households targeted per non-poor household targeted
0–4	0.1	67.0	0.2	2.0:1
5–9	0.8	75.4	2.2	3.1:1
10–14	3.2	73.2	9.0	2.7:1
15–19	8.8	64.0	21.5	1.8:1
20–24	18.1	58.8	40.8	1.4:1
25–29	30.4	51.2	59.4	1.0:1
30–34	42.9	45.8	75.1	0.8:1
35–39	53.9	41.6	85.8	0.7:1
40–44	63.1	38.4	92.5	0.6:1
45–49	71.6	35.2	96.3	0.5:1
50–54	79.0	32.5	98.0	0.5:1
55–59	86.0	30.1	99.1	0.4:1
60–64	91.3	28.6	99.7	0.4:1
65–69	95.3	27.5	100.0	0.4:1
70–74	97.7	26.8	100.0	0.4:1
75–79	99.1	26.4	100.0	0.4:1
80–84	99.6	26.3	100.0	0.4:1
85–89	99.9	26.2	100.0	0.4:1
90–94	100.0	26.2	100.0	0.4:1
95–100	100.0	26.2	100.0	0.4:1

150% of the National Poverty Line Tables

Figure 3 (150% of the National line): Estimated poverty likelihoods associated with scores

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–4	100.0
5–9	93.9
10–14	88.1
15–19	87.5
20–24	83.3
25–29	74.6
30–34	67.9
35–39	56.3
40–44	45.2
45–49	37.9
50–54	25.1
55–59	16.2
60–64	10.3
65–69	4.9
70–74	3.4
75–79	2.4
80–84	1.3
85–89	0.5
90–94	0.0
95–100	0.0

Figure 6 (150% of the National line): Bootstrapped differences between estimated and true poverty likelihoods for households in a large sample ($n = 16,384$) with confidence intervals, scorecard applied to the validation sample

| Score | Diff. | Difference between estimate and true value Confidence interval (+/− percentage points) | | |
		90-percent	95-percent	99-percent
0–4	+0.0	0.0	0.0	0.0
5–9	+4.3	5.0	5.8	7.6
10–14	+0.8	2.8	3.4	4.5
15–19	+5.9	2.5	3.0	4.2
20–24	+5.1	1.8	2.2	3.0
25–29	+0.6	1.6	1.9	2.6
30–34	+2.6	1.8	2.2	2.9
35–39	−0.2	2.0	2.4	3.3
40–44	−4.5	3.3	3.5	3.8
45–49	−0.2	2.3	2.8	3.9
50–54	+0.6	2.1	2.5	3.3
55–59	−1.1	1.9	2.2	2.8
60–64	−0.9	1.8	2.2	2.8
65–69	−1.4	1.7	1.9	2.6
70–74	+0.3	1.6	1.9	2.3
75–79	+2.1	0.4	0.5	0.6
80–84	+1.0	0.5	0.6	0.8
85–89	+0.5	0.0	0.0	0.0
90–94	+0.0	0.0	0.0	0.0
95–100	+0.0	0.0	0.0	0.0

Figure 7 (150% of the National line): Differences and precision of differences for bootstrapped estimates of poverty rates for groups of households at a point in time, by sample size, scorecard applied to the validation sample

Sample Size n	Diff.	Difference between estimate and true value		
		Confidence interval (+/− percentage points)		
		90-percent	95-percent	99-percent
1	−0.3	68.4	83.5	88.7
4	−0.1	36.8	42.5	53.9
8	+0.5	25.3	29.3	36.2
16	+0.5	18.5	21.8	28.5
32	+0.7	13.5	16.3	20.7
64	+0.7	9.0	10.8	14.2
128	+0.8	6.5	7.9	10.4
256	+0.7	4.5	5.6	7.6
512	+0.7	3.3	3.9	5.6
1,024	+0.7	2.4	2.9	3.8
2,048	+0.7	1.7	2.0	2.8
4,096	+0.7	1.2	1.4	1.9
8,192	+0.7	0.9	1.0	1.3
16,384	+0.7	0.6	0.7	0.9

Figure 10 (150% of the National line): Households by targeting classification and score, along with "Total Accuracy" and BPAC, scorecard applied to the validation sample

Score	Inclusion: < poverty line correctly targeted	Undercoverage: < poverty line mistakenly non-targeted	Leakage: => poverty line mistakenly targeted	Exclusion: => poverty line correctly non-targeted	Total Accuracy Inclusion + Exclusion	BPAC See text
0–4	0.1	50.1	0.0	49.8	49.9	–99.7
5–9	0.7	49.5	0.1	49.7	50.4	–97.1
10–14	2.8	47.4	0.4	49.4	52.3	–88.0
15–19	7.5	42.7	1.3	48.5	56.0	–67.5
20–24	15.0	35.2	3.2	46.6	61.6	–34.0
25–29	24.0	26.1	6.3	43.5	67.5	+8.4
30–34	32.3	17.8	10.6	39.3	71.6	+49.9
35–39	38.5	11.7	15.4	34.4	72.9	+69.2
40–44	43.1	7.1	20.0	29.8	72.8	+60.1
45–49	46.2	4.0	25.4	24.4	70.5	+49.3
50–54	48.0	2.2	31.0	18.8	66.8	+38.3
55–59	49.2	1.0	36.8	13.0	62.2	+26.6
60–64	49.9	0.3	41.4	8.4	58.3	+17.5
65–69	50.1	0.1	45.2	4.6	54.7	+10.0
70–74	50.2	0.0	47.5	2.3	52.4	+5.3
75–79	50.2	0.0	48.9	0.9	51.1	+2.6
80–84	50.2	0.0	49.4	0.4	50.6	+1.5
85–89	50.2	0.0	49.8	0.1	50.2	+0.9
90–94	50.2	0.0	49.8	0.0	50.2	+0.7
95–100	50.2	0.0	49.8	0.0	50.2	+0.7

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

Figure 11 (150% of the National line): For a given score cut-off, the percentage of all households who are targeted (that is, have a score equal to or less than the cut-off), the percentage of targeted households who are poor (that is, below the poverty line), the percentage of poor households who are targeted, and the number of poor households who are successfully targeted (coverage) per non-poor household mistakenly targeted (leakage), scorecard applied to the validation sample

Targeting cut-off	% all households who are targeted	% targeted who are poor	% of poor who are targeted	Poor households targeted per non-poor household targeted
0–4	0.1	100.0	0.1	Only poor targeted
5–9	0.8	90.7	1.4	9.8:1
10–14	3.2	88.2	5.6	7.4:1
15–19	8.8	85.5	15.0	5.9:1
20–24	18.1	82.5	29.8	4.7:1
25–29	30.4	79.2	47.9	3.8:1
30–34	42.9	75.4	64.4	3.1:1
35–39	53.9	71.4	76.7	2.5:1
40–44	63.1	68.2	85.8	2.1:1
45–49	71.6	64.5	92.0	1.8:1
50–54	79.0	60.8	95.6	1.5:1
55–59	86.0	57.2	98.1	1.3:1
60–64	91.3	54.6	99.4	1.2:1
65–69	95.3	52.6	99.8	1.1:1
70–74	97.7	51.3	100.0	1.1:1
75–79	99.1	50.7	100.0	1.0:1
80–84	99.6	50.4	100.0	1.0:1
85–89	99.9	50.2	100.0	1.0:1
90–94	100.0	50.2	100.0	1.0:1
95–100	100.0	50.2	100.0	1.0:1

200% of the National Poverty Line Tables

Figure 3 (200% of the National line): Estimated poverty likelihoods associated with scores

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–4	100.0
5–9	100.0
10–14	95.4
15–19	95.3
20–24	92.9
25–29	89.6
30–34	85.3
35–39	77.0
40–44	69.3
45–49	62.6
50–54	46.6
55–59	34.5
60–64	23.9
65–69	15.5
70–74	12.0
75–79	5.5
80–84	5.1
85–89	1.9
90–94	0.0
95–100	0.0

Figure 6 (200% of the National line): Bootstrapped differences between estimated and true poverty likelihoods for households in a large sample ($n = 16,384$) with confidence intervals, scorecard applied to the validation sample

Score	Diff.	Difference between estimate and true value		
		Confidence interval (+/− percentage points)		
		90-percent	95-percent	99-percent
0–4	+0.0	0.0	0.0	0.0
5–9	+4.1	3.3	3.7	5.0
10–14	−0.4	1.5	1.9	2.3
15–19	+3.8	1.8	2.1	2.9
20–24	+2.5	1.4	1.8	2.3
25–29	+1.7	1.2	1.5	1.9
30–34	+2.6	1.4	1.8	2.3
35–39	−1.5	1.6	2.0	2.8
40–44	−2.6	2.3	2.5	3.1
45–49	+1.4	2.3	2.7	3.6
50–54	+0.2	2.5	2.9	3.6
55–59	−1.2	2.5	3.0	3.9
60–64	−1.5	2.9	3.4	4.3
65–69	+0.2	2.5	2.9	3.7
70–74	−4.2	3.7	4.0	4.7
75–79	+2.3	2.1	2.5	3.3
80–84	+4.8	0.5	0.6	0.8
85–89	−4.8	5.4	7.2	9.5
90–94	+0.0	0.0	0.0	0.0
95–100	+0.0	0.0	0.0	0.0

Figure 7 (200% of the National line): Differences and precision of differences for bootstrapped estimates of poverty rates for groups of households at a point in time, by sample size, scorecard applied to the validation sample

Sample Size	Difference between estimate and true value			
		Confidence interval (+/− percentage points)		
n	Diff.	90-percent	95-percent	99-percent
1	−0.1	69.4	77.6	86.6
4	−0.1	33.0	37.6	51.3
8	+0.4	22.3	27.2	36.2
16	+0.4	16.7	19.3	24.1
32	+0.5	12.0	14.6	19.9
64	+0.5	8.4	10.1	13.6
128	+0.6	6.1	7.3	9.3
256	+0.5	4.2	5.0	6.9
512	+0.5	3.1	3.6	4.8
1,024	+0.5	2.1	2.5	3.2
2,048	+0.5	1.6	1.9	2.4
4,096	+0.5	1.1	1.3	1.7
8,192	+0.5	0.8	0.9	1.2
16,384	+0.5	0.6	0.7	0.9

Figure 10 (200% of the National line): Households by targeting classification and score, along with "Total Accuracy" and BPAC, scorecard applied to the validation sample

Score	Inclusion: < poverty line correctly targeted	Undercoverage: < poverty line mistakenly non-targeted	Leakage: => poverty line mistakenly targeted	Exclusion: => poverty line correctly non-targeted	Total Accuracy Inclusion + Exclusion	BPAC See text
0–4	0.1	66.6	0.0	33.3	33.4	–99.8
5–9	0.7	65.9	0.0	33.3	34.0	–97.8
10–14	3.1	63.6	0.1	33.2	36.3	–90.6
15–19	8.2	58.4	0.5	32.8	41.0	–74.5
20–24	16.8	49.9	1.3	32.0	48.8	–47.6
25–29	27.6	39.1	2.8	30.5	58.1	–13.1
30–34	38.0	28.6	4.9	28.5	66.5	+21.4
35–39	46.7	20.0	7.3	26.1	72.7	+50.9
40–44	53.3	13.4	9.8	23.5	76.8	+74.6
45–49	58.5	8.2	13.1	20.2	78.7	+80.3
50–54	61.8	4.8	17.1	16.2	78.1	+74.3
55–59	64.3	2.3	21.7	11.6	75.9	+67.4
60–64	65.6	1.1	25.7	7.6	73.2	+61.5
65–69	66.2	0.5	29.1	4.3	70.5	+56.4
70–74	66.6	0.1	31.1	2.2	68.8	+53.3
75–79	66.6	0.0	32.4	0.9	67.6	+51.4
80–84	66.6	0.0	33.0	0.3	67.0	+50.5
85–89	66.7	0.0	33.3	0.1	66.7	+50.1
90–94	66.7	0.0	33.3	0.0	66.7	+50.0
95–100	66.7	0.0	33.3	0.0	66.7	+50.0

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

Figure 11 (200% of the National line): For a given score cut-off, the percentage of all households who are targeted (that is, have a score equal to or less than the cut-off), the percentage of targeted households who are poor (that is, below the poverty line), the percentage of poor households who are targeted, and the number of poor households who are successfully targeted (coverage) per non-poor household mistakenly targeted (leakage), scorecard applied to the validation sample

Targeting cut-off	% all households who are targeted	% targeted who are poor	% of poor who are targeted	Poor households targeted per non-poor household targeted
0–4	0.1	100.0	0.1	Only poor targeted
5–9	0.8	96.6	1.1	28.7:1
10–14	3.2	95.9	4.6	23.2:1
15–19	8.8	93.8	12.4	15.2:1
20–24	18.1	92.6	25.2	12.5:1
25–29	30.4	90.7	41.3	9.8:1
30–34	42.9	88.7	57.1	7.8:1
35–39	53.9	86.5	70.0	6.4:1
40–44	63.1	84.4	79.9	5.4:1
45–49	71.6	81.7	87.7	4.5:1
50–54	79.0	78.3	92.8	3.6:1
55–59	86.0	74.8	96.5	3.0:1
60–64	91.3	71.8	98.4	2.6:1
65–69	95.3	69.5	99.3	2.3:1
70–74	97.7	68.1	99.9	2.1:1
75–79	99.1	67.3	100.0	2.1:1
80–84	99.6	66.9	100.0	2.0:1
85–89	99.9	66.7	100.0	2.0:1
90–94	100.0	66.7	100.0	2.0:1
95–100	100.0	66.7	100.0	2.0:1

USAID "Extreme" Poverty Line Tables

Figure 3 (USAID "Extreme" line): Estimated poverty likelihoods associated with scores

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–4	49.7
5–9	49.7
10–14	41.1
15–19	35.1
20–24	25.3
25–29	20.4
30–34	12.8
35–39	8.2
40–44	4.7
45–49	3.8
50–54	2.1
55–59	0.9
60–64	0.5
65–69	0.3
70–74	0.2
75–79	0.1
80–84	0.0
85–89	0.0
90–94	0.0
95–100	0.0

Figure 6 (USAID "Extreme" line): Bootstrapped differences between estimated and true poverty likelihoods for households in a large sample ($n = 16,384$) with confidence intervals, scorecard applied to the validation sample

| Score | Diff. | Difference between estimate and true value Confidence interval (+/− percentage points) | | |
		90-percent	95-percent	99-percent
0–4	−23.6	21.6	27.4	32.4
5–9	+9.4	7.7	9.1	11.6
10–14	−4.8	4.4	5.1	6.7
15–19	+2.1	2.6	3.2	4.2
20–24	−1.2	1.9	2.2	2.9
25–29	+0.6	1.5	1.8	2.5
30–34	+0.4	1.2	1.5	1.9
35–39	−0.9	1.2	1.4	1.8
40–44	−0.8	1.0	1.2	1.5
45–49	+1.2	0.8	0.9	1.1
50–54	+0.4	0.6	0.7	0.9
55–59	−0.2	0.5	0.6	0.8
60–64	−0.2	0.4	0.5	0.7
65–69	−0.0	0.4	0.4	0.5
70–74	+0.2	0.0	0.0	0.0
75–79	+0.1	0.0	0.0	0.0
80–84	+0.0	0.0	0.0	0.0
85–89	+0.0	0.0	0.0	0.0
90–94	+0.0	0.0	0.0	0.0
95–100	+0.0	0.0	0.0	0.0

Figure 7 (USAID "Extreme" line): Differences and precision of differences for bootstrapped estimates of poverty rates for groups of households at a point in time, by sample size, scorecard applied to the validation sample

Sample Size	Difference between estimate and true value			
	Diff.	Confidence interval (+/− percentage points)		
n		90-percent	95-percent	99-percent
1	−1.6	57.4	61.1	73.8
4	−0.3	24.8	29.9	38.0
8	+0.1	17.5	20.8	28.3
16	+0.1	12.1	14.2	18.2
32	−0.1	8.7	10.5	12.6
64	+0.1	6.1	7.2	9.4
128	+0.1	4.3	5.3	7.1
256	+0.0	3.1	3.6	5.1
512	+0.0	2.1	2.5	3.7
1,024	+0.1	1.6	1.8	2.3
2,048	+0.0	1.1	1.4	1.7
4,096	+0.0	0.8	0.9	1.2
8,192	+0.0	0.6	0.7	0.9
16,384	+0.0	0.4	0.5	0.6

Figure 10 (USAID "Extreme" line): Households by targeting classification and score, along with "Total Accuracy" and BPAC, scorecard applied to the validation sample

Score	Inclusion: < poverty line correctly targeted	Undercoverage: < poverty line mistakenly non-targeted	Leakage: => poverty line mistakenly targeted	Exclusion: => poverty line correctly non-targeted	Total Accuracy Inclusion + Exclusion	BPAC See text
0–4	0.0	11.8	0.0	88.1	88.2	−99.1
5–9	0.3	11.5	0.4	87.7	88.1	−90.9
10–14	1.4	10.4	1.8	86.4	87.8	−60.7
15–19	3.3	8.5	5.5	82.7	86.0	+2.1
20–24	5.9	6.0	12.3	75.9	81.7	−3.8
25–29	8.2	3.6	22.2	66.0	74.2	−87.2
30–34	9.8	2.0	33.1	55.1	64.9	−179.3
35–39	10.8	1.0	43.1	45.0	55.9	−264.2
40–44	11.4	0.5	51.8	36.4	47.8	−337.2
45–49	11.6	0.3	60.0	28.2	39.7	−406.9
50–54	11.7	0.1	67.3	20.9	32.6	−468.2
55–59	11.8	0.0	74.3	13.9	25.7	−527.3
60–64	11.8	0.0	79.4	8.7	20.5	−571.2
65–69	11.8	0.0	83.4	4.7	16.6	−605.0
70–74	11.8	0.0	85.9	2.3	14.1	−625.6
75–79	11.8	0.0	87.2	0.9	12.8	−636.9
80–84	11.8	0.0	87.8	0.4	12.2	−641.7
85–89	11.8	0.0	88.1	0.1	11.9	−644.4
90–94	11.8	0.0	88.2	0.0	11.8	−644.8
95–100	11.8	0.0	88.2	0.0	11.8	−644.8

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

Figure 11 (USAID "Extreme" line): For a given score cut-off, the percentage of all households who are targeted (that is, have a score equal to or less than the cut-off), the percentage of targeted households who are poor (that is, below the poverty line), the percentage of poor households who are targeted, and the number of poor households who are successfully targeted (coverage) per non-poor household mistakenly targeted (leakage), scorecard applied to the validation sample

Targeting cut-off	% all households who are targeted	% targeted who are poor	% of poor who are targeted	Poor households targeted per non-poor household targeted
0–4	0.1	67.0	0.4	2.0:1
5–9	0.8	43.2	2.8	0.8:1
10–14	3.2	45.0	12.2	0.8:1
15–19	8.8	37.6	27.9	0.6:1
20–24	18.1	32.3	49.6	0.5:1
25–29	30.4	27.0	69.3	0.4:1
30–34	42.9	22.9	83.1	0.3:1
35–39	53.9	20.0	91.3	0.3:1
40–44	63.1	18.0	96.0	0.2:1
45–49	71.6	16.2	97.8	0.2:1
50–54	79.0	14.8	98.9	0.2:1
55–59	86.0	13.7	99.6	0.2:1
60–64	91.3	13.0	99.9	0.1:1
65–69	95.3	12.4	100.0	0.1:1
70–74	97.7	12.1	100.0	0.1:1
75–79	99.1	11.9	100.0	0.1:1
80–84	99.6	11.9	100.0	0.1:1
85–89	99.9	11.8	100.0	0.1:1
90–94	100.0	11.8	100.0	0.1:1
95–100	100.0	11.8	100.0	0.1:1

$1.25/day 2005 PPP Poverty Line Tables

Figure 3 ($1.25/day 2005 PPP line): Estimated poverty likelihoods associated with scores

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–4	94.0
5–9	85.8
10–14	74.6
15–19	70.4
20–24	62.2
25–29	49.4
30–34	39.4
35–39	28.4
40–44	19.1
45–49	14.4
50–54	7.9
55–59	5.7
60–64	3.1
65–69	1.1
70–74	1.1
75–79	0.3
80–84	0.0
85–89	0.0
90–94	0.0
95–100	0.0

Figure 6 ($1.25/day 2005 PPP line): Bootstrapped differences between estimated and true poverty likelihoods for households in a large sample ($n = 16,384$) with confidence intervals, scorecard applied to the validation sample

Score	Diff.	Difference between estimate and true value		
		Confidence interval (+/− percentage points)		
		90-percent	95-percent	99-percent
0–4	+3.7	12.5	14.5	19.8
5–9	+4.4	6.4	7.9	9.9
10–14	+2.0	3.8	4.7	6.1
15–19	+7.7	2.9	3.4	4.5
20–24	+5.0	2.2	2.6	3.5
25–29	+1.0	1.8	2.1	2.9
30–34	+1.0	1.8	2.1	2.8
35–39	−3.0	2.5	2.7	3.2
40–44	−3.4	2.6	2.8	3.1
45–49	+0.0	1.8	2.0	2.6
50–54	−1.0	1.4	1.6	2.1
55–59	−0.2	1.1	1.3	1.8
60–64	−2.0	1.7	1.8	2.2
65–69	−0.8	0.9	1.0	1.3
70–74	+0.3	0.9	1.0	1.1
75–79	+0.3	0.0	0.0	0.0
80–84	−0.3	0.5	0.6	0.8
85–89	+0.0	0.0	0.0	0.0
90–94	+0.0	0.0	0.0	0.0
95–100	+0.0	0.0	0.0	0.0

Figure 7 ($1.25/day 2005 PPP line): Differences and precision of differences for bootstrapped estimates of poverty rates for groups of households at a point in time, by sample size, scorecard applied to the validation sample

Sample Size	Difference between estimate and true value			
	Diff.	Confidence interval (+/− percentage points)		
n		90-percent	95-percent	99-percent
1	−0.3	71.6	76.0	85.7
4	+0.0	33.5	38.7	50.6
8	+0.6	24.2	28.4	36.7
16	+0.4	16.9	20.1	26.0
32	+0.4	12.3	14.9	19.1
64	+0.5	8.5	10.4	14.4
128	+0.4	6.1	7.5	9.5
256	+0.3	4.4	5.3	6.9
512	+0.4	3.1	3.7	4.7
1,024	+0.4	2.2	2.6	3.3
2,048	+0.4	1.6	1.9	2.5
4,096	+0.4	1.1	1.3	1.7
8,192	+0.4	0.8	0.9	1.2
16,384	+0.4	0.6	0.7	0.9

Figure 10 ($1.25/day 2005 PPP line): Households by targeting classification and score, along with "Total Accuracy" and BPAC, scorecard applied to the validation sample

Score	Inclusion: < poverty line correctly targeted	Undercoverage: < poverty line mistakenly non-targeted	Leakage: => poverty line mistakenly targeted	Exclusion: => poverty line correctly non-targeted	Total Accuracy Inclusion + Exclusion	BPAC See text
0–4	0.1	30.4	0.0	69.6	69.6	−99.6
5–9	0.6	29.8	0.1	69.5	70.1	−95.5
10–14	2.4	28.0	0.8	68.8	71.2	−81.5
15–19	6.0	24.4	2.8	66.8	72.8	−51.4
20–24	11.5	18.9	6.7	62.9	74.4	−2.5
25–29	17.4	13.0	13.0	56.6	74.0	+57.1
30–34	22.3	8.1	20.6	49.0	71.3	+32.3
35–39	25.6	4.8	28.3	41.3	66.9	+6.9
40–44	27.7	2.7	35.4	34.2	62.0	−16.3
45–49	28.9	1.5	42.6	26.9	55.9	−40.2
50–54	29.6	0.8	49.4	20.2	49.8	−62.3
55–59	30.0	0.4	56.0	13.6	43.6	−84.2
60–64	30.3	0.1	61.0	8.6	38.9	−100.5
65–69	30.4	0.0	64.9	4.7	35.1	−113.4
70–74	30.4	0.0	67.3	2.3	32.7	−121.4
75–79	30.4	0.0	68.7	0.9	31.3	−125.8
80–84	30.4	0.0	69.2	0.4	30.8	−127.6
85–89	30.4	0.0	69.5	0.1	30.5	−128.7
90–94	30.4	0.0	69.6	0.0	30.4	−128.9
95–100	30.4	0.0	69.6	0.0	30.4	−128.9

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

Figure 11 ($1.25/day 2005 PPP line): For a given score cut-off, the percentage of all households who are targeted (that is, have a score equal to or less than the cut-off), the percentage of targeted households who are poor (that is, below the poverty line), the percentage of poor households who are targeted, and the number of poor households who are successfully targeted (coverage) per non-poor household mistakenly targeted (leakage), scorecard applied to the validation sample

Targeting cut-off	% all households who are targeted	% targeted who are poor	% of poor who are targeted	Poor households targeted per non-poor household targeted
0–4	0.1	85.6	0.2	5.9:1
5–9	0.8	83.0	2.1	4.9:1
10–14	3.2	75.5	8.0	3.1:1
15–19	8.8	68.3	19.7	2.2:1
20–24	18.1	63.3	37.8	1.7:1
25–29	30.4	57.3	57.2	1.3:1
30–34	42.9	52.0	73.4	1.1:1
35–39	53.9	47.5	84.2	0.9:1
40–44	63.1	44.0	91.2	0.8:1
45–49	71.6	40.4	95.2	0.7:1
50–54	79.0	37.5	97.3	0.6:1
55–59	86.0	34.9	98.7	0.5:1
60–64	91.3	33.2	99.6	0.5:1
65–69	95.3	31.9	99.9	0.5:1
70–74	97.7	31.1	100.0	0.5:1
75–79	99.1	30.7	100.0	0.4:1
80–84	99.6	30.5	100.0	0.4:1
85–89	99.9	30.4	100.0	0.4:1
90–94	100.0	30.4	100.0	0.4:1
95–100	100.0	30.4	100.0	0.4:1

$2.50/day 2005 PPP Poverty Line Tables

Figure 3 ($2.50/day 2005 PPP line): Estimated poverty likelihoods associated with scores

If a household's score is . . .	. . . then the likelihood (%) of being below the poverty line is:
0–4	100.0
5–9	100.0
10–14	96.8
15–19	96.8
20–24	94.7
25–29	91.9
30–34	88.5
35–39	82.0
40–44	74.1
45–49	67.5
50–54	52.4
55–59	38.9
60–64	28.0
65–69	18.6
70–74	15.1
75–79	6.1
80–84	6.1
85–89	2.3
90–94	0.0
95–100	0.0

Figure 6 ($2.50/day 2005 PPP line): Bootstrapped differences between estimated and true poverty likelihoods for households in a large sample ($n = 16,384$) with confidence intervals, scorecard applied to the validation sample

Score	Diff.	Difference between estimate and true value		
		Confidence interval (+/− percentage points)		
		90-percent	95-percent	99-percent
0–4	+0.0	0.0	0.0	0.0
5–9	+1.7	2.0	2.2	3.0
10–14	−0.0	1.4	1.6	2.2
15–19	+4.1	1.7	2.1	2.9
20–24	+2.0	1.3	1.5	1.9
25–29	+2.0	1.2	1.4	1.8
30–34	+3.1	1.4	1.6	2.1
35–39	+0.2	1.6	2.0	2.6
40–44	−2.4	2.2	2.4	2.8
45–49	+1.4	2.2	2.7	3.4
50–54	+0.2	2.4	2.8	4.0
55–59	−2.5	2.5	3.0	3.9
60–64	−5.7	4.4	4.7	5.0
65–69	−3.3	3.1	3.3	4.1
70–74	−5.9	4.7	5.0	5.7
75–79	+2.2	2.2	2.8	3.6
80–84	+5.8	0.5	0.6	0.8
85–89	−4.4	5.4	7.2	9.5
90–94	+0.0	0.0	0.0	0.0
95–100	+0.0	0.0	0.0	0.0

Figure 7 ($2.50/day 2005 PPP line): Differences and precision of differences for bootstrapped estimates of poverty rates for groups of households at a point in time, by sample size, scorecard applied to the validation sample

Sample Size	Difference between estimate and true value			
		Confidence interval (+/− percentage points)		
n	Diff.	90-percent	95-percent	99-percent
1	−0.1	71.6	82.0	89.8
4	−0.4	32.0	39.0	47.5
8	−0.1	22.6	26.5	33.4
16	+0.2	17.0	19.4	23.9
32	+0.3	11.8	14.9	20.2
64	+0.3	8.2	10.0	14.0
128	+0.3	5.9	7.3	9.2
256	+0.3	4.1	5.1	6.6
512	+0.3	3.0	3.5	4.5
1,024	+0.3	2.1	2.4	3.1
2,048	+0.3	1.5	1.8	2.3
4,096	+0.3	1.1	1.3	1.7
8,192	+0.3	0.7	0.9	1.2
16,384	+0.3	0.5	0.7	0.9

Figure 10 ($2.50/day 2005 PPP line): Households by targeting classification and score, along with "Total Accuracy" and BPAC, scorecard applied to the validation sample

Score	Inclusion: < poverty line correctly targeted	Undercoverage: < poverty line mistakenly non-targeted	Leakage: => poverty line mistakenly targeted	Exclusion: => poverty line correctly non-targeted	Total Accuracy Inclusion + Exclusion	BPAC See text
0–4	0.1	70.3	0.0	29.6	29.7	–99.8
5–9	0.7	69.6	0.0	29.6	30.4	–97.9
10–14	3.1	67.2	0.1	29.6	32.7	–91.0
15–19	8.4	62.0	0.4	29.2	37.6	–75.6
20–24	17.1	53.3	1.1	28.6	45.7	–49.9
25–29	28.1	42.3	2.3	27.4	55.5	–16.9
30–34	38.9	31.4	4.0	25.7	64.6	+16.3
35–39	47.9	22.4	6.0	23.7	71.6	+44.8
40–44	55.0	15.3	8.1	21.6	76.6	+67.9
45–49	60.6	9.7	10.9	18.7	79.3	+84.4
50–54	64.4	5.9	14.5	15.1	79.6	+79.4
55–59	67.3	3.0	18.7	10.9	78.2	+73.4
60–64	68.9	1.5	22.4	7.3	76.2	+68.2
65–69	69.8	0.6	25.5	4.1	73.9	+63.7
70–74	70.3	0.1	27.4	2.2	72.5	+61.0
75–79	70.3	0.0	28.7	0.9	71.3	+59.2
80–84	70.3	0.0	29.3	0.3	70.7	+58.4
85–89	70.4	0.0	29.6	0.1	70.4	+57.9
90–94	70.4	0.0	29.6	0.0	70.4	+57.9
95–100	70.4	0.0	29.6	0.0	70.4	+57.9

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

Figure 11 ($2.50/day 2005 PPP line): For a given score cut-off, the percentage of all households who are targeted (that is, have a score equal to or less than the cut-off), the percentage of targeted households who are poor (that is, below the poverty line), the percentage of poor households who are targeted, and the number of poor households who are successfully targeted (coverage) per non-poor household mistakenly targeted (leakage), scorecard applied to the validation sample

Targeting cut-off	% all households who are targeted	% targeted who are poor	% of poor who are targeted	Poor households targeted per non-poor household targeted
0–4	0.1	100.0	0.1	Only poor targeted
5–9	0.8	98.5	1.1	65.0:1
10–14	3.2	97.1	4.4	33.2:1
15–19	8.8	95.2	11.9	19.7:1
20–24	18.1	94.1	24.3	16.1:1
25–29	30.4	92.5	39.9	12.3:1
30–34	42.9	90.7	55.3	9.8:1
35–39	53.9	88.9	68.2	8.0:1
40–44	63.1	87.2	78.2	6.8:1
45–49	71.6	84.7	86.2	5.5:1
50–54	79.0	81.6	91.6	4.4:1
55–59	86.0	78.2	95.7	3.6:1
60–64	91.3	75.5	97.9	3.1:1
65–69	95.3	73.2	99.2	2.7:1
70–74	97.7	71.9	99.9	2.6:1
75–79	99.1	71.0	100.0	2.4:1
80–84	99.6	70.6	100.0	2.4:1
85–89	99.9	70.4	100.0	2.4:1
90–94	100.0	70.4	100.0	2.4:1
95–100	100.0	70.4	100.0	2.4:1

For all 12 departments and 77 communes:

Poverty lines and poverty rates
(at household level and person level)
by poverty line and
by urban/rural/overall

Alibori

| Region | Commune | Line/rate | Poverty lines (XOF/person/day) and poverty rates (%) | | | | | |
| | | | National | | | USAID | Intl. 2005 PPP | |
			100%	150%	200%	"extreme"	$1.25	$2.50
Urban Alibori	Banikoara	Line	368.56	552.83	737.11	304.63	396.99	793.97
		Rate (households)	22.0	65.7	83.6	6.7	23.9	89.4
		Rate (people)	30.0	76.5	90.0	12.7	31.7	94.7
	Gogounou	Line	400.95	601.43	801.91	388.72	431.88	863.76
		Rate (households)	8.3	31.2	45.8	4.2	12.5	50.0
		Rate (people)	13.4	45.4	58.8	6.4	20.7	64.3
	Kandi	Line	335.46	503.19	670.93	284.10	361.34	722.68
		Rate (households)	16.6	35.9	53.7	6.9	20.8	57.8
		Rate (people)	26.2	49.5	65.5	11.7	30.9	69.6
	Karimama	Line	—	—	—	—	—	—
		Rate (households)	—	—	—	—	—	—
		Rate (people)	—	—	—	—	—	—
	Malanville	Line	327.91	491.87	655.83	302.62	353.21	706.41
		Rate (households)	6.2	33.2	50.7	2.1	13.5	53.9
		Rate (people)	11.0	49.6	68.3	3.8	22.8	70.5
	Ségbana	Line	544.03	816.05	1088.06	418.12	586.00	1171.99
		Rate (households)	41.7	60.4	79.2	20.8	43.8	83.3
		Rate (people)	46.8	67.7	82.3	21.5	48.7	85.1
Rural Alibori	Banikoara	Line	303.24	454.86	606.48	202.62	326.63	653.26
		Rate (households)	21.2	43.4	61.4	10.2	25.4	64.1
		Rate (people)	26.6	53.3	69.0	12.9	31.8	71.8
	Gogounou	Line	339.15	508.72	678.29	260.13	365.31	730.62
		Rate (households)	26.4	44.2	63.9	11.7	30.6	65.0
		Rate (people)	35.1	57.1	73.7	16.1	40.5	74.6
	Kandi	Line	263.02	394.54	526.05	221.98	283.31	566.63
		Rate (households)	18.8	36.8	58.1	7.7	20.5	63.2
		Rate (people)	31.1	49.9	70.3	14.9	32.9	73.1
	Karimama	Line	355.56	533.34	711.12	218.36	382.99	765.97
		Rate (households)	46.4	70.1	81.8	18.6	49.1	85.1
		Rate (people)	53.8	79.2	88.5	26.3	55.7	90.4
	Malanville	Line	450.99	676.48	901.97	313.91	485.77	971.54
		Rate (households)	41.7	70.8	81.7	16.7	47.5	84.2
		Rate (people)	50.1	77.4	85.9	24.1	54.8	88.0
	Ségbana	Line	430.41	645.62	860.83	269.33	463.61	927.23
		Rate (households)	38.3	59.6	76.6	12.8	42.5	78.7
		Rate (people)	47.0	65.3	82.1	20.9	50.0	84.0
All-Commune	Banikoara	Line	310.59	465.89	621.18	214.10	334.55	669.10
		Rate (households)	21.3	45.8	63.8	9.8	25.2	66.9
		Rate (people)	27.0	55.9	71.4	12.9	31.8	74.4
	Gogounou	Line	348.58	522.88	697.17	279.76	375.47	750.94
		Rate (households)	23.7	42.3	61.2	10.6	27.9	62.7
		Rate (people)	31.8	55.3	71.4	14.6	37.5	73.1
	Kandi	Line	284.22	426.33	568.44	240.16	306.14	612.29
		Rate (households)	18.1	36.5	56.7	7.4	20.6	61.5
		Rate (people)	29.7	49.8	68.9	14.0	32.3	72.1
	Karimama	Line	355.56	533.34	711.12	218.36	382.99	765.97
		Rate (households)	46.4	70.1	81.8	18.6	49.1	85.1
		Rate (people)	53.8	79.2	88.5	26.3	55.7	90.4
	Malanville	Line	416.87	625.30	833.74	310.78	449.02	898.05
		Rate (households)	29.1	57.5	70.7	11.5	35.4	73.4
		Rate (people)	39.3	69.7	81.0	18.5	46.0	83.2
	Ségbana	Line	460.70	691.05	921.41	309.00	496.24	992.48
		Rate (households)	39.1	59.8	77.2	14.7	42.8	79.8
		Rate (people)	47.0	65.9	82.1	21.1	49.7	84.3
Alibori	Urban	Line	370.69	556.04	741.38	320.44	399.28	798.57
		Rate (households)	15.7	41.2	58.7	6.5	20.4	62.7
		Rate (people)	23.3	55.4	71.3	10.1	29.7	75.0
	Rural	Line	345.91	518.86	691.82	241.94	372.59	745.18
		Rate (households)	29.9	51.9	68.7	12.4	33.7	71.6
		Rate (people)	38.6	62.5	76.9	18.4	42.5	79.2
	All	Line	350.56	525.85	701.13	256.69	377.61	755.21
		Rate (households)	26.9	49.7	66.6	11.2	30.9	69.7
		Rate (people)	35.7	61.1	75.9	16.8	40.1	78.4

Source: 2010 EMICoV

Atakora

<table>

Région	Commune	Seuil/taux	Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)					
			National			USAID	Int. 2005 PPA	
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Atakora	Boukoumbe	Seuil	309.22	463.82	618.43	175.67	333.07	666.13
		Taux (ménages)	34.0	53.2	61.7	12.8	38.3	61.7
		Taux (personnes)	41.6	64.2	73.9	19.0	44.3	73.9
	Cobly	Seuil	331.44	497.16	662.87	253.89	357.00	714.01
		Taux (ménages)	31.6	69.9	84.9	14.8	33.7	84.9
		Taux (personnes)	41.6	76.7	89.1	20.3	42.8	89.1
	Kérou	Seuil	273.37	410.06	546.74	173.00	294.46	588.92
		Taux (ménages)	15.9	38.6	51.7	4.7	18.9	59.3
		Taux (personnes)	25.3	54.5	69.8	11.8	28.9	76.3
	Kouandé	Seuil	320.13	480.19	640.26	256.56	344.82	689.65
		Taux (ménages)	28.3	67.4	80.4	13.0	41.3	82.6
		Taux (personnes)	33.8	74.5	85.5	15.3	51.6	86.2
	Matéri	Seuil	333.39	500.08	666.78	267.71	359.11	718.21
		Taux (ménages)	38.3	72.5	76.8	17.2	42.5	79.0
		Taux (personnes)	57.2	86.8	90.9	28.0	60.8	91.3
	Natitingou	Seuil	305.42	458.13	610.84	174.90	328.98	657.95
		Taux (ménages)	22.3	42.1	53.7	9.1	25.6	58.7
		Taux (personnes)	37.3	59.5	71.8	18.1	40.5	76.7
	Péhunco	Seuil	317.12	475.67	634.23	211.26	341.58	683.16
		Taux (ménages)	25.0	44.2	61.8	10.3	35.4	66.2
		Taux (personnes)	31.0	55.1	67.7	14.4	42.2	71.3
	Tanguiéta	Seuil	274.74	412.11	549.48	214.06	295.93	591.86
		Taux (ménages)	24.2	53.0	66.7	10.6	33.3	71.2
		Taux (personnes)	38.7	73.4	84.8	18.5	53.2	88.6
	Toucountouna	Seuil	288.61	432.91	577.21	210.14	310.87	621.74
		Taux (ménages)	29.8	57.4	74.5	12.8	36.2	76.6
		Taux (personnes)	44.5	76.0	90.1	20.5	52.9	91.3
Rural Atakora	Boukoumbe	Seuil	288.54	432.81	577.09	207.81	310.80	621.60
		Taux (ménages)	27.6	53.7	72.3	12.0	29.0	74.3
		Taux (personnes)	40.9	70.6	85.7	20.4	42.3	87.4
	Cobly	Seuil	313.30	469.94	626.59	287.49	337.46	674.92
		Taux (ménages)	13.8	43.0	65.4	5.5	15.2	66.7
		Taux (personnes)	19.4	58.3	79.2	8.6	22.3	80.9
	Kérou	Seuil	298.83	448.25	597.66	128.37	321.88	643.76
		Taux (ménages)	35.9	54.3	74.9	12.0	35.9	74.9
		Taux (personnes)	37.2	54.7	77.3	17.7	37.2	77.3
	Kouandé	Seuil	343.25	514.87	686.49	197.93	369.72	739.45
		Taux (ménages)	45.0	67.4	88.9	19.9	47.5	89.7
		Taux (personnes)	49.0	72.4	93.7	24.4	52.6	94.8
	Matéri	Seuil	206.73	310.09	413.45	148.18	222.67	445.35
		Taux (ménages)	18.5	48.3	68.7	7.5	23.3	75.8
		Taux (personnes)	28.2	60.8	80.4	13.3	33.7	87.5
	Natitingou	Seuil	254.38	381.57	508.76	191.11	274.00	548.00
		Taux (ménages)	22.9	45.1	56.6	9.8	24.6	60.7
		Taux (personnes)	39.1	65.1	75.8	19.3	41.5	79.4
	Péhunco	Seuil	414.24	621.35	828.47	359.54	446.19	892.38
		Taux (ménages)	6.9	49.2	73.5	2.1	11.6	75.6
		Taux (personnes)	9.6	60.2	80.2	2.3	15.9	83.5
	Tanguiéta	Seuil	243.18	364.78	486.37	222.28	261.94	523.89
		Taux (ménages)	24.7	46.7	59.0	10.9	26.1	60.4
		Taux (personnes)	35.1	60.9	70.9	16.9	37.5	72.4
	Toucountouna	Seuil	248.89	373.33	497.77	168.94	268.09	536.17
		Taux (ménages)	45.8	68.8	81.3	18.8	45.8	83.3
		Taux (personnes)	54.8	81.6	91.5	25.8	54.8	92.6
All-Commune	Boukoumbe	Seuil	294.77	442.16	589.54	198.12	317.51	635.02
		Taux (ménages)	29.7	53.5	68.9	12.2	32.0	70.3
		Taux (personnes)	41.1	68.7	82.1	20.0	42.9	83.3
	Cobly	Seuil	320.66	480.98	641.31	273.86	345.39	690.78
		Taux (ménages)	20.2	52.8	72.4	8.9	21.9	73.3
		Taux (personnes)	28.4	65.8	83.2	13.4	30.6	84.2
	Kérou	Seuil	283.01	424.52	566.03	156.09	304.85	609.69
		Taux (ménages)	24.0	44.9	61.1	7.6	25.7	65.6
		Taux (personnes)	29.8	54.6	72.7	14.0	32.0	76.7
	Kouandé	Seuil	336.71	505.07	673.42	214.50	362.68	725.37
		Taux (ménages)	40.6	67.4	86.6	18.1	45.9	87.8
		Taux (personnes)	44.7	73.0	91.4	21.8	52.4	92.4
	Matéri	Seuil	234.20	351.30	468.41	174.11	252.27	504.54
		Taux (ménages)	22.7	53.5	70.5	9.6	27.4	76.4
		Taux (personnes)	34.5	66.5	82.7	16.5	39.6	88.3
	Natitingou	Seuil	285.76	428.65	571.53	181.14	307.81	615.62
		Taux (ménages)	22.6	43.3	54.9	9.4	25.2	59.5
		Taux (personnes)	38.0	61.6	73.3	18.5	40.9	77.7
	Péhunco	Seuil	354.69	532.04	709.38	268.63	382.05	764.10
		Taux (ménages)	17.0	46.4	67.0	6.7	24.9	70.4
		Taux (personnes)	22.7	57.1	72.5	9.7	32.0	76.0
	Tanguiéta	Seuil	252.55	378.82	505.09	219.84	272.03	544.05
		Taux (ménages)	24.5	49.1	61.9	10.8	28.8	64.5
		Taux (personnes)	36.2	64.6	75.1	17.4	42.1	77.2
	Toucountouna	Seuil	265.73	398.59	531.46	186.41	286.23	572.45
		Taux (ménages)	38.8	63.8	78.3	16.1	41.6	80.4
		Taux (personnes)	50.4	79.3	90.9	23.6	54.0	92.0
Atakora	Urbain	Seuil	304.93	457.39	609.86	202.93	328.45	656.90
		Taux (ménages)	26.1	51.2	63.3	10.8	31.3	67.0
		Taux (personnes)	37.7	65.5	77.2	17.9	43.4	80.4
	Rural	Seuil	272.81	409.21	545.62	200.97	293.85	587.71
		Taux (ménages)	25.2	51.4	69.6	10.5	27.5	72.7
		Taux (personnes)	34.8	64.5	81.1	16.7	37.8	84.1
	Globale	Seuil	286.22	429.33	572.44	201.79	308.30	616.59
		Taux (ménages)	25.6	51.3	67.0	10.6	29.1	70.4
		Taux (personnes)	36.0	64.9	79.5	17.2	40.1	82.5

</table>

Source: EMICoV 2010

Atlantique

| Région | Commune | Seuil/taux | Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%) | | | | | |
| | | | National | | | USAID | Int. 2005 PPA | |
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Atlantique	Abomey-Calavi	Seuil	580.89	871.34	1161.79	463.66	625.70	1251.40
		Taux (ménages)	11.6	29.3	49.6	5.5	13.5	53.7
		Taux (personnes)	16.9	38.2	60.3	8.3	18.9	64.7
	Allada	Seuil	337.01	505.51	674.01	180.75	363.00	726.00
		Taux (ménages)	56.2	71.2	84.9	20.5	60.3	87.7
		Taux (personnes)	64.1	78.8	88.7	31.2	68.8	92.6
	Kpomasse	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Ouidah	Seuil	445.39	668.08	890.77	298.98	479.74	959.48
		Taux (ménages)	29.5	50.4	69.8	12.8	34.5	72.3
		Taux (personnes)	48.5	75.0	86.6	24.2	54.9	88.2
	So-Ava	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Toffo	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Torri-Bossito	Seuil	363.54	545.32	727.09	240.47	391.59	783.17
		Taux (ménages)	32.7	61.2	75.5	12.2	34.7	85.7
		Taux (personnes)	40.7	69.0	81.0	17.1	41.2	91.2
	Ze	Seuil	317.88	476.82	635.76	221.86	342.40	684.80
		Taux (ménages)	45.8	68.7	79.2	25.0	47.9	85.4
		Taux (personnes)	63.5	83.6	91.0	30.3	66.8	93.9
Rural Atlantique	Abomey-Calavi	Seuil	439.61	659.41	879.22	367.98	473.52	947.04
		Taux (ménages)	16.0	48.7	71.1	7.0	25.1	77.5
		Taux (personnes)	20.6	58.3	80.1	10.0	32.2	84.3
	Allada	Seuil	326.41	489.62	652.82	246.77	351.59	703.18
		Taux (ménages)	30.6	61.1	77.3	14.4	37.0	80.1
		Taux (personnes)	43.8	78.3	88.8	21.4	52.5	90.3
	Kpomasse	Seuil	339.37	509.05	678.73	266.08	365.54	731.09
		Taux (ménages)	27.8	48.7	68.1	13.6	33.0	70.7
		Taux (personnes)	34.5	58.4	76.3	17.3	39.8	80.2
	Ouidah	Seuil	347.05	520.58	694.11	211.29	373.82	747.65
		Taux (ménages)	29.3	51.5	63.6	12.8	34.4	72.9
		Taux (personnes)	48.3	75.3	86.1	23.3	54.5	89.7
	So-Ava	Seuil	435.78	653.67	871.56	318.25	469.39	938.79
		Taux (ménages)	42.7	64.9	81.6	20.1	46.9	84.4
		Taux (personnes)	53.2	74.8	89.6	26.1	57.7	91.6
	Toffo	Seuil	362.74	544.10	725.47	258.05	390.72	781.43
		Taux (ménages)	37.5	63.9	71.5	16.8	39.6	73.6
		Taux (personnes)	53.2	77.5	83.7	26.2	54.9	84.7
	Torri-Bossito	Seuil	323.99	485.99	647.98	200.54	348.98	697.96
		Taux (ménages)	37.7	67.2	84.4	17.2	42.6	86.1
		Taux (personnes)	50.1	81.7	94.9	24.9	57.7	95.3
	Ze	Seuil	270.92	406.38	541.84	185.06	291.82	583.64
		Taux (ménages)	43.0	64.6	74.7	23.4	46.2	78.5
		Taux (personnes)	54.7	78.9	87.4	26.9	59.5	89.0
All-Commune	Abomey-Calavi	Seuil	538.61	807.92	1077.23	435.02	580.16	1160.32
		Taux (ménages)	12.8	34.7	55.6	5.9	16.8	60.4
		Taux (personnes)	18.0	44.2	66.2	8.8	22.8	70.6
	Allada	Seuil	328.02	492.03	656.04	236.74	353.32	706.65
		Taux (ménages)	35.0	62.9	78.6	15.4	41.0	81.4
		Taux (personnes)	46.8	78.4	88.8	22.9	54.9	90.6
	Kpomasse	Seuil	339.37	509.05	678.73	266.08	365.54	731.09
		Taux (ménages)	27.8	48.7	68.1	13.6	33.0	70.7
		Taux (personnes)	34.5	58.4	76.3	17.3	39.8	80.2
	Ouidah	Seuil	387.59	581.39	775.18	247.44	417.49	834.98
		Taux (ménages)	29.4	51.0	66.2	12.8	34.4	72.6
		Taux (personnes)	48.4	75.2	86.3	23.7	54.6	89.1
	So-Ava	Seuil	435.78	653.67	871.56	318.25	469.39	938.79
		Taux (ménages)	42.7	64.9	81.6	20.1	46.9	84.4
		Taux (personnes)	53.2	74.8	89.6	26.1	57.7	91.6
	Toffo	Seuil	362.74	544.10	725.47	258.05	390.72	781.43
		Taux (ménages)	37.5	63.9	71.5	16.8	39.6	73.6
		Taux (personnes)	53.2	77.5	83.7	26.2	54.9	84.7
	Torri-Bossito	Seuil	335.17	502.76	670.34	211.82	361.02	722.05
		Taux (ménages)	36.5	65.7	82.2	16.0	40.7	86.0
		Taux (personnes)	47.5	78.1	91.0	22.7	53.0	94.2
	Ze	Seuil	279.77	419.65	559.54	191.99	301.35	602.70
		Taux (ménages)	43.5	65.2	75.4	23.7	46.5	79.5
		Taux (personnes)	56.3	79.8	88.1	27.6	60.9	89.9
Atlantique	Urbain	Seuil	534.37	801.55	1068.73	413.07	575.59	1151.17
		Taux (ménages)	18.5	37.1	56.3	8.2	21.0	60.5
		Taux (personnes)	25.4	47.1	66.5	12.3	27.9	70.8
	Rural	Seuil	367.36	551.03	734.71	272.10	395.69	791.38
		Taux (ménages)	32.2	58.4	73.8	15.2	37.4	77.7
		Taux (personnes)	43.3	71.7	85.2	21.3	49.7	87.6
	Globale	Seuil	426.80	640.19	853.59	322.27	459.72	919.44
		Taux (ménages)	27.2	50.7	67.4	12.7	31.5	71.5
		Taux (personnes)	36.9	63.0	78.6	18.1	42.0	81.6

Source: EMICoV 2010

Borgou

Région	Commune	Seuil/taux	Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)					
			National			USAID	Int. 2005 PPA	
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Borgou	Bembereke	Seuil	370.71	556.06	741.41	190.68	399.30	798.60
		Taux (ménages)	47.2	66.2	81.0	21.5	51.4	85.2
		Taux (personnes)	53.4	72.6	88.1	25.3	59.3	91.2
	Kalale	Seuil	356.45	534.68	712.91	135.81	383.95	767.90
		Taux (ménages)	42.1	61.4	82.9	20.0	44.2	85.0
		Taux (personnes)	48.2	69.7	90.1	22.7	50.9	91.0
	N'dali	Seuil	312.96	469.45	625.93	274.23	337.10	674.21
		Taux (ménages)	33.3	58.9	69.2	14.5	33.3	69.2
		Taux (personnes)	52.9	75.7	84.7	23.9	52.9	84.7
	Nikki	Seuil	359.06	538.59	718.13	198.88	386.76	773.52
		Taux (ménages)	37.7	57.1	84.9	16.3	42.6	86.8
		Taux (personnes)	46.3	64.7	90.8	21.6	50.9	92.3
	Parakou	Seuil	384.57	576.86	769.15	248.23	414.24	828.48
		Taux (ménages)	14.8	32.7	50.5	7.2	18.4	52.7
		Taux (personnes)	22.5	45.2	64.7	11.1	26.9	67.2
	Perere	Seuil	409.27	613.91	818.55	328.21	440.84	881.69
		Taux (ménages)	31.2	58.3	77.1	14.6	39.6	81.3
		Taux (personnes)	43.0	73.4	87.1	21.1	55.1	91.8
	Sinende	Seuil	298.28	447.42	596.56	253.55	321.29	642.57
		Taux (ménages)	28.1	45.3	62.3	13.0	30.3	70.7
		Taux (personnes)	28.3	47.0	59.6	12.9	30.2	72.5
	Tchaourou	Seuil	314.83	472.24	629.65	221.16	339.11	678.22
		Taux (ménages)	12.7	35.2	52.1	4.2	18.3	56.3
		Taux (personnes)	21.3	49.4	69.9	9.2	28.9	73.6
Rural Borgou	Bembereke	Seuil	298.34	447.50	596.67	218.75	321.35	642.70
		Taux (ménages)	13.7	45.5	67.8	5.2	19.6	70.3
		Taux (personnes)	17.9	54.6	78.0	8.3	24.7	79.9
	Kalale	Seuil	253.49	380.24	506.99	203.04	273.05	546.09
		Taux (ménages)	9.7	35.9	58.2	3.8	13.6	61.1
		Taux (personnes)	15.2	47.8	70.7	7.4	20.4	73.2
	N'dali	Seuil	273.41	410.12	546.82	192.78	294.50	589.00
		Taux (ménages)	26.3	50.7	64.3	11.6	28.4	67.5
		Taux (personnes)	34.8	60.1	71.7	17.1	36.4	75.2
	Nikki	Seuil	307.27	460.90	614.53	178.50	330.97	661.94
		Taux (ménages)	23.9	45.6	70.2	8.7	26.4	71.2
		Taux (personnes)	30.6	54.0	83.4	14.7	33.7	84.1
	Parakou	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Perere	Seuil	295.70	443.55	591.40	209.22	318.51	637.02
		Taux (ménages)	14.9	44.7	83.0	4.3	19.2	87.2
		Taux (personnes)	19.1	51.2	91.0	5.7	24.4	93.3
	Sinende	Seuil	306.93	460.40	613.87	252.79	330.61	661.22
		Taux (ménages)	23.5	47.1	69.2	13.8	26.2	76.3
		Taux (personnes)	24.9	53.2	81.8	10.9	28.9	89.7
	Tchaourou	Seuil	301.27	451.91	602.55	236.66	324.51	649.02
		Taux (ménages)	25.2	49.2	67.6	12.2	30.0	72.4
		Taux (personnes)	33.3	59.9	78.8	16.1	39.2	84.4
All-Commune	Bembereke	Seuil	318.78	478.17	637.57	210.82	343.37	686.75
		Taux (ménages)	23.5	51.5	71.6	9.9	28.9	74.7
		Taux (personnes)	27.9	59.7	80.9	13.1	34.5	83.1
	Kalale	Seuil	278.33	417.50	556.66	186.83	299.80	599.60
		Taux (ménages)	16.5	41.2	63.4	7.2	20.0	66.1
		Taux (personnes)	23.1	53.1	75.4	11.1	27.7	77.5
	N'dali	Seuil	283.39	425.08	566.77	213.32	305.25	610.49
		Taux (ménages)	28.3	53.0	65.7	12.4	29.8	68.0
		Taux (personnes)	39.3	64.0	75.0	18.8	40.6	77.6
	Nikki	Seuil	333.90	500.85	667.79	188.98	359.65	719.31
		Taux (ménages)	30.5	51.2	77.3	12.4	34.2	78.7
		Taux (personnes)	38.6	59.5	87.2	18.2	42.5	88.3
	Parakou	Seuil	384.57	576.86	769.15	248.23	414.24	828.48
		Taux (ménages)	14.8	32.7	50.5	7.2	18.4	52.7
		Taux (personnes)	22.5	45.2	64.7	11.1	26.9	67.2
	Perere	Seuil	327.58	491.37	655.16	242.62	352.85	705.69
		Taux (ménages)	20.1	49.0	81.1	7.5	25.6	85.3
		Taux (personnes)	25.8	57.4	89.9	10.0	33.0	92.9
	Sinende	Seuil	303.46	455.18	606.91	253.09	326.86	653.73
		Taux (ménages)	25.6	46.3	66.0	13.4	28.1	73.7
		Taux (personnes)	26.3	50.7	72.9	11.7	29.4	82.8
	Tchaourou	Seuil	303.62	455.42	607.23	233.98	327.04	654.07
		Taux (ménages)	22.1	45.7	63.8	10.2	27.1	68.4
		Taux (personnes)	31.2	58.1	77.2	14.9	37.4	82.6
Borgou	Urbain	Seuil	364.08	546.13	728.17	229.28	392.17	784.34
		Taux (ménages)	23.4	42.7	61.4	10.7	27.3	64.3
		Taux (personnes)	33.3	55.2	74.5	15.8	37.7	77.5
	Rural	Seuil	289.18	433.77	578.36	213.62	311.48	622.97
		Taux (ménages)	19.9	45.6	67.4	8.7	23.9	70.9
		Taux (personnes)	25.2	54.6	78.1	11.8	30.1	81.5
	Globale	Seuil	323.53	485.30	647.06	220.80	348.49	696.97
		Taux (ménages)	21.7	44.1	64.4	9.7	25.6	67.5
		Taux (personnes)	28.9	54.8	76.4	13.6	33.6	79.7

Source: EMICoV 2010

Collines

Region	Commune	Line/rate	Poverty lines (XOF/person/day) and poverty rates (%)					
			National			USAID	Intl. 2005 PPP	
			100%	150%	200%	"extreme"	$1.25	$2.50
Urban Collines	Bante	Line	385.22	577.83	770.44	316.71	414.94	829.87
		Rate (households)	37.2	67.5	81.4	16.3	41.9	86.1
		Rate (people)	42.5	77.3	89.4	20.2	50.2	92.7
	Dassa-Zoume	Line	430.38	645.57	860.75	282.43	463.57	927.15
		Rate (households)	25.0	47.2	59.7	8.3	27.8	59.7
		Rate (people)	41.0	59.8	71.3	17.9	43.4	71.3
	Glazoue	Line	420.73	631.09	841.45	308.32	453.18	906.36
		Rate (households)	23.6	56.1	71.3	10.6	30.2	71.3
		Rate (people)	32.5	69.8	83.0	15.3	41.4	83.0
	Ouesse	Line	389.39	584.08	778.78	308.17	419.43	838.85
		Rate (households)	39.7	62.9	76.8	21.2	44.3	76.8
		Rate (people)	57.1	79.1	90.0	28.1	62.8	90.0
	Savalou	Line	431.76	647.64	863.52	290.11	465.06	930.13
		Rate (households)	32.0	67.1	78.1	14.1	37.7	82.6
		Rate (people)	44.3	82.1	91.5	21.3	51.5	94.4
	Save	Line	415.23	622.85	830.46	296.39	447.26	894.52
		Rate (households)	20.4	40.5	61.3	7.9	23.7	64.7
		Rate (people)	29.5	55.7	80.0	12.8	34.6	83.0
Rural Collines	Bante	Line	352.36	528.54	704.73	249.27	379.54	759.09
		Rate (households)	36.8	61.4	79.9	17.1	41.4	83.4
		Rate (people)	47.9	71.4	86.8	22.9	51.7	89.7
	Dassa-Zoume	Line	349.49	524.23	698.97	242.46	376.45	752.89
		Rate (households)	30.4	49.2	61.3	13.6	33.5	65.4
		Rate (people)	41.4	63.4	76.5	20.0	44.5	79.7
	Glazoue	Line	339.89	509.84	679.79	214.72	366.11	732.22
		Rate (households)	42.0	70.8	82.0	17.6	45.4	85.4
		Rate (people)	54.8	82.2	90.3	26.7	57.6	92.3
	Ouesse	Line	339.82	509.73	679.64	253.47	366.03	732.07
		Rate (households)	36.7	65.0	74.5	16.8	41.9	76.3
		Rate (people)	45.1	74.4	82.8	22.4	51.1	84.0
	Savalou	Line	370.87	556.30	741.73	247.83	399.47	798.95
		Rate (households)	37.7	61.2	75.3	17.8	40.7	77.1
		Rate (people)	46.6	72.2	85.1	23.2	50.5	86.4
	Save	Line	304.28	456.43	608.57	208.50	327.76	655.51
		Rate (households)	14.9	45.2	64.9	5.3	18.1	69.3
		Rate (people)	21.2	53.9	74.4	10.4	25.2	78.4
All-Commune	Bante	Line	358.42	537.64	716.85	261.71	386.07	772.14
		Rate (households)	36.9	62.6	80.2	17.0	41.5	83.9
		Rate (people)	46.9	72.5	87.3	22.4	51.4	90.3
	Dassa-Zoume	Line	375.32	562.98	750.64	255.22	404.27	808.55
		Rate (households)	28.6	48.6	60.8	11.9	31.6	63.6
		Rate (people)	41.3	62.2	74.9	19.4	44.2	77.0
	Glazoue	Line	352.49	528.73	704.98	229.30	379.68	759.36
		Rate (households)	38.9	68.3	80.2	16.4	42.9	83.0
		Rate (people)	51.3	80.3	89.2	25.0	55.0	90.8
	Ouesse	Line	345.04	517.55	690.07	259.23	371.65	743.30
		Rate (households)	37.0	64.8	74.7	17.3	42.1	76.4
		Rate (people)	46.4	74.9	83.6	23.0	52.3	84.7
	Savalou	Line	383.23	574.85	766.46	256.42	412.79	825.58
		Rate (households)	36.2	62.7	76.0	16.9	40.0	78.5
		Rate (people)	46.1	74.2	86.4	22.8	50.7	88.1
	Save	Line	347.88	521.83	695.77	243.04	374.72	749.44
		Rate (households)	17.2	43.2	63.4	6.4	20.5	67.4
		Rate (people)	24.5	54.6	76.6	11.3	28.9	80.2
Collines	Urban	Line	416.18	624.27	832.36	297.56	448.29	896.57
		Rate (households)	27.8	55.0	69.3	11.5	32.2	71.7
		Rate (people)	39.8	69.6	83.3	18.4	45.7	85.1
	Rural	Line	348.47	522.71	696.95	239.12	375.35	750.71
		Rate (households)	34.9	60.2	73.8	15.6	38.6	76.8
		Rate (people)	45.4	71.5	84.0	22.2	49.2	86.3
	All	Line	363.11	544.67	726.22	251.75	391.12	782.24
		Rate (households)	33.2	58.9	72.7	14.6	37.0	75.5
		Rate (people)	44.2	71.1	83.9	21.4	48.5	86.0

Source: 2010 EMICoV

Kouffo

Région	Commune	Seuil/taux	Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)					
			National			USAID	Int. 2005 PPA	
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Kouffo	Aplahoue	Seuil	225.45	338.17	450.90	150.15	242.84	485.68
		Taux (ménages)	32.4	59.2	69.0	15.5	39.4	77.5
		Taux (personnes)	41.7	73.8	84.2	20.7	51.4	92.0
	Djakotomey	Seuil	212.94	319.40	425.87	102.19	229.36	458.72
		Taux (ménages)	29.2	54.2	72.9	10.4	35.4	77.1
		Taux (personnes)	40.1	66.4	87.1	18.1	47.0	89.2
	Dogbo	Seuil	289.24	433.86	578.48	205.76	311.55	623.10
		Taux (ménages)	33.3	57.3	71.9	14.6	42.7	76.0
		Taux (personnes)	51.3	76.7	88.0	25.2	62.4	91.1
	Klouékanme	Seuil	336.26	504.40	672.53	253.90	362.20	724.41
		Taux (ménages)	31.9	63.8	87.2	12.8	36.2	87.2
		Taux (personnes)	39.5	78.2	92.4	18.1	43.3	92.4
	Lalo	Seuil	345.35	518.02	690.69	217.41	371.99	743.97
		Taux (ménages)	55.7	70.8	79.1	25.3	57.9	83.3
		Taux (personnes)	75.5	88.1	94.2	35.8	77.8	95.6
	Toviklin	Seuil	303.19	454.78	606.38	275.18	326.58	653.15
		Taux (ménages)	23.4	55.3	80.9	10.6	29.8	85.1
		Taux (personnes)	37.4	70.4	92.7	16.8	45.8	96.1
Rural Kouffo	Aplahoue	Seuil	290.41	435.61	580.82	198.66	312.81	625.62
		Taux (ménages)	53.6	76.2	86.2	24.9	57.5	87.3
		Taux (personnes)	65.9	85.9	93.4	32.9	70.8	93.8
	Djakotomey	Seuil	222.56	333.84	445.12	147.30	239.73	479.45
		Taux (ménages)	45.7	69.5	84.1	20.7	51.2	86.6
		Taux (personnes)	58.0	78.6	92.5	28.9	63.0	94.8
	Dogbo	Seuil	243.10	364.65	486.20	210.81	261.85	523.70
		Taux (ménages)	16.7	41.7	65.3	8.3	21.5	72.2
		Taux (personnes)	23.6	53.6	75.8	11.3	29.7	82.8
	Klouékanme	Seuil	298.82	448.22	597.63	215.71	321.86	643.73
		Taux (ménages)	26.2	62.8	80.2	10.5	31.6	82.0
		Taux (personnes)	34.5	74.5	90.0	17.0	39.5	91.0
	Lalo	Seuil	241.88	362.82	483.75	173.13	260.53	521.07
		Taux (ménages)	40.8	61.8	78.1	20.1	42.5	82.7
		Taux (personnes)	46.8	70.3	85.1	22.8	49.1	87.9
	Toviklin	Seuil	234.70	352.06	469.41	194.27	252.81	505.62
		Taux (ménages)	28.0	56.1	72.0	12.2	35.4	78.0
		Taux (personnes)	44.9	75.8	87.4	21.7	52.2	90.1
All-Commune	Aplahoue	Seuil	277.10	415.66	554.21	188.72	298.48	596.96
		Taux (ménages)	49.3	72.8	82.7	23.0	53.8	85.3
		Taux (personnes)	61.0	83.4	91.5	30.4	66.9	93.5
	Djakotomey	Seuil	221.05	331.58	442.10	140.23	238.10	476.21
		Taux (ménages)	43.0	67.0	82.3	19.0	48.6	85.0
		Taux (personnes)	55.2	76.7	91.6	27.2	60.5	93.9
	Dogbo	Seuil	261.93	392.90	523.87	208.75	282.14	564.28
		Taux (ménages)	24.2	48.8	68.3	11.2	31.1	74.0
		Taux (personnes)	34.9	63.1	80.8	17.0	43.0	86.2
	Klouékanme	Seuil	305.35	458.03	610.70	222.37	328.91	657.81
		Taux (ménages)	27.2	63.0	81.5	10.9	32.4	83.0
		Taux (personnes)	35.4	75.1	90.4	17.2	40.1	91.2
	Lalo	Seuil	253.83	380.75	507.67	178.24	273.41	546.83
		Taux (ménages)	42.5	62.8	78.2	20.7	44.2	82.8
		Taux (personnes)	50.1	72.3	86.1	24.3	52.4	88.8
	Toviklin	Seuil	248.05	372.08	496.11	210.04	267.19	534.37
		Taux (ménages)	26.9	55.9	74.1	11.8	34.0	79.8
		Taux (personnes)	43.5	74.8	88.5	20.8	50.9	91.3
Kouffo	Urbain	Seuil	281.71	422.56	563.41	198.53	303.44	606.87
		Taux (ménages)	33.0	59.1	75.5	14.3	39.9	79.8
		Taux (personnes)	46.5	75.4	88.8	22.2	54.7	92.1
	Rural	Seuil	260.76	391.14	521.52	190.83	280.88	561.75
		Taux (ménages)	36.8	63.2	79.0	16.8	41.4	82.4
		Taux (personnes)	46.5	74.1	88.2	22.9	51.4	90.5
	Globale	Seuil	265.24	397.86	530.49	192.48	285.70	571.41
		Taux (ménages)	35.9	62.2	78.2	16.3	41.1	81.8
		Taux (personnes)	46.5	74.4	88.3	22.8	52.1	90.9

Source: EMICoV 2010

Donga

| Région | Commune | Seuil/taux | Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%) | | | | | |
| | | | National | | | USAID | Int. 2005 PPA | |
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Donga	Bassila	Seuil	332.05	498.08	664.11	199.62	357.67	715.33
		Taux (ménages)	31.1	51.9	66.2	14.5	37.4	70.8
		Taux (personnes)	35.0	55.1	73.7	17.0	39.7	78.1
	Copargo	Seuil	356.72	535.09	713.45	285.53	384.24	768.48
		Taux (ménages)	52.2	78.3	91.3	26.1	62.3	92.8
		Taux (personnes)	58.9	85.1	93.9	28.2	71.3	95.7
	Djougou	Seuil	358.10	537.15	716.19	328.77	385.72	771.44
		Taux (ménages)	9.3	41.2	62.8	4.3	18.0	65.6
		Taux (personnes)	11.3	53.3	77.7	5.2	22.7	80.4
	Ouake	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
Rural Donga	Bassila	Seuil	235.58	353.38	471.17	170.99	253.76	507.51
		Taux (ménages)	25.2	52.2	69.6	12.0	27.4	72.9
		Taux (personnes)	26.5	56.1	74.0	12.8	27.9	78.7
	Copargo	Seuil	236.86	355.29	473.72	155.74	255.13	510.26
		Taux (ménages)	37.7	62.3	77.9	15.5	38.8	81.2
		Taux (personnes)	41.8	69.1	85.2	20.2	43.1	88.6
	Djougou	Seuil	239.72	359.59	479.45	180.12	258.22	516.43
		Taux (ménages)	30.4	61.8	80.0	14.1	35.8	84.5
		Taux (personnes)	39.2	69.7	87.2	19.1	44.4	90.5
	Ouake	Seuil	269.77	404.66	539.54	203.30	290.58	581.16
		Taux (ménages)	13.1	26.2	41.7	4.8	16.7	46.4
		Taux (personnes)	20.1	37.8	56.8	9.2	24.2	60.5
All-Commune	Bassila	Seuil	280.22	420.33	560.44	184.24	301.83	603.67
		Taux (ménages)	27.9	52.1	68.0	13.2	32.0	71.9
		Taux (personnes)	30.4	55.6	73.8	14.8	33.4	78.4
	Copargo	Seuil	281.21	421.82	562.43	203.77	302.91	605.81
		Taux (ménages)	42.8	67.9	82.6	19.2	47.0	85.2
		Taux (personnes)	48.2	75.0	88.4	23.2	53.6	91.2
	Djougou	Seuil	278.68	418.03	557.37	229.05	300.18	600.36
		Taux (ménages)	23.1	54.7	74.0	10.7	29.6	77.9
		Taux (personnes)	30.0	64.3	84.0	14.5	37.3	87.1
	Ouake	Seuil	269.77	404.66	539.54	203.30	290.58	581.16
		Taux (ménages)	13.1	26.2	41.7	4.8	16.7	46.4
		Taux (personnes)	20.1	37.8	56.8	9.2	24.2	60.5
Donga	Urbain	Seuil	350.54	525.81	701.07	285.90	377.58	755.15
		Taux (ménages)	21.2	49.4	67.8	10.1	29.5	70.9
		Taux (personnes)	25.0	58.5	78.9	11.9	34.7	82.0
	Rural	Seuil	243.93	365.90	487.87	179.80	262.75	525.50
		Taux (ménages)	27.6	54.3	71.5	12.3	31.6	75.7
		Taux (personnes)	34.2	62.0	79.6	16.5	38.2	83.2
	Globale	Seuil	278.27	417.40	556.53	213.97	299.73	599.46
		Taux (ménages)	25.5	52.7	70.3	11.6	30.9	74.1
		Taux (personnes)	31.3	60.9	79.4	15.1	37.1	82.8

Source: EMICoV 2010

Littoral

Région	Commune	Seuil/taux	Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)					
			National			USAID	Int. 2005 PPA	
			100%	**150%**	**200%**	**"extrême"**	**$1.25**	**$2.50**
Littoral	Cotonou	Seuil	672.31	1008.47	1344.63	518.48	724.17	1448.35
		Taux (ménages)	15.4	34.7	50.5	7.3	18.2	54.0
		Taux (personnes)	23.9	48.8	65.9	11.9	27.9	69.6

Source: EMICoV 2010

Mono

Région	Commune	Seuil/taux	National			USAID	Int. 2005 PPA	
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Mono	Athieme	Seuil	322.54	483.81	645.08	235.77	347.42	694.84
		Taux (ménages)	41.5	82.9	90.2	19.5	48.8	90.2
		Taux (personnes)	52.9	89.5	97.1	25.7	60.0	97.1
	Bopa	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Come	Seuil	329.58	494.37	659.16	190.59	355.00	710.00
		Taux (ménages)	29.8	48.9	67.0	13.8	31.9	71.3
		Taux (personnes)	51.8	72.0	86.5	23.4	55.0	88.3
	Grand-Popo	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Houeyogbe	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Lokossa	Seuil	370.42	555.64	740.85	296.28	399.00	798.00
		Taux (ménages)	22.5	49.2	61.7	10.8	29.2	64.2
		Taux (personnes)	28.3	57.2	72.4	13.5	37.0	75.2
Rural Mono	Athieme	Seuil	263.45	395.18	526.90	214.37	283.77	567.54
		Taux (ménages)	44.5	66.4	81.8	20.0	49.1	87.3
		Taux (personnes)	53.5	77.0	90.5	26.5	60.1	92.2
	Bopa	Seuil	291.18	436.77	582.36	204.89	313.64	627.28
		Taux (ménages)	33.2	54.9	70.4	15.3	37.6	74.9
		Taux (personnes)	44.6	67.0	83.2	21.6	49.8	87.0
	Come	Seuil	303.56	455.34	607.12	221.40	326.98	653.95
		Taux (ménages)	28.9	68.9	76.1	11.9	44.7	80.3
		Taux (personnes)	37.6	81.7	89.1	18.8	56.4	92.3
	Grand-Popo	Seuil	319.25	478.87	638.50	209.24	343.88	687.75
		Taux (ménages)	34.4	56.1	66.3	14.2	35.9	70.6
		Taux (personnes)	48.1	67.5	73.9	23.7	49.8	76.2
	Houeyogbe	Seuil	328.18	492.28	656.37	223.73	353.50	707.00
		Taux (ménages)	43.4	67.8	78.5	21.0	50.2	81.5
		Taux (personnes)	49.6	73.0	83.4	24.6	55.7	86.1
	Lokossa	Seuil	344.94	517.41	689.88	232.89	371.55	743.10
		Taux (ménages)	44.2	69.2	80.8	20.8	51.7	85.0
		Taux (personnes)	53.4	76.4	86.8	26.0	59.4	90.9
All-Commune	Athieme	Seuil	277.18	415.77	554.35	219.34	298.56	597.11
		Taux (ménages)	43.8	70.4	83.9	19.9	49.0	88.0
		Taux (personnes)	53.4	79.9	92.1	26.3	60.1	93.4
	Bopa	Seuil	291.18	436.77	582.36	204.89	313.64	627.28
		Taux (ménages)	33.2	54.9	70.4	15.3	37.6	74.9
		Taux (personnes)	44.6	67.0	83.2	21.6	49.8	87.0
	Come	Seuil	312.01	468.01	624.02	211.40	336.08	672.15
		Taux (ménages)	29.3	61.2	72.6	12.6	39.8	76.8
		Taux (personnes)	42.2	78.5	88.3	20.3	55.9	91.0
	Grand-Popo	Seuil	319.25	478.87	638.50	209.24	343.88	687.75
		Taux (ménages)	34.4	56.1	66.3	14.2	35.9	70.6
		Taux (personnes)	48.1	67.5	73.9	23.7	49.8	76.2
	Houeyogbe	Seuil	328.18	492.28	656.37	223.73	353.50	707.00
		Taux (ménages)	43.4	67.8	78.5	21.0	50.2	81.5
		Taux (personnes)	49.6	73.0	83.4	24.6	55.7	86.1
	Lokossa	Seuil	356.30	534.46	712.61	261.15	383.79	767.58
		Taux (ménages)	33.7	59.5	71.6	16.0	40.8	75.0
		Taux (personnes)	42.2	67.8	80.4	20.4	49.4	83.9
Mono	Urbain	Seuil	351.30	526.95	702.60	258.77	378.40	756.79
		Taux (ménages)	27.4	53.8	67.3	13.0	32.7	70.0
		Taux (personnes)	38.7	66.9	80.6	18.2	45.8	82.6
	Rural	Seuil	309.91	464.87	619.82	216.92	333.82	667.64
		Taux (ménages)	38.1	63.0	74.9	17.3	44.3	79.0
		Taux (personnes)	48.0	72.6	83.8	23.6	54.5	86.9
	Globale	Seuil	316.59	474.88	633.18	223.67	341.01	682.02
		Taux (ménages)	36.1	61.3	73.5	16.5	42.1	77.3
		Taux (personnes)	46.5	71.6	83.3	22.7	53.1	86.2

Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)

Source: EMICoV 2010

Ouèmè

| Région | Commune | Seuil/taux | Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%) | | | | | |
| | | | National | | | USAID | Int. 2005 PPA | |
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Ouèmè	Adjarra	Seuil	372.32	558.48	744.64	264.73	401.04	802.08
		Taux (ménages)	22.4	44.2	76.1	9.9	29.4	77.4
		Taux (personnes)	24.4	49.2	83.7	12.0	31.8	84.7
	Adjohoun	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Aguegues	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Akpro-Misseret	Seuil	411.15	616.73	822.31	312.76	442.87	885.74
		Taux (ménages)	39.7	66.2	82.4	19.1	47.1	85.3
		Taux (personnes)	47.2	75.8	90.0	23.2	56.0	91.9
	Avrankou	Seuil	392.23	588.35	784.46	293.11	422.49	844.97
		Taux (ménages)	23.4	57.4	78.7	8.5	29.8	80.9
		Taux (personnes)	33.5	67.7	84.8	14.1	39.5	85.9
	Bonou	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Dangbo	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Porto-Novo	Seuil	608.67	913.01	1217.35	530.40	655.62	1311.25
		Taux (ménages)	13.7	39.2	58.9	6.9	16.7	65.0
		Taux (personnes)	19.1	51.1	72.3	9.0	22.1	77.4
	Seme-Kpodji	Seuil	594.60	891.91	1189.21	482.44	640.47	1280.94
		Taux (ménages)	19.7	41.6	58.4	8.7	27.2	66.0
		Taux (personnes)	24.1	49.1	64.3	11.8	32.8	71.9
Rural Ouèmè	Adjarra	Seuil	492.43	738.64	984.85	412.72	530.41	1060.82
		Taux (ménages)	23.4	58.1	70.6	10.9	30.5	74.2
		Taux (personnes)	31.0	68.3	81.2	14.7	39.9	84.3
	Adjohoun	Seuil	321.10	481.65	642.20	227.35	345.87	691.74
		Taux (ménages)	16.4	34.5	52.5	7.9	19.8	55.9
		Taux (personnes)	20.6	41.8	61.1	9.9	26.0	64.4
	Aguegues	Seuil	369.38	554.07	738.75	231.22	397.87	795.74
		Taux (ménages)	25.2	54.3	62.8	11.4	30.3	66.2
		Taux (personnes)	32.7	60.6	69.5	15.2	37.7	72.6
	Akpro-Misseret	Seuil	353.92	530.89	707.85	252.05	381.22	762.45
		Taux (ménages)	19.7	49.3	73.3	9.1	22.6	79.0
		Taux (personnes)	25.5	56.5	80.7	12.6	28.4	85.8
	Avrankou	Seuil	354.89	532.34	709.79	300.45	382.27	764.54
		Taux (ménages)	14.8	43.2	66.3	7.1	19.5	70.4
		Taux (personnes)	17.6	51.7	74.9	7.7	23.5	78.7
	Bonou	Seuil	391.31	586.96	782.61	288.79	421.49	842.98
		Taux (ménages)	25.6	55.8	76.0	13.2	31.8	79.1
		Taux (personnes)	33.1	65.7	84.8	16.6	39.4	88.2
	Dangbo	Seuil	385.31	577.96	770.61	307.34	415.03	830.06
		Taux (ménages)	25.5	53.5	69.7	12.3	29.4	73.2
		Taux (personnes)	35.3	63.9	78.8	17.2	40.9	82.1
	Porto-Novo	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Seme-Kpodji	Seuil	441.77	662.65	883.54	352.84	475.84	951.69
		Taux (ménages)	9.6	26.7	45.1	4.1	13.1	49.3
		Taux (personnes)	12.7	37.5	57.9	6.3	17.8	61.5
All-Commune	Adjarra	Seuil	462.01	693.01	924.01	375.24	497.64	995.29
		Taux (ménages)	23.1	54.6	72.0	10.6	30.2	75.0
		Taux (personnes)	29.3	63.4	81.8	14.0	37.9	84.4
	Adjohoun	Seuil	321.10	481.65	642.20	227.35	345.87	691.74
		Taux (ménages)	16.4	34.5	52.5	7.9	19.8	55.9
		Taux (personnes)	20.6	41.8	61.1	9.9	26.0	64.4
	Aguegues	Seuil	369.38	554.07	738.75	231.22	397.87	795.74
		Taux (ménages)	25.2	54.3	62.8	11.4	30.3	66.2
		Taux (personnes)	32.7	60.6	69.5	15.2	37.7	72.6
	Akpro-Misseret	Seuil	367.06	550.58	734.11	265.98	395.37	790.74
		Taux (ménages)	24.2	53.1	75.3	11.3	28.1	80.4
		Taux (personnes)	30.5	60.9	82.8	15.1	34.7	87.2
	Avrankou	Seuil	361.80	542.70	723.60	299.09	389.71	779.42
		Taux (ménages)	16.3	45.7	68.5	7.4	21.4	72.3
		Taux (personnes)	20.5	54.7	76.7	8.9	26.5	80.0
	Bonou	Seuil	391.31	586.96	782.61	288.79	421.49	842.98
		Taux (ménages)	25.6	55.8	76.0	13.2	31.8	79.1
		Taux (personnes)	33.1	65.7	84.8	16.6	39.4	88.2
	Dangbo	Seuil	385.31	577.96	770.61	307.34	415.03	830.06
		Taux (ménages)	25.5	53.5	69.7	12.3	29.4	73.2
		Taux (personnes)	35.3	63.9	78.8	17.2	40.9	82.1
	Porto-Novo	Seuil	608.67	913.01	1217.35	530.40	655.62	1311.25
		Taux (ménages)	13.7	39.2	58.9	6.9	16.7	65.0
		Taux (personnes)	19.1	51.1	72.3	9.0	22.1	77.4
	Seme-Kpodji	Seuil	515.36	773.04	1030.72	415.24	555.11	1110.22
		Taux (ménages)	14.1	33.3	51.0	6.1	19.4	56.7
		Taux (personnes)	18.1	43.1	61.0	8.9	25.1	66.5
Ouèmè	Urbain	Seuil	560.59	840.88	1121.18	470.01	603.83	1207.66
		Taux (ménages)	17.1	42.2	62.0	8.1	21.6	67.8
		Taux (personnes)	23.3	53.2	73.4	11.1	28.5	78.3
	Rural	Seuil	390.47	585.70	780.93	304.04	420.59	841.17
		Taux (ménages)	19.0	45.2	63.2	8.9	23.4	67.1
		Taux (personnes)	24.8	54.8	73.3	11.9	30.5	76.9
	Globale	Seuil	455.60	683.40	911.20	367.58	490.74	981.49
		Taux (ménages)	18.2	44.0	62.7	8.6	22.7	67.4
		Taux (personnes)	24.3	54.2	73.3	11.6	29.7	77.4

Source: EMICoV 2010

Plateau

Région	Commune	Seuil/taux	Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)					
			National			USAID	Int. 2005 PPA	
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Plateau	Athieme	Seuil	297.29	445.94	594.58	202.20	320.22	640.45
		Taux (ménages)	10.9	40.6	62.5	4.7	12.5	65.6
		Taux (personnes)	17.0	54.3	75.7	7.3	20.2	77.7
	Bopa	Seuil	390.83	586.24	781.66	286.23	420.98	841.95
		Taux (ménages)	15.0	44.9	69.0	6.1	22.4	74.5
		Taux (personnes)	20.4	55.8	79.1	8.5	28.8	86.5
	Come	Seuil	352.65	528.97	705.30	316.66	379.85	759.70
		Taux (ménages)	15.9	31.9	55.1	7.2	18.8	56.5
		Taux (personnes)	20.3	40.6	60.5	8.4	25.5	61.5
	Grand-Popo	Seuil	300.09	450.13	600.18	274.71	323.24	646.47
		Taux (ménages)	10.4	30.3	48.9	5.3	14.5	54.1
		Taux (personnes)	14.7	43.0	67.5	6.6	20.4	70.1
	Houeyogbe	Seuil	339.18	508.77	678.37	251.22	365.35	730.69
		Taux (ménages)	32.3	55.1	75.0	12.4	35.8	75.0
		Taux (personnes)	36.8	64.0	82.2	17.5	41.7	82.2
Rural Plateau	Athieme	Seuil	273.54	410.31	547.07	235.41	294.64	589.27
		Taux (ménages)	17.8	53.9	73.6	7.7	21.7	73.6
		Taux (personnes)	26.0	69.6	84.1	12.8	31.2	84.1
	Bopa	Seuil	308.68	463.02	617.36	238.44	332.49	664.98
		Taux (ménages)	23.7	46.7	73.3	8.9	28.6	80.0
		Taux (personnes)	27.6	51.8	79.5	13.6	33.2	84.6
	Come	Seuil	291.23	436.85	582.46	220.41	313.70	627.39
		Taux (ménages)	29.6	52.8	66.2	14.1	33.8	71.8
		Taux (personnes)	38.4	64.5	78.7	18.4	43.8	84.8
	Grand-Popo	Seuil	227.51	341.27	455.02	154.70	245.06	490.12
		Taux (ménages)	46.9	67.8	78.2	19.0	51.6	80.0
		Taux (personnes)	63.1	84.5	92.8	30.6	68.7	93.6
	Houeyogbe	Seuil	281.02	421.54	562.05	209.23	302.70	605.40
		Taux (ménages)	23.4	50.5	68.3	9.7	26.5	71.6
		Taux (personnes)	33.4	69.8	83.5	15.8	37.1	85.3
All-Commune	Athieme	Seuil	278.41	417.62	556.83	228.59	299.89	599.78
		Taux (ménages)	16.4	51.1	71.2	7.1	19.8	71.9
		Taux (personnes)	24.1	66.5	82.4	11.7	28.9	82.8
	Bopa	Seuil	327.83	491.75	655.66	249.58	353.12	706.24
		Taux (ménages)	21.3	46.2	72.1	8.1	26.9	78.5
		Taux (personnes)	25.9	52.7	79.4	12.4	32.2	85.1
	Come	Seuil	306.42	459.63	612.85	244.21	330.06	660.12
		Taux (ménages)	25.9	47.2	63.2	12.3	29.8	67.7
		Taux (personnes)	33.9	58.6	74.2	16.0	39.2	79.0
	Grand-Popo	Seuil	252.35	378.52	504.70	195.77	271.82	543.63
		Taux (ménages)	32.2	52.7	66.4	13.4	36.6	69.6
		Taux (personnes)	46.5	70.3	84.2	22.4	52.1	85.6
	Houeyogbe	Seuil	307.61	461.41	615.21	228.43	331.33	662.67
		Taux (ménages)	27.1	52.4	71.1	10.8	30.3	73.0
		Taux (personnes)	35.0	67.1	82.9	16.6	39.2	83.9
Plateau	Urbain	Seuil	337.02	505.53	674.05	267.94	363.02	726.04
		Taux (ménages)	17.7	40.8	61.9	7.4	21.6	64.9
		Taux (personnes)	23.2	52.3	73.6	10.4	28.8	76.1
	Rural	Seuil	279.43	419.15	558.87	215.35	300.99	601.98
		Taux (ménages)	27.5	54.0	71.9	11.6	31.6	75.3
		Taux (personnes)	36.6	66.5	83.2	17.8	41.8	86.2
	Globale	Seuil	296.17	444.25	592.33	230.63	319.01	638.02
		Taux (ménages)	24.4	49.9	68.8	10.3	28.5	72.1
		Taux (personnes)	32.7	62.4	80.4	15.6	38.0	83.2

Source: EMICoV 2010

Zou

| Région | Commune | Seuil/taux | Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%) | | | | | |
| | | | National | | | USAID | Int. 2005 PPA | |
			100%	150%	200%	"extrême"	$1.25	$2.50
Urbain Zou	Abomey	Seuil	344.35	516.52	688.70	288.11	370.91	741.82
		Taux (ménages)	16.6	50.9	63.9	7.7	20.7	68.0
		Taux (personnes)	22.8	67.4	80.6	11.1	29.2	84.6
	Abgbangnizoun	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Bohicon	Seuil	307.15	460.73	614.30	192.99	330.84	661.69
		Taux (ménages)	26.0	53.4	67.8	11.6	30.1	72.6
		Taux (personnes)	33.4	63.9	78.6	15.3	39.1	83.0
	Cove	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Djidja	Seuil	289.17	433.75	578.33	248.59	311.47	622.94
		Taux (ménages)	23.3	47.9	69.9	11.0	26.0	69.9
		Taux (personnes)	30.1	58.8	79.3	14.2	33.8	79.3
	Ouinhi	Seuil	301.74	452.61	603.48	206.21	325.02	650.03
		Taux (ménages)	24.5	51.0	65.3	10.2	28.6	71.4
		Taux (personnes)	37.4	72.2	83.8	16.7	42.9	85.4
	Zagnanado	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
	Za-Kpota	Seuil	202.34	303.51	404.68	144.93	217.95	435.89
		Taux (ménages)	53.9	80.1	85.7	25.4	59.3	85.7
		Taux (personnes)	69.1	90.8	94.5	33.8	74.0	94.5
	Zogbodomey	Seuil	—	—	—	—	—	—
		Taux (ménages)	—	—	—	—	—	—
		Taux (personnes)	—	—	—	—	—	—
Rural Zou	Abomey	Seuil	430.95	646.42	861.90	332.93	464.19	928.38
		Taux (ménages)	32.3	60.4	84.4	15.6	35.4	84.4
		Taux (personnes)	42.1	73.3	92.0	21.1	45.6	92.0
	Abgbangnizoun	Seuil	242.42	363.63	484.84	156.41	261.12	522.24
		Taux (ménages)	33.9	50.7	66.0	15.4	38.0	69.5
		Taux (personnes)	42.0	60.1	74.6	20.6	46.6	78.6
	Bohicon	Seuil	333.26	499.89	666.52	234.51	358.97	717.94
		Taux (ménages)	35.9	64.8	77.9	17.2	40.7	81.4
		Taux (personnes)	43.3	75.0	86.4	21.2	49.3	88.9
	Cove	Seuil	180.24	270.37	360.49	116.14	194.15	388.29
		Taux (ménages)	32.4	54.9	69.0	10.6	37.3	70.4
		Taux (personnes)	45.5	73.1	88.1	21.8	52.7	90.2
	Djidja	Seuil	346.58	519.87	693.16	280.70	373.31	746.62
		Taux (ménages)	26.3	51.0	65.5	11.8	31.6	69.9
		Taux (personnes)	37.9	69.0	81.4	18.2	45.3	84.6
	Ouinhi	Seuil	247.38	371.07	494.76	193.31	266.46	532.93
		Taux (ménages)	40.8	73.2	82.2	18.6	47.6	86.6
		Taux (personnes)	50.4	82.4	89.4	24.2	58.4	92.3
	Zagnanado	Seuil	219.13	328.70	438.26	152.00	236.03	472.07
		Taux (ménages)	33.3	51.8	65.2	15.8	35.8	70.2
		Taux (personnes)	49.4	71.2	83.6	24.0	52.1	87.8
	Za-Kpota	Seuil	224.31	336.46	448.61	154.04	241.61	483.22
		Taux (ménages)	19.3	35.4	59.1	8.3	23.8	65.2
		Taux (personnes)	29.8	46.4	71.3	14.4	33.6	79.7
	Zogbodomey	Seuil	196.16	294.25	392.33	137.83	211.30	422.59
		Taux (ménages)	36.4	54.7	68.7	17.1	38.5	70.8
		Taux (personnes)	45.7	65.7	78.6	21.9	47.7	79.7
All-Commune	Abomey	Seuil	367.63	551.44	735.26	300.15	395.99	791.97
		Taux (ménages)	20.6	53.3	69.2	9.7	24.5	72.3
		Taux (personnes)	28.0	69.0	83.6	13.8	33.6	86.6
	Abgbangnizoun	Seuil	242.42	363.63	484.84	156.41	261.12	522.24
		Taux (ménages)	33.9	50.7	66.0	15.4	38.0	69.5
		Taux (personnes)	42.0	60.1	74.6	20.6	46.6	78.6
	Bohicon	Seuil	318.74	478.11	637.48	211.42	343.33	686.66
		Taux (ménages)	30.4	58.5	72.3	14.1	34.8	76.5
		Taux (personnes)	37.8	68.8	82.1	17.9	43.6	85.6
	Cove	Seuil	180.24	270.37	360.49	116.14	194.15	388.29
		Taux (ménages)	32.4	54.9	69.0	10.6	37.3	70.4
		Taux (personnes)	45.5	73.1	88.1	21.8	52.7	90.2
	Djidja	Seuil	336.63	504.94	673.26	275.14	362.60	725.19
		Taux (ménages)	25.8	50.6	66.2	11.7	30.8	69.9
		Taux (personnes)	36.5	67.2	81.0	17.5	43.3	83.7
	Ouinhi	Seuil	263.31	394.97	526.63	197.09	283.62	567.25
		Taux (ménages)	35.7	66.2	76.8	15.9	41.6	81.8
		Taux (personnes)	46.6	79.4	87.8	22.0	53.8	90.3
	Zagnanado	Seuil	219.13	328.70	438.26	152.00	236.03	472.07
		Taux (ménages)	33.3	51.8	65.2	15.8	35.8	70.2
		Taux (personnes)	49.4	71.2	83.6	24.0	52.1	87.8
	Za-Kpota	Seuil	214.96	322.44	429.92	150.16	231.54	463.08
		Taux (ménages)	31.7	51.4	68.7	14.4	36.5	72.6
		Taux (personnes)	46.6	65.3	81.1	22.7	50.8	86.0
	Zogbodomey	Seuil	196.16	294.25	392.33	137.83	211.30	422.59
		Taux (ménages)	36.4	54.7	68.7	17.1	38.5	70.8
		Taux (personnes)	45.7	65.7	78.6	21.9	47.7	79.7
Zou	Urbain	Seuil	288.92	433.38	577.84	212.94	311.21	622.42
		Taux (ménages)	28.3	57.6	70.2	13.0	32.6	73.5
		Taux (personnes)	39.7	72.1	83.7	18.9	45.2	86.3
	Rural	Seuil	257.08	385.63	514.17	183.16	276.91	553.83
		Taux (ménages)	31.5	52.6	68.3	14.2	35.7	72.0
		Taux (personnes)	41.8	65.2	79.9	20.3	46.6	83.4
	Globale	Seuil	265.74	398.61	531.48	191.26	286.24	572.48
		Taux (ménages)	30.7	53.9	68.8	13.9	34.8	72.4
		Taux (personnes)	41.2	67.1	80.9	19.9	46.2	84.2

Source: EMICoV 2010

All-Benin

		Seuil/taux	Seuils de pauvreté (XOF/personne/jour) et taux de pauvreté (%)					
			National			USAID	Int. 2005 PPA	
			100%	150%	200%	"extrême"	$1.25	$2.50
All-Benin	Urbain	Seuil	464.42	696.64	928.85	353.17	500.25	1000.50
		Taux (ménages)	20.7	43.3	60.1	9.3	24.6	63.8
		Taux (personnes)	29.8	56.7	73.7	14.2	34.8	77.2
	Rural	Seuil	313.36	470.04	626.73	228.48	337.53	675.07
		Taux (ménages)	29.8	54.7	71.0	13.4	34.1	74.5
		Taux (personnes)	38.4	65.4	81.0	18.6	43.2	83.9
	Globale	Seuil	368.60	552.90	737.20	274.07	397.03	794.06
		Taux (ménages)	26.2	50.2	66.7	11.8	30.4	70.3
		Taux (personnes)	35.2	62.3	78.3	17.0	40.2	81.5

Source: EMICoV 2010