# Simple Poverty Scorecard® Poverty-Assessment Tool
# Chad

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## Abstract

The Simple Poverty Scorecard-brand poverty-assessment tool for Chad uses 11 low-cost indicators from the 2011 Survey of Consumption and the Informal Sector to estimate the likelihood that a household has consumption below a given poverty line. Field workers can collect responses in about ten minutes. Accuracy is reported for a range of poverty lines. Pro-poor programs in Chad can use the scorecard to estimate poverty rates, to track changes in poverty rates over time, and to segment clients for differentiated treatment.

## Acknowledgements

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# Simple Poverty Scorecard® Poverty-Assessment Tool

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

| Indicator | Response | Points | Score |
|---|---|---|---|
| 1. How many household members are 18-years-old or younger? | A. Six or more | 0 | |
| | B. Five | 2 | |
| | C. Four | 7 | |
| | D. Three | 8 | |
| | E. Two | 16 | |
| | F. One | 23 | |
| | G. None | 25 | |
| 2. Did all household members ages 7 to 18 go to school at the start of the current school year? | A. No | 0 | |
| | B. Yes | 3 | |
| | C. No members 7 to 18 | 5 | |
| 3. In the past 12 months, did your household do any farming? | A. Yes | 0 | |
| | B. No | 7 | |
| 4. In the past 12 months, did your household keep any livestock as sedentary or nomadic herders? | A. No | 0 | |
| | B. Yes (sedentary) | 3 | |
| | C. Yes (nomadic) | 8 | |
| 5. What is the main construction material of the roof? (*Observe and record.*) | A. Straw/reeds, or other | 0 | |
| | B. Packed earth, sheet metal/tile, or reinforced concrete | 6 | |
| 6. What is the household's main source of lighting? | A. Other | 0 | |
| | B. Flashlight | 3 | |
| | C. Kerosene lamp | 8 | |
| | D. Electricity (STEE, generator, or solar panel) | 12 | |
| 7. What is the main source of drinking water in the dry season? | A. Traditional well, or stagnant surface water | 0 | |
| | B. Borehole, or running surface water | 6 | |
| | C. Public standpipe, or other | 10 | |
| | D. Water truck/cart, or private faucet (inside or outside) | 16 | |
| 8. Does the household have a bathroom? | A. No | 0 | |
| | B. Yes | 4 | |
| 9. Does the household have a latrine or flush toilet? | A. No | 0 | |
| | B. Yes | 3 | |
| 10. Does the household have a bicycle, motorcycle/scooter, or an automobile, business vehicle (taxi, minibus), or truck in good working order? | A. None | 0 | |
| | B. Only bicycle | 5 | |
| | C. Motorcycle/scooter, automobile, business vehicle (taxi, minibus), or truck (regardless of bicycle) | 9 | |
| 11. Does the household have a usable bed? | A. No | 0 | |
| | B. Yes | 5 | |

SimplePovertyScorecard.com                                    **Score:**

# Back-page Worksheet:
# Household Members, Ages, and School Attendance

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

Then read to the respondent: *Please tell me the first names (or nicknames) and ages of all the members of your household, starting with the head. A* household *is a group of people—regardless of blood or martial relationships—who live under the same roof (or in the same compound), who acknowledge the authority of one member of the household (the* head*), and who share resources and expenses, whether in full or in part.*

Write down the name/nickname and age of each member. You need to know a member's precise age only if it may be close to 7 or 18. Record the number of household members in the scorecard header next to "Number of household members:", and then circle the answer to the first scorecard indicator.

For each member ages 7 to 18, ask, "Did [NAME] go to school at the start of the current school year?" and mark the response. Then circle the answer to the second indicator. Mark "C. No members ages 7 to 18" if no members are ages 7 to 18. Mark "B. Yes" if there are members ages 7 to 18 and if they all went to school. Mark "A. No" if there are members ages 7 to 18 but at least one did not go to school.

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

| First name (or nickname) | How old is [NAME]? | Did [NAME] go to school at the start of the current school year? | | |
|---|---|---|---|---|
| 1. (Head) | | <7 or >18 | No | Yes |
| 2. | | <7 or >18 | No | Yes |
| 3. | | <7 or >18 | No | Yes |
| 4. | | <7 or >18 | No | Yes |
| 5. | | <7 or >18 | No | Yes |
| 6. | | <7 or >18 | No | Yes |
| 7. | | <7 or >18 | No | Yes |
| 8. | | <7 or >18 | No | Yes |
| 9. | | <7 or >18 | No | Yes |
| 10. | | <7 or >18 | No | Yes |
| 11. | | <7 or >18 | No | Yes |
| 12. | | <7 or >18 | No | Yes |
| 13. | | <7 or >18 | No | Yes |
| **Number of HH members:** | | — | | |

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

|  | Poverty likelihood (%) | | | |
|  | National (2011 def.) | | | |
| Score | Food | 100% | 150% | 200% |
|-------|------|------|------|------|
| 0–12 | 62.7 | 78.1 | 93.6 | 97.0 |
| 13–17 | 47.0 | 71.7 | 89.1 | 93.9 |
| 18–20 | 38.1 | 60.3 | 79.6 | 89.6 |
| 21–22 | 32.2 | 52.5 | 75.8 | 87.3 |
| 23–25 | 26.9 | 47.6 | 74.6 | 87.0 |
| 26–27 | 26.9 | 47.6 | 74.2 | 87.0 |
| 28–29 | 26.9 | 47.6 | 69.4 | 82.6 |
| 30–31 | 22.4 | 47.6 | 69.4 | 82.6 |
| 32–33 | 18.3 | 37.7 | 67.7 | 82.6 |
| 34–35 | 17.6 | 29.9 | 61.1 | 79.2 |
| 36–37 | 16.9 | 29.9 | 61.1 | 77.3 |
| 38–40 | 15.9 | 28.8 | 61.1 | 77.3 |
| 41–43 | 10.8 | 23.5 | 50.2 | 71.6 |
| 44–47 | 8.7 | 17.8 | 43.4 | 60.0 |
| 48–52 | 7.1 | 16.1 | 37.7 | 55.4 |
| 53–60 | 7.1 | 14.1 | 30.9 | 48.0 |
| 61–100 | 2.1 | 5.2 | 16.8 | 28.7 |

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

| | Poverty likelihood (%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| Score | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| 0–12 | 67.5 | 88.3 | 94.4 | 98.8 | 70.5 | 91.6 | 97.1 | 100.0 |
| 13–17 | 55.2 | 82.3 | 90.1 | 98.1 | 57.7 | 86.3 | 95.5 | 100.0 |
| 18–20 | 46.8 | 71.6 | 82.2 | 97.9 | 48.0 | 76.5 | 93.4 | 100.0 |
| 21–22 | 39.2 | 69.3 | 76.9 | 97.4 | 41.5 | 73.8 | 92.1 | 100.0 |
| 23–25 | 33.3 | 65.4 | 76.4 | 96.5 | 37.4 | 70.3 | 92.1 | 100.0 |
| 26–27 | 33.3 | 64.1 | 76.2 | 96.5 | 37.4 | 68.9 | 92.1 | 100.0 |
| 28–29 | 33.3 | 61.8 | 70.2 | 93.8 | 37.4 | 65.1 | 86.3 | 100.0 |
| 30–31 | 31.5 | 61.8 | 70.2 | 93.8 | 33.9 | 65.1 | 86.3 | 100.0 |
| 32–33 | 26.5 | 56.7 | 69.6 | 91.7 | 27.7 | 62.0 | 84.8 | 100.0 |
| 34–35 | 20.3 | 47.1 | 63.1 | 91.7 | 21.5 | 54.4 | 84.0 | 100.0 |
| 36–37 | 20.3 | 47.1 | 63.1 | 91.7 | 21.5 | 54.4 | 82.3 | 99.9 |
| 38–40 | 19.3 | 46.7 | 63.1 | 91.7 | 20.2 | 54.4 | 82.3 | 99.7 |
| 41–43 | 15.4 | 41.1 | 56.0 | 91.2 | 15.7 | 46.7 | 80.3 | 99.3 |
| 44–47 | 11.1 | 30.3 | 45.2 | 89.8 | 11.7 | 36.5 | 75.3 | 98.6 |
| 48–52 | 9.3 | 27.8 | 38.9 | 81.1 | 9.8 | 34.2 | 68.8 | 98.6 |
| 53–60 | 9.3 | 21.6 | 32.8 | 73.5 | 9.8 | 26.2 | 60.3 | 98.6 |
| 61–100 | 3.8 | 9.8 | 18.1 | 55.7 | 4.1 | 12.8 | 36.0 | 96.4 |

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

| Score | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|---|---|---|---|---|---|---|
| | | 20th | 40th | 50th | 60th | 80th |
| 0–12 | 52.7 | 43.7 | 73.4 | 80.4 | 87.3 | 96.3 |
| 13–17 | 39.8 | 35.9 | 63.4 | 74.0 | 82.3 | 93.6 |
| 18–20 | 29.1 | 26.3 | 50.3 | 63.7 | 70.3 | 87.6 |
| 21–22 | 26.4 | 23.4 | 43.5 | 56.6 | 67.4 | 86.1 |
| 23–25 | 23.8 | 20.5 | 39.7 | 51.9 | 64.2 | 86.1 |
| 26–27 | 23.8 | 20.5 | 39.7 | 51.9 | 63.6 | 86.1 |
| 28–29 | 23.8 | 17.1 | 39.7 | 51.9 | 61.2 | 80.6 |
| 30–31 | 18.6 | 14.3 | 39.7 | 49.8 | 61.2 | 80.6 |
| 32–33 | 14.7 | 12.6 | 31.0 | 39.8 | 54.3 | 80.6 |
| 34–35 | 13.1 | 11.1 | 24.2 | 32.9 | 44.8 | 77.9 |
| 36–37 | 11.4 | 10.7 | 24.2 | 32.9 | 44.8 | 76.4 |
| 38–40 | 10.1 | 9.8 | 23.8 | 32.3 | 44.8 | 76.4 |
| 41–43 | 7.4 | 6.4 | 20.1 | 27.9 | 40.1 | 69.4 |
| 44–47 | 7.0 | 6.0 | 13.5 | 20.9 | 29.8 | 55.6 |
| 48–52 | 4.9 | 3.9 | 11.0 | 18.0 | 27.4 | 50.5 |
| 53–60 | 4.9 | 3.9 | 11.0 | 15.4 | 21.2 | 43.6 |
| 61–100 | 1.1 | 1.0 | 4.4 | 6.2 | 9.6 | 26.4 |

# Simple Poverty Scorecard® Poverty-Assessment Tool Chad

## 1. Introduction

Pro-poor programs in Chad can use the Simple Poverty Scorecard poverty-assessment tool as a low-cost, transparent way to estimate the likelihood that a household has consumption below a given poverty line, to estimate a population's poverty rate at a point in time, to estimate the annual change in a population's poverty rate, and to segment participants for differentiated treatment.

The direct approach to poverty assessment via consumption surveys is difficult and costly. A case in point is Chad's 2011 Survey of Consumption and the Informal Sector (*Enquête sur la Consommation et le Secteur Informel du Tchad*, ECOSIT) by the *Institut National de la Statistique, des Études Économiques, et Démographiques* (INSEED). The 46-page questionnaire covers about 800 questions, many of which have follow-up questions and/or are asked multiple times (for example, for each household member). Enumerators visited each surveyed household six times over 15 days, and household members kept a dairy of their spending and of their consumption of their own production.

In comparison, the indirect approach of the scorecard is quick and low-cost. It uses 11 verifiable indicators drawn from the 2011 ECOSIT (such as "What is the main construction material of the roof?" and "Does the household have a usable bed?") to get

a score that is correlated with poverty status as measured by the exhaustive ECOSIT survey.

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

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

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[1] The Simple Poverty Scorecard tool for Chad is not, however, in the public domain. Copyright is held by Microfinance Risk Management, L.L.C.

[2] USAID defines a household as *very poor* if its daily per-capita consumption is less than the highest of the $1.90/day 2011 PPP line (XAF471, Table 1) or the line that marks the poorest half of people below 100% of the national line (XAF332).

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

The statistical approach here aims to be understood by non-specialists. After all, if program managers are to adopt the scorecard on their own and apply it to inform their decisions, then they must first trust that it works. Transparency and straightforwardness build trust. Getting "buy-in" matters; proxy-means tests and regressions on the "determinants of poverty" have been around for decades, but they are rarely used to inform decisions by pro-poor organizations. This is not because these tools do not work, but because they are often presented (when they are presented at all) as tables of regression coefficients incomprehensible to non-specialists (with cryptic indicator names such as "`LGHHSZ_2`" and with points with negative values and many decimal places). Thanks to the predictive-modeling phenomenon known as the "flat maximum", straightforward, transparent approaches are usually about as accurate as complex, opaque ones (Schreiner, 2012a; Caire and Schreiner, 2012).

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

The scorecard is based on data from the 2011 ECOSIT from Chad's INSEED.

Indicators are selected to be:

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

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

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

Second, the scorecard can estimate the poverty rate of a population of households at a point in time. This estimate is the average of estimated poverty likelihoods among a representative sample of households from the population.

Third, the scorecard can estimate the annual change in a poverty rate. With two independent samples of households from the same population, this is the difference in the average estimated poverty likelihood in the baseline sample versus the average estimated likelihood in the follow-up sample, divided by the difference (in years) between the average interview date in the baseline sample and the average interview date in the follow-up sample.

With one sample in which each household is scored twice, the estimate of the annual change in a poverty rate is the sum of the changes in each household's

estimated poverty likelihood from baseline to follow-up, divided by the sum of years between each household's pair of interviews (Schreiner, 2014a).

The scorecard can also be used to segment participants for differentiated treatment. To help managers choose appropriate targeting cut-offs for their purposes, several measures of targeting accuracy are reported for a range of possible cut-offs.

This paper presents a single scorecard whose indicators and points are derived with Chad's national poverty line and data from the 2011 ECOSIT. Scores from this one scorecard are calibrated with this same data to poverty likelihoods for 18 poverty lines.

The scorecard is constructed using data from about three-fifths of the households in the 2011 ECOSIT. Data from that same three-fifths of households is also used to calibrate scores to poverty likelihoods for the 18 poverty lines. Data from the other two-fifths of households is used to validate the scorecard's accuracy for estimating households' poverty likelihoods, for estimating populations' poverty rates at a point in time, and for segmenting participants.

Given their assumptions, all three scorecard-based estimators (the poverty likelihood of a household, the poverty rate of a population at a point in time, and the annual change in a population's poverty rate) are *unbiased*. That is, their average matches the true value in repeated samples when constructed from (and applied to) a single, unchanging population in which the relationship between scorecard indicators and poverty is unchanging. Like all predictive models, the scorecard is constructed from

a single sample and so makes errors to some unknown extent when applied (as in this paper) to a validation sample. Furthermore, it makes errors when applied (in practice) to a different population or when applied after 2011 (because the relationships between indicators and poverty change over time).[3]

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

The error in the scorecard's estimated poverty rate at a point in time (that is, the average of differences between estimated and observed values across 1,000 bootstrap samples of $n = 16,384$ from the validation sample) for 100% of the national poverty line is –0.1 percentage points. The average across all 18 poverty lines of the absolute values of the average error is about 0.7 percentage points, and the maximum of the absolute values of the average error is 2.0 percentage points. These estimation errors are due to sampling variation, not bias; the average difference would be zero if the whole 2011 ECOSIT were to be repeatedly re-fielded and re-divided into sub-samples before repeating the entire process of constructing and validating the resulting scorecards.

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

With $n = 16{,}384$, the 90-percent confidence intervals are $\pm 0.7$ percentage points or smaller. For $n = 1{,}024$, the 90-percent intervals are $\pm 2.8$ percentage points or smaller.

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

The "Interview Guide" (found after the References) tells how to ask questions—and how to interpret responses—so as to mimic practice in Chad's 2011 ECOSIT as closely as possible. The "Interview Guide" (and the "Back-page Worksheet") are integral parts of the Simple Poverty Scorecard tool for Chad.

# 2. Data and poverty lines

This section presents the data used to construct and validate the scorecard. It also documents Chad's definition of *poverty* as well as the 18 poverty lines to which scores are calibrated.

## 2.1   Data

Indicators and points for the scorecard are selected (*constructed*) based on data from a random three-fifths of the 9,259 households in the 2011 ECOSIT, Chad's most-recent national household consumption survey.

The data from the three-fifths of observations from the 2011 ECOSIT that is used to construct the scorecard is also used to associate (*calibrate*) scores to poverty likelihoods for all poverty lines.

Data from the other two-fifths of households from the 2011 ECOSIT is used to test (*validate*) scorecard accuracy for point-in-time estimates of poverty rates *out-of-sample*, that is, with data that is not used in construction/calibration. It is also used to test out-of-sample targeting accuracy.

The ECOSIT was fielded in June and July of 2011. Consumption is in units of XAF per person per day in prices in N'Djaména during field work.

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

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

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

Poverty rates are in terms of either households or people. If the program defines its *participants* as households, then the household level is relevant. The estimated household-level poverty rate is the weighted[4] average of poverty statuses (or estimated poverty likelihoods) across households with participants. This is

$\frac{1 \cdot 1 + 1 \cdot 0}{1 + 1} = \frac{1}{2} = 0.5 = 50$ percent. In the "$1 \cdot 1$" term in the numerator, the first "1" is the first household's weight, and the second "1" represents the first household's poverty status (poor) or its estimated poverty likelihood. In the "$1 \cdot 0$" term in the numerator, the "1" is the second household's weight, and the "0" represents the second household's

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

poverty status (non-poor) or its estimated poverty likelihood. The "$1 + 1$" in the denominator is the sum of the weights of the two households. Household-level weights are used because the unit of analysis is the household.

Alternatively, a person-level rate is relevant if a program defines all people in the households that benefit from its services as *participants*. In the example here, the person-level rate is the household-size-weighted[5] average of poverty statuses (or estimated poverty likelihoods) for households with participants, or

$$\frac{3 \cdot 1 + 4 \cdot 0}{3 + 4} = \frac{3}{7} = 0.43 = 43 \text{ percent.}$$ In the "$3 \cdot 1$" term in the numerator, the "3" is the first household's weight because it has three members, and the "1" represents its poverty status (poor) or its estimated poverty likelihood. In the "$4 \cdot 0$" term in the numerator, the "4" is the second household's weight because it has four members, and the zero represents its poverty status (non-poor) or its estimated poverty likelihood. The "$3 + 4$" in the denominator is the sum of the weights of the two households. A household's weight is its number of members because the unit of analysis is the household member.

As a final example, a program might count as *participants* only those household members who directly participate in the program. For the example here, this means that some—but not all—household members are counted. The person-level rate is now

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

the participant-weighted average[6] of the poverty statuses (or estimated poverty likelihoods) of households with participants, or $\frac{1 \cdot 1 + 2 \cdot 0}{1 + 2} = \frac{1}{3} = 0.33 = 33$ percent. The first "1" in the "$1 \cdot 1$" in the numerator is the first household's weight because it has one participant, and the second "1" represents its poverty status (poor) or its estimated poverty likelihood. In the "$2 \cdot 0$" term in the numerator, the "2" is the second household's weight because it has two participants, and the zero represents its poverty status (non-poor) or its estimated poverty likelihood. The "$1 + 2$" in the denominator is the sum of the weights of the two households. Each household's weight is its number of participants because the unit of analysis is the participant.[7]

To sum up, estimated poverty rates are weighted averages of households' poverty statuses (or estimated poverty likelihoods), where—assuming simple random sampling at the household level—the weights are the number of relevant units in the household. When reporting, organizations should make explicit the unit of analysis—whether households, household members, or participants—and explain why that unit is relevant.

Table 1 reports poverty lines and poverty rates for households and people in the 2011 ECOSIT for Chad as a whole and for each its 20 regions by urban/rural/all.

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[6] Given simple random sampling at the household level, a household's participant-level weight is the number of participants in that household.
[7] If all households with participants have (or are assumed to have) one participant each, then the participant-level poverty rate is the same as the household-level rate.

Household-level poverty rates are reported because—as shown above—household-level poverty likelihoods can be straightforwardly converted into poverty rates for other units of analysis and because sampling is almost always done at the level of households. This is also why the scorecard is constructed, calibrated, and validated with household weights. Person-level poverty rates are also included in Table 1 because these are the rates reported by the government of Chad. Furthermore, popular discussions and policy discourse usually proceed in terms of person-level rates, and the goal of pro-poor programs is to help people (not households) to improve their well-being.

## 2.3 Definition of *poverty*, and poverty lines

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

INSEED (2013, pp. 31, 32, and 63) describes Chad's measure of *consumption* as well as the method used to derive the national poverty line.

Because pro-poor programs in Chad may want to use different or various poverty lines, this paper calibrates scores from its single scorecard to poverty likelihoods for 18 lines:

- Food
- 100% of national
- 150% of national
- 200% of national
- $1.25/day 2005 PPP
- $2.00/day 2005 PPP
- $2.50/day 2005 PPP
- $5.00/day 2005 PPP
- $1.90/day 2011 PPP
- $3.20/day 2011 PPP
- $5.50/day 2011 PPP
- $21.70/day 2011 PPP
- Line marking the poorest half of people below 100% of the national line
- First-quintile (20th-percentile) line
- Second-quintile (40th-percentile) line
- Median (50th-percentile) line
- Third-quintile (60th-percentile) line
- Fourth-quintile (80th-percentile) line

### 2.3.1 National poverty line

Chad's national poverty line (usually called here "100% of the national line") is a minimum standard for food consumption, plus a minimum standard for non-food consumption. The approach follows the cost-of-basic-needs method of Ravallion (1998).

For a given region, Chad's food standard is the cost in that region of 2,400 Calories from a food basket of 33 items that cover about 84 percent of total food

consumption.[8] On average in Chad as a whole and in prices in N'Djaména in June and July of 2011, the food poverty line is XAF390 per person per day, giving a household-level poverty rate of 24.0 percent and a person-level poverty rate of 29.0 percent (Table 1).

100% of the national poverty line in a given region is the region's food line, plus a minimum standard of non-food consumption. A region's non-food standard is defined as the average non-food consumption in the 2011 ECOSIT among the 10 percent of households in the region whose total consumption is centered on the region's food standard. The national (food-plus-non-food) line in 2011 for the region is then the sum of the region's food and non-food standards. On average in Chad as a whole and in prices in N'Djaména in June and July of 2011, 100% of the national (food-plus-non-food) poverty line is XAF579 per person per day, giving a household-level poverty rate of 40.0 percent and a person-level poverty rate of 46.7 percent (Table 1).[9]

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

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[8] INSEED (2013) does not have more information about the derivation of the food line.
[9] This person-level rate matches INSEED (2013, p. 16), suggesting that this paper uses the same data and calculations as INSEED did.

### 2.3.2   2005 and 2011 PPP poverty lines

International 2005 and 2011 PPP lines are derived from:

- PPP exchange rates for Chad for "individual consumption expenditure by households":
    - 2005:[10] XAF327.57 per $1.00
    - 2011:[11] XAF251.30 per $1.00
- Consumer Price Index (CPI):[12]
    - Calendar-year 2005 average: 85.63
    - Calendar-year 2011 average: 96.30
    - Average June and July 2011 (ECOSIT field work): 95.50
- All-Chad person-weighted regional price deflator: 0.8935
- Regional price deflators:[13]
    - Barh El Gazel                1.018
    - Batha                        0.814
    - Borkou-Ennedi-Tibesti        1.109
    - Chari Baguirmi               0.890
    - Guéra                        0.861
    - Hadjer Lamis                 1.048
    - Kanem                        1.044
    - Lac                          0.857
    - Logone Occidental            0.875
    - Logone Oriental              0.892
    - Mandoul                      0.914
    - Mayo Kebbi Est               0.726
    - Mayo Kebbi Ouest             0.791
    - Moyen Chari                  0.799
    - N'Djaména                    1.000
    - Ouaddaï                      0.906
    - Salamat                      0.843
    - Sila                         0.857
    - Tandjilé                     0.875
    - Wadi-Fira                    0.857

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[10] World Bank, 2008.

[11] `iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=TCD_3&PPP0=251.296&PL0=1.90&Y0=2011&NumOfCountries=1`, retrieved 20 December 2017.

[12] The monthly CPI series has a base of 100 on average in calendar-year 2010. It comes from `data.imf.org/regular.aspx?key=61545861`, retrieved 10 November 2017.

[13] INSEED (2013, pp. 32–33).

### 2.3.2.1 $1.25/day 2005 PPP line

For a given region in Chad, the $1.25/day 2005 PPP line in prices in N'Djaména during field work for the 2011 ECOSIT is

$$\frac{\$1.25 \cdot 2005 \text{ PPP factor} \cdot \left(\dfrac{\text{CPI}_{\text{ECOSIT11}}}{\text{CPI}_{2005}}\right) \cdot \text{Regional deflator}}{\text{Average all - Chad deflator}}.$$

For the example of the region of Barh El Gazel, the $1.25/day 2005 PPP line is

$$\frac{\$1.25 \cdot \left(\dfrac{\text{XAF327.57}}{\$1}\right) \cdot \left(\dfrac{95.50}{85.63}\right) \cdot 1.018}{0.8935} = \text{XAF520}.$$

The all-Chad $1.25/day 2005 PPP line is the person-weighted average of the 20 regional lines. This is XAF454 per person per day, with a household-level poverty rate of 29.3 percent and a person-level poverty rate of 34.9 percent (Table 1).

The lines for $2.00/day, $2.50/day, and $5.00/day 2005 PPP are multiples of the $1.25/day 2005 PPP line.

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The World Bank's PovcalNet uses data from the 2011 ECOSIT to find a person-level poverty rate for the \$1.25/day 2005 PPP line of 36.5 percent.[14] The lower estimate here of 34.9 percent is to be preferred (Schreiner, 2014b) because PovcalNet does not report:

- Its \$1.25/day 2005 PPP line in XAF
- The time/place of its price units
- Whether/how it adjusts for regional differences in prices
- How it deflates 2005 PPP factors over time

Furthermore, PovcalNet's estimates are based on a 20-quantile approximation of the distribution of consumption as opposed to this paper's direct use of the household-level microdata.

### 2.3.2.2 $1.90/day 2011 PPP line

Given the parameters in the previous sub-section, the \$1.90/day 2011 PPP line for a given region is

$$\frac{\$1.90 \cdot 2011 \text{ PPP factor} \cdot \left( \dfrac{\text{CPI}_{\text{ECOSIT11}}}{\text{CPI}_{2011}} \right) \cdot \text{Region deflator}}{\text{Average all - Chad deflator}}$$

For the example of the region of Barh El Gazel, the \$1.90/day 2011 PPP line is

$$\frac{\$1.90 \cdot \left( \dfrac{\text{XAF251.30}}{\$1} \right) \cdot \left( \dfrac{95.50}{96.30} \right) \cdot 1.018}{0.8935} = \text{XAF539.}$$

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The all-Chad $1.90/day 2011 PPP line is the person-weighted average of the 20 regional lines. This is XAF471 per person per day, with a household-level poverty rate of 31.0 percent and a person-level poverty rate of 37.2 percent (Table 1).

PovcalNet[15] reports a similar $1.90/day 2011 PPP line for the 2011 ECOSIT (XAF477 versus 471) and a higher person-level poverty rate (38.4 percent versus 37.2). The reasons for the difference are not immediately clear because—as for the $1.25/day 2005 PPP line—PovcalNet does not report:

- The time/place of its price units
- Whether/how it adjusts for regional differences in prices
- How it deflates 2011 PPP factors over time
- Whether it uses the same data as INSEED (2013)

As noted above, the figures here for PPP poverty lines are to be preferred because their derivation is documented. In the case of Chad, it turns out that applying PovcalNet's line of XOF477.46 per person per day[16] without adjustment for regional prices in the line itself nor in consumption gives a person-level poverty rate that exactly matches that of PovcalNet. Of course, such within-country price adjustments make sense (when deflators exist); after all, the motivation for PPP lines in the first place is to adjust for differences in purchasing power across countries, and if that makes sense,

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[15] `iresearch.worldbank.org/PovcalNet/Detail.aspx?Format=Detail&C0=TCD_3&PPP0=251.296&PL0=1.90&Y0=2011&NumOfCountries=1`, retrieved 20 December 2017.

[16] PovcalNet's line is in error. It is $1.90, multipled by the 2011 PPP factor of XAF251.30, multiplied by the 2011 calendar-year average CPI (which is not the average CPI while the ECOSIT was in the field and so is incorrect), and divided by the 2011 calendar-year average CPI. This is $1.90 x 251.30 x 96.30 ÷ 96.30 = 477.47.

then it also makes sense to adjust for differences in purchasing power across regions within a country.

The 2011 PPP poverty lines for $3.20/day, $5.50/day, and $21.70/day are multiples of the $1.90/day line.[17]

### 2.3.3 USAID "very poor" line

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

- The line that marks the poorest half of people below 100% of the national line (XAF332, with a person-level poverty rate of 23.3 percent, Table 1)
- The $1.90/day 2011 PPP line (XAF471, with a person-level poverty rate of 37.2 percent)

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[17] Jolliffe and Prydz (2016) discuss the definition of the four 2011 PPP lines.

### 2.3.4 Percentile-based lines

The scorecard for Chad also supports percentile-based poverty lines.[18] This facilitates a number of types of analyses. For example, the second-quintile (40th-percentile) line might be used to help track Chad's progress toward the World Bank's (2013) goal of "shared prosperity/inclusive economic growth", defined as income growth among the bottom 40 percent of the world's people.

The four quintile lines, analyzed together, can also be used to look at the relationship of consumption with health outcomes (or anything else related with the distribution of consumption). The scorecard thus offers an alternative for health-equity analyses that typically have used a "wealth index" such as that supplied with the data from the Demographic and Health Surveys (Rutstein and Johnson, 2004) to compare some estimate of wealth with health outcomes.

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[18] Following the convention of the DHS wealth index, percentiles are defined in terms of people (not households) and at the level of Chad as a whole. For example, the all-Chad person-level poverty rate for the first-quintile (20th-percentile) poverty line is 20 percent (Table 1). The household-level poverty rate for that same line is not 20 percent but rather 16.4 percent.

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

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

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

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

# 3. Scorecard construction

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

- Household composition (such as the number of household members)
- Education (such as the school attendance of household members ages 7 to 18)
- Housing (such as the material of the roof)
- Ownership of durable assets (such as beds or motorcycles)
- Employment (such as the number of household members who work)
- Agriculture (such as the whether the household farms or keeps livestock)

Table 2 lists the candidate indicators, ordered by the entropy-based "uncertainty coefficient" (Goodman and Kruskal, 1979) that measures how well a given indicator predicts poverty status on its own.[19]

One possible application of the scorecard is to estimate the annual change in poverty rates. Thus, when selecting indicators—and holding other considerations constant—preference is given to more sensitive indicators. For example, the possession of a motorcycle 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 100% of the national poverty line and Logit regression on the construction sub-sample. Indicator selection is based on both judgment and statistics. The first step is to use Logit to build one scorecard for each candidate indicator. The power of each one-indicator scorecard to rank households by poverty status is measured as "c" (SAS Institute Inc., 2004).

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[19] The uncertainty coefficient is *not* used when selecting scorecard indicators. It is just a way to order the candidate indicators listed in Table 2.

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

A series of two-indicator scorecards are then built, each adding a second indicator to the one-indicator scorecard selected from the first round. The best two-indicator scorecard is then selected, again using judgment to balance statistical accuracy with the non-statistical criteria. These steps are repeated until the scorecard has 11 indicators that work well together.

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

This algorithm is similar to common $R^2$-based stepwise least-squares regression. It differs from naïve stepwise in that the selection of indicators considers both statistical[20] and non-statistical criteria. The use of non-statistical criteria can improve robustness through time and across non-nationally representative groups. It also helps ensure that indicators are straightforward, common-sense, inexpensive-to-collect, and acceptable to users.

The single scorecard here applies to all of Chad. Segmenting poverty-assessment tools by urban/rural does not improve targeting accuracy much. This is documented for nine countries in Sub-Saharan Africa (Brown, Ravaillon, and van de Walle, 2016)[21], Indonesia (World Bank, 2012), Bangladesh (Sharif, 2009), India and Mexico (Schreiner, 2006 and 2005a), Sri Lanka (Narayan and Yoshida, 2005), and Jamaica (Grosh and Baker, 1995). In general, segmentation may improve the accuracy of estimates of poverty rates (Schreiner, forthcoming; Diamond *et al.*, 2016; Tarozzi and Deaton, 2009), but it may also increase the risk of overfitting (Haslett, 2012).

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

# 4. Practical guidelines for scorecard use

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

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

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

- Only 11 indicators
- Only "multiple-choice" indicators
- Only simple points (non-negative integers, and no arithmetic beyond addition)

The scorecard (and its "Back-page Worksheet") is ready to be photocopied. A field worker using the Chad scorecard would:

- Record the interview identifier, interview date, country code ("TCD"), scorecard code ("001") and the sampling weight assigned to the household of the participant by the organization's survey design (if known)
- Record the names and identifiers of the participant (who is not necessarily the same as the respondent), of the field agent who is the participant's main point of contact with the organization (who is not necessarily the same as the enumerator), and of the organizational service point that is relevant for the participant (if there is such a service point)
- Complete the "Back-page Worksheet" with each household member's first name (or nickname), age, and school attendance, starting with the head
- Based on what has been recorded on the "Back-page Worksheet", record household size (that is, the number of household members) in the scorecard header next to "Number of household members:"
- Based on what has been recorded on the "Back-page Worksheet", mark the response to the first scorecard indicator ("How many household members are 18-years-old or younger?")
- Based on what has been recorded on the "Back-page Worksheet", mark the response to the second scorecard indicator ("Did all household members ages 7 to 18 go to school at the start of the current school year?")
- Read the third and fourth scorecard indicators to the respondent one-by-one. Circle each of the responses and their points, and write each point value in the far right-hand column
- For the fifth scorecard indicator ("What is the main construction material of the roof? (*Observe and record.*)"), try to determine the relevant response on your own by observing the roof. If the response if not clear from your own observation, then ask the respondent
- Read the rest of the scorecard indicators to the respondent one-by-one. Circle each of the responses and their points, and write each point value in the far right-hand column
- Add up the points to get a total score
- Implement targeting policy (if any) based on the score
- Deliver the paper scorecard to a central office for data entry and filing

Of course, field workers must be trained. The quality of outputs depends on the quality of inputs. If organizations or field workers gather their own data and believe that they have an incentive to exaggerate poverty rates (for example, if managers or funders reward them for higher poverty rates), then it is wise to do on-going quality control via data review and random audits (Matul and Kline, 2003).[22] IRIS Center (2007a) and Toohig (2008) are useful nuts-and-bolts guides for budgeting, training field workers and supervisors, logistics, sampling, interviewing, piloting, recording data, and controlling quality. Schreiner (2014a) explains how to compute estimates and analyze them.

In particular, while collecting scorecard indicators is relatively easier than alternative ways of assessing poverty, it is still absolutely difficult. Training and explicit definitions of the terms and concepts in the scorecard are essential, and field workers should scrupulously study and follow the "Interview Guide" found after the References

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

in this paper, as the "Interview Guide"—along with the "Back-page Worksheet"—are integral parts of the Simple Poverty Scorecard tool.[23]

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

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[23] The guidelines here are the only ones that organizations should give to field workers. All other issues of interpretation should be left to the judgment of field workers and respondents, as this seems to be what Chad's INSEED did in the 2011 ECOSIT.

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

choices about:

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

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

the exercise, the questions to be answered, and the budget. The main goals should be to

make sure that the sample is representative of a well-defined population and that the

use of the scorecard will inform issues that matter to the organization.

The non-specialists who apply the scorecard in the field with the households of

an organization's participants can be:

- Employees of the organization
- Third parties

There is only one correct, on-label way to do interviews: in-person, at the

sampled household's residence, with an enumerator trained to follow the "Interview

Guide". This is how Chad's INSEED did interviews in the 2011 ECOSIT, and this

provides the most-accurate and most-consistent data (and thus the best poverty-rate

estimates).

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

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

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

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

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

- Paper in the field, and then filed at a central office
- Paper in the field, and then keyed into a database or spreadsheet at a central office
- Portable electronic devices in the field, and then uploaded to a database[24]

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[24] The authors of this paper can support organizations that want to set up a system to collect data with portable electronic devices in the field or to capture data in a database at the office once paper forms come in from the field. Support is also available for automating the calculation of estimates as well as for reporting and analysis.

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

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

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

The frequency of application can be:

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

If a scorecard is applied more than once in order to estimate annual changes in poverty rates, then it can be applied:

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

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

# 5. Estimates of a household's poverty likelihood

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

To get absolute units, scores are converted to *poverty likelihoods*, that is, probabilities of being below a poverty line. This is done via easy-to-use look-up tables. For the example of 100% of the national line, scores of 28–29 have a poverty likelihood of 47.6 percent, and scores of 32–33 have a poverty likelihood of 37.7 percent (Table 3).

The poverty likelihood associated with a score varies by poverty line. For example, scores of 28–29 are associated with a poverty likelihood of 47.6 percent for 100% of the national line but of 37.4 percent for the $1.90/day 2011 PPP line.[25]

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[25] From Table 3 on, many tables have 18 versions, one for each of the 18 supported poverty lines. To keep them straight, they are grouped by line. Single tables pertaining to all lines appear with the first group of tables for 100% of the national line.

## 5.1 Calibrating scores with poverty likelihoods

A given score is associated ("calibrated") with a *poverty likelihood* that is defined as the share of households in the calibration sub-sample who have the score and who have per-capita consumption below a given poverty line.

For the example of 100% of the national line (Table 4), there are 8,784 (normalized) households in the calibration sub-sample with a score of 28–29. Of these, 4,184 (normalized) are below the poverty line. The estimated poverty likelihood associated with a score of 28–29 is then 47.6 percent, because 4,184 ÷ 8,784 = 47.6 percent.

To illustrate with 100% of the national line and a score of 32–33, there are 7,445 (normalized) households in the calibration sub-sample, of whom 2,806 (normalized) are below the line (Table 4). The poverty likelihood for this score range is then 2,806 ÷ 7,445 = 37.7 percent.

The same method is used to calibrate scores with estimated poverty likelihoods for all 18 poverty lines.[26]

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[26] To ensure that poverty likelihoods never increase as scores increase, likelihoods across pairs of adjacent scores may be iteratively averaged before grouping scores into ranges. This preserves unbiasedness while keeping users from balking when sampling variation in score ranges with few households would otherwise lead to higher scores being linked with higher poverty likelihoods.

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

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

## 5.2 Accuracy of estimates of households' poverty likelihoods

As long as the relationships between indicators and poverty do not change over time, and as long as the scorecard is applied to households who are representative of the same population as that from which the scorecard was originally constructed, then this calibration process produces unbiased estimates of poverty likelihoods. *Unbiased* means that in repeated samples from the same population, the average estimate matches the population's true value. Given the assumptions above, the scorecard also produces unbiased estimates of poverty rates at a point in time and unbiased estimates of the annual change in poverty rates between two points in time.[27]

Of course, the relationships between indicators and poverty do change to some unknown extent over time, and they also vary across sub-national groups in Chad's population. Thus, scorecard estimates will generally have errors when applied after July 2011 (the last month of field work for the 2011 ECOSIT) or when applied with sub-groups that are not nationally representative.

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[27] This is because these estimates of populations' poverty rates are linear functions of the unbiased estimates of households' poverty likelihoods.

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

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

For each score range and for $n = 16,384$, Table 5 shows the errors in the estimates of poverty likelihoods, that is, the average of differences between the estimates and observed values. It also shows confidence intervals for the errors.

For 100% of the national line and on average across bootstrap samples from the validation sample, the estimated poverty likelihood for scores of 28–29 (47.6 percent, Table 3) is too high by 9.1 percentage points. For scores of 26–27, the estimate is too low by 2.9 percentage points.[28]

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[28] These differences are not zero, in spite of the estimator's unbiasedness, because the scorecard comes from a single sample. The average difference by score would be zero if

The 90-percent confidence interval for the differences for scores of 28–29 is ±3.0 percentage points (Table 5). This means that in 900 of 1,000 bootstraps, the average difference between the estimate and the observed value for households in this score range is between +6.1 and +12.1 percentage points (because +9.1 − 3.0 = +6.1, and +9.1 + 3.0 = +12.1). In 950 of 1,000 bootstraps (95 percent), the difference is +9.1 ± 3.7 percentage points, and in 990 of 1,000 bootstraps (99 percent), the difference is +9.1 ± 4.9 percentage points.

Many of the absolute errors between estimated and observed poverty likelihoods in Table 5 for 100% of the national line are large. The differences are at least partly due to the fact that the validation sample is a single sample that—thanks to sampling variation—differs in distribution from the construction/calibration sub-samples and from Chad's population. For targeting, however, what matters is less the difference in all score ranges and more the differences in the score ranges just above and just below the targeting cut-off. This mitigates the effects of error and sampling variation on targeting (Friedman, 1997). Section 8 below looks at targeting accuracy in detail.

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

In addition, if estimates of populations' poverty rates are to be usefully accurate, then errors for individual households' poverty likelihoods must largely balance out. As discussed in the next section, this is generally the case for nationally representative samples in 2011 in Chad, although it will hold less well for samples from sub-national populations and in other time periods.

Another possible source of errors between estimates and observed values is overfitting. The scorecard here is unbiased, but it may still be *overfit* when applied after the end of the ECOSIT field work in July 2011. That is, the scorecard may fit the construction/calibration data from 2011 so closely that it captures not only some real patterns but also some random patterns that, due to sampling variation, show up only in the 2011 ECOSIT construction/calibration data but not in the overall population of Chad. Or the scorecard may be overfit in the sense that it is not robust when relationships between indicators and poverty change over time or when the scorecard is applied to samples that are not nationally representative.

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

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

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

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

To illustrate, suppose a program samples three households on 1 January 2019 and that they have scores of 20, 30, and 40, corresponding to estimated poverty likelihoods of 60.3, 47.6, and 28.8 percent (100% of the national line, Table 3). The population's estimated poverty rate is the households' average poverty likelihood of $(60.3 + 47.6 + 28.8) \div 3 = 45.6$ percent.[29]

Be careful; the population's estimated poverty rate is *not* the poverty likelihood associated with the average score. Here, the average score is 30, which corresponds to an estimated poverty likelihood of 47.6 percent. This differs from the 45.6 percent found as the average of the three individual poverty likelihoods associated with each of the three scores. Unlike poverty likelihoods, scores are ordinal symbols, like letters in the alphabet or colors in the spectrum. Because scores are not cardinal numbers, they cannot meaningfully be added up or averaged across households. Only three operations are valid for scores: conversion to poverty likelihoods, analysis of distributions (Schreiner, 2012a), or comparison—if desired—with a cut-off for segmentation. There are a few contexts in which the analysis of scores is appropriate, but, in general, the

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[29] This example assumes simple random sampling (or a census) and analysis at the level of households so that each household's household-level weight is one (1). The weights would differ by household if there were stratified sampling or—as discussed in Section 2—if the analysis were at the level of the person or at the level of the participant.

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

Scores from the scorecard are calibrated with data from the 2011 ECOSIT for all 18 poverty lines. The process of calibrating scores to poverty likelihoods and the approach to estimating poverty rates is exactly the same for all poverty lines. For users, the only difference in terms of what they do with one poverty line versus with another concerns the specific look-up table used to convert scores to poverty likelihoods.

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

For the scorecard applied to 1,000 bootstraps of $n = 16{,}384$ from the validation sample and 100% of the national line, the error (average difference between the estimate and observed value in the 2011 ECOSIT) for a poverty rate at a point in time is –0.1 percentage points (Table 7, summarizing Table 6 for all poverty lines). Across the 18 poverty lines in the validation sample, the maximum of the absolute values of the error is 2.0 percentage points, and the average of the absolute values of the average error is about 0.7 percentage points. At least part of these differences is due to sampling variation in the division of the 2011 ECOSIT into sub-samples.

When estimating poverty rates at a point in time for a given poverty line, the error reported in Table 7 should be subtracted from the average poverty likelihood to give a corrected estimate. For the example of the scorecard and 100% of the national line in the validation sample, the error is –0.1 percentage points, so the corrected estimate in the three-household example above is 45.6 – (–0.1) = 45.7 percent.

In terms of precision, the 90-percent confidence interval for a population's estimated poverty rate at a point in time with $n = 16,384$ is ±0.7 percentage points or smaller for all poverty lines (Table 7). This means that in 900 of 1,000 bootstraps of this size, the estimate (after correcting for the known average error) is within 0.7 percentage points of the observed value.

For example, suppose that the (uncorrected) average poverty likelihood in a sample of $n = 16,384$ with the scorecard and 100% of the national line is 45.6 percent. Then estimates in 90 percent of such samples would be expected to fall in the range of 45.6 – (–0.1) – 0.7 = 45.0 percent to 45.6 – (–0.1) + 0.7 = 46.4 percent, with the most likely observed value being the corrected estimate in the middle of this range, that is, 45.6 – (–0.1) = 45.7 percent. This is because the original (uncorrected) estimate is 45.6 percent, the average error is –0.1 percentage points, and the 90-percent confidence interval for 100% of the national line in the validation sample with this sample size is ±0.7 percentage points (Table 7).

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

How precise are the point-in-time estimates? Because these estimates are averages, they have (in "large" samples) a Normal distribution and can be characterized by their error (average difference vis-à-vis observed values), together with their standard error (precision).

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

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

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

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

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

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

$N$ is the population size, and

$n$ is the sample size.

For example, Chad's 2011 ECOSIT gives a direct-measure household-level poverty rate for 100% of the national line of $\hat{p} = 40.0$ percent (Table 1).[30] If this measure came from a sample of $n = 16{,}384$ households from a population $N$ of 1,784,037 (the number of households in Chad in 2011 according to the ECOSIT sampling weights), then the finite population correction $\phi$ is $\sqrt{\dfrac{1{,}784{,}037 - 16{,}384}{1{,}784{,}037 - 1}} = 0.9954$, which is close to $\phi = 1$. If the desired confidence level is 90-percent ($z = 1.64$), then the confidence interval $\pm c$ is

$$\pm z \cdot \sqrt{\frac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\frac{N - n}{N - 1}} = \pm 1.64 \cdot \sqrt{\frac{0.400 \cdot (1 - 0.400)}{16{,}384}} \cdot \sqrt{\frac{2{,}137{,}567 - 16{,}384}{2{,}137{,}567 - 1}} = \pm 0.625$$

percentage points. If $\phi$ were taken as 1, then the interval would be $\pm 0.628$ percentage points.

Unlike the 2011 ECOSIT, however, the scorecard does not measure poverty directly, so this formula is not applicable. To derive a formula for the scorecard, consider Table 6, which reports empirical confidence intervals $\pm c$ for the errors for the scorecard applied to 1,000 bootstrap samples of various sizes from the validation sample. For example, with $n = 16{,}384$ and 100% of the national line in the validation sample, the 90-percent confidence interval is $\pm 0.717$ percentage points.[31]

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[30] The analysis here ignores that poverty-rate estimates from the ECOSIT are themselves based on a sample and so have their own sampling distribution.
[31] Due to rounding, Table 6 displays 0.7, not 0.717.

Thus, the 90-percent confidence interval with $n = 16{,}384$ is $\pm 0.717$ percentage points for the scorecard and $\pm 0.625$ percentage points for direct measurement. The ratio of the two intervals is $0.717 \div 0.625 = 1.15$.

Now consider the same exercise, but with $n = 8{,}192$. The confidence interval under direct measurement and 100% of the national line in the validation sample is

$$\pm\, 1.64 \cdot \sqrt{\frac{0.400 \cdot (1 - 0.400)}{8{,}192}} \cdot \sqrt{\frac{1{,}784{,}037 - 8{,}192}{1{,}784{,}037 - 1}} = \pm 0.886 \text{ percentage points. The}$$

empirical confidence interval with the scorecard (Table 6) is $\pm 1.003$ percentage points. Thus for $n = 8{,}192$, the ratio of the two intervals is $1.003 \div 0.886 = 1.13$.

This ratio of 1.13 for $n = 8{,}192$ is close to the ratio of 1.15 for $n = 16{,}384$. Across all sample sizes of 256 or more in Table 6, these ratios are generally close to each other, and the average of these ratios in the validation sample turns out to be 1.14, implying that confidence intervals for indirect estimates of poverty rates via Chad's scorecard and 100% of the national line are—for a given sample size—about 14-percent wider than confidence intervals for direct estimates via the 2011 ECOSIT. This 1.14 appears in Table 7 as the "$\alpha$ factor for precision" because if $\alpha = 1.14$, then the formula for approximate confidence intervals $c$ for the scorecard is $\pm c = \pm z \cdot \alpha \cdot \sigma$. That is, the formula for the approximate standard error $\sigma$ for point-in-time estimates of poverty rates via the scorecard is $\alpha \cdot \sqrt{\dfrac{\hat{p} \cdot (1 - \hat{p})}{n}} \cdot \sqrt{\dfrac{N - n}{N - 1}}$.

In general, $\alpha$ can be more or less than 1.00. When $\alpha$ is more than 1.00, it means that the scorecard is less precise than direct measurement. It turns out that $\alpha$ is more than 1.00 for 14 of the 18 poverty lines in Table 7, and its highest value is 1.18.

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

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

To illustrate how to use this, suppose the population $N$ is 1,784,037 (the number of households in Chad in 2011), suppose $c = 0.05833$, $z = 1.64$ (90-percent confidence), and the relevant poverty line is 100% of the national line so that the most sensible expected poverty rate $\widetilde{p}$ is Chad's overall poverty rate for that line in 2011 (40.0 percent at the household level, Table 1). The $\alpha$ factor is 1.14 (Table 7). Then the sample-size formula gives

$$n = 1{,}784{,}037 \cdot \left( \frac{1.64^2 \cdot 1.14^2 \cdot 0.400 \cdot (1 - 0.400)}{1.64^2 \cdot 1.14^2 \cdot 0.400 \cdot (1 - 0.400) + 0.05833^2 \cdot (1{,}784{,}037 - 1)} \right) = 247, \text{ which}$$

is not far from the sample size of 256 observed for these parameters in Table 6 for 100%

of the national line. Taking the finite population correction factor $\phi$ as one (1) gives the

same result, as $n = \left(\dfrac{1.14 \cdot 1.64}{0.05833}\right)^2 \cdot 0.400 \cdot (1 - 0.400) = 247.$[32]

Of course, the $\alpha$ factors in Table 7 are specific to Chad, its poverty lines, its poverty rates, and this scorecard. The derivation of the formulas for standard errors using the $\alpha$ factors, however, is valid for any poverty-assessment tool following the approach in this paper.

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[32] Although USAID has not specified confidence levels nor intervals, IRIS Center (2007a and 2007b) says that a sample size of $n = 300$ is sufficient for USAID reporting. USAID's microenterprise partners in Chad should report using the \$1.90/day 2011 PPP line. Given the $\alpha$ factor of 1.11 for this line (Table 7), an expected before-measurement household-level poverty rate of 31.0 percent (the all-Chad rate for this line in 2011, Table 1), and a confidence level of 90 percent ($z = 1.64$), then $n = 300$ implies a confidence interval of $\pm\, 1.64 \cdot 1.11 \cdot \sqrt{\dfrac{0.310 \cdot (1 - 0.310)}{300}} = \pm 4.9$ percentage points.

In practice after the end of field work for the ECOSIT in July 2011, a program would select a poverty line (say, 100% of the national line), note its participants' population size (for example, $N = 10{,}000$ participants), select a desired confidence level (say, 90 percent, or $z = 1.64$), select a desired confidence interval (say, $\pm 2.0$ percentage points, or $c = \pm 0.02$), make an assumption about $\widetilde{p}$ (perhaps based on a previous estimate such as the household-level poverty rate for 100% of the national line for Chad of 40.0 percent in the 2011 ECOSIT in Table 1), look up α (here, 1.14 in Table 7), assume that the scorecard will still work in the future and for sub-groups that are not nationally representative,[33] and then compute the required sample size. In this illustration, $n = 10{,}000 \cdot \left( \dfrac{1.64^2 \cdot 1.14^2 \cdot 0.400 \cdot (1 - 0.400)}{1.64^2 \cdot 1.14^2 \cdot 0.400 \cdot (1 - 0.400) + 0.02^2 \cdot (10{,}000 - 1)} \right) = 1{,}734.$

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[33] This paper reports accuracy for the scorecard applied to its validation sample, but it does not test accuracy for later years nor for sub-populations that are not nationally representative. Performance after July 2011 will resemble that in the 2011 ECOSIT with deterioration over time and across non-nationally representative sub-groups to the extent that the relationships between indicators and poverty status change.

# 7. Estimates of changes in poverty rates over time

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

With only data from the 2011 ECOSIT, this paper cannot test estimates of the annual change in poverty rates for Chad, and it can only suggest approximate formulas for standard errors. Nonetheless, the relevant concepts are presented here because, in practice, pro-poor programs in Chad can apply the scorecard to collect their own data and estimate change over time.

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

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

know—or explicit assumptions about—what would have happened in the absence of participation. And that must come from beyond the scorecard.

## 7.2   Estimating annual changes in poverty rates

Consider the illustration begun in the previous section. On 1 January 2019, an organization samples three households who score 20, 30, and 40 and so have poverty likelihoods of 60.3, 47.6, and 28.8 percent (100% of the national line, Table 3). Given the known average error for this line in the validation sample of –0.1 percentage points (Table 7), the corrected baseline estimated poverty rate is the households' average poverty likelihood of [(60.3 + 47.6 + 28.8) ÷ 3] – (–0.1) = 45.7 percent.

After baseline, two sampling approaches are possible for the follow-up round:
- Score a new, independent sample from the same population
- Score the same sample that was scored at baseline

By way of illustration, suppose that three years later on 1 January 2022, the organization samples three additional households who are in the same population as the three original households and finds that their scores are 25, 35, and 45 (poverty likelihoods of 47.6, 29.9, and 17.8 percent, 100% of the national line, Table 3). Adjusting for the known average error, the average poverty likelihood at follow-up is [(47.6 + 29.9 + 17.8) ÷ 3] – (–0.1) = 31.9 percent. The reduction in the poverty rate is

then 45.7 − 31.9 = 13.8 percentage points.[34] Supposing that exactly three years passed between the average baseline interview and the average follow-up interview, the estimated annual decrease in the poverty rate is 13.8 ÷ 3 = 4.6 percentage points per year. That is, about one in 22 participants in this hypothetical example cross the poverty line each year.[35] Among those who start below the line, about one in 10 (4.6 ÷ 45.7 = 10.1 percent) on net end up above the line each year.[36]

Alternatively, suppose that the same three original households who were scored at baseline are scored again on 1 January 2022. Given scores of 25, 35, and 45, their follow-up poverty likelihoods are 47.6, 29.9, and 17.8 percent. The average across households of the difference in each given household's baseline poverty likelihood and its follow-up poverty likelihood is [(60.3 − 47.6) + (47.6 − 29.9) + (28.8 − 17.8)] ÷ 3 = 13.8 percentage points.[37] Assuming in this example that there are exactly three years between each household's interviews, the estimated annual decrease in the poverty rate is 13.8 ÷ 3 = 4.6 percentage points per year.

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[34] Of course, such a large reduction in poverty in three years is unlikely, but this is just an example to show how the scorecard can be used to estimate change.
[35] This is a net figure; some start above the line and end below it, and vice versa.
[36] The scorecard does not reveal the reasons for this change.
[37] In this approach, the error for this line in Table 7 should *not* be subtracted off.

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

## 7.3   Precision for estimated change in two independent samples

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

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

Here, $z$, $c$, $\hat{p}$ and $N$ are defined as above, $n$ is the sample size at both baseline and follow-up,[38] and $\alpha$ is the average (across a range of bootstrapped sample sizes) of the ratio of the observed confidence interval from a scorecard and the theoretical confidence interval under direct measurement.

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[38] This means that—for a given level of precision—estimating the change in a poverty rate between two points in time requires four times as many interviews (not twice as many) as does estimating a poverty rate at a point in time.

As before, the formula for standard errors can be rearranged to give a formula for sample sizes before indirect estimation via a poverty-assessment tool, where $\widetilde{p}$ is based on previous estimates 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 $\phi$ can be taken as one, then the

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

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

To illustrate the use of this formula to determine sample size for estimating changes in poverty rates across two independent samples, suppose the desired confidence level is 90 percent ($z = 1.64$), the desired confidence interval is $\pm 2$ percentage points ($\pm c = \pm 0.02$), the poverty line is 100% of the national line, $\alpha = 1.08$, $\widetilde{p} = 0.400$ (the household-level poverty rate in 2011 for 100% of the national line in Table 1), and the population $N$ is large enough relative to the expected sample size $n$ that the finite population correction $\phi$ can be taken as one (1). Then the baseline

sample size is $n = 2 \cdot \left( \dfrac{1.08 \cdot 1.64}{0.02} \right)^2 \cdot 0.400 \cdot (1 - 0.400) \cdot 1 = 3{,}765$, and the follow-up

sample size is also 3,765.

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

Analogous to previous derivations, the general formula relating the confidence

interval $\pm c$ to the standard error $\sigma$ when using a scorecard to estimate change for a

single sample of households, all of whom are scored at two points in time, is:[39]

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

where $z$, $c$, $\alpha$, $N$, and $n$ are defined as usual, $\hat{p}_{12}$ is the share of all sampled households

that move from below the poverty line to above it, and $\hat{p}_{21}$ is the share of all sampled

households that move from above the line to below it. With the available data for

Chad, it is not possible to estimate values of $\alpha$ here.

The formula for confidence intervals can be re-arranged to give a formula for

sample size before estimation. This requires an estimate (based on information available

before estimation) of the expected shares of all households who cross the poverty line

$\tilde{p}_{12}$ and $\tilde{p}_{21}$. Before estimation, an agnostic assumption is that the change in the

poverty rate will be zero, which implies $\tilde{p}_{12} = \tilde{p}_{21} = \tilde{p}_*$, giving:

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

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

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

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

Given this, a sample-size formula for a sample of households to whom the scorecard is applied twice (once after July 2011 and then again later) is

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

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

To illustrate the use of this formula, suppose the desired confidence level is 90 percent ($z = 1.64$), the desired confidence interval is $\pm 2.0$ percentage points ($\pm c = \pm 0.02$), the poverty line is 100% of the national line, the sample will first be scored in 2019 and then again in 2022 ($y = 3$), and the population $N$ is so large relative to the expected sample size $n$ that the finite population correction $\phi$ can be taken as one (1). The pre-baseline household-level poverty rate $p_{2019}$ is taken as 40.0 percent (Table 1), and $\alpha$ is assumed to be 1.30. Then the baseline sample size is

$$n = 2 \cdot \left(\frac{1.30 \cdot 1.64}{0.02}\right)^2 \cdot \left[-0.02 + 0.016 \cdot 3 + 0.47 \cdot 0.400 \cdot \left(1 - 0.400\right)\right] \cdot 1 \ = 3{,}200.$$ The same group of 3,200 households is scored at follow-up as well.

# 8. Targeting

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

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

Households who score at or below a given cut-off should be labeled as *targeted*,[40] not as *poor*. After all, unless all targeted households have poverty likelihoods of 100 percent, some of them are non-poor (their consumption is above a given poverty line). In the context of the scorecard, the terms *poor* and *non-poor* have specific definitions. Using these same terms for targeting status is incorrect and misleading.

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[40] Others labels are acceptable as long as they describe the segment and do not confuse targeting status (having a score below a program-selected cut-off) with poverty status (having consumption below an externally-defined poverty line). Examples of acceptable labels include: *Groups A, B, and C*; *Households with scores of 29 or less, 30 to 69, or 70 or more*; and *Households who qualify for reduced fees, or who do not qualify.*

Targeting is successful when households truly below a poverty line are targeted (*inclusion*) and when households truly above a poverty line are not targeted (*exclusion*). Of course, no poverty-assessment tool is perfect, and targeting is unsuccessful when households truly below a poverty line are not targeted (*undercoverage*) or when households truly above a poverty line are targeted (*leakage*).

Table 8 depicts these four possible targeting outcomes. Targeting accuracy varies by the cut-off score. A higher cut-off has better inclusion and better undercoverage (but worse exclusion and worse leakage), while a lower cut-off has better exclusion and better leakage (but worse inclusion and worse undercoverage).

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

Table 9 shows the distribution of households by targeting outcome for Chad. For an example cut-off of 29 or less, outcomes for 100% of the national line in the validation sample are:

- Inclusion:        26.6 percent are below the line and correctly targeted
- Undercoverage:  13.7 percent are below the line and mistakenly not targeted
- Leakage:          16.2 percent are above the line and mistakenly targeted
- Exclusion:        43.6 percent are above the line and correctly not targeted

Increasing the cut-off to 31 or less improves inclusion and undercoverage but worsens leakage and exclusion:

- Inclusion:      28.6 percent are below the line and correctly targeted
- Undercoverage: 11.7 percent are below the line and mistakenly not targeted
- Leakage:       20.2 percent are above the line and mistakenly targeted
- Exclusion:     39.6 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 Table 9 for a given poverty line
- Select the cut-off with the highest total net benefit

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

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

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

Table 9 shows the hit rate for all cut-offs for the scorecard. For the example of 100% of the national line in the validation sample, total net benefit under the hit rate is 70.2 for a cut-off of 29 or less, with about two in three households in Chad correctly classified.

The hit rate weighs successful inclusion of households below the line the same as successful exclusion of households above the line. If a program values inclusion more (say, twice as much) than exclusion, then it can reflect this by setting the benefit for inclusion to 2 and the benefit for exclusion to 1. Then the chosen cut-off will maximize (2 x Households correctly included) + (1 x Households correctly excluded).[41]

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[41] Table 9 also reports BPAC, the Balanced Poverty Accuracy Criterion adopted by USAID for certifying poverty-assessment tools for use by its microenterprise partners. IRIS Center (2005) made BPAC to consider accuracy in terms of the errors in estimated poverty rates and in terms of targeting inclusion. BPAC = (Inclusion – |Undercoverage – Leakage|) x [100 ÷ (Inclusion + Undercoverage)]. Schreiner (2014b) explains why BPAC does not add information over-and-above that provided by the other, more-standard measures used here.

As an alternative to assigning benefits and costs to targeting outcomes and then choosing a cut-off to maximize total net benefits, a program could set a cut-off to achieve a desired poverty rate among targeted households. The third column of Table 10 ("% targeted HHs who are poor") shows, for the scorecard applied to the validation sample, the estimated poverty rate among households who score at or below a given cut-off. For the example of 100% of the national line, targeting households in the validation sample who score 29 or less would target 42.7 percent of all households (second column) and would be associated with an estimated poverty rate among those targeted of 62.2 percent (third column).

Table 10 also reports two other measures of targeting accuracy. The first is a version of coverage ("% poor HHs who are targeted"). For the example of 100% of the national line with the validation sample and a cut-off of 29 or less, an estimated 66.0 percent of all poor households are covered.

The final targeting measure in Table 10 is the number of successfully targeted poor households for each non-poor household mistakenly targeted (right-most column). For 100% of the national line with the validation sample and a cut-off of 29 or less, it is estimated that covering about 1.6 poor households means leaking to 1 non-poor household.

# 9. Context of poverty-assessment tools in Chad

This section discusses an existing poverty-assessment tool for Chad in terms of its goals, methods, definition of *poverty*, data, indicators, errors, precision, and cost. In general, the advantages of the scorecard are its:

- Using data from the most-recent nationally representative consumption survey
- Having fewer and lower-cost indicators
- Using a consumption-based definition of *poverty* that is widely understood and that is used by the government of Chad
- Reporting errors and precision for estimates of poverty rates at a point in time from out-of-sample tests, including formulas for standard errors
- Reporting targeting accuracy from out-of-sample tests, and having targeting accuracy that is likely similar to that of alternative approaches
- Being feasible for pro-poor programs in Chad, due to its low cost and transparency

Gwatkin *et al.* (2007) construct a poverty-assessment tool for Chad with an approach that they use in 56 countries with Demographic and Health Surveys (Rutstein and Johnson, 2004). They use Principal Component Analysis to make an asset index from low-cost indicators available for the 5,369 households in Chad's 2004 DHS.[42] The PCA index is like the scorecard here except that—because the DHS does not collect data on consumption—the index uses a different (asset-based) definition of *poverty*, its accuracy vis-à-vis consumption-based poverty is unknown, and it can only be assumed to be a proxy for long-term wealth/economic status.[43] Well-known examples of the PCA

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[42] DHS data for Chad since 1996/7 include each household's asset-index value (`dhsprogram.com/topics/wealth-index/Wealth-Index-Construction.cfm`, retrieved 20 December 2017).

[43] Nevertheless, the indicators are similar and the "flat maximum" is important, so carefully built PCA indexes and consumption-based poverty-assessment tools rank

asset-index approach include Stifel and Christiaensen (2007), Zeller *et al.* (2006), Sahn

and Stifel (2003 and 2000), Henry *et al.* (2003), and Filmer and Pritchett (2001).

The 16 indicators in Gwatkin *et al.* are similar to those in the scorecard in terms

of their ease-of-collection and verifiability:

- Characteristics of the residence:
  — Type of floor
  — Type of walls
  — Type of roof
  — Source of energy for lighting
  — Source of drinking water
  — Toilet arrangement
- Ownership of consumer durables:
  — Radios
  — Televisions
  — Refrigerators
  — Telephones
  — Bicycles
  — Motorcycles
  — Cars or trucks
  — Boats
  — Carts
- Ownership of camels, horses, or donkeys

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households much the same and may pick up the same underlying construct (perhaps "permanent income", see Bollen, Glanville, and Stecklov, 2007). Comparisons of rankings of households by PCA indexes, directly-measured consumption, and consumption-based poverty-assessment tools include Filmer and Scott (2012), Howe *et al.* (2009), Lindelow (2006), Sahn and Stifel (2003), Wagstaff and Watanabe (2003), and Montgomery *et al.* (2000).

Gwatkin *et al.* suggest three possible uses for their index:

- Segmenting households by the quintile of their index value to see how health varies with socio-economic status
- Monitoring (via exit surveys) how well local health-service posts reach the poor
- Estimating local coverage of health services via small-scale surveys

The first goal is segmentation, and the last two goals deal with performance monitoring, so the asset index would be used much like the scorecard. In particular, the scorecard's support for relative (percentile-based) poverty lines allows the segmentation of households by quintile of consumption to see how health (or other things) vary with consumption. Of course, it is also possible to segment households by quintiles based on scores from the scorecard to see how health (or other things) vary with wealth.

The Gwatkin *et al.* index is more costly and difficult-to-use than the scorecard. The index has 16 indicators (versus 11), and while the scorecard requires adding up 11 integers (some of them usually zeroes), Gwatkin *et al.*'s index requires adding up 47 numbers, each with five decimal places and about half with negative signs.

A strength of asset indexes is that, because they do not require consumption data, they can be constructed with data from a wide array of "light" surveys such as censuses, Demographic and Health Surveys, Welfare Monitoring Surveys, and Core Welfare Indicator Questionnaires. In comparison, the scorecard is linked directly to a consumption-based poverty line. Thus, while both approaches can rank households, only the scorecard can estimate consumption-based poverty status.

In essence, Gwatkin *et al.*—like all asset indexes—define *poverty* in terms of the indicators and points in the index itself. Thus, the index is not a proxy standing in for

something else (such as consumption). Rather, it is a direct measure of an asset-based (non-consumption-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 a consumption-based definition. It also means that results are not comparable across different asset indexes because the definition of *poverty* varies with a given index's indicators and points. And an asset index can estimate only the direction of change in its definition of *poverty* over time, not the magnitude of change.

In general, the asset-based approach defines people as *poor* if their assets (physical, human, financial, or social) fall below a threshold. Arguments for an asset-based view of development and well-being include Carter and Barrett (2006), Schreiner and Sherraden (2006), Sahn and Stifel (2003), and Sherraden (1991). The main advantages of the asset-based view are that:

- Asset ownership is easier to measure accurately than consumption
- Access to resources in the long term—and thus capacity to produce income and to consume—depends on the control of assets
- Assets get at specific capabilities more directly, the difference between, say, "Can you afford adequate sanitation on your income?" versus "Do you have a flush toilet?"

While the asset view and the income/consumption view are distinct, they are also tightly linked. After all, income and consumption are flows of resources received/consumed from the use of stocks of assets. Both views are low-dimensional simplifications—due to practical limits on definitions and measurement—of a higher-dimensional and more-complete conception of the production of human well-being.

# 10. Conclusion

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

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

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

The scorecard is constructed with data from about three-fifths of the observations on households in Chad's 2011 ECOSIT. Those households' scores are then calibrated to poverty likelihoods for 18 poverty lines. The scorecard's accuracy (errors and standard errors) for targeting and for estimating poverty rates at a point in time is tested out-of-sample on data that is not used in scorecard construction.

When the scorecard is applied to the 18 poverty lines in the validation sample, the maximum absolute value of the average error for point-in-time estimates of poverty rates is 2.0 percentage points, and the average of the absolute values of the average error across the 18 lines is about 0.7 percentage points. Corrected estimates may be had by subtracting the known error for a given poverty line from original, uncorrected estimates.

For $n = 16,384$ and 90-percent confidence, the precision of point-in-time estimates of poverty rates is $\pm 0.7$ percentage points or smaller. With $n = 1,024$, the 90-percent confidence intervals are $\pm 2.8$ percentage points or smaller.

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

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

For this reason, the scorecard uses 11 indicators that are straightforward, low-cost, and verifiable. Points are all zeros or positive integers, and scores range from 0 (most likely below a poverty line) to 100 (least likely below a poverty line). Scores are converted to poverty likelihoods via look-up tables, and targeting cut-offs are likewise straightforward to apply. The design attempts to facilitate voluntary adoption by helping program managers to understand and to trust the scorecard and by allowing non-specialists to add up scores quickly in the field.

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

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# Interview Guide

The excerpts quoted here are taken from:

l'Institut National de la Statistique, des Études Économiques et Démographiques.
(2011) « ECOSIT3 : Manuel de l'Enquêteur » [the *Manual*].

## Basic interview instructions

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

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

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

Do not directly ask the second scorecard indicator ("Did all household members ages 7 to 18 go to school at the start of the current school year?"). Instead, record the appropriate answer based on the information that you already collected on the "Back-page Worksheet".

Ask all of the other scorecard questions directly of the respondent, except for the fifth question ("What is the main construction material of the roof? (*Observe and record.*)"). For this question, try to determine the relevant response on your own by observing the roof. If the response if not clear from your own observation, then ask the respondent.

## General interviewing advice

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

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

Read each question word-for-word, in the order presented in the scorecard.

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

| 4. In the past 12 months, did your household keep any livestock as sedentary or nomadic herders? | A. No | 0 | |
|---|---|---|---|
| | B. Yes (sedentary) | 3 | **3** |
| | C. Yes (nomadic) | 8 | |

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

When an issue comes up that is not addressed here, its resolution should be left to the unaided judgment of the enumerator, as that apparently was the practice of Chad's INSEED in the 2011 ECOSIT. That is, an organization using the Simple Poverty Scorecard poverty-assessment tool should not promulgate any definitions or rules (other than those in this "Guide") to be used by all its field agents. Anything not explicitly addressed in this "Guide" is to be left to the unaided judgment of each individual enumerator.

Do not read the response options to the respondent. Simply read the question, and then stop; wait for a response. If the respondent asks for clarification or otherwise hesitates or seems confused, then read the question again or provide additional assistance based on this "Guide" or as you, the enumerator, deem appropriate.

In general, you should accept the responses given by the respondent. Nevertheless, if the respondent says something—or if you see or sense something—that suggests that the response may not be accurate, that the respondent is uncertain, or that the respondent could benefit from assistance in figuring out how to respond, then you should read the question again and provide whatever help you deem appropriate based on this "Guide".
　　　While most indicators in the scorecard are verifiable, you do not—in general—need to verify responses. You should verify a response only if something suggests to you that the response may be inaccurate and thus that verification might improve data accuracy. For example, you might choose to verify if the respondent hesitates, seems nervous, or otherwise gives signals that he/she may be lying or be confused. Likewise, verification is probably appropriate if a child in the household or a neighbor mentions something that does not square with the respondent's answer. Verification is also a good idea if you can see something yourself—such as a consumer durable that the respondent avers not to possess, or a child eating in the room who has not been counted as a member of the household—that suggests that a response may be inaccurate.

In general, the application of the scorecard should mimic as closely as possible the application of the 2011 ECOSIT by Chad's INSEED. For example, interviews should take place in respondents' homesteads because the 2011 ECOSIT took place in respondents' homesteads.

<u>Translation</u>:
As of this writing, the scorecard itself, the "Back-page Worksheet", and this "Guide" are available only in French and English. There are not yet professional translations to other major languages spoken in Chad such as Chadian Arabic and Standard Arabic. Users should check `SimplePovertyScorecard.com` to see what translations have been completed since this writing.

If there is not yet a professional translation to a given language, then users should contact the author of this document for help in creating such a translation. In particular, the translation of scorecard indicators should follow as closely as possible the meaning of the original French wording in the 2011 ECOSIT questionnaire. Likewise, the *Enumerator Manual* for the 2011 ECOSIT is written in French, so this "Guide" must be translated from the *Manual*'s original French, not from this English "Guide" here.

## Who should be the respondent?
Remember that the respondent does not need to be the same person as the household member who is a participant with your organization (although the respondent can be that person).

According to page 31 of the *Manual*, "To improve data quality, carefully select the respondent(s), [choosing those who know the most about the topic]."

According to page 42 of the *Manual*, "[The scorecard] is addressed to the head of the household and/or to his/her spouse."

# Who is the head of the household?
Note that the head of the household may or may not be the same person who participates with your organization (although the head of the household can be that person).

## Advice on your work as an enumerator

According to pp. 19–21 of the *Manual*, "If at all possible, keep a regular schedule. Show up on-time. Only the responding household—not you the enumerator—can change an appointment. When it comes to scheduling, the household is the boss. That said, do your best to convince the household to plan to be available at home at the scheduled time. Emphasize the importance of keeping appointments so that the household takes seriously being available at the agreed-on time. . . .

"No matter what happens, always be professional, polite, and friendly.

"Do not eat or drink anything in front of the household, and do not accept any gifts (this will affect their consumption expenditures). If the household insists (as may be the custom of hospitality for visitors), then explain the reasons why you are not allowed to accept.

"Always carry your identity card (CNI), and always wear your badge that identifies you as [an employee of your organization].

"Check the survey for completeness after visiting the household."

According to pp. 21–23 of the *Manual*, "The survey's success depends on you the enumerator, and especially on how you treat the respondents. Follow these rules:

- "Your appearance will affect the responding household's first impression of you, so how you dress could affect the success or failure of the interview. Therefore, dress professionally and simply
- "Do your best to avoid doing interviews at inconvenient times such as during meals, working hours, or after bed time. Try to set up your appointments so that respondents are available to answer your questions
- "Introduce yourself by stating your name and showing your identification badge. Explain the purpose of the survey and why you want to ask questions of the household
- "The [scorecard] is in French. Depending on the respondent's language(s), however, you may have to do the interview in some other language (such as Arabic, Sara, Ngambaye, Moundang, Gorane, and so on). If no one on your team can speak the household's language, then you must use an interpreter. Be careful to preserve the original meaning of the questions when they are translated
- "Explain to the household that all answers will be kept strictly confidential. If the household members are reluctant to participate, then do your best to change their minds
- "If a respondent starts to complain about the government or other things, then let him/her talk, but do not allow yourself to be drawn into a discussion on such topics
- "To do a good job, always be professional. Stay calm, friendly, and polite. Stick to the questionnaire, being aware of both the respondent and of the goals of your work

- "Read the questions exactly as they are written. Even small changes to the wording can change a question's meaning
- "Ask the questions in the order given in [the scorecard]
- "Ask all the questions, even if the respondent has already said something that seems to supply the response to a question before you have asked it. Explain that you must ask each question individually, or say, "Just to be sure . . ." or "Just to refresh my memory . . ." before you ask the question
- "Put respondents at ease, but do not to suggest responses to questions. For example, do not 'help' the respondent to recall his/her expenditures
- "Give the respondent adequate time to respond
- "Do not leave any questions unanswered. [If the respondent refuses to answer, do not leave the space blank; instead, write "Refused", and go to the next question]
- "Some questions include 'Other' among the response options. Once you are certain that the respondent cannot give you an appropriate response [or once you are certain that the correct response does not match well with any of the pre-coded responses], then you can circle the response corresponding to 'Other'. For questions that do not offer 'Other' among the response options, do your best [to determine the pre-coded response that best matches the household's reality]
- "Before you take your leave of the responding household, review the questionnaire to make sure that it is filled out correctly and completely
- "When you are finished, thank the respondent for his/her cooperation . . . Do not hang around too long chatting, but also do not try to rush out. Do not act like you are in a hurry"

According to pp. 23–24 of the *Manual*, "As an enumerator, you must observe the following restrictions:

- "Do not reveal a household's responses to third parties who have no business knowing; keep the data strictly confidential
- "Do not share [the scorecard] with anyone beyond your survey team; do not make comments to anyone about [the scorecard or about anyone's responses]
- "Do not ask about anything other than what is in [the scorecard]
- "Do not take anyone with you on an interview who has no business being there. Do not assign your tasks as an enumerator to someone else
- "Do not ask the responding household for food, drink, or money
- "Do not discuss religion, politics, or any other [non-scorecard] topic as you do your survey work, and do not do anything that would express a political view (for example, by what you wear or by your comments)
- "Do not make up responses without having actually asked the questions of the responding household"

# Guidelines for each indicator in the scorecard

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

According to p. 6 of the *Manual*, a *household* is "a person or a group of people—regardless of blood or marital relationships—who live in the same residence, who eat together, and who together to provide for their food and other basic needs. The members of the household acknowledge the authority of one household member (the *head*), who may be a man or a woman."

According to page 25 of the *Manual*, a *household* is "a group of people—regardless of blood or martial relationships—who live under the same roof (or in the same compound), who acknowledge the authority of one member of the household (the *head*), and who share resources and expenses, whether in full or in part."

This implies that a person's being counted as a *member of the household* depends on his/her fulfilling all of the following four criteria:

1.  Lives with the other household members in the same residence or compound
2.  Usually eats with the other household members. In urban areas, the key is the evening meal
3.  Shares income and expenses with other household members. If someone has his/her own income, then being a member of the household implies sharing at least part of that income for the benefit of other members
4.  Submits to the headship of one household member

Page 39 of the *Manual* provides additional guidance for some cases related to whether a person qualifies as a member of a household:

- "A person who lives alone by him/herself is a one-person household in which he/she is the head [and the only member]
- "A renter who lives in the same compound with his/her landlord but who lives independently is not a member of the landlord's household. This is the case even if the renter is sometimes invited to eat with the landlord's household and even if the renter pays to eat regularly with the landlord's household
- "In contrast, a son/daughter who lives in a distinct residence in the same compound as his/her parents and who shares some meals with them and who also shares part of his/her income to the benefit of all (helping to cover the costs of food, school fees of younger siblings, up-keep of the residence, and so on) is counted as a member of the household of his/her parents
- "A neighbor who is indigent, elderly, handicapped, unemployed, and so on who is regularly invited to eat with a household (or who regularly receives cooked food sent by the household) is not counted as a member of the sharing household. The sharing household helps its neighbor, but it is not responsible for his/her well-being
- "Young people who rent a room in a big city but who eat all their meals in the household of an uncle or of a tutor in whose residence the young people spend most of their time are not counted as members of the household of the uncle or tutor
- "Three unrelated students who rent a house, who live in it together, and who split the cost of rent, food, water, and so on are counted as three members of a single household
- "In contrast, if each of the three students in the previous case has his/her own room in the shared house and if they all run their lives independently, then they are each counted as one-person households
- "Absakine is a polygamous man with three wives. He lives with all three wives and their children in a single compound. Even if each wife has her own residence within the compound, they are all—Absakine, his wives, and their children—counted as members of a single household headed by Absakine
- "In contrast, if one of the wives of Absakine does not live in the same compound with Absakine and his other two wives, then that wife (regardless of whether she has children) is counted as the head of her own separate household
- "Even if a child sometimes questions the authority of his mother or father (the head of the household), the child still counts as a member of the parent's household"

The *Manual* (pp. 40–41) addresses some more cases where it may be difficult to determine household membership.

- *A single person living alone (unmarried, widow/widower, or divorced)* who covers his/her own living expenses with his/her own resources is counted as a one-person household
- A single person who takes room and board with a household (perhaps with a relative, perhaps with a non-relative), who has his/her own income (from a wage/salary job, from self-employment, or from some other source) and who turns over some of his/her income to the head of the household is counted as:
  — A member of the household of the head (if the single person gives most of his/her income to the head and allows the head to decide how to use it)
  — A one-person household (if the single person pays only for his/her room and board and keeps the rest of his/her income to do with as he/she pleases)
- *Someone who is completely dependent on the household* (for example, a child who lives with his/her parents, or a young man who has moved to the city to look for a job and who lives with a relative) for all his/her basic needs is a member of the household where he/she lives
- *A relative or aging parent with low or no income* who lives with (and is supported by) another relative is a member of the household where he/she lives
- *A woman and her children who live and eat apart from their husband/father* (regardless of whether he has other wives) who stops by from time to time (to visit, to share a meal, or to pick up food that his wife sometimes makes for him) are counted as members of a household in which the woman is the head. The husband in not counted as a member of the wife's household
- *A polygamous man who lives with some of his wives in a single compound* is counted as a member (along with his co-resident wives) of the household where he lives
- *The wives of a polygamous man who live with their children in separate compounds* are counted separate households in which the wives are the heads. The polygamous man is counted as a member (and the head) of the household where he stays
- *A household temporarily without any resources that is "rescued" by another household* (for example, a household in the same compound) from whom the devastated household receives money for food (or from whom the devastated household receives meals, shelter, and other basic needs as gifts) is counted as a separate household apart from its benefactor household

- *Young people living together as roommates* (for example, college students, or young people from a rural area who have moved to the city to seek work) are counted as:
  — A single household (if they share both meals and the residence)
  — A single household (if they share meals and if they live in separate residences in a single compound)
  — Separate households (if they share a residence but do not share meals)
- *A maid or other domestic servant* is counted as:
  — A member of his/her employer's household (if the employer provides for his/her food, shelter, and other basic needs)
  — A member of some household other than his/her employer's household (if the employer provides food but not shelter)
  — A member of some household other than his/her employer's household (if the employer does not provide food, regardless of whether the employer provides shelter)

According to page 64 of the *Manual*, "A husband who left the residence more than six months ago to work abroad is no longer a member of his former household, even if he sends money back to it."

The concept of *family* (a social unit defined by blood or marital relationships) differs from that of *household* (an economic unit defined by sharing relationships).

2. Did all household members ages 7 to 18 go to school at the start of the current school year?
    A. No
    B. Yes
    C. No members 7 to 18

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

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

* Are there any household members ages 7 to 18?
* Did all household members ages 7 to 18 (if any) go to school at the start of the current school year?

Mark the response based on the combination of responses these two questions:

| Are there any household members ages 7 to 18? | Did all household members ages 7 to 18 (if any) go to school at the start of the current school year? | Response |
|---|---|---|
| No | N/A | C |
| Yes | No | A |
| No | N/A | C |
| Yes | Yes | B |

The *Manual* provides no additional information about this indicator.

3. In the past 12 months, did your household do any farming?
    A. Yes
    B. No


The *Manual* provides no additional information about this indicator.

4. In the past 12 months, did your household keep any livestock as sedentary or nomadic herders?
    A. No
    B. Yes (sedentary)
    C. Yes (nomadic)

The *Manual* provides no additional information about this indicator.

5. What is the main construction material of the roof? (*Observe and record.*)
    A. Straw/reeds, or other
    B. Packed earth, sheet metal/tile, or reinforced concrete


Try to determine the relevant response on your own by observing the roof. If the response if not clear from your own observation, then ask the respondent.

According to p. 74 of the *Manual*, "Observe on your own the main construction material of the roof, and circle the relevant response option. If the roof is made of more than one material, then ask the respondent which is the main one, that is, the one that accounts for the largest [area]. If it is not clear what the main material is, then mark the response option that corresponds to the highest-quality material among those that could be the main one."

According to p. 22 of the *Manual*, "The response option 'Other' is included. Once you are certain that the respondent cannot give you an appropriate response [or once you are certain that the correct response does not match well with any of the pre-coded responses], then you can circle "A. Straw/reeds, or other".

6. What is the household's main source of lighting?
   A. Other
   B. Flashlight
   C. Kerosene lamp
   D. Electricity (STEE, generator, or solar panel)

According to page 22 of the *Manual*, "The response option 'Other' is included. Once you are certain that the respondent cannot give you an appropriate response [or once you are certain that the correct response does not match well with any of the pre-coded responses], then you can circle "A. Other".

The *Manual* provides no additional information about this indicator.

7. What is the main source of drinking water in the dry season?
    A. Traditional well, or stagnant surface water
    B. Borehole, or running surface water
    C. Public standpipe, or other
    D. Water truck/cart, or private faucet (inside or outside)

According to p. 22 of the *Manual*, "The response option 'Other' is included. Once you are certain that the respondent cannot give you an appropriate response [or once you are certain that the correct response does not match well with any of the pre-coded responses], then you can circle "C. Public standpipe, or other".

The *Manual* provides no additional information about this indicator.

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


The *Manual* provides no additional information about this indicator.

9.  Does the household have a latrine or flush toilet?
    A.  No
    B.  Yes


The *Manual* provides no additional information about this indicator either.

10. Does the household have a bicycle, motorcycle/scooter, or an automobile, business vehicle (taxi, minibus), or truck in good working order?
     A. None
     B. Only bicycle
     C. Motorcycle/scooter, automobile, business vehicle (taxi, minibus), or truck (regardless of bicycle)


Do not read the question as written. Instead, ask one question for each of the three items:

- Does the household have a bicycle in good working order?
- Does the household have a motorcycle/scooter in good working order?
- Does the household have an automobile, business vehicle (taxi, minibus), or truck in good working order?

Mark the responses as follows:

| Does the household have an <ITEM>? | | | |
|---|---|---|---|
| **Bicycle** | **Motorcycle/scooter** | **Automobile, business vehicle (taxi, minibus), or truck** | **Response to mark** |
| No | No | No | A |
| Yes | No | No | B |
| No | Yes | No | C |
| Yes | Yes | No | C |
| No | No | Yes | C |
| Yes | No | Yes | C |
| No | Yes | Yes | C |
| Yes | Yes | Yes | C |

According to p. 76 of the *Manual*, "*Having* a bicycle, motorcycle/scooter, automobile, business vehicle (taxi, minibus), or truck means that the household has had the use of the vehicle for at least six months, or that the household has had the use of the vehicle for less than six months but expects to have the use of it for a total of at least six months (regardless of how the vehicle was acquired). For example, suppose a neighbor entrusted a motorcycle to the household for safekeeping while the neighbor is away, and three years later the household still has the motorcycle and uses it for its personal transport. [Then the household is counted as having the motorcycle.] Count any broken-down bicycles, motorcycles/scooters, automobiles, business vehicles (taxi, minibus), or trucks that are only temporarily not in good working order, but do not count out-of-order vehicles for which no repair is planned.

"Do not count any bicycles, motorcycles/scooters, automobiles, business vehicles (taxi, minibus), or trucks that are used mainly for business purposes (that is, mainly in the production of goods or services, such as a car used by the household five days a week in a taxi business). Count a vehicle only if it is mainly for personal use."

11. Does the household have a usable bed?
   A. No
   B. Yes



According to p. 76 of the *Manual*, "*Having* a bed means that the household has had the use of the bed for at least six months, or that the household has had the use of the bed for less than six months and expects to have the use of it for a total of at least six months (regardless of how the bed was acquired). For example, suppose a neighbor entrusted a bed to the household for safekeeping while the neighbor is away, and three years later the household still has the bed and uses it for sleeping. [Then the household is counted as having the bed.] Count any non-usable beds that are only temporarily not in good working order, but do not count out-of-order beds for which no repair is planned.

# Table 1 (All of Chad): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | n | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|------|------|------|------|------|------|------|------|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 408 | 607 | 910 | 1,213 |
| | Rate | Households | 6,237 | 7.1 | 16.4 | 35.8 | 51.9 |
| | Rate | People | | 9.2 | 20.9 | 43.1 | 60.5 |
| **Rural** | | | | | | | |
| | Line | People | | 385 | 573 | 860 | 1,147 |
| | Rate | Households | 3,022 | 28.1 | 45.6 | 69.0 | 81.6 |
| | Rate | People | | 33.5 | 52.5 | 75.8 | 86.3 |
| **All** | | | | | | | |
| | Line | People | | 390 | 579 | 869 | 1,159 |
| | Rate | Households | 9,259 | 24.0 | 40.0 | 62.5 | 75.8 |
| | Rate | People | | 29.0 | 46.7 | 69.8 | 81.5 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (All of Chad): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 476 | 761 | 951 | 1,902 | 493 | 831 | 1,427 | 5,632 |
| | Rate | Households | 6,237 | 10.0 | 25.8 | 38.0 | 76.8 | 11.0 | 30.6 | 61.7 | 98.9 |
| | Rate | People | | 12.9 | 32.2 | 45.3 | 83.7 | 14.3 | 37.6 | 69.9 | 99.5 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 449 | 719 | 899 | 1,798 | 466 | 785 | 1,349 | 5,323 |
| | Rate | Households | 3,022 | 34.0 | 60.1 | 71.1 | 92.9 | 35.8 | 64.4 | 86.4 | 99.6 |
| | Rate | People | | 39.9 | 67.6 | 77.8 | 95.4 | 42.3 | 71.7 | 90.0 | 99.8 |
| **All** | | | | | | | | | | | |
| | Line | People | | 454 | 727 | 909 | 1,817 | 471 | 793 | 1,364 | 5,380 |
| | Rate | Households | 9,259 | 29.3 | 53.4 | 64.7 | 89.7 | 31.0 | 57.8 | 81.6 | 99.5 |
| | Rate | People | | 34.9 | 61.1 | 71.8 | 93.3 | 37.2 | 65.4 | 86.3 | 99.8 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

**Table 1 (All of Chad): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011**

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 347 | 318 | 529 | 644 | 749 | 1,155 |
| | Rate | Households | 6,237 | 4.6 | 3.7 | 12.5 | 18.7 | 25.2 | 48.6 |
| | Rate | People | | 6.1 | 5.0 | 16.2 | 23.8 | 31.5 | 56.9 |
| **Rural** | | | | | | | | | |
| | Line | People | | 328 | 300 | 500 | 608 | 708 | 1,092 |
| | Rate | Households | 3,022 | 22.5 | 19.5 | 38.9 | 48.8 | 58.9 | 80.0 |
| | Rate | People | | 27.2 | 23.6 | 45.4 | 55.9 | 66.4 | 85.2 |
| **All** | | | | | | | | | |
| | Line | People | | 332 | 304 | 506 | 615 | 716 | 1,104 |
| | Rate | Households | 9,259 | 19.0 | 16.4 | 33.8 | 42.9 | 52.4 | 73.9 |
| | Rate | People | | 23.3 | 20.1 | 40.0 | 50.0 | 60.0 | 80.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Barh El Gazel): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | *n* | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 446 | 664 | 995 | 1,327 |
| | Rate | Households | 248 | 9.9 | 22.3 | 41.2 | 61.6 |
| | Rate | People | | 12.0 | 27.2 | 48.7 | 68.8 |
| **Rural** | | | | | | | |
| | Line | People | | 446 | 664 | 995 | 1,327 |
| | Rate | Households | 146 | 25.6 | 40.2 | 59.4 | 73.5 |
| | Rate | People | | 30.6 | 46.1 | 68.2 | 79.2 |
| **All** | | | | | | | |
| | Line | People | | 446 | 664 | 995 | 1,327 |
| | Rate | Households | 394 | 22.7 | 36.9 | 56.0 | 71.3 |
| | Rate | People | | 27.1 | 42.6 | 64.5 | 77.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Barh El Gazel): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 520 | 832 | 1,041 | 2,081 | 539 | 909 | 1,562 | 6,161 |
| | Rate | Households | 248 | 13.5 | 31.9 | 44.2 | 85.0 | 14.8 | 37.5 | 75.6 | 100.0 |
| | Rate | People | | 17.3 | 38.1 | 51.1 | 90.9 | 19.1 | 44.5 | 82.5 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 520 | 832 | 1,041 | 2,081 | 539 | 909 | 1,562 | 6,161 |
| | Rate | Households | 146 | 32.8 | 52.8 | 60.7 | 88.8 | 33.3 | 56.5 | 83.0 | 98.2 |
| | Rate | People | | 38.2 | 59.4 | 69.3 | 91.4 | 38.7 | 63.8 | 86.9 | 99.3 |
| **All** | | | | | | | | | | | |
| | Line | People | | 520 | 832 | 1,041 | 2,081 | 539 | 909 | 1,562 | 6,161 |
| | Rate | Households | 394 | 29.2 | 49.0 | 57.6 | 88.1 | 29.9 | 53.0 | 81.6 | 98.5 |
| | Rate | People | | 34.3 | 55.4 | 65.9 | 91.3 | 35.0 | 60.2 | 86.1 | 99.5 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Barh El Gazel): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|------|------|------|------|------|------|------|------|------|------|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 380 | 348 | 579 | 704 | 820 | 1,264 |
| | Rate | Households | 248 | 6.0 | 4.4 | 16.9 | 23.7 | 30.5 | 57.0 |
| | Rate | People | | 8.1 | 5.8 | 21.4 | 28.6 | 36.2 | 64.3 |
| **Rural** | | | | | | | | | |
| | Line | People | | 380 | 348 | 579 | 704 | 820 | 1,264 |
| | Rate | Households | 146 | 20.2 | 19.0 | 34.7 | 45.4 | 52.1 | 67.1 |
| | Rate | People | | 21.9 | 20.4 | 39.8 | 52.5 | 59.2 | 73.9 |
| **All** | | | | | | | | | |
| | Line | People | | 380 | 348 | 579 | 704 | 820 | 1,264 |
| | Rate | Households | 394 | 17.6 | 16.3 | 31.4 | 41.4 | 48.1 | 65.2 |
| | Rate | People | | 19.3 | 17.7 | 36.4 | 48.0 | 54.9 | 72.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Batha): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
|------|------|------|------|------|------|------|------|
| | | | | | National (2011 def.) | | |
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 357 | 531 | 796 | 1,061 |
| | Rate | Households | 208 | 3.8 | 13.1 | 25.6 | 39.8 |
| | Rate | People | | 4.7 | 16.9 | 32.5 | 48.6 |
| **Rural** | | | | | | | |
| | Line | People | | 357 | 531 | 796 | 1,061 |
| | Rate | Households | 141 | 15.6 | 37.9 | 64.5 | 76.0 |
| | Rate | People | | 20.4 | 48.8 | 75.8 | 85.8 |
| **All** | | | | | | | |
| | Line | People | | 357 | 531 | 796 | 1,061 |
| | Rate | Households | 349 | 14.5 | 35.6 | 60.9 | 72.7 |
| | Rate | People | | 18.8 | 45.6 | 71.4 | 82.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

**Table 1 (Batha): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011**

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 416 | 666 | 832 | 1,664 | 431 | 727 | 1,249 | 4,927 |
| | Rate | Households | 208 | 4.7 | 17.8 | 27.9 | 78.5 | 4.7 | 20.6 | 53.3 | 99.5 |
| | Rate | People | | 6.1 | 21.5 | 34.4 | 82.8 | 6.1 | 25.8 | 61.9 | 99.7 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 416 | 666 | 832 | 1,664 | 431 | 727 | 1,249 | 4,927 |
| | Rate | Households | 141 | 20.0 | 53.2 | 66.5 | 90.1 | 22.6 | 60.3 | 81.6 | 100.0 |
| | Rate | People | | 25.4 | 65.5 | 77.7 | 95.4 | 29.4 | 71.7 | 90.3 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 416 | 666 | 832 | 1,664 | 431 | 727 | 1,249 | 4,927 |
| | Rate | Households | 349 | 18.6 | 49.9 | 63.0 | 89.0 | 21.0 | 56.7 | 79.0 | 100.0 |
| | Rate | People | | 23.5 | 61.1 | 73.3 | 94.1 | 27.1 | 67.1 | 87.5 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Batha): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | |
| | Line | People | | 304 | 278 | 463 | 563 | 656 | 1,011 |
| | Rate | Households | 208 | 2.1 | 0.8 | 7.2 | 14.5 | 17.8 | 35.4 |
| | Rate | People | | 3.0 | 1.1 | 9.7 | 18.2 | 21.5 | 43.4 |
| **Rural** | | | | | | | | | |
| | Line | People | | 304 | 278 | 463 | 563 | 656 | 1,011 |
| | Rate | Households | 141 | 9.7 | 7.8 | 27.7 | 38.5 | 50.7 | 73.4 |
| | Rate | People | | 12.9 | 11.0 | 35.9 | 50.0 | 62.7 | 83.7 |
| **All** | | | | | | | | | |
| | Line | People | | 304 | 278 | 463 | 563 | 656 | 1,011 |
| | Rate | Households | 349 | 9.0 | 7.2 | 25.8 | 36.3 | 47.7 | 69.9 |
| | Rate | People | | 11.9 | 10.0 | 33.3 | 46.8 | 58.5 | 79.7 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Borkou-Ennedi-Tibesti): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
|---|---|---|---|---|---|---|---|
| | | | | | National (2011 def.) | | |
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 486 | 723 | 1,084 | 1,446 |
| | Rate | Households | 220 | 7.1 | 17.8 | 39.3 | 57.3 |
| | Rate | People | | 9.3 | 21.2 | 47.5 | 67.4 |
| **Rural** | | | | | | | |
| | Line | People | | 486 | 723 | 1,084 | 1,446 |
| | Rate | Households | 143 | 14.6 | 35.5 | 49.3 | 68.6 |
| | Rate | People | | 22.3 | 48.7 | 61.7 | 73.9 |
| **All** | | | | | | | |
| | Line | People | | 486 | 723 | 1,084 | 1,446 |
| | Rate | Households | 363 | 12.9 | 31.5 | 47.1 | 66.1 |
| | Rate | People | | 19.0 | 41.8 | 58.1 | 72.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

**Table 1 (Borkou-Ennedi-Tibesti): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011**

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 567 | 907 | 1,134 | 2,267 | 588 | 990 | 1,701 | 6,712 |
| | Rate | Households | 220 | 11.6 | 28.6 | 42.4 | 82.1 | 12.1 | 33.0 | 67.8 | 100.0 |
| | Rate | People | | 14.8 | 35.3 | 51.6 | 88.3 | 15.3 | 39.8 | 75.9 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 567 | 907 | 1,134 | 2,267 | 588 | 990 | 1,701 | 6,712 |
| | Rate | Households | 143 | 28.0 | 41.9 | 52.8 | 86.4 | 29.0 | 47.1 | 75.8 | 99.7 |
| | Rate | People | | 40.8 | 55.8 | 64.3 | 87.8 | 42.4 | 60.0 | 78.2 | 99.9 |
| **All** | | | | | | | | | | | |
| | Line | People | | 567 | 907 | 1,134 | 2,267 | 588 | 990 | 1,701 | 6,712 |
| | Rate | Households | 363 | 24.3 | 38.9 | 50.5 | 85.4 | 25.2 | 44.0 | 74.0 | 99.8 |
| | Rate | People | | 34.2 | 50.6 | 61.1 | 87.9 | 35.5 | 54.9 | 77.6 | 99.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Borkou-Ennedi-Tibesti): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 414 | 379 | 631 | 767 | 893 | 1,377 |
| | Rate | Households | 220 | 4.7 | 2.8 | 14.0 | 19.5 | 26.7 | 55.8 |
| | Rate | People | | 6.2 | 4.3 | 17.4 | 23.8 | 32.6 | 65.3 |
| **Rural** | | | | | | | | | |
| | Line | People | | 414 | 379 | 631 | 767 | 893 | 1,377 |
| | Rate | Households | 143 | 11.7 | 9.1 | 29.3 | 40.0 | 41.5 | 62.7 |
| | Rate | People | | 17.8 | 14.8 | 42.6 | 54.0 | 55.2 | 71.9 |
| **All** | | | | | | | | | |
| | Line | People | | 414 | 379 | 631 | 767 | 893 | 1,377 |
| | Rate | Households | 363 | 10.1 | 7.7 | 25.9 | 35.4 | 38.2 | 61.1 |
| | Rate | People | | 14.9 | 12.1 | 36.2 | 46.4 | 49.5 | 70.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Chari Baguirmi): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
| | | | | National (2011 def.) | | | |
| | | | | Food | 100% | 150% | 200% |
|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | |
| | Line | People | | 390 | 580 | 870 | 1,160 |
| | Rate | Households | 178 | 14.0 | 26.4 | 51.6 | 76.7 |
| | Rate | People | | 20.3 | 33.9 | 58.8 | 84.4 |
| **Rural** | | | | | | | |
| | Line | People | | 390 | 580 | 870 | 1,160 |
| | Rate | Households | 155 | 20.8 | 34.0 | 62.0 | 81.5 |
| | Rate | People | | 27.3 | 41.4 | 72.1 | 87.7 |
| **All** | | | | | | | |
| | Line | People | | 390 | 580 | 870 | 1,160 |
| | Rate | Households | 333 | 20.6 | 33.8 | 61.7 | 81.3 |
| | Rate | People | | 27.1 | 41.1 | 71.7 | 87.6 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Chari Baguirmi): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 455 | 728 | 910 | 1,819 | 472 | 794 | 1,365 | 5,387 |
| | Rate | Households | 178 | 19.9 | 43.0 | 56.7 | 91.9 | 19.9 | 47.3 | 83.8 | 100.0 |
| | Rate | People | | 27.3 | 51.3 | 64.2 | 95.9 | 27.3 | 55.6 | 90.8 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 455 | 728 | 910 | 1,819 | 472 | 794 | 1,365 | 5,387 |
| | Rate | Households | 155 | 28.1 | 52.1 | 64.9 | 91.0 | 28.1 | 57.1 | 85.8 | 100.0 |
| | Rate | People | | 36.3 | 63.2 | 74.9 | 95.5 | 36.3 | 67.0 | 90.9 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 455 | 728 | 910 | 1,819 | 472 | 794 | 1,365 | 5,387 |
| | Rate | Households | 333 | 27.9 | 51.8 | 64.7 | 91.0 | 27.9 | 56.8 | 85.7 | 100.0 |
| | Rate | People | | 36.0 | 62.8 | 74.6 | 95.5 | 36.0 | 66.6 | 90.9 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Chari Baguirmi): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | 20th | 40th | 50th | 60th | 80th |
|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | |
| | Line | People | | 332 | 304 | 506 | 615 | 717 | 1,105 |
| | Rate | Households | 178 | 10.9 | 8.5 | 21.3 | 31.6 | 42.6 | 72.5 |
| | Rate | People | | 15.8 | 12.1 | 28.6 | 39.7 | 50.9 | 79.4 |
| **Rural** | | | | | | | | | |
| | Line | People | | 332 | 304 | 506 | 615 | 717 | 1,105 |
| | Rate | Households | 155 | 15.1 | 11.4 | 29.9 | 38.8 | 50.1 | 79.8 |
| | Rate | People | | 18.7 | 13.2 | 37.7 | 47.5 | 60.4 | 86.3 |
| **All** | | | | | | | | | |
| | Line | People | | 332 | 304 | 506 | 615 | 717 | 1,105 |
| | Rate | Households | 333 | 14.9 | 11.3 | 29.6 | 38.6 | 49.9 | 79.6 |
| | Rate | People | | 18.6 | 13.2 | 37.4 | 47.3 | 60.1 | 86.1 |

*Columns 20th–80th are under the heading "Percentile-based lines (2011 def.)", under the overall heading "Poverty lines and poverty rates (%)".*

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Guéra): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) Food | 100% | 150% | 200% |
|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | |
| | Line | People | | 377 | 561 | 842 | 1,123 |
| | Rate | Households | 218 | 9.7 | 23.4 | 41.6 | 58.0 |
| | Rate | People | | 12.0 | 24.6 | 45.5 | 61.9 |
| **Rural** | | | | | | | |
| | Line | People | | 377 | 561 | 842 | 1,123 |
| | Rate | Households | 163 | 46.9 | 66.0 | 87.2 | 93.6 |
| | Rate | People | | 55.8 | 72.1 | 91.8 | 96.1 |
| **All** | | | | | | | |
| | Line | People | | 377 | 561 | 842 | 1,123 |
| | Rate | Households | 381 | 42.2 | 60.6 | 81.5 | 89.1 |
| | Rate | People | | 50.7 | 66.5 | 86.4 | 92.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Guéra): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 440 | 704 | 880 | 1,760 | 456 | 768 | 1,321 | 5,211 |
| | Rate | Households | 218 | 13.5 | 34.5 | 44.5 | 79.9 | 15.5 | 37.5 | 66.4 | 99.5 |
| | Rate | People | | 14.9 | 37.1 | 48.5 | 84.0 | 16.5 | 40.5 | 70.4 | 99.3 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 440 | 704 | 880 | 1,760 | 456 | 768 | 1,321 | 5,211 |
| | Rate | Households | 163 | 55.8 | 78.6 | 87.9 | 98.9 | 56.9 | 85.4 | 96.4 | 100.0 |
| | Rate | People | | 64.2 | 82.9 | 92.4 | 99.7 | 65.3 | 90.4 | 97.8 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 440 | 704 | 880 | 1,760 | 456 | 768 | 1,321 | 5,211 |
| | Rate | Households | 381 | 50.5 | 73.0 | 82.4 | 96.5 | 51.6 | 79.3 | 92.6 | 99.9 |
| | Rate | People | | 58.4 | 77.6 | 87.3 | 97.8 | 59.6 | 84.6 | 94.6 | 99.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Guéra): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|------|------|------|------|------|------|------|------|------|------|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 321 | 294 | 490 | 595 | 693 | 1,069 |
| | Rate | Households | 218 | 8.0 | 7.5 | 18.8 | 26.7 | 34.5 | 55.7 |
| | Rate | People | | 10.4 | 10.0 | 20.5 | 28.0 | 37.1 | 60.5 |
| **Rural** | | | | | | | | | |
| | Line | People | | 321 | 294 | 490 | 595 | 693 | 1,069 |
| | Rate | Households | 163 | 38.6 | 34.1 | 60.0 | 70.7 | 77.8 | 93.6 |
| | Rate | People | | 45.4 | 39.9 | 67.1 | 76.8 | 82.4 | 96.1 |
| **All** | | | | | | | | | |
| | Line | People | | 321 | 294 | 490 | 595 | 693 | 1,069 |
| | Rate | Households | 381 | 34.7 | 30.7 | 54.8 | 65.2 | 72.3 | 88.8 |
| | Rate | People | | 41.3 | 36.4 | 61.7 | 71.1 | 77.1 | 91.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Hadjer Lamis): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 459 | 683 | 1,025 | 1,366 |
| | Rate | Households | 243 | 13.3 | 30.5 | 59.1 | 74.5 |
| | Rate | People | | 18.7 | 40.4 | 70.4 | 84.2 |
| **Rural** | | | | | | | |
| | Line | People | | 459 | 683 | 1,025 | 1,366 |
| | Rate | Households | 167 | 26.2 | 40.3 | 67.3 | 77.8 |
| | Rate | People | | 30.0 | 46.1 | 74.4 | 82.9 |
| **All** | | | | | | | |
| | Line | People | | 459 | 683 | 1,025 | 1,366 |
| | Rate | Households | 410 | 25.1 | 39.5 | 66.6 | 77.5 |
| | Rate | People | | 29.1 | 45.7 | 74.1 | 83.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Hadjer Lamis): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | | | |
| | Line | People | | 536 | 857 | 1,071 | 2,142 | 555 | 935 | 1,608 | 6,343 |
| | Rate | Households | 243 | 21.2 | 44.7 | 62.6 | 88.7 | 21.4 | 53.2 | 81.0 | 99.3 |
| | Rate | People | | 29.6 | 54.7 | 73.5 | 94.3 | 29.8 | 62.9 | 88.6 | 99.9 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 536 | 857 | 1,071 | 2,142 | 555 | 935 | 1,608 | 6,343 |
| | Rate | Households | 167 | 32.0 | 54.1 | 67.3 | 93.3 | 32.5 | 57.2 | 83.5 | 98.5 |
| | Rate | People | | 35.8 | 61.9 | 74.4 | 93.6 | 36.2 | 64.1 | 87.2 | 99.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 536 | 857 | 1,071 | 2,142 | 555 | 935 | 1,608 | 6,343 |
| | Rate | Households | 410 | 31.1 | 53.4 | 66.9 | 92.9 | 31.6 | 56.9 | 83.3 | 98.6 |
| | Rate | People | | 35.4 | 61.3 | 74.3 | 93.6 | 35.7 | 64.0 | 87.3 | 99.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

**Table 1 (Hadjer Lamis): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011**

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 391 | 358 | 596 | 725 | 844 | 1,301 |
| | Rate | Households | 243 | 8.5 | 6.9 | 24.0 | 34.7 | 44.4 | 71.9 |
| | Rate | People | | 13.2 | 10.7 | 33.6 | 44.5 | 54.3 | 82.3 |
| **Rural** | | | | | | | | | |
| | Line | People | | 391 | 358 | 596 | 725 | 844 | 1,301 |
| | Rate | Households | 167 | 22.7 | 20.3 | 34.1 | 42.1 | 52.1 | 77.0 |
| | Rate | People | | 27.6 | 24.6 | 38.2 | 48.0 | 59.3 | 82.2 |
| **All** | | | | | | | | | |
| | Line | People | | 391 | 358 | 596 | 725 | 844 | 1,301 |
| | Rate | Households | 410 | 21.5 | 19.2 | 33.2 | 41.5 | 51.5 | 76.6 |
| | Rate | People | | 26.5 | 23.6 | 37.9 | 47.7 | 58.9 | 82.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Kanem): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Food | 100% | 150% | 200% |
|---|---|---|---|---|---|---|---|
| | | | | | National (2011 def.) | | |
| **Urban** | | | | | | | |
| | Line | People | | 458 | 681 | 1,021 | 1,361 |
| | Rate | Households | 245 | 8.6 | 25.9 | 58.6 | 75.3 |
| | Rate | People | | 11.3 | 31.7 | 65.5 | 81.0 |
| **Rural** | | | | | | | |
| | Line | People | | 458 | 681 | 1,021 | 1,361 |
| | Rate | Households | 167 | 16.0 | 31.2 | 50.7 | 63.7 |
| | Rate | People | | 18.3 | 35.2 | 56.9 | 69.9 |
| **All** | | | | | | | |
| | Line | People | | 458 | 681 | 1,021 | 1,361 |
| | Rate | Households | 412 | 15.2 | 30.6 | 51.5 | 64.9 |
| | Rate | People | | 17.6 | 34.8 | 57.8 | 71.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Kanem): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 534 | 854 | 1,067 | 2,134 | 553 | 932 | 1,601 | 6,319 |
| | Rate | Households | 245 | 15.5 | 42.0 | 60.8 | 89.5 | 15.9 | 49.5 | 80.1 | 100.0 |
| | Rate | People | | 20.4 | 47.1 | 68.3 | 93.6 | 20.6 | 56.0 | 85.5 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 534 | 854 | 1,067 | 2,134 | 553 | 932 | 1,601 | 6,319 |
| | Rate | Households | 167 | 21.3 | 43.2 | 51.1 | 85.3 | 23.4 | 46.2 | 72.4 | 99.2 |
| | Rate | People | | 24.6 | 49.1 | 57.3 | 89.6 | 27.6 | 51.9 | 76.6 | 99.7 |
| **All** | | | | | | | | | | | |
| | Line | People | | 534 | 854 | 1,067 | 2,134 | 553 | 932 | 1,601 | 6,319 |
| | Rate | Households | 412 | 20.7 | 43.1 | 52.1 | 85.8 | 22.6 | 46.5 | 73.2 | 99.3 |
| | Rate | People | | 24.1 | 48.9 | 58.4 | 90.0 | 26.8 | 52.4 | 77.6 | 99.7 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Kanem): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|------|------|------|------|------|------|------|------|------|------|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 390 | 357 | 594 | 722 | 841 | 1,296 |
| | Rate | Households | 245 | 7.4 | 5.6 | 20.3 | 31.8 | 40.6 | 71.4 |
| | Rate | People | | 10.3 | 7.7 | 25.6 | 38.5 | 45.9 | 77.9 |
| **Rural** | | | | | | | | | |
| | Line | People | | 390 | 357 | 594 | 722 | 841 | 1,296 |
| | Rate | Households | 167 | 14.0 | 12.2 | 25.4 | 34.0 | 42.5 | 61.2 |
| | Rate | People | | 16.2 | 14.3 | 28.9 | 38.7 | 48.4 | 68.0 |
| **All** | | | | | | | | | |
| | Line | People | | 390 | 357 | 594 | 722 | 841 | 1,296 |
| | Rate | Households | 412 | 13.3 | 11.5 | 24.8 | 33.8 | 42.3 | 62.3 |
| | Rate | People | | 15.6 | 13.6 | 28.5 | 38.7 | 48.1 | 69.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Lac): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|------|------|------|------|------|------|------|------|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 247 | 13.9 | 25.8 | 58.1 | 71.7 |
| | Rate | People | | 17.5 | 32.4 | 68.7 | 80.1 |
| **Rural** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 164 | 19.4 | 39.7 | 69.7 | 83.3 |
| | Rate | People | | 24.4 | 48.3 | 78.8 | 90.6 |
| **All** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 411 | 18.8 | 38.0 | 68.3 | 81.9 |
| | Rate | People | | 23.6 | 46.3 | 77.5 | 89.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Lac): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 247 | 18.6 | 39.7 | 62.5 | 89.1 | 18.9 | 48.7 | 78.4 | 100.0 |
| | Rate | People | | 23.8 | 49.4 | 72.6 | 93.7 | 23.9 | 59.3 | 85.3 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 164 | 23.7 | 56.5 | 72.7 | 93.6 | 26.4 | 63.2 | 89.7 | 100.0 |
| | Rate | People | | 27.7 | 66.5 | 81.9 | 96.9 | 31.2 | 72.7 | 94.9 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 411 | 23.1 | 54.4 | 71.5 | 93.0 | 25.5 | 61.4 | 88.3 | 100.0 |
| | Rate | People | | 27.2 | 64.3 | 80.7 | 96.5 | 30.3 | 71.0 | 93.7 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Lac): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|------|------|------|------|------|------|------|------|------|------|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 247 | 7.7 | 5.5 | 21.4 | 29.9 | 38.3 | 70.5 |
| | Rate | People | | 9.8 | 6.6 | 26.7 | 37.5 | 47.7 | 79.7 |
| **Rural** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 164 | 15.4 | 10.7 | 28.6 | 43.6 | 56.0 | 81.7 |
| | Rate | People | | 19.5 | 14.2 | 35.5 | 53.5 | 65.8 | 89.4 |
| **All** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 411 | 14.5 | 10.1 | 27.7 | 41.9 | 53.8 | 80.4 |
| | Rate | People | | 18.3 | 13.2 | 34.4 | 51.5 | 63.5 | 88.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Logone Occidental): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) | | | |
| | | | | Food | 100% | 150% | 200% |
|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | |
| | Line | People | | 384 | 570 | 856 | 1,141 |
| | Rate | Households | 258 | 9.4 | 23.3 | 47.9 | 62.3 |
| | Rate | People | | 13.1 | 28.9 | 56.8 | 70.5 |
| **Rural** | | | | | | | |
| | Line | People | | 384 | 570 | 856 | 1,141 |
| | Rate | Households | 160 | 43.9 | 65.3 | 88.1 | 94.7 |
| | Rate | People | | 52.4 | 73.1 | 91.4 | 96.7 |
| **All** | | | | | | | |
| | Line | People | | 384 | 570 | 856 | 1,141 |
| | Rate | Households | 418 | 38.5 | 58.6 | 81.7 | 89.5 |
| | Rate | People | | 46.4 | 66.4 | 86.1 | 92.7 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Logone Occidental): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 447 | 716 | 894 | 1,789 | 464 | 781 | 1,342 | 5,296 |
| | Rate | Households | 258 | 13.1 | 33.7 | 50.1 | 81.5 | 15.0 | 42.0 | 70.3 | 99.3 |
| | Rate | People | | 17.7 | 40.7 | 58.7 | 87.4 | 19.9 | 50.8 | 77.0 | 99.5 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 447 | 716 | 894 | 1,789 | 464 | 781 | 1,342 | 5,296 |
| | Rate | Households | 160 | 50.7 | 79.9 | 88.4 | 98.4 | 52.7 | 85.2 | 96.2 | 100.0 |
| | Rate | People | | 59.6 | 85.5 | 91.5 | 98.9 | 62.5 | 90.1 | 98.0 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 447 | 716 | 894 | 1,789 | 464 | 781 | 1,342 | 5,296 |
| | Rate | Households | 418 | 44.7 | 72.6 | 82.3 | 95.7 | 46.7 | 78.4 | 92.1 | 99.9 |
| | Rate | People | | 53.2 | 78.7 | 86.5 | 97.1 | 56.1 | 84.1 | 94.8 | 99.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Logone Occidental): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 327 | 299 | 498 | 605 | 705 | 1,086 |
| | Rate | Households | 258 | 6.5 | 5.6 | 17.9 | 26.6 | 32.7 | 59.1 |
| | Rate | People | | 9.7 | 8.5 | 23.7 | 33.1 | 39.8 | 67.0 |
| **Rural** | | | | | | | | | |
| | Line | People | | 327 | 299 | 498 | 605 | 705 | 1,086 |
| | Rate | Households | 160 | 34.3 | 31.5 | 56.0 | 68.4 | 77.6 | 93.6 |
| | Rate | People | | 43.0 | 40.2 | 64.5 | 75.6 | 83.7 | 95.6 |
| **All** | | | | | | | | | |
| | Line | People | | 327 | 299 | 498 | 605 | 705 | 1,086 |
| | Rate | Households | 418 | 29.9 | 27.4 | 50.0 | 61.7 | 70.5 | 88.1 |
| | Rate | People | | 38.0 | 35.4 | 58.3 | 69.2 | 77.0 | 91.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Logone Oriental): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
|---|---|---|---|---|---|---|---|
| | | | | | National (2011 def.) | | |
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 391 | 581 | 872 | 1,163 |
| | Rate | Households | 226 | 22.4 | 36.8 | 59.6 | 74.2 |
| | Rate | People | | 26.9 | 42.6 | 66.8 | 78.7 |
| **Rural** | | | | | | | |
| | Line | People | | 391 | 581 | 872 | 1,163 |
| | Rate | Households | 159 | 28.1 | 49.5 | 72.9 | 85.8 |
| | Rate | People | | 28.6 | 49.4 | 76.1 | 86.9 |
| **All** | | | | | | | |
| | Line | People | | 391 | 581 | 872 | 1,163 |
| | Rate | Households | 385 | 27.4 | 47.9 | 71.2 | 84.3 |
| | Rate | People | | 28.4 | 48.6 | 75.0 | 86.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Logone Oriental): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 456 | 729 | 912 | 1,824 | 473 | 796 | 1,368 | 5,399 |
| | Rate | Households | 226 | 25.3 | 48.2 | 60.9 | 87.9 | 26.6 | 55.6 | 78.2 | 99.3 |
| | Rate | People | | 29.5 | 55.2 | 67.8 | 93.2 | 31.8 | 63.2 | 84.3 | 99.7 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 456 | 729 | 912 | 1,824 | 473 | 796 | 1,368 | 5,399 |
| | Rate | Households | 159 | 37.0 | 68.5 | 75.0 | 96.3 | 39.2 | 69.2 | 89.8 | 100.0 |
| | Rate | People | | 37.6 | 72.3 | 77.8 | 98.4 | 40.7 | 72.7 | 90.1 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 456 | 729 | 912 | 1,824 | 473 | 796 | 1,368 | 5,399 |
| | Rate | Households | 385 | 35.4 | 65.9 | 73.2 | 95.2 | 37.5 | 67.4 | 88.3 | 99.9 |
| | Rate | People | | 36.6 | 70.3 | 76.6 | 97.8 | 39.6 | 71.6 | 89.4 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

**Table 1 (Logone Oriental): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011**

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 333 | 305 | 507 | 617 | 718 | 1,107 |
| | Rate | Households | 226 | 15.6 | 13.8 | 29.4 | 40.3 | 48.0 | 72.0 |
| | Rate | People | | 19.3 | 17.0 | 34.9 | 46.4 | 54.9 | 76.1 |
| **Rural** | | | | | | | | | |
| | Line | People | | 333 | 305 | 507 | 617 | 718 | 1,107 |
| | Rate | Households | 159 | 20.3 | 18.0 | 42.3 | 53.3 | 67.7 | 83.6 |
| | Rate | People | | 21.5 | 18.5 | 42.9 | 54.3 | 71.8 | 85.2 |
| **All** | | | | | | | | | |
| | Line | People | | 333 | 305 | 507 | 617 | 718 | 1,107 |
| | Rate | Households | 385 | 19.7 | 17.5 | 40.6 | 51.6 | 65.1 | 82.1 |
| | Rate | People | | 21.2 | 18.3 | 42.0 | 53.3 | 69.8 | 84.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Mandoul): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | n | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 401 | 596 | 894 | 1,192 |
| | Rate | Households | 239 | 12.6 | 26.4 | 54.8 | 74.1 |
| | Rate | People | | 15.9 | 35.6 | 64.4 | 84.0 |
| **Rural** | | | | | | | |
| | Line | People | | 401 | 596 | 894 | 1,192 |
| | Rate | Households | 166 | 52.9 | 66.9 | 87.0 | 95.0 |
| | Rate | People | | 61.4 | 73.5 | 91.2 | 97.2 |
| **All** | | | | | | | |
| | Line | People | | 401 | 596 | 894 | 1,192 |
| | Rate | Households | 405 | 49.8 | 63.7 | 84.5 | 93.4 |
| | Rate | People | | 58.3 | 70.9 | 89.4 | 96.3 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Mandoul): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 467 | 747 | 934 | 1,868 | 484 | 816 | 1,402 | 5,532 |
| | Rate | Households | 239 | 17.8 | 41.5 | 58.7 | 88.0 | 20.3 | 50.3 | 81.2 | 99.1 |
| | Rate | People | | 22.8 | 49.2 | 69.3 | 94.8 | 26.6 | 58.8 | 89.6 | 99.5 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 467 | 747 | 934 | 1,868 | 484 | 816 | 1,402 | 5,532 |
| | Rate | Households | 166 | 55.4 | 84.0 | 87.9 | 98.9 | 57.0 | 85.7 | 96.4 | 100.0 |
| | Rate | People | | 63.5 | 89.0 | 92.1 | 99.6 | 65.5 | 90.7 | 98.2 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 467 | 747 | 934 | 1,868 | 484 | 816 | 1,402 | 5,532 |
| | Rate | Households | 405 | 52.5 | 80.8 | 85.7 | 98.1 | 54.2 | 83.0 | 95.2 | 99.9 |
| | Rate | People | | 60.7 | 86.3 | 90.6 | 99.2 | 62.9 | 88.5 | 97.6 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Mandoul): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 341 | 312 | 520 | 632 | 736 | 1,135 |
| | Rate | Households | 239 | 8.3 | 6.3 | 22.5 | 31.5 | 41.3 | 71.6 |
| | Rate | People | | 10.4 | 7.9 | 29.5 | 40.3 | 49.2 | 82.3 |
| **Rural** | | | | | | | | | |
| | Line | People | | 341 | 312 | 520 | 632 | 736 | 1,135 |
| | Rate | Households | 166 | 46.2 | 38.9 | 62.2 | 69.6 | 84.0 | 94.1 |
| | Rate | People | | 52.5 | 44.6 | 70.7 | 75.2 | 89.0 | 97.0 |
| **All** | | | | | | | | | |
| | Line | People | | 341 | 312 | 520 | 632 | 736 | 1,135 |
| | Rate | Households | 405 | 43.2 | 36.4 | 59.2 | 66.7 | 80.8 | 92.4 |
| | Rate | People | | 49.7 | 42.1 | 67.9 | 72.8 | 86.3 | 96.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Mayo Kebbi Est): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|------|------|------|------|------|------|------|------|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 318 | 473 | 710 | 947 |
| | Rate | Households | 236 | 9.6 | 22.8 | 39.0 | 55.7 |
| | Rate | People | | 10.4 | 25.6 | 44.3 | 61.4 |
| **Rural** | | | | | | | |
| | Line | People | | 318 | 473 | 710 | 947 |
| | Rate | Households | 164 | 18.9 | 34.7 | 62.3 | 79.2 |
| | Rate | People | | 24.6 | 40.3 | 68.8 | 81.9 |
| **All** | | | | | | | |
| | Line | People | | 318 | 473 | 710 | 947 |
| | Rate | Households | 400 | 17.7 | 33.1 | 59.2 | 76.0 |
| | Rate | People | | 22.6 | 38.2 | 65.3 | 78.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Mayo Kebbi Est): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | | | |
| | Line | People | | 371 | 594 | 742 | 1,484 | 385 | 648 | 1,114 | 4,394 |
| | Rate | Households | 236 | 13.1 | 31.1 | 43.5 | 80.7 | 14.2 | 35.3 | 67.1 | 100.0 |
| | Rate | People | | 14.9 | 35.8 | 48.8 | 86.8 | 16.4 | 40.5 | 72.6 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 371 | 594 | 742 | 1,484 | 385 | 648 | 1,114 | 4,394 |
| | Rate | Households | 164 | 22.7 | 48.6 | 67.0 | 91.7 | 26.0 | 56.1 | 83.0 | 99.6 |
| | Rate | People | | 28.0 | 54.1 | 71.6 | 94.0 | 31.9 | 61.5 | 85.3 | 99.9 |
| **All** | | | | | | | | | | | |
| | Line | People | | 371 | 594 | 742 | 1,484 | 385 | 648 | 1,114 | 4,394 |
| | Rate | Households | 400 | 21.5 | 46.2 | 63.9 | 90.2 | 24.4 | 53.3 | 80.9 | 99.7 |
| | Rate | People | | 26.1 | 51.5 | 68.4 | 93.0 | 29.7 | 58.5 | 83.5 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Mayo Kebbi Est): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | 20th | 40th | 50th | 60th | 80th |
|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | |
| | Line | People | | 271 | 248 | 413 | 502 | 585 | 901 |
| | Rate | Households | 236 | 7.3 | 7.0 | 16.7 | 25.2 | 31.1 | 52.4 |
| | Rate | People | | 8.3 | 8.2 | 19.9 | 28.6 | 35.8 | 58.4 |
| **Rural** | | | | | | | | | |
| | Line | People | | 271 | 248 | 413 | 502 | 585 | 901 |
| | Rate | Households | 164 | 15.4 | 14.0 | 28.8 | 37.5 | 47.5 | 77.2 |
| | Rate | People | | 20.4 | 17.6 | 34.3 | 43.3 | 53.5 | 81.0 |
| **All** | | | | | | | | | |
| | Line | People | | 271 | 248 | 413 | 502 | 585 | 901 |
| | Rate | Households | 400 | 14.3 | 13.1 | 27.2 | 35.9 | 45.3 | 73.9 |
| | Rate | People | | 18.7 | 16.3 | 32.3 | 41.2 | 51.0 | 77.8 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Mayo Kebbi Ouest): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) | | | |
|------|------|------|------|------|------|------|------|
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 347 | 516 | 773 | 1,031 |
| | Rate | Households | 216 | 7.3 | 16.9 | 40.0 | 54.3 |
| | Rate | People | | 10.3 | 23.2 | 51.4 | 65.9 |
| **Rural** | | | | | | | |
| | Line | People | | 347 | 516 | 773 | 1,031 |
| | Rate | Households | 165 | 22.7 | 43.5 | 63.0 | 75.4 |
| | Rate | People | | 26.3 | 50.0 | 70.7 | 81.3 |
| **All** | | | | | | | |
| | Line | People | | 347 | 516 | 773 | 1,031 |
| | Rate | Households | 381 | 20.9 | 40.4 | 60.3 | 72.9 |
| | Rate | People | | 24.8 | 47.4 | 68.9 | 79.8 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Mayo Kebbi Ouest): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) $1.25 | $2.00 | $2.50 | $5.00 | Intl. 2011 PPP (2011 def.) $1.90 | $3.20 | $5.50 | $21.70 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | | | |
| | Line | People | | 404 | 647 | 809 | 1,617 | 419 | 706 | 1,213 | 4,787 |
| | Rate | Households | 216 | 11.0 | 28.6 | 41.7 | 80.4 | 12.1 | 33.8 | 68.5 | 99.7 |
| | Rate | People | | 15.5 | 38.8 | 53.6 | 88.5 | 16.7 | 45.2 | 79.8 | 99.5 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 404 | 647 | 809 | 1,617 | 419 | 706 | 1,213 | 4,787 |
| | Rate | Households | 165 | 26.1 | 54.3 | 64.3 | 94.0 | 28.0 | 59.9 | 86.0 | 100.0 |
| | Rate | People | | 30.2 | 62.8 | 71.9 | 95.0 | 33.6 | 69.1 | 88.5 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 404 | 647 | 809 | 1,617 | 419 | 706 | 1,213 | 4,787 |
| | Rate | Households | 381 | 24.4 | 51.3 | 61.7 | 92.4 | 26.2 | 56.8 | 84.0 | 100.0 |
| | Rate | People | | 28.8 | 60.5 | 70.1 | 94.4 | 32.0 | 66.8 | 87.6 | 99.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Mayo Kebbi Ouest): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | 20th | 40th | 50th | 60th | 80th |
|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | |
| | Line | People | | 295 | 270 | 450 | 547 | 637 | 982 |
| | Rate | Households | 216 | 2.4 | 1.3 | 13.5 | 20.9 | 27.4 | 52.1 |
| | Rate | People | | 3.1 | 1.9 | 18.3 | 28.5 | 37.4 | 63.5 |
| **Rural** | | | | | | | | | |
| | Line | People | | 295 | 270 | 450 | 547 | 637 | 982 |
| | Rate | Households | 165 | 18.1 | 15.2 | 33.2 | 45.9 | 54.1 | 74.6 |
| | Rate | People | | 21.4 | 16.9 | 38.9 | 52.7 | 62.6 | 81.0 |
| **All** | | | | | | | | | |
| | Line | People | | 295 | 270 | 450 | 547 | 637 | 982 |
| | Rate | Households | 381 | 16.3 | 13.6 | 30.9 | 43.0 | 50.9 | 71.9 |
| | Rate | People | | 19.7 | 15.5 | 36.9 | 50.4 | 60.1 | 79.3 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Moyen Chari): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | n | Food | National (2011 def.) 100% | National (2011 def.) 150% | National (2011 def.) 200% |
|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | |
| | Line | People | | 350 | 521 | 781 | 1,042 |
| | Rate | Households | 264 | 7.1 | 20.8 | 39.0 | 54.8 |
| | Rate | People | | 9.1 | 28.9 | 49.5 | 67.2 |
| **Rural** | | | | | | | |
| | Line | People | | 350 | 521 | 781 | 1,042 |
| | Rate | Households | 165 | 41.2 | 58.9 | 81.0 | 87.7 |
| | Rate | People | | 47.1 | 67.4 | 89.9 | 93.7 |
| **All** | | | | | | | |
| | Line | People | | 350 | 521 | 781 | 1,042 |
| | Rate | Households | 429 | 35.8 | 52.9 | 74.4 | 82.5 |
| | Rate | People | | 41.2 | 61.4 | 83.6 | 89.6 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Moyen Chari): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) $1.25 | $2.00 | $2.50 | $5.00 | Intl. 2011 PPP (2011 def.) $1.90 | $3.20 | $5.50 | $21.70 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | | | |
| | Line | People | | 408 | 653 | 817 | 1,633 | 423 | 713 | 1,226 | 4,836 |
| | Rate | Households | 264 | 11.0 | 29.5 | 41.8 | 76.8 | 11.6 | 34.9 | 63.4 | 99.6 |
| | Rate | People | | 14.3 | 39.6 | 53.2 | 85.6 | 15.6 | 45.7 | 75.1 | 99.9 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 408 | 653 | 817 | 1,633 | 423 | 713 | 1,226 | 4,836 |
| | Rate | Households | 165 | 48.1 | 75.0 | 81.9 | 95.3 | 50.0 | 77.4 | 90.8 | 100.0 |
| | Rate | People | | 54.5 | 83.7 | 90.8 | 98.7 | 57.0 | 86.8 | 95.8 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 408 | 653 | 817 | 1,633 | 423 | 713 | 1,226 | 4,836 |
| | Rate | Households | 429 | 42.2 | 67.8 | 75.5 | 92.4 | 43.9 | 70.7 | 86.4 | 99.9 |
| | Rate | People | | 48.3 | 76.9 | 84.9 | 96.6 | 50.6 | 80.4 | 92.6 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Moyen Chari): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | *n* | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|------|------|------|------|------|------|------|------|------|------|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 298 | 273 | 454 | 553 | 643 | 992 |
| | Rate | Households | 264 | 3.8 | 1.8 | 12.6 | 22.4 | 27.9 | 52.5 |
| | Rate | People | | 4.8 | 1.6 | 17.4 | 30.2 | 37.1 | 66.0 |
| **Rural** | | | | | | | | | |
| | Line | People | | 298 | 273 | 454 | 553 | 643 | 992 |
| | Rate | Households | 165 | 35.7 | 33.6 | 53.9 | 62.8 | 73.8 | 86.7 |
| | Rate | People | | 41.0 | 39.8 | 61.9 | 71.9 | 82.6 | 93.5 |
| **All** | | | | | | | | | |
| | Line | People | | 298 | 273 | 454 | 553 | 643 | 992 |
| | Rate | Households | 429 | 30.7 | 28.6 | 47.3 | 56.4 | 66.6 | 81.3 |
| | Rate | People | | 35.3 | 33.9 | 54.9 | 65.4 | 75.5 | 89.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (N'Djaména): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) National (2011 def.) | | | |
| | | | | Food | 100% | 150% | 200% |
|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | |
| | Line | People | | 438 | 652 | 978 | 1,304 |
| | Rate | Households | 1,793 | 2.6 | 8.0 | 24.6 | 41.3 |
| | Rate | People | | 3.7 | 11.0 | 30.8 | 50.5 |
| **Rural** | | | | | | | |
| | Line | People | | — | — | — | — |
| | Rate | Households | — | — | — | — | — |
| | Rate | People | | — | — | — | — |
| **All** | | | | | | | |
| | Line | People | | 438 | 652 | 978 | 1,304 |
| | Rate | Households | 1,793 | 2.6 | 8.0 | 24.6 | 41.3 |
| | Rate | People | | 3.7 | 11.0 | 30.8 | 50.5 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (N'Djaména): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 511 | 818 | 1,022 | 2,044 | 530 | 893 | 1,534 | 6,052 |
| | Rate | Households | 1,793 | 4.2 | 15.8 | 26.2 | 70.5 | 5.2 | 19.3 | 52.6 | 98.4 |
| | Rate | People | | 5.7 | 21.3 | 32.5 | 78.8 | 7.3 | 25.0 | 61.7 | 99.4 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | — | — | — | — | — | — | — | — |
| | Rate | Households | — | — | — | — | — | — | — | — | — |
| | Rate | People | | — | — | — | — | — | — | — | — |
| **All** | | | | | | | | | | | |
| | Line | People | | 511 | 818 | 1,022 | 2,044 | 530 | 893 | 1,534 | 6,052 |
| | Rate | Households | 1,793 | 4.2 | 15.8 | 26.2 | 70.5 | 5.2 | 19.3 | 52.6 | 98.4 |
| | Rate | People | | 5.7 | 21.3 | 32.5 | 78.8 | 7.3 | 25.0 | 61.7 | 99.4 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (N'Djaména): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|-----|---------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 373 | 342 | 569 | 692 | 805 | 1,242 |
| | Rate | Households | 1,793 | 1.4 | 1.0 | 5.7 | 9.5 | 15.5 | 37.3 |
| | Rate | People | | 2.1 | 1.4 | 8.1 | 13.2 | 20.8 | 45.6 |
| **Rural** | | | | | | | | | |
| | Line | People | | — | — | — | — | — | — |
| | Rate | Households | — | — | — | — | — | — | — |
| | Rate | People | | — | — | — | — | — | — |
| **All** | | | | | | | | | |
| | Line | People | | 373 | 342 | 569 | 692 | 805 | 1,242 |
| | Rate | Households | 1,793 | 1.4 | 1.0 | 5.7 | 9.5 | 15.5 | 37.3 |
| | Rate | People | | 2.1 | 1.4 | 8.1 | 13.2 | 20.8 | 45.6 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Ouaddaï): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
| | | | | National (2011 def.) | | | |
| | | | | Food | 100% | 150% | 200% |
|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | |
| | Line | People | | 397 | 591 | 886 | 1,181 |
| | Rate | Households | 274 | 3.2 | 10.0 | 20.7 | 35.3 |
| | Rate | People | | 4.1 | 13.6 | 25.8 | 42.0 |
| **Rural** | | | | | | | |
| | Line | People | | 397 | 591 | 886 | 1,181 |
| | Rate | Households | 162 | 15.6 | 30.9 | 55.3 | 72.7 |
| | Rate | People | | 18.5 | 37.8 | 62.8 | 78.0 |
| **All** | | | | | | | |
| | Line | People | | 397 | 591 | 886 | 1,181 |
| | Rate | Households | 436 | 14.2 | 28.6 | 51.5 | 68.6 |
| | Rate | People | | 16.7 | 34.8 | 58.2 | 73.5 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Ouaddaï): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) $1.25 | $2.00 | $2.50 | $5.00 | Intl. 2011 PPP (2011 def.) $1.90 | $3.20 | $5.50 | $21.70 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | | | | | |
| | Line | People | | 463 | 741 | 926 | 1,852 | 480 | 809 | 1,390 | 5,483 |
| | Rate | Households | 274 | 4.2 | 15.6 | 21.9 | 65.1 | 4.2 | 18.5 | 45.0 | 97.9 |
| | Rate | People | | 5.0 | 20.2 | 27.1 | 69.9 | 5.0 | 23.5 | 50.5 | 99.2 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 463 | 741 | 926 | 1,852 | 480 | 809 | 1,390 | 5,483 |
| | Rate | Households | 162 | 20.8 | 44.7 | 60.8 | 89.1 | 23.0 | 50.2 | 78.8 | 99.2 |
| | Rate | People | | 25.2 | 53.2 | 68.7 | 93.2 | 28.6 | 58.3 | 83.6 | 99.7 |
| **All** | | | | | | | | | | | |
| | Line | People | | 463 | 741 | 926 | 1,852 | 480 | 809 | 1,390 | 5,483 |
| | Rate | Households | 436 | 19.0 | 41.5 | 56.5 | 86.4 | 20.9 | 46.7 | 75.1 | 99.0 |
| | Rate | People | | 22.7 | 49.1 | 63.6 | 90.3 | 25.7 | 53.9 | 79.5 | 99.6 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Ouaddaï): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| | | | | | | Percentile-based lines (2011 def.) | | | |
| **Urban** | | | | | | | | | |
| | Line | People | | 338 | 309 | 515 | 627 | 730 | 1,125 |
| | Rate | Households | 274 | 1.8 | 1.6 | 5.3 | 11.2 | 15.6 | 32.4 |
| | Rate | People | | 2.2 | 2.1 | 6.6 | 15.4 | 20.2 | 38.5 |
| **Rural** | | | | | | | | | |
| | Line | People | | 338 | 309 | 515 | 627 | 730 | 1,125 |
| | Rate | Households | 162 | 12.8 | 11.6 | 25.4 | 33.1 | 42.7 | 71.0 |
| | Rate | People | | 15.6 | 14.7 | 31.3 | 40.6 | 50.9 | 75.6 |
| **All** | | | | | | | | | |
| | Line | People | | 338 | 309 | 515 | 627 | 730 | 1,125 |
| | Rate | Households | 436 | 11.6 | 10.5 | 23.2 | 30.7 | 39.7 | 66.7 |
| | Rate | People | | 13.9 | 13.1 | 28.2 | 37.5 | 47.1 | 71.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Salamat): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
| | | | | | National (2011 def.) | | |
| | | | | Food | 100% | 150% | 200% |
|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | |
| | Line | People | | 370 | 550 | 824 | 1,099 |
| | Rate | Households | 206 | 20.3 | 36.2 | 58.4 | 69.7 |
| | Rate | People | | 25.3 | 43.5 | 67.3 | 77.4 |
| **Rural** | | | | | | | |
| | Line | People | | 370 | 550 | 824 | 1,099 |
| | Rate | Households | 145 | 24.7 | 42.1 | 63.9 | 82.8 |
| | Rate | People | | 30.8 | 50.0 | 74.9 | 92.2 |
| **All** | | | | | | | |
| | Line | People | | 370 | 550 | 824 | 1,099 |
| | Rate | Households | 351 | 23.6 | 40.7 | 62.6 | 79.6 |
| | Rate | People | | 29.4 | 48.4 | 73.0 | 88.6 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Salamat): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | n | Poverty lines and poverty rates (%) | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 431 | 689 | 862 | 1,723 | 447 | 752 | 1,293 | 5,102 |
| | Rate | Households | 206 | 27.4 | 47.7 | 59.7 | 90.3 | 27.8 | 53.0 | 77.5 | 100.0 |
| | Rate | People | | 34.0 | 55.9 | 68.4 | 93.1 | 34.5 | 62.4 | 82.2 | 100.0 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 431 | 689 | 862 | 1,723 | 447 | 752 | 1,293 | 5,102 |
| | Rate | Households | 145 | 28.6 | 55.7 | 66.7 | 92.4 | 30.5 | 61.3 | 85.2 | 100.0 |
| | Rate | People | | 34.3 | 64.2 | 77.6 | 97.3 | 36.1 | 71.1 | 93.5 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 431 | 689 | 862 | 1,723 | 447 | 752 | 1,293 | 5,102 |
| | Rate | Households | 351 | 28.3 | 53.8 | 65.0 | 91.9 | 29.8 | 59.3 | 83.3 | 100.0 |
| | Rate | People | | 34.2 | 62.2 | 75.3 | 96.3 | 35.7 | 69.0 | 90.8 | 100.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Salamat): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 315 | 288 | 479 | 583 | 679 | 1,047 |
| | Rate | Households | 206 | 12.8 | 12.5 | 30.1 | 38.7 | 46.8 | 69.4 |
| | Rate | People | | 15.9 | 15.7 | 36.1 | 46.3 | 54.8 | 77.4 |
| **Rural** | | | | | | | | | |
| | Line | People | | 315 | 288 | 479 | 583 | 679 | 1,047 |
| | Rate | Households | 145 | 20.1 | 15.0 | 34.0 | 45.6 | 55.0 | 80.1 |
| | Rate | People | | 24.5 | 19.0 | 40.5 | 54.5 | 63.8 | 90.2 |
| **All** | | | | | | | | | |
| | Line | People | | 315 | 288 | 479 | 583 | 679 | 1,047 |
| | Rate | Households | 351 | 18.3 | 14.4 | 33.0 | 44.0 | 53.0 | 77.5 |
| | Rate | People | | 22.5 | 18.2 | 39.4 | 52.5 | 61.6 | 87.1 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Sila): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | n | Food | National (2011 def.) 100% | National (2011 def.) 150% | National (2011 def.) 200% |
|---|---|---|---|---|---|---|---|
| **Urban** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 245 | 8.6 | 17.6 | 41.1 | 61.9 |
| | Rate | People | | 11.2 | 21.5 | 49.9 | 70.7 |
| **Rural** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 166 | 17.1 | 33.0 | 61.2 | 78.2 |
| | Rate | People | | 19.3 | 38.2 | 67.2 | 82.3 |
| **All** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 411 | 16.2 | 31.5 | 59.3 | 76.6 |
| | Rate | People | | 18.6 | 36.7 | 65.6 | 81.2 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

**Table 1 (Sila): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011**

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 245 | 12.6 | 27.8 | 44.1 | 81.0 | 12.6 | 35.6 | 70.7 | 98.8 |
| | Rate | People | | 16.2 | 33.9 | 53.1 | 87.7 | 16.2 | 43.0 | 78.7 | 98.1 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 166 | 23.3 | 46.9 | 68.9 | 90.6 | 25.5 | 51.9 | 84.5 | 100.0 |
| | Rate | People | | 26.7 | 52.1 | 75.1 | 93.1 | 29.3 | 58.0 | 87.2 | 100.0 |
| **All** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 411 | 22.3 | 45.0 | 66.5 | 89.7 | 24.3 | 50.3 | 83.1 | 99.9 |
| | Rate | People | | 25.7 | 50.4 | 73.1 | 92.6 | 28.1 | 56.6 | 86.4 | 99.8 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Sila): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 245 | 5.7 | 3.9 | 14.3 | 20.6 | 26.5 | 56.1 |
| | Rate | People | | 7.1 | 4.8 | 17.9 | 25.3 | 32.7 | 64.5 |
| **Rural** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 166 | 10.5 | 8.5 | 28.0 | 35.8 | 45.2 | 77.1 |
| | Rate | People | | 11.9 | 9.7 | 32.1 | 41.1 | 50.7 | 81.4 |
| **All** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 411 | 10.0 | 8.0 | 26.7 | 34.3 | 43.4 | 75.1 |
| | Rate | People | | 11.4 | 9.3 | 30.8 | 39.7 | 49.1 | 79.9 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Tandjilé): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | n | Food | National (2011 def.) 100% | 150% | 200% |
|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | |
| | Line | People | | 384 | 570 | 856 | 1,141 |
| | Rate | Households | 235 | 12.7 | 24.2 | 50.3 | 67.5 |
| | Rate | People | | 15.1 | 26.9 | 55.1 | 72.5 |
| **Rural** | | | | | | | |
| | Line | People | | 384 | 570 | 856 | 1,141 |
| | Rate | Households | 160 | 39.2 | 60.4 | 80.9 | 90.0 |
| | Rate | People | | 44.9 | 68.7 | 84.7 | 94.3 |
| **All** | | | | | | | |
| | Line | People | | 384 | 570 | 856 | 1,141 |
| | Rate | Households | 395 | 36.5 | 56.8 | 77.9 | 87.8 |
| | Rate | People | | 42.5 | 65.3 | 82.3 | 92.5 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Tandjilé): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 447 | 716 | 894 | 1,789 | 464 | 781 | 1,342 | 5,296 |
| | Rate | Households | 235 | 18.9 | 38.4 | 52.5 | 88.8 | 19.3 | 46.4 | 74.7 | 99.7 |
| | Rate | People | | 21.2 | 43.0 | 57.1 | 89.5 | 21.8 | 51.4 | 79.0 | 99.8 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 447 | 716 | 894 | 1,789 | 464 | 781 | 1,342 | 5,296 |
| | Rate | Households | 160 | 46.7 | 73.4 | 81.8 | 95.4 | 49.4 | 76.6 | 93.1 | 99.6 |
| | Rate | People | | 54.3 | 80.1 | 86.1 | 97.3 | 56.5 | 82.2 | 95.8 | 99.7 |
| **All** | | | | | | | | | | | |
| | Line | People | | 447 | 716 | 894 | 1,789 | 464 | 781 | 1,342 | 5,296 |
| | Rate | Households | 395 | 43.9 | 69.9 | 78.9 | 94.7 | 46.4 | 73.6 | 91.3 | 99.6 |
| | Rate | People | | 51.6 | 77.1 | 83.7 | 96.7 | 53.7 | 79.7 | 94.5 | 99.7 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Tandjilé): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | *n* | Poverty lines and poverty rates (%) | | | | | |
| | | | | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) | | | | |
| | | | | | 20th | 40th | 50th | 60th | 80th |
| **Urban** | | | | | | | | | |
| | Line | People | | 327 | 299 | 498 | 605 | 705 | 1,086 |
| | Rate | Households | 235 | 10.0 | 8.1 | 21.4 | 28.2 | 35.8 | 64.3 |
| | Rate | People | | 11.5 | 9.6 | 24.4 | 31.4 | 40.6 | 69.4 |
| **Rural** | | | | | | | | | |
| | Line | People | | 327 | 299 | 498 | 605 | 705 | 1,086 |
| | Rate | Households | 160 | 32.3 | 28.9 | 52.9 | 63.7 | 72.7 | 89.4 |
| | Rate | People | | 38.4 | 34.7 | 59.4 | 72.2 | 78.9 | 94.0 |
| **All** | | | | | | | | | |
| | Line | People | | 327 | 299 | 498 | 605 | 705 | 1,086 |
| | Rate | Households | 395 | 30.1 | 26.9 | 49.7 | 60.2 | 69.1 | 86.9 |
| | Rate | People | | 36.2 | 32.6 | 56.6 | 68.9 | 75.8 | 92.0 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Wadi-Fira): National poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poverty lines and poverty rates (%) | | | |
|---|---|---|---|---|---|---|---|
| | | | | | National (2011 def.) | | |
| | | | | Food | 100% | 150% | 200% |
| **Urban** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 238 | 0.2 | 6.1 | 20.9 | 31.6 |
| | Rate | People | | 0.4 | 9.6 | 27.6 | 40.6 |
| **Rural** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 164 | 20.7 | 35.8 | 53.1 | 67.4 |
| | Rate | People | | 24.1 | 39.8 | 54.7 | 69.2 |
| **All** | | | | | | | |
| | Line | People | | 376 | 559 | 838 | 1,117 |
| | Rate | Households | 402 | 19.6 | 34.2 | 51.4 | 65.5 |
| | Rate | People | | 23.0 | 38.4 | 53.4 | 67.8 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 1 (Wadi-Fira): International 2005 and 2011 PPP poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| **Urban** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 238 | 2.5 | 13.7 | 23.3 | 58.7 | 2.9 | 16.7 | 39.4 | 93.9 |
| | Rate | People | | 4.0 | 18.4 | 29.9 | 70.1 | 4.7 | 22.3 | 50.8 | 97.2 |
| **Rural** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 164 | 25.5 | 45.5 | 55.2 | 81.3 | 28.3 | 47.1 | 74.9 | 98.3 |
| | Rate | People | | 29.4 | 48.4 | 57.9 | 83.6 | 32.0 | 49.9 | 76.9 | 99.4 |
| **All** | | | | | | | | | | | |
| | Line | People | | 438 | 701 | 876 | 1,752 | 454 | 765 | 1,315 | 5,187 |
| | Rate | Households | 402 | 24.3 | 43.8 | 53.6 | 80.1 | 26.9 | 45.5 | 73.0 | 98.1 |
| | Rate | People | | 28.2 | 47.0 | 56.6 | 83.0 | 30.7 | 48.5 | 75.7 | 99.3 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

# Table 1 (Wadi-Fira): Relative and percentile-based poverty lines and poverty rates for households and people by urban/rural/all in 2011

| Area | Line or Rate | Households or People | $n$ | Poorest 1/2 < 100% Natl. | Percentile-based lines (2011 def.) 20th | 40th | 50th | 60th | 80th |
|------|------|------|------|------|------|------|------|------|------|
| **Urban** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 238 | 0.0 | 0.0 | 5.2 | 8.6 | 13.0 | 28.7 |
| | Rate | People | | 0.0 | 0.0 | 8.5 | 11.9 | 17.6 | 37.6 |
| **Rural** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 164 | 14.7 | 11.4 | 30.4 | 38.9 | 44.8 | 66.3 |
| | Rate | People | | 16.7 | 11.9 | 34.4 | 42.0 | 48.2 | 68.1 |
| **All** | | | | | | | | | |
| | Line | People | | 320 | 293 | 487 | 593 | 690 | 1,064 |
| | Rate | Households | 402 | 13.9 | 10.8 | 29.1 | 37.3 | 43.2 | 64.3 |
| | Rate | People | | 15.9 | 11.3 | 33.2 | 40.6 | 46.7 | 66.6 |

Source: 2011 ECOSIT

Poverty rates are percentages.

Poverty lines are XAF per-person per-day.

Poverty lines are XAF in prices in N'Djaména in June and July 2011.

## Table 2: Poverty indicators

| Uncertainty coefficient | Indicator (Responses ordered starting with those linked with higher poverty likelihoods) |
|---|---|
| 641 | How many household members are there? (Nine or more; Eight; Seven; Six; Five; Four; Three; Two; One) |
| 494 | How many household members are 18-years-old or younger? (Six or more; Five; Four; Three; Two; One; None) |
| 487 | How many household members are 17-years-old or younger? (Six or more; Five; Four; Three; Two; One; None) |
| 483 | What is the main source of drinking water in the dry season? (Traditional well, or stagnant surface water; Borehole, or running surface water; Public standpipe, or other; Water truck/cart, or private faucet (inside or outside)) |
| 481 | How many household members are 16-years-old or younger? (Five or more; Four; Three; Two; One; None) |
| 480 | How many household members are 15-years-old or younger? (Five or more; Four; Three; Two; One; None) |
| 454 | Did all household members ages 7 to 13 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 13) |
| 453 | Did all household members ages 7 to 14 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 14) |
| 451 | How many household members 6-years-old or older worked at least one hour in the past 7 days and were in their main occupation a farmer, livestock-raiser, or fisherman? (Three or more; Two; One; None) |
| 449 | How many household members are 14-years-old or younger? (Five or more; Four; Three; Two; One; None) |
| 444 | Did all household members ages 7 to 15 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 15) |
| 436 | Did all household members ages 7 to 12 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 12) |
| 430 | How many household members are 13-years-old or younger? (Five or more; Four; Three; Two; One; None) |
| 425 | How many household members are 12-years-old or younger? (Five or more; Four; Three; Two; One; None) |

## Table 2 (cont.): Poverty indicators

| Uncertainty coefficient | Indicator (Responses ordered starting with those linked with higher poverty likelihoods) |
|---|---|
| 411 | Did all household members ages 7 to 16 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 16) |
| 410 | Did all household members ages 7 to 17 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 17) |
| 398 | Did all household members ages 7 to 11 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 11) |
| 381 | Did all household members ages 7 to 18 go to a school (public or private) at the start of the current school year? (No; Yes, all public; Yes, at least one private; No one ages 7 to 18) |
| 378 | How many cell phones does the household have in good working order? (None; One; Two) |
| 372 | In the past 12 months, did your household do any farming? (Yes; No) |
| 367 | How many household members are 11-years-old or younger? (Four or more; Three; Two; One; None) |
| 365 | What is the main construction material of the roof? (*Observe and record.*) (Straw/reeds, or other; Packed earth, sheet metal/tile, or reinforced concrete) |
| 345 | Did all household members ages 7 to 13 go to school at the start of the current school year? (No; Yes; No members 7 to 13) |
| 342 | Did all household members ages 7 to 15 go to school at the start of the current school year? (No; Yes; No members 7 to 15) |
| 341 | Did all household members ages 7 to 14 go to school at the start of the current school year? (No; Yes; No members 7 to 14) |
| 341 | If the male head/spouse worked at least 1 hour in the past week, then was his job, occupation, profession, or type of work in farming, animal husbandry, or fishing? (Works in farming, animal husbandry, or fishing; Does not work; No male head/spouse; Works in something other than farming, animal husbandry, or fishing) |
| 328 | Did all household members ages 7 to 12 go to school at the start of the current school year? (No; Yes; No members 7 to 12) |

## Table 2 (cont.): Poverty indicators

| Uncertainty coefficient | Indicator (Responses ordered starting with those linked with higher poverty likelihoods) |
|---|---|
| 317 | Does the household have a latrine or flush toilet? (No; Yes) |
| 305 | Did all household members ages 7 to 16 go to school at the start of the current school year? (No; Yes; No members 7 to 16) |
| 302 | Did all household members ages 7 to 17 go to school at the start of the current school year? (No; Yes; No members 7 to 17) |
| 285 | Did all household members ages 7 to 18 go to school at the start of the current school year? (No; Yes; No members 7 to 18) |
| 282 | If the male head/spouse worked at least one hour in the past week, then what was his status in his main occupation? (Family worker; Self-employed, apprentice, or other; Does not work; No male head/spouse; Semi-skilled worker, day laborer, or business owner; Executive, professional, or para-professional, middle manager, or white-collar worker, or skilled worker) |
| 281 | Did all household members ages 7 to 11 go to school at the start of the current school year? (No; Yes; No members 7 to 11) |
| 265 | What is the household's tenancy status in its residence? (Owner, or housed by employer; Housed for free; Renter) |
| 262 | How many household members six-years-old or older worked for at least 1 hour in the past 7 days and, in their main occupation, were day labourers, unpaid family workers, or unpaid interns/apprentices? (Three or more; Two; One; None) |
| 260 | What is the highest grade that the male head/spouse has passed? (Never went to school/none; No male head/spouse; CP, CP2, CE1, CE2, or CM1; CM2, $6^{\text{ème}}$, $5^{\text{ème}}$, $4^{\text{ème}}$, $3^{\text{ème}}$, $2^{\text{nde}}$, Koranic, or other; $1^{\text{ère}}$, terminale, EP1, EP2, EP3, or post-secondary) |
| 256 | How many household members are 6-years-old or younger? (Three or more; Two; One;  None) |
| 241 | Does the household have a wardrobe or dresser in good working order? (No; Yes) |
| 235 | How many household members 6-years-old or older worked at least one hour in the past 7 days? (Four or more; Three; Two; One; None) |

## Table 2 (cont.): Poverty indicators

| Uncertainty coefficient | Indicator (Responses ordered starting with those linked with higher poverty likelihoods) |
|---|---|
| 218 | In what type of residence does the household live? (Detached rural house, or other; Compound; House with multiple residences, apartment building, or modern detached house) |
| 211 | Does the household have a TV in good working order? (No; Yes) |
| 208 | What is the main construction material of the floor? (Dirt, or other; Cement, tile, or reinforced concrete) |
| 187 | Does the household have a radio, radio-K7, or a car radio in good working order? (No; Yes) |
| 183 | What is the highest diploma that the (eldest) female head/spouse has received? (Never went to school/none; No female head/spouse; CP, CP2, CE1, CE2, CM1, Koranic, or other; CM2, $6^{ème}$, $5^{ème}$, $4^{ème}$, $3^{ème}$, $2^{nde}$, $1^{ère}$, terminale, EP1, EP2, EP3, or post-secondary) |
| 175 | What is the household's main source of lighting? (Other; Flashlight; Kerosene lamp; Electricity (STEE, generator, or solar panel)) |
| 162 | How many household members 6-years-old or older worked at least 1 hour in the past 7 days and were, in their main occupation, an executive, professional, para-professional, middle manager, employee, or a business owner? (None; One or more) |
| 159 | If the (eldest) female head/spouse worked at least 1 hour in the past week, then was her job, occupation, profession, or type of work in farming, animal husbandry, or fishing? (Works in farming, animal husbandry, or fishing; Does not work; No female head/spouse; Works in something other than farming, animal husbandry, or fishing) |
| 156 | Does the household have a bicycle, motorcycle/scooter, or an automobile, business vehicle (taxi, minibus), or truck in good working order? (None; Only bicycle; Motorcycle/scooter, automobile, business vehicle (taxi, minibus), or truck (regardless of bicycle)) |
| 149 | Does the household have an iron in good working order? (No; Yes) |
| 146 | What is the main construction material of the walls? (Other; Straw; Packed earth/adobe; Packed earth/adobe with a cement veneer; Cinder blocks) |
| 137 | Does the household have a motorcycle or scooter in good working order? (No; Yes) |
| 128 | Does the household have a usable bed? (No; Yes) |

# Table 2 (cont.): Poverty indicators

| Uncertainty coefficient | Indicator (Responses ordered starting with those linked with higher poverty likelihoods) |
|---|---|
| 112 | How many rooms does the household use for sleeping? (Five or more; Four; Three; Two; One; None) |
| 101 | Can the (eldest) female head/spouse read and write a simple sentence in any language? (No; No female head/spouse; Yes) |
| 96 | If the (eldest) female head/spouse worked at least one hour in the past week, then what was her status in her main occupation? (Family worker, self-employed, day laborer, apprentice, business owner, or other; Does not work; No female head/spouse; Executive, professional, or para-professional, middle manager, or white-collar worker, skilled worker, or semi-skilled worker) |
| 94 | Does the household have a latrine or flush toilet? (No; Yes) |
| 91 | How many mortar and pestles does the household have in good working order? (Four or more; Three; Two; One; None) |
| 91 | How many living rooms and dining rooms does the household use? (None; One or more) |
| 83 | How many chairs, benchs, or stools does the household have in good working order? (None; One; Two; Three; Four or more) |
| 81 | In the past 12 months, did your household keep any livestock as sedentary or nomadic herders? (No; Yes (sedentary); Yes (nomadic)) |
| 78 | How many living rooms, dining rooms, and bedrooms does the household use? (Five or more; Four; Three; Two; One; None) |
| 78 | What is the household's main cooking fuel? (Wood, or other; Charcoal, LPG, kerosene, or electricity) |
| 66 | Did the (eldest) female head/spouse work at least 1 hour in the past 7 days? (Yes; No; No female head/spouse) |
| 64 | Can the male head/spouse read and write a simple sentence in some language? (No; Yes, only French; No male head/spouse; Yes, some non-French language (regardless of French)) |
| 62 | In the past 7 days, did the male head/spouse or the (eldest) female head/spouse work at least 1 hour and have his/her main occupation in self-employment in a non-agricultural activity? (No; Yes) |

## Table 2 (cont.): Poverty indicators

| Uncertainty coefficient | Indicator (Responses ordered starting with those linked with higher poverty likelihoods) |
|---|---|
| 56 | Does the household head have a spouse/conjugal partner? (Yes; Female head without a spouse/conjugal partner; Male head without a spouse/conjugal partner) |
| 51 | How many tables does the household have in good working order? (Three or more; Two; One; None) |
| 40 | Does the household have a trunk in good working order? (No; Yes) |
| 37 | Is there a room that is used for cooking? (No; Yes (inside); Yes (outside)) |
| 33 | Does the household have an automobile, a business vehicle (taxi, minibus), or truck in good working order? (No; Yes) |
| 29 | Did the male head/spouse work at least 1 hour in the past 7 days? (No; Yes; No male head/spouse) |
| 27 | Does the household have an armchair or sofa in good working order? (No; Yes) |
| 11 | Does the household have non-agricultural land? (Yes; No) |
| 6 | Does the household have a bicycle in good working order? (No; Yes) |
| 4 | Does the household have an second residence? (No; Yes) |
| 0 | Does the household have a cart or rickshaw in good working order? (No; Yes) |

Source: 2011 ECOSIT with 100% of the national poverty line

# Tables for
# 100% of the National Poverty Line

# (and Tables Pertaining
# to All Poverty Lines)

# Table 3 (100% of the national line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 78.1 |
| 13–17 | 71.7 |
| 18–20 | 60.3 |
| 21–22 | 52.5 |
| 23–25 | 47.6 |
| 26–27 | 47.6 |
| 28–29 | 47.6 |
| 30–31 | 47.6 |
| 32–33 | 37.7 |
| 34–35 | 29.9 |
| 36–37 | 29.9 |
| 38–40 | 28.8 |
| 41–43 | 23.5 |
| 44–47 | 17.8 |
| 48–52 | 16.1 |
| 53–60 | 14.1 |
| 61–100 | 5.2 |

# Table 4 (100% of the national line): Derivation of estimated poverty likelihoods

| Score | Households in range and < poverty line | | All households in range | | Poverty likelihood (%) |
|---|---|---|---|---|---|
| 0–12 | 7,158 | ÷ | 9,162 | = | 78.1 |
| 13–17 | 9,016 | ÷ | 12,567 | = | 71.7 |
| 18–20 | 6,522 | ÷ | 10,813 | = | 60.3 |
| 21–22 | 4,023 | ÷ | 7,657 | = | 52.5 |
| 23–25 | 5,511 | ÷ | 11,571 | = | 47.6 |
| 26–27 | 4,030 | ÷ | 8,462 | = | 47.6 |
| 28–29 | 4,184 | ÷ | 8,784 | = | 47.6 |
| 30–31 | 3,522 | ÷ | 7,396 | = | 47.6 |
| 32–33 | 2,806 | ÷ | 7,445 | = | 37.7 |
| 34–35 | 1,963 | ÷ | 6,556 | = | 29.9 |
| 36–37 | 1,877 | ÷ | 6,269 | = | 29.9 |
| 38–40 | 2,389 | ÷ | 8,307 | = | 28.8 |
| 41–43 | 2,105 | ÷ | 8,938 | = | 23.5 |
| 44–47 | 1,622 | ÷ | 9,104 | = | 17.8 |
| 48–52 | 1,295 | ÷ | 8,030 | = | 16.1 |
| 53–60 | 1,073 | ÷ | 7,631 | = | 14.1 |
| 61–100 | 595 | ÷ | 11,354 | = | 5.2 |

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

# Table 5 (100% of the national line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| Score | Error | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | −14.1 | 7.8 | 7.9 | 8.2 |
| 13–17 | −5.0 | 3.6 | 3.8 | 4.1 |
| 18–20 | +6.9 | 2.8 | 3.4 | 4.5 |
| 21–22 | −3.4 | 3.2 | 3.6 | 4.6 |
| 23–25 | −6.6 | 4.7 | 5.0 | 5.6 |
| 26–27 | −2.9 | 3.3 | 4.1 | 5.4 |
| 28–29 | +9.1 | 3.0 | 3.7 | 4.9 |
| 30–31 | +15.4 | 2.5 | 3.1 | 4.4 |
| 32–33 | +8.8 | 2.8 | 3.4 | 4.5 |
| 34–35 | +6.5 | 2.9 | 3.4 | 4.5 |
| 36–37 | −0.5 | 2.6 | 3.1 | 4.3 |
| 38–40 | +5.7 | 2.5 | 3.1 | 4.1 |
| 41–43 | −5.7 | 4.3 | 4.6 | 5.1 |
| 44–47 | −11.3 | 7.1 | 7.5 | 8.3 |
| 48–52 | −6.3 | 4.6 | 5.0 | 5.5 |
| 53–60 | +1.1 | 2.5 | 3.2 | 4.5 |
| 61–100 | −0.1 | 1.4 | 1.7 | 2.1 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (100% of the national line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|:---:|:---:|:---:|:---:|:---:|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | −1.7 | 64.5 | 71.3 | 82.0 |
| 4 | −0.9 | 44.3 | 50.7 | 59.0 |
| 8 | +0.3 | 32.6 | 38.5 | 46.8 |
| 16 | +0.3 | 22.9 | 26.7 | 35.8 |
| 32 | +0.1 | 16.6 | 19.6 | 25.4 |
| 64 | 0.0 | 11.3 | 13.9 | 19.0 |
| 128 | 0.0 | 7.9 | 9.4 | 13.3 |
| 256 | 0.0 | 5.8 | 6.7 | 9.0 |
| 512 | 0.0 | 4.1 | 5.0 | 6.3 |
| 1,024 | −0.1 | 2.7 | 3.3 | 4.0 |
| 2,048 | −0.1 | 2.0 | 2.4 | 3.1 |
| 4,096 | −0.1 | 1.5 | 1.6 | 2.2 |
| 8,192 | −0.1 | 1.0 | 1.2 | 1.6 |
| 16,384 | −0.1 | 0.7 | 0.9 | 1.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 7 (National lines): Errors in households' poverty rates at a point in time, precision, and the α factor for precision

| | Poverty lines | | | |
| | National (2011 def.) | | | |
| | Food | 100% | 150% | 200% |
|---|---|---|---|---|
| Error (estimate minus observed value) | –0.7 | –0.1 | –0.9 | –1.8 |
| Precision of estimate | 0.6 | 0.7 | 0.7 | 0.5 |
| Alpha factor for precision | 1.14 | 1.14 | 1.11 | 0.96 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

Errors (differences between estimates and observed values) are in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of ± percentage points.

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

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

# Table 7 (International 2005 and 2011 PPP lines): Errors in households' poverty rates at a point in time, precision, and the α factor for precision

| | Poverty lines | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Intl. 2005 PPP (2011 def.) | | | | Intl. 2011 PPP (2011 def.) | | | |
| | $1.25 | $2.00 | $2.50 | $5.00 | $1.90 | $3.20 | $5.50 | $21.70 |
| Error (estimate minus observed value) | −0.6 | −1.1 | −2.0 | 0.0 | −0.1 | +0.7 | −1.1 | +0.1 |
| Precision of estimate | 0.7 | 0.7 | 0.7 | 0.4 | 0.6 | 0.7 | 0.5 | 0.1 |
| Alpha factor for precision | 1.12 | 1.14 | 1.09 | 0.92 | 1.11 | 1.14 | 0.94 | 1.07 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

Errors (differences between estimates and observed values) are in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of ± percentage points.

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

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

# Table 7 (Relative and percentile-based lines): Errors in households' poverty rates at a point in time, precision, and the α factor for precision

| | Poorest 1/2 | Percentile-based lines (2011 def.) | | | | |
| | < 100% Natl. | 20th | 40th | 50th | 60th | 80th |
|---|---|---|---|---|---|---|
| Error (estimate minus observed value) | +0.6 | −0.1 | +0.3 | −0.3 | −0.7 | −2.0 |
| Precision of estimate | 0.6 | 0.5 | 0.7 | 0.7 | 0.7 | 0.5 |
| Alpha factor for precision | 1.16 | 1.18 | 1.09 | 1.11 | 1.12 | 0.97 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

Errors (differences between estimates and observed values) are in units of percentage points.

Precision is measured as 90-percent confidence intervals in units of ± percentage points.

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

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

## Table 8 (All poverty lines): Possible targeting outcomes

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

# Table 9 (100% of the national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 4.9 | 35.3 | 0.6 | 59.2 | 64.1 | −74.2 |
| <=17 | 11.4 | 28.8 | 2.5 | 57.2 | 68.6 | −37.1 |
| <=20 | 14.9 | 25.3 | 5.5 | 54.3 | 69.2 | −12.4 |
| <=22 | 17.9 | 22.3 | 8.0 | 51.8 | 69.7 | +8.8 |
| <=25 | 21.6 | 18.7 | 11.0 | 48.8 | 70.3 | +34.5 |
| <=27 | 24.3 | 15.9 | 13.4 | 46.4 | 70.7 | +54.1 |
| <=29 | 26.6 | 13.7 | 16.2 | 43.6 | 70.2 | +59.8 |
| <=31 | 28.6 | 11.7 | 20.2 | 39.6 | 68.2 | +49.9 |
| <=33 | 30.2 | 10.0 | 24.1 | 35.7 | 65.9 | +40.2 |
| <=35 | 31.5 | 8.7 | 27.6 | 32.2 | 63.7 | +31.4 |
| <=37 | 33.4 | 6.8 | 31.8 | 28.0 | 61.4 | +20.9 |
| <=40 | 35.0 | 5.2 | 36.0 | 23.8 | 58.8 | +10.6 |
| <=43 | 36.7 | 3.6 | 40.1 | 19.6 | 56.3 | +0.2 |
| <=47 | 38.2 | 2.0 | 44.7 | 15.1 | 53.3 | −11.0 |
| <=52 | 39.2 | 1.0 | 49.1 | 10.7 | 49.9 | −21.9 |
| <=60 | 39.9 | 0.4 | 53.5 | 6.3 | 46.2 | −33.0 |
| <=100 | 40.2 | 0.0 | 59.8 | 0.0 | 40.2 | −48.6 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 (100% of the national line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 89.6 | 12.2 | 8.6:1 |
| <=17 | 13.9 | 81.8 | 28.3 | 4.5:1 |
| <=20 | 20.4 | 73.1 | 37.0 | 2.7:1 |
| <=22 | 25.9 | 69.2 | 44.5 | 2.2:1 |
| <=25 | 32.6 | 66.2 | 53.6 | 2.0:1 |
| <=27 | 37.7 | 64.5 | 60.4 | 1.8:1 |
| <=29 | 42.7 | 62.2 | 66.0 | 1.6:1 |
| <=31 | 48.7 | 58.6 | 71.0 | 1.4:1 |
| <=33 | 54.3 | 55.7 | 75.1 | 1.3:1 |
| <=35 | 59.1 | 53.3 | 78.3 | 1.1:1 |
| <=37 | 65.2 | 51.2 | 83.1 | 1.1:1 |
| <=40 | 71.0 | 49.3 | 87.0 | 1.0:1 |
| <=43 | 76.8 | 47.7 | 91.1 | 0.9:1 |
| <=47 | 82.9 | 46.1 | 95.1 | 0.9:1 |
| <=52 | 88.2 | 44.4 | 97.4 | 0.8:1 |
| <=60 | 93.4 | 42.7 | 99.1 | 0.7:1 |
| <=100 | 100.0 | 40.2 | 100.0 | 0.7:1 |

Scorecard applied to the validation sample.

# Tables for the Food Poverty Line

## Table 3 (Food line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 62.7 |
| 13–17 | 47.0 |
| 18–20 | 38.1 |
| 21–22 | 32.2 |
| 23–25 | 26.9 |
| 26–27 | 26.9 |
| 28–29 | 26.9 |
| 30–31 | 22.4 |
| 32–33 | 18.3 |
| 34–35 | 17.6 |
| 36–37 | 16.9 |
| 38–40 | 15.9 |
| 41–43 | 10.8 |
| 44–47 | 8.7 |
| 48–52 | 7.1 |
| 53–60 | 7.1 |
| 61–100 | 2.1 |

# Table 5 (Food line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| **Score** | **Error** | **90-percent** | **95-percent** | **99-percent** |
| 0–12 | −13.9 | 8.1 | 8.3 | 8.9 |
| 13–17 | −11.6 | 7.1 | 7.3 | 7.9 |
| 18–20 | +7.6 | 2.6 | 3.1 | 3.9 |
| 21–22 | +3.5 | 2.8 | 3.3 | 4.2 |
| 23–25 | +0.2 | 2.6 | 3.0 | 4.0 |
| 26–27 | +0.9 | 2.8 | 3.3 | 4.3 |
| 28–29 | +8.6 | 2.4 | 2.7 | 3.5 |
| 30–31 | +3.5 | 2.2 | 2.6 | 3.8 |
| 32–33 | +2.3 | 2.3 | 2.6 | 3.5 |
| 34–35 | +0.7 | 2.6 | 3.1 | 4.1 |
| 36–37 | +0.7 | 2.4 | 2.7 | 3.5 |
| 38–40 | −1.6 | 2.4 | 2.9 | 3.8 |
| 41–43 | −1.4 | 1.8 | 2.1 | 2.8 |
| 44–47 | −13.5 | 8.2 | 8.5 | 9.1 |
| 48–52 | +1.7 | 1.5 | 1.7 | 2.2 |
| 53–60 | +5.4 | 0.6 | 0.7 | 0.9 |
| 61–100 | +0.1 | 1.0 | 1.2 | 1.5 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (Food line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | −1.0 | 62.1 | 65.5 | 77.0 |
| 4 | −1.5 | 39.3 | 45.4 | 53.5 |
| 8 | −0.5 | 27.9 | 32.5 | 40.6 |
| 16 | −0.4 | 20.3 | 24.0 | 30.0 |
| 32 | −0.5 | 14.5 | 17.4 | 24.5 |
| 64 | −0.6 | 10.0 | 12.7 | 16.0 |
| 128 | −0.6 | 7.0 | 8.4 | 10.7 |
| 256 | −0.7 | 5.1 | 5.7 | 7.1 |
| 512 | −0.6 | 3.6 | 4.2 | 5.3 |
| 1,024 | −0.7 | 2.4 | 2.8 | 3.7 |
| 2,048 | −0.7 | 1.7 | 2.0 | 2.6 |
| 4,096 | −0.7 | 1.2 | 1.4 | 1.9 |
| 8,192 | −0.7 | 0.9 | 1.1 | 1.3 |
| 16,384 | −0.7 | 0.6 | 0.8 | 0.9 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (Food line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 3.9 | 20.4 | 1.6 | 74.1 | 78.0 | −61.5 |
| <=17 | 8.6 | 15.8 | 5.4 | 70.3 | 78.9 | −7.6 |
| <=20 | 10.9 | 13.5 | 9.5 | 66.2 | 77.0 | +28.4 |
| <=22 | 12.4 | 11.9 | 13.4 | 62.2 | 74.7 | +44.8 |
| <=25 | 14.4 | 9.9 | 18.1 | 57.5 | 72.0 | +25.5 |
| <=27 | 16.0 | 8.3 | 21.7 | 54.0 | 70.0 | +10.8 |
| <=29 | 17.1 | 7.2 | 25.6 | 50.1 | 67.2 | −5.2 |
| <=31 | 18.2 | 6.1 | 30.5 | 45.2 | 63.4 | −25.4 |
| <=33 | 19.1 | 5.2 | 35.2 | 40.5 | 59.6 | −44.5 |
| <=35 | 19.9 | 4.4 | 39.2 | 36.5 | 56.4 | −61.0 |
| <=37 | 20.7 | 3.6 | 44.5 | 31.2 | 51.9 | −82.9 |
| <=40 | 21.8 | 2.5 | 49.2 | 26.5 | 48.3 | −102.1 |
| <=43 | 22.7 | 1.6 | 54.1 | 21.6 | 44.3 | −122.2 |
| <=47 | 23.7 | 0.6 | 59.2 | 16.5 | 40.2 | −143.2 |
| <=52 | 24.0 | 0.3 | 64.2 | 11.5 | 35.5 | −163.8 |
| <=60 | 24.2 | 0.1 | 69.1 | 6.5 | 30.7 | −184.1 |
| <=100 | 24.3 | 0.0 | 75.7 | 0.0 | 24.3 | −210.9 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 (Food line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 71.4 | 16.0 | 2.5:1 |
| <=17 | 13.9 | 61.5 | 35.2 | 1.6:1 |
| <=20 | 20.4 | 53.4 | 44.7 | 1.1:1 |
| <=22 | 25.9 | 48.0 | 51.1 | 0.9:1 |
| <=25 | 32.6 | 44.3 | 59.3 | 0.8:1 |
| <=27 | 37.7 | 42.4 | 65.7 | 0.7:1 |
| <=29 | 42.7 | 40.1 | 70.3 | 0.7:1 |
| <=31 | 48.7 | 37.4 | 74.8 | 0.6:1 |
| <=33 | 54.3 | 35.2 | 78.5 | 0.5:1 |
| <=35 | 59.1 | 33.7 | 81.9 | 0.5:1 |
| <=37 | 65.2 | 31.8 | 85.2 | 0.5:1 |
| <=40 | 71.0 | 30.7 | 89.6 | 0.4:1 |
| <=43 | 76.8 | 29.6 | 93.4 | 0.4:1 |
| <=47 | 82.9 | 28.6 | 97.6 | 0.4:1 |
| <=52 | 88.2 | 27.2 | 98.8 | 0.4:1 |
| <=60 | 93.4 | 25.9 | 99.5 | 0.4:1 |
| <=100 | 100.0 | 24.3 | 100.0 | 0.3:1 |

Scorecard applied to the validation sample.

# Tables for the 150% of the National Poverty Line

## Table 3 (150% of national line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
| --- | --- |
| 0–12 | 93.6 |
| 13–17 | 89.1 |
| 18–20 | 79.6 |
| 21–22 | 75.8 |
| 23–25 | 74.6 |
| 26–27 | 74.2 |
| 28–29 | 69.4 |
| 30–31 | 69.4 |
| 32–33 | 67.7 |
| 34–35 | 61.1 |
| 36–37 | 61.1 |
| 38–40 | 61.1 |
| 41–43 | 50.2 |
| 44–47 | 43.4 |
| 48–52 | 37.7 |
| 53–60 | 30.9 |
| 61–100 | 16.8 |

# Table 5 (150% of national line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | −1.0 | 1.3 | 1.5 | 1.9 |
| 13–17 | −2.5 | 1.9 | 2.0 | 2.3 |
| 18–20 | −5.1 | 3.6 | 3.8 | 4.5 |
| 21–22 | −4.8 | 3.6 | 3.7 | 4.2 |
| 23–25 | +2.9 | 2.7 | 3.1 | 4.0 |
| 26–27 | +1.6 | 3.0 | 3.5 | 4.9 |
| 28–29 | −2.2 | 3.0 | 3.6 | 4.7 |
| 30–31 | +16.8 | 2.9 | 3.4 | 4.6 |
| 32–33 | +14.0 | 3.1 | 3.7 | 5.3 |
| 34–35 | −6.4 | 4.9 | 5.1 | 5.7 |
| 36–37 | −12.4 | 7.4 | 7.5 | 8.0 |
| 38–40 | +16.9 | 3.0 | 3.6 | 4.8 |
| 41–43 | −11.8 | 7.5 | 7.8 | 8.2 |
| 44–47 | −15.7 | 9.6 | 9.8 | 10.5 |
| 48–52 | +6.5 | 3.2 | 4.0 | 4.9 |
| 53–60 | −3.1 | 4.1 | 5.1 | 6.7 |
| 61–100 | −15.0 | 9.8 | 10.5 | 11.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (150% of national line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | +0.4 | 65.6 | 72.4 | 87.3 |
| 4 | −1.5 | 41.8 | 49.9 | 59.3 |
| 8 | −1.1 | 30.1 | 35.1 | 44.7 |
| 16 | −0.9 | 21.5 | 24.8 | 32.9 |
| 32 | −1.0 | 15.8 | 18.6 | 24.1 |
| 64 | −0.7 | 10.7 | 13.6 | 17.8 |
| 128 | −0.7 | 7.7 | 9.1 | 11.8 |
| 256 | −0.8 | 5.5 | 6.4 | 8.2 |
| 512 | −0.8 | 3.9 | 4.8 | 6.0 |
| 1,024 | −0.9 | 2.7 | 3.1 | 4.2 |
| 2,048 | −0.9 | 1.9 | 2.2 | 3.1 |
| 4,096 | −0.9 | 1.4 | 1.6 | 2.2 |
| 8,192 | −0.9 | 1.0 | 1.2 | 1.5 |
| 16,384 | −0.9 | 0.7 | 0.8 | 1.1 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (150% of national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.1 | 57.2 | 0.3 | 37.3 | 42.5 | −83.0 |
| <=17 | 12.8 | 49.5 | 1.1 | 36.6 | 49.4 | −57.1 |
| <=20 | 18.1 | 44.2 | 2.2 | 35.5 | 53.6 | −38.2 |
| <=22 | 22.5 | 39.8 | 3.3 | 34.4 | 56.9 | −22.3 |
| <=25 | 27.4 | 34.9 | 5.2 | 32.5 | 59.9 | −3.8 |
| <=27 | 31.2 | 31.1 | 6.5 | 31.2 | 62.4 | +10.5 |
| <=29 | 34.8 | 27.5 | 7.9 | 29.8 | 64.5 | +24.4 |
| <=31 | 38.1 | 24.2 | 10.6 | 27.1 | 65.2 | +39.3 |
| <=33 | 41.3 | 21.0 | 13.0 | 24.7 | 66.0 | +53.4 |
| <=35 | 44.6 | 17.7 | 14.5 | 23.2 | 67.8 | +66.4 |
| <=37 | 48.7 | 13.6 | 16.5 | 21.2 | 69.9 | +73.5 |
| <=40 | 51.6 | 10.7 | 19.4 | 18.3 | 69.9 | +68.9 |
| <=43 | 54.9 | 7.5 | 21.9 | 15.7 | 70.6 | +64.8 |
| <=47 | 58.0 | 4.3 | 24.9 | 12.8 | 70.9 | +60.1 |
| <=52 | 59.8 | 2.5 | 28.4 | 9.2 | 69.1 | +54.4 |
| <=60 | 61.2 | 1.1 | 32.1 | 5.6 | 66.8 | +48.5 |
| <=100 | 62.3 | 0.0 | 37.7 | 0.0 | 62.3 | +39.5 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 (150% of national line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 93.7 | 8.2 | 15.0:1 |
| <=17 | 13.9 | 92.2 | 20.6 | 11.8:1 |
| <=20 | 20.4 | 89.1 | 29.1 | 8.2:1 |
| <=22 | 25.9 | 87.2 | 36.2 | 6.8:1 |
| <=25 | 32.6 | 84.1 | 44.0 | 5.3:1 |
| <=27 | 37.7 | 82.8 | 50.1 | 4.8:1 |
| <=29 | 42.7 | 81.4 | 55.8 | 4.4:1 |
| <=31 | 48.7 | 78.2 | 61.2 | 3.6:1 |
| <=33 | 54.3 | 76.1 | 66.3 | 3.2:1 |
| <=35 | 59.1 | 75.5 | 71.5 | 3.1:1 |
| <=37 | 65.2 | 74.7 | 78.2 | 3.0:1 |
| <=40 | 71.0 | 72.7 | 82.8 | 2.7:1 |
| <=43 | 76.8 | 71.4 | 88.0 | 2.5:1 |
| <=47 | 82.9 | 70.0 | 93.1 | 2.3:1 |
| <=52 | 88.2 | 67.8 | 96.0 | 2.1:1 |
| <=60 | 93.4 | 65.6 | 98.3 | 1.9:1 |
| <=100 | 100.0 | 62.3 | 100.0 | 1.7:1 |

Scorecard applied to the validation sample.

# Tables for 200% of the National Poverty Line

# Table 3 (200% of the national line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 97.0 |
| 13–17 | 93.9 |
| 18–20 | 89.6 |
| 21–22 | 87.3 |
| 23–25 | 87.0 |
| 26–27 | 87.0 |
| 28–29 | 82.6 |
| 30–31 | 82.6 |
| 32–33 | 82.6 |
| 34–35 | 79.2 |
| 36–37 | 77.3 |
| 38–40 | 77.3 |
| 41–43 | 71.6 |
| 44–47 | 60.0 |
| 48–52 | 55.4 |
| 53–60 | 48.0 |
| 61–100 | 28.7 |

**Table 5 (200% of the national line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals**

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | –0.2 | 1.1 | 1.3 | 1.6 |
| 13–17 | –0.8 | 1.0 | 1.2 | 1.7 |
| 18–20 | +1.8 | 1.9 | 2.2 | 3.1 |
| 21–22 | –10.5 | 5.7 | 5.7 | 5.9 |
| 23–25 | –8.8 | 4.7 | 4.8 | 5.0 |
| 26–27 | –3.4 | 2.6 | 2.7 | 3.0 |
| 28–29 | –4.9 | 3.4 | 3.5 | 3.9 |
| 30–31 | +7.7 | 2.4 | 2.8 | 3.9 |
| 32–33 | +10.4 | 2.8 | 3.4 | 4.4 |
| 34–35 | –11.5 | 6.5 | 6.6 | 7.0 |
| 36–37 | –13.5 | 7.4 | 7.6 | 7.8 |
| 38–40 | +13.0 | 3.2 | 3.9 | 4.9 |
| 41–43 | –8.2 | 5.2 | 5.4 | 5.8 |
| 44–47 | –9.5 | 6.2 | 6.6 | 7.0 |
| 48–52 | +20.8 | 3.2 | 3.9 | 5.0 |
| 53–60 | +4.0 | 4.3 | 5.3 | 7.3 |
| 61–100 | –14.7 | 9.6 | 9.9 | 10.9 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (200% of the national line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | −0.6 | 63.6 | 67.3 | 81.6 |
| 4 | −1.6 | 33.9 | 40.8 | 52.0 |
| 8 | −1.8 | 23.4 | 27.8 | 39.3 |
| 16 | −1.9 | 16.8 | 19.2 | 25.8 |
| 32 | −2.0 | 11.9 | 14.0 | 19.2 |
| 64 | −1.9 | 8.2 | 10.0 | 13.4 |
| 128 | −1.9 | 5.6 | 7.0 | 9.2 |
| 256 | −1.9 | 4.1 | 4.7 | 6.1 |
| 512 | −1.9 | 3.1 | 3.6 | 4.7 |
| 1,024 | −1.9 | 2.1 | 2.4 | 3.2 |
| 2,048 | −1.8 | 1.5 | 1.8 | 2.2 |
| 4,096 | −1.8 | 1.1 | 1.3 | 1.6 |
| 8,192 | −1.8 | 0.7 | 0.9 | 1.2 |
| 16,384 | −1.8 | 0.5 | 0.6 | 0.9 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 9 (200% of the national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.3 | 70.5 | 0.1 | 24.0 | 29.4 | −85.7 |
| <=17 | 13.3 | 62.5 | 0.6 | 23.5 | 36.8 | −64.1 |
| <=20 | 19.0 | 56.8 | 1.3 | 22.8 | 41.8 | −48.1 |
| <=22 | 24.4 | 51.5 | 1.5 | 22.7 | 47.0 | −33.8 |
| <=25 | 30.5 | 45.3 | 2.0 | 22.1 | 52.7 | −16.8 |
| <=27 | 35.1 | 40.7 | 2.6 | 21.6 | 56.7 | −4.0 |
| <=29 | 39.4 | 36.5 | 3.4 | 20.8 | 60.2 | +8.2 |
| <=31 | 43.6 | 32.2 | 5.1 | 19.1 | 62.7 | +21.7 |
| <=33 | 47.7 | 28.1 | 6.6 | 17.6 | 65.3 | +34.5 |
| <=35 | 51.9 | 24.0 | 7.2 | 16.9 | 68.8 | +46.3 |
| <=37 | 57.2 | 18.6 | 8.0 | 16.2 | 73.4 | +61.5 |
| <=40 | 61.0 | 14.8 | 10.0 | 14.2 | 75.2 | +74.0 |
| <=43 | 65.2 | 10.6 | 11.6 | 12.6 | 77.8 | +84.8 |
| <=47 | 69.3 | 6.6 | 13.6 | 10.5 | 79.8 | +82.0 |
| <=52 | 71.5 | 4.3 | 16.7 | 7.4 | 79.0 | +78.0 |
| <=60 | 73.9 | 2.0 | 19.5 | 4.7 | 78.6 | +74.3 |
| <=100 | 75.8 | 0.0 | 24.2 | 0.0 | 75.8 | +68.2 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 (200% of the national line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 97.8 | 7.0 | 45.4:1 |
| <=17 | 13.9 | 95.6 | 17.5 | 21.7:1 |
| <=20 | 20.4 | 93.4 | 25.1 | 14.1:1 |
| <=22 | 25.9 | 94.3 | 32.1 | 16.4:1 |
| <=25 | 32.6 | 93.8 | 40.3 | 15.0:1 |
| <=27 | 37.7 | 93.2 | 46.3 | 13.7:1 |
| <=29 | 42.7 | 92.2 | 51.9 | 11.7:1 |
| <=31 | 48.7 | 89.6 | 57.5 | 8.6:1 |
| <=33 | 54.3 | 87.9 | 62.9 | 7.3:1 |
| <=35 | 59.1 | 87.8 | 68.4 | 7.2:1 |
| <=37 | 65.2 | 87.8 | 75.5 | 7.2:1 |
| <=40 | 71.0 | 86.0 | 80.4 | 6.1:1 |
| <=43 | 76.8 | 84.9 | 86.0 | 5.6:1 |
| <=47 | 82.9 | 83.6 | 91.3 | 5.1:1 |
| <=52 | 88.2 | 81.1 | 94.3 | 4.3:1 |
| <=60 | 93.4 | 79.1 | 97.4 | 3.8:1 |
| <=100 | 100.0 | 75.8 | 100.0 | 3.1:1 |

Scorecard applied to the validation sample.

# Tables for the $1.25/day 2005 PPP Poverty Line

# Table 3 ($1.25/day 2005 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
| --- | --- |
| 0–12 | 67.5 |
| 13–17 | 55.2 |
| 18–20 | 46.8 |
| 21–22 | 39.2 |
| 23–25 | 33.3 |
| 26–27 | 33.3 |
| 28–29 | 33.3 |
| 30–31 | 31.5 |
| 32–33 | 26.5 |
| 34–35 | 20.3 |
| 36–37 | 20.3 |
| 38–40 | 19.3 |
| 41–43 | 15.4 |
| 44–47 | 11.1 |
| 48–52 | 9.3 |
| 53–60 | 9.3 |
| 61–100 | 3.8 |

# Table 5 ($1.25/day 2005 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | −12.0 | 7.1 | 7.3 | 7.7 |
| 13–17 | −10.0 | 6.2 | 6.4 | 6.9 |
| 18–20 | +2.1 | 2.8 | 3.4 | 4.4 |
| 21–22 | +2.3 | 2.9 | 3.5 | 4.5 |
| 23–25 | −10.4 | 6.7 | 6.9 | 7.4 |
| 26–27 | +4.5 | 2.8 | 3.2 | 4.5 |
| 28–29 | +9.0 | 2.6 | 3.1 | 4.1 |
| 30–31 | +6.0 | 2.3 | 2.9 | 3.9 |
| 32–33 | +9.6 | 2.3 | 2.7 | 3.4 |
| 34–35 | +1.8 | 2.6 | 3.3 | 4.3 |
| 36–37 | −0.7 | 2.5 | 3.1 | 4.1 |
| 38–40 | −0.6 | 2.4 | 3.0 | 4.0 |
| 41–43 | +2.2 | 1.8 | 2.1 | 2.8 |
| 44–47 | −12.6 | 7.7 | 8.0 | 8.6 |
| 48–52 | +1.9 | 1.6 | 1.9 | 2.6 |
| 53–60 | +4.0 | 1.4 | 1.6 | 2.2 |
| 61–100 | +1.3 | 1.0 | 1.3 | 1.6 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

**Table 6 ($1.25/day 2005 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals**

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | –2.0 | 63.2 | 69.9 | 79.1 |
| 4 | –2.2 | 40.9 | 46.1 | 55.8 |
| 8 | –0.7 | 29.6 | 34.2 | 42.9 |
| 16 | –0.3 | 20.9 | 24.2 | 29.7 |
| 32 | –0.4 | 14.8 | 17.6 | 25.0 |
| 64 | –0.5 | 10.4 | 12.6 | 16.9 |
| 128 | –0.5 | 7.2 | 8.8 | 11.4 |
| 256 | –0.6 | 5.5 | 6.3 | 8.0 |
| 512 | –0.5 | 3.9 | 4.5 | 5.7 |
| 1,024 | –0.6 | 2.5 | 3.0 | 3.8 |
| 2,048 | –0.6 | 1.9 | 2.2 | 2.9 |
| 4,096 | –0.6 | 1.2 | 1.5 | 2.1 |
| 8,192 | –0.6 | 0.9 | 1.1 | 1.4 |
| 16,384 | –0.6 | 0.7 | 0.8 | 1.0 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($1.25/day 2005 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 4.1 | 25.6 | 1.3 | 68.9 | 73.1 | −67.7 |
| <=17 | 9.5 | 20.2 | 4.4 | 65.8 | 75.3 | −21.2 |
| <=20 | 12.5 | 17.2 | 7.9 | 62.4 | 74.9 | +10.5 |
| <=22 | 14.6 | 15.1 | 11.2 | 59.1 | 73.7 | +36.2 |
| <=25 | 17.3 | 12.4 | 15.2 | 55.0 | 72.4 | +48.8 |
| <=27 | 19.3 | 10.5 | 18.4 | 51.8 | 71.1 | +37.9 |
| <=29 | 20.8 | 9.0 | 21.9 | 48.3 | 69.1 | +26.2 |
| <=31 | 22.3 | 7.5 | 26.5 | 43.8 | 66.1 | +11.0 |
| <=33 | 23.3 | 6.5 | 31.0 | 39.3 | 62.5 | −4.4 |
| <=35 | 24.2 | 5.5 | 34.9 | 35.4 | 59.5 | −17.5 |
| <=37 | 25.3 | 4.4 | 39.9 | 30.3 | 55.6 | −34.4 |
| <=40 | 26.6 | 3.1 | 44.4 | 25.9 | 52.5 | −49.3 |
| <=43 | 27.6 | 2.1 | 49.2 | 21.1 | 48.7 | −65.6 |
| <=47 | 28.8 | 0.9 | 54.1 | 16.2 | 44.9 | −82.1 |
| <=52 | 29.2 | 0.5 | 59.1 | 11.2 | 40.4 | −98.7 |
| <=60 | 29.6 | 0.2 | 63.8 | 6.5 | 36.1 | −114.6 |
| <=100 | 29.7 | 0.0 | 70.3 | 0.0 | 29.7 | −136.5 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 ($1.25/day 2005 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 75.4 | 13.9 | 3.1:1 |
| <=17 | 13.9 | 68.1 | 31.9 | 2.1:1 |
| <=20 | 20.4 | 61.3 | 42.0 | 1.6:1 |
| <=22 | 25.9 | 56.6 | 49.2 | 1.3:1 |
| <=25 | 32.6 | 53.2 | 58.3 | 1.1:1 |
| <=27 | 37.7 | 51.1 | 64.8 | 1.0:1 |
| <=29 | 42.7 | 48.6 | 69.9 | 0.9:1 |
| <=31 | 48.7 | 45.7 | 74.9 | 0.8:1 |
| <=33 | 54.3 | 42.8 | 78.2 | 0.7:1 |
| <=35 | 59.1 | 40.9 | 81.3 | 0.7:1 |
| <=37 | 65.2 | 38.8 | 85.1 | 0.6:1 |
| <=40 | 71.0 | 37.5 | 89.4 | 0.6:1 |
| <=43 | 76.8 | 35.9 | 92.8 | 0.6:1 |
| <=47 | 82.9 | 34.7 | 96.8 | 0.5:1 |
| <=52 | 88.2 | 33.1 | 98.2 | 0.5:1 |
| <=60 | 93.4 | 31.7 | 99.5 | 0.5:1 |
| <=100 | 100.0 | 29.7 | 100.0 | 0.4:1 |

Scorecard applied to the validation sample.

# Tables for the $2.00/day 2005 PPP Poverty Line

# Table 3 ($2.00/day 2005 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|:---:|:---:|
| 0–12 | 88.3 |
| 13–17 | 82.3 |
| 18–20 | 71.6 |
| 21–22 | 69.3 |
| 23–25 | 65.4 |
| 26–27 | 64.1 |
| 28–29 | 61.8 |
| 30–31 | 61.8 |
| 32–33 | 56.7 |
| 34–35 | 47.1 |
| 36–37 | 47.1 |
| 38–40 | 46.7 |
| 41–43 | 41.1 |
| 44–47 | 30.3 |
| 48–52 | 27.8 |
| 53–60 | 21.6 |
| 61–100 | 9.8 |

# Table 5 ($2.00/day 2005 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| Score | Error | Difference between estimate and observed value | | |
|-------|-------|---------------|------------|------------|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | –4.5 | 3.0 | 3.1 | 3.4 |
| 13–17 | –5.3 | 3.5 | 3.6 | 4.0 |
| 18–20 | +0.8 | 2.6 | 3.1 | 3.9 |
| 21–22 | –0.9 | 2.8 | 3.4 | 4.4 |
| 23–25 | +0.7 | 2.8 | 3.3 | 4.4 |
| 26–27 | –7.4 | 5.2 | 5.4 | 6.2 |
| 28–29 | –3.0 | 3.1 | 3.6 | 4.6 |
| 30–31 | +14.3 | 2.7 | 3.3 | 4.6 |
| 32–33 | +8.7 | 3.1 | 3.8 | 5.1 |
| 34–35 | +10.2 | 3.2 | 3.9 | 5.1 |
| 36–37 | –8.0 | 5.5 | 5.8 | 6.2 |
| 38–40 | +10.6 | 3.0 | 3.6 | 4.5 |
| 41–43 | –16.7 | 9.9 | 10.2 | 10.7 |
| 44–47 | –13.6 | 8.4 | 8.8 | 9.2 |
| 48–52 | –0.1 | 3.1 | 3.8 | 4.7 |
| 53–60 | +7.8 | 2.6 | 3.2 | 4.4 |
| 61–100 | –15.0 | 9.9 | 10.1 | 11.4 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 ($2.00/day 2005 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | −0.4 | 67.5 | 71.9 | 89.3 |
| 4 | −1.4 | 45.2 | 50.3 | 60.9 |
| 8 | −0.8 | 32.9 | 38.8 | 44.5 |
| 16 | −0.9 | 23.2 | 27.8 | 34.8 |
| 32 | −1.1 | 16.2 | 20.2 | 26.2 |
| 64 | −1.0 | 11.3 | 13.7 | 17.9 |
| 128 | −0.9 | 7.8 | 9.0 | 11.7 |
| 256 | −1.0 | 5.8 | 6.8 | 8.9 |
| 512 | −1.1 | 4.1 | 5.0 | 6.1 |
| 1,024 | −1.2 | 2.8 | 3.4 | 4.6 |
| 2,048 | −1.2 | 2.0 | 2.5 | 3.3 |
| 4,096 | −1.2 | 1.4 | 1.7 | 2.3 |
| 8,192 | −1.1 | 1.1 | 1.3 | 1.7 |
| 16,384 | −1.1 | 0.7 | 0.9 | 1.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($2.00/day 2005 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.0 | 48.6 | 0.5 | 46.0 | 51.0 | −80.5 |
| <=17 | 12.4 | 41.2 | 1.6 | 44.9 | 57.3 | −50.9 |
| <=20 | 16.8 | 36.8 | 3.6 | 42.9 | 59.6 | −30.6 |
| <=22 | 20.7 | 32.9 | 5.2 | 41.3 | 61.9 | −13.1 |
| <=25 | 25.1 | 28.4 | 7.5 | 39.0 | 64.1 | +7.7 |
| <=27 | 28.7 | 24.8 | 8.9 | 37.5 | 66.3 | +24.1 |
| <=29 | 31.9 | 21.7 | 10.9 | 35.6 | 67.5 | +39.3 |
| <=31 | 34.7 | 18.8 | 14.0 | 32.5 | 67.2 | +55.8 |
| <=33 | 37.5 | 16.1 | 16.8 | 29.6 | 67.1 | +68.6 |
| <=35 | 39.7 | 13.8 | 19.4 | 27.1 | 66.8 | +63.8 |
| <=37 | 42.9 | 10.6 | 22.3 | 24.2 | 67.1 | +58.3 |
| <=40 | 45.3 | 8.3 | 25.7 | 20.8 | 66.1 | +52.0 |
| <=43 | 48.1 | 5.4 | 28.7 | 17.8 | 65.9 | +46.4 |
| <=47 | 50.5 | 3.1 | 32.4 | 14.0 | 64.5 | +39.4 |
| <=52 | 51.9 | 1.6 | 36.3 | 10.1 | 62.0 | +32.1 |
| <=60 | 52.8 | 0.8 | 40.6 | 5.9 | 58.7 | +24.2 |
| <=100 | 53.5 | 0.0 | 46.5 | 0.0 | 53.5 | +13.2 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

# Table 10 ($2.00/day 2005 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 91.2 | 9.3 | 10.4:1 |
| <=17 | 13.9 | 88.8 | 23.1 | 7.9:1 |
| <=20 | 20.4 | 82.3 | 31.3 | 4.7:1 |
| <=22 | 25.9 | 79.9 | 38.6 | 4.0:1 |
| <=25 | 32.6 | 77.1 | 46.9 | 3.4:1 |
| <=27 | 37.7 | 76.3 | 53.7 | 3.2:1 |
| <=29 | 42.7 | 74.6 | 59.5 | 2.9:1 |
| <=31 | 48.7 | 71.3 | 64.8 | 2.5:1 |
| <=33 | 54.3 | 69.0 | 70.0 | 2.2:1 |
| <=35 | 59.1 | 67.2 | 74.2 | 2.0:1 |
| <=37 | 65.2 | 65.8 | 80.2 | 1.9:1 |
| <=40 | 71.0 | 63.8 | 84.6 | 1.8:1 |
| <=43 | 76.8 | 62.6 | 89.8 | 1.7:1 |
| <=47 | 82.9 | 60.9 | 94.3 | 1.6:1 |
| <=52 | 88.2 | 58.8 | 97.0 | 1.4:1 |
| <=60 | 93.4 | 56.5 | 98.6 | 1.3:1 |
| <=100 | 100.0 | 53.5 | 100.0 | 1.2:1 |

Scorecard applied to the validation sample.

# Tables for the $2.50/day 2005 PPP Poverty Line

# Table 3 ($2.50/day 2005 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 94.4 |
| 13–17 | 90.1 |
| 18–20 | 82.2 |
| 21–22 | 76.9 |
| 23–25 | 76.4 |
| 26–27 | 76.2 |
| 28–29 | 70.2 |
| 30–31 | 70.2 |
| 32–33 | 69.6 |
| 34–35 | 63.1 |
| 36–37 | 63.1 |
| 38–40 | 63.1 |
| 41–43 | 56.0 |
| 44–47 | 45.2 |
| 48–52 | 38.9 |
| 53–60 | 32.8 |
| 61–100 | 18.1 |

# Table 5 ($2.50/day 2005 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | −1.8 | 1.5 | 1.6 | 1.8 |
| 13–17 | −4.4 | 2.7 | 2.8 | 2.9 |
| 18–20 | −4.6 | 3.3 | 3.5 | 4.0 |
| 21–22 | −4.3 | 3.3 | 3.5 | 4.0 |
| 23–25 | −6.8 | 4.4 | 4.5 | 4.8 |
| 26–27 | −2.0 | 2.8 | 3.3 | 4.5 |
| 28–29 | −2.5 | 3.0 | 3.6 | 4.5 |
| 30–31 | +17.2 | 2.9 | 3.4 | 4.6 |
| 32–33 | +10.2 | 3.1 | 3.7 | 5.3 |
| 34–35 | −5.5 | 4.5 | 4.6 | 5.3 |
| 36–37 | −12.2 | 7.3 | 7.5 | 8.0 |
| 38–40 | +12.9 | 3.4 | 4.0 | 5.0 |
| 41–43 | −8.1 | 5.6 | 5.9 | 6.4 |
| 44–47 | −15.1 | 9.2 | 9.5 | 10.2 |
| 48–52 | +7.6 | 3.2 | 4.0 | 4.9 |
| 53–60 | −1.6 | 4.1 | 5.0 | 6.8 |
| 61–100 | −15.3 | 9.9 | 10.5 | 11.3 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 ($2.50/day 2005 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
| --- | --- | --- | --- | --- |
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | –0.7 | 67.1 | 71.8 | 86.0 |
| 4 | –2.4 | 40.2 | 47.0 | 58.8 |
| 8 | –2.2 | 29.5 | 33.4 | 44.0 |
| 16 | –2.1 | 20.3 | 24.4 | 33.5 |
| 32 | –2.1 | 15.4 | 18.1 | 25.3 |
| 64 | –2.0 | 10.5 | 12.7 | 17.7 |
| 128 | –1.9 | 7.7 | 8.7 | 11.8 |
| 256 | –2.0 | 5.3 | 6.0 | 7.8 |
| 512 | –2.0 | 3.7 | 4.4 | 6.1 |
| 1,024 | –2.1 | 2.6 | 3.1 | 4.1 |
| 2,048 | –2.1 | 1.8 | 2.2 | 2.9 |
| 4,096 | –2.0 | 1.3 | 1.6 | 2.0 |
| 8,192 | –2.0 | 1.0 | 1.1 | 1.4 |
| 16,384 | –2.0 | 0.7 | 0.8 | 1.0 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($2.50/day 2005 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.2 | 59.8 | 0.2 | 34.8 | 40.0 | −83.5 |
| <=17 | 13.2 | 51.9 | 0.8 | 34.2 | 47.4 | −58.4 |
| <=20 | 18.7 | 46.4 | 1.7 | 33.3 | 51.9 | −40.0 |
| <=22 | 23.1 | 41.9 | 2.7 | 32.2 | 55.4 | −24.7 |
| <=25 | 28.4 | 36.6 | 4.1 | 30.9 | 59.3 | −6.2 |
| <=27 | 32.5 | 32.6 | 5.2 | 29.7 | 62.2 | +7.9 |
| <=29 | 36.1 | 28.9 | 6.6 | 28.4 | 64.5 | +21.2 |
| <=31 | 39.5 | 25.5 | 9.2 | 25.8 | 65.3 | +35.7 |
| <=33 | 43.0 | 22.1 | 11.3 | 23.7 | 66.6 | +49.5 |
| <=35 | 46.4 | 18.7 | 12.7 | 22.2 | 68.6 | +62.2 |
| <=37 | 50.7 | 14.3 | 14.5 | 20.4 | 71.1 | +77.6 |
| <=40 | 53.7 | 11.3 | 17.2 | 17.8 | 71.5 | +73.5 |
| <=43 | 57.1 | 7.9 | 19.7 | 15.3 | 72.4 | +69.7 |
| <=47 | 60.5 | 4.5 | 22.4 | 12.5 | 73.0 | +65.5 |
| <=52 | 62.3 | 2.7 | 26.0 | 9.0 | 71.3 | +60.1 |
| <=60 | 63.8 | 1.2 | 29.6 | 5.4 | 69.2 | +54.5 |
| <=100 | 65.0 | 0.0 | 35.0 | 0.0 | 65.0 | +46.2 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

# Table 10 ($2.50/day 2005 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 95.8 | 8.1 | 22.9:1 |
| <=17 | 13.9 | 94.4 | 20.2 | 17.0:1 |
| <=20 | 20.4 | 91.6 | 28.7 | 10.9:1 |
| <=22 | 25.9 | 89.4 | 35.6 | 8.4:1 |
| <=25 | 32.6 | 87.3 | 43.7 | 6.9:1 |
| <=27 | 37.7 | 86.1 | 49.9 | 6.2:1 |
| <=29 | 42.7 | 84.5 | 55.5 | 5.5:1 |
| <=31 | 48.7 | 81.1 | 60.8 | 4.3:1 |
| <=33 | 54.3 | 79.2 | 66.1 | 3.8:1 |
| <=35 | 59.1 | 78.4 | 71.3 | 3.6:1 |
| <=37 | 65.2 | 77.7 | 78.0 | 3.5:1 |
| <=40 | 71.0 | 75.7 | 82.7 | 3.1:1 |
| <=43 | 76.8 | 74.4 | 87.8 | 2.9:1 |
| <=47 | 82.9 | 72.9 | 93.0 | 2.7:1 |
| <=52 | 88.2 | 70.6 | 95.8 | 2.4:1 |
| <=60 | 93.4 | 68.3 | 98.1 | 2.2:1 |
| <=100 | 100.0 | 65.0 | 100.0 | 1.9:1 |

Scorecard applied to the validation sample.

# Tables for the $5.00/day 2005 PPP Poverty Line

# Table 3 ($5.00/day 2005 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 98.8 |
| 13–17 | 98.1 |
| 18–20 | 97.9 |
| 21–22 | 97.4 |
| 23–25 | 96.5 |
| 26–27 | 96.5 |
| 28–29 | 93.8 |
| 30–31 | 93.8 |
| 32–33 | 91.7 |
| 34–35 | 91.7 |
| 36–37 | 91.7 |
| 38–40 | 91.7 |
| 41–43 | 91.2 |
| 44–47 | 89.8 |
| 48–52 | 81.1 |
| 53–60 | 73.5 |
| 61–100 | 55.7 |

# Table 5 ($5.00/day 2005 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|-------|-------|------------|------------|------------|
| 0–12 | −1.2 | 0.6 | 0.6 | 0.6 |
| 13–17 | −1.5 | 0.8 | 0.8 | 0.9 |
| 18–20 | +2.2 | 1.2 | 1.4 | 2.0 |
| 21–22 | −2.5 | 1.3 | 1.3 | 1.3 |
| 23–25 | −1.7 | 1.1 | 1.1 | 1.2 |
| 26–27 | −0.9 | 0.8 | 1.0 | 1.3 |
| 28–29 | +0.8 | 1.5 | 1.8 | 2.3 |
| 30–31 | +0.7 | 1.2 | 1.4 | 1.9 |
| 32–33 | +4.4 | 2.0 | 2.4 | 3.2 |
| 34–35 | −4.6 | 2.8 | 2.8 | 3.0 |
| 36–37 | −5.4 | 3.1 | 3.1 | 3.3 |
| 38–40 | +12.7 | 2.9 | 3.6 | 4.6 |
| 41–43 | +0.1 | 1.5 | 1.7 | 2.2 |
| 44–47 | +1.6 | 2.1 | 2.4 | 3.4 |
| 48–52 | +3.2 | 2.8 | 3.3 | 4.1 |
| 53–60 | −6.5 | 5.1 | 5.3 | 5.8 |
| 61–100 | −4.8 | 4.3 | 4.8 | 6.3 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 ($5.00/day 2005 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | 0.0 | 53.8 | 68.0 | 70.4 |
| 4 | +0.2 | 22.5 | 26.9 | 41.9 |
| 8 | +0.1 | 15.5 | 19.0 | 28.3 |
| 16 | −0.2 | 10.7 | 13.2 | 17.9 |
| 32 | −0.2 | 7.8 | 9.5 | 12.1 |
| 64 | 0.0 | 5.7 | 6.9 | 8.9 |
| 128 | −0.1 | 4.1 | 4.7 | 5.9 |
| 256 | 0.0 | 2.8 | 3.4 | 4.3 |
| 512 | 0.0 | 2.0 | 2.4 | 3.3 |
| 1,024 | 0.0 | 1.4 | 1.7 | 2.1 |
| 2,048 | 0.0 | 1.0 | 1.2 | 1.6 |
| 4,096 | 0.0 | 0.7 | 0.9 | 1.1 |
| 8,192 | 0.0 | 0.5 | 0.6 | 0.9 |
| 16,384 | 0.0 | 0.4 | 0.4 | 0.6 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($5.00/day 2005 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.5 | 84.0 | 0.0 | 10.5 | 15.9 | −87.8 |
| <=17 | 13.8 | 75.7 | 0.1 | 10.4 | 24.2 | −69.0 |
| <=20 | 20.0 | 69.5 | 0.4 | 10.1 | 30.1 | −54.9 |
| <=22 | 25.5 | 64.0 | 0.4 | 10.1 | 35.6 | −42.6 |
| <=25 | 31.9 | 57.6 | 0.6 | 9.9 | 41.8 | −27.9 |
| <=27 | 36.9 | 52.6 | 0.8 | 9.7 | 46.6 | −16.7 |
| <=29 | 41.5 | 48.0 | 1.2 | 9.3 | 50.9 | −5.9 |
| <=31 | 46.9 | 42.6 | 1.8 | 8.7 | 55.7 | +6.9 |
| <=33 | 51.8 | 37.7 | 2.5 | 8.0 | 59.8 | +18.5 |
| <=35 | 56.4 | 33.1 | 2.7 | 7.8 | 64.1 | +29.0 |
| <=37 | 62.3 | 27.2 | 3.0 | 7.5 | 69.8 | +42.4 |
| <=40 | 67.1 | 22.4 | 3.9 | 6.6 | 73.7 | +54.2 |
| <=43 | 72.2 | 17.3 | 4.6 | 5.9 | 78.1 | +66.5 |
| <=47 | 77.5 | 12.0 | 5.4 | 5.1 | 82.7 | +79.3 |
| <=52 | 81.5 | 8.0 | 6.7 | 3.8 | 85.3 | +89.7 |
| <=60 | 85.7 | 3.8 | 7.6 | 2.9 | 88.6 | +91.5 |
| <=100 | 89.5 | 0.0 | 10.5 | 0.0 | 89.5 | +88.3 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 ($5.00/day 2005 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 99.9 | 6.1 | 858.8:1 |
| <=17 | 13.9 | 99.2 | 15.4 | 127.8:1 |
| <=20 | 20.4 | 98.2 | 22.3 | 53.9:1 |
| <=22 | 25.9 | 98.5 | 28.5 | 67.1:1 |
| <=25 | 32.6 | 98.1 | 35.7 | 51.7:1 |
| <=27 | 37.7 | 97.9 | 41.2 | 46.6:1 |
| <=29 | 42.7 | 97.3 | 46.4 | 35.5:1 |
| <=31 | 48.7 | 96.4 | 52.4 | 26.5:1 |
| <=33 | 54.3 | 95.5 | 57.9 | 21.0:1 |
| <=35 | 59.1 | 95.4 | 63.0 | 20.6:1 |
| <=37 | 65.2 | 95.4 | 69.6 | 20.9:1 |
| <=40 | 71.0 | 94.5 | 75.0 | 17.3:1 |
| <=43 | 76.8 | 94.0 | 80.7 | 15.7:1 |
| <=47 | 82.9 | 93.5 | 86.6 | 14.5:1 |
| <=52 | 88.2 | 92.4 | 91.1 | 12.2:1 |
| <=60 | 93.4 | 91.8 | 95.8 | 11.2:1 |
| <=100 | 100.0 | 89.5 | 100.0 | 8.5:1 |

Scorecard applied to the validation sample.

# Tables for the $1.90/day 2011 PPP Poverty Line

# Table 3 ($1.90/day 2011 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 70.5 |
| 13–17 | 57.7 |
| 18–20 | 48.0 |
| 21–22 | 41.5 |
| 23–25 | 37.4 |
| 26–27 | 37.4 |
| 28–29 | 37.4 |
| 30–31 | 33.9 |
| 32–33 | 27.7 |
| 34–35 | 21.5 |
| 36–37 | 21.5 |
| 38–40 | 20.2 |
| 41–43 | 15.7 |
| 44–47 | 11.7 |
| 48–52 | 9.8 |
| 53–60 | 9.8 |
| 61–100 | 4.1 |

# Table 5 ($1.90/day 2011 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | –11.5 | 6.9 | 7.0 | 7.6 |
| 13–17 | –7.9 | 5.2 | 5.4 | 5.7 |
| 18–20 | +0.6 | 2.9 | 3.5 | 4.5 |
| 21–22 | –2.0 | 3.0 | 3.5 | 4.2 |
| 23–25 | –7.5 | 5.2 | 5.4 | 6.1 |
| 26–27 | +4.5 | 2.9 | 3.4 | 4.3 |
| 28–29 | +13.1 | 2.6 | 3.1 | 4.1 |
| 30–31 | +8.4 | 2.3 | 2.9 | 3.9 |
| 32–33 | +8.7 | 2.4 | 2.8 | 3.3 |
| 34–35 | +2.9 | 2.6 | 3.3 | 4.3 |
| 36–37 | –0.4 | 2.5 | 3.1 | 3.9 |
| 38–40 | –0.9 | 2.4 | 3.0 | 4.0 |
| 41–43 | +2.5 | 1.8 | 2.1 | 2.8 |
| 44–47 | –12.0 | 7.4 | 7.7 | 8.3 |
| 48–52 | +2.5 | 1.6 | 1.9 | 2.6 |
| 53–60 | +4.6 | 1.4 | 1.6 | 2.2 |
| 61–100 | +0.9 | 1.1 | 1.4 | 1.8 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 6 ($1.90/day 2011 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
| --- | --- | --- | --- | --- |
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | –2.2 | 63.3 | 71.0 | 80.4 |
| 4 | –1.9 | 41.5 | 46.9 | 56.0 |
| 8 | –0.2 | 30.0 | 34.8 | 44.4 |
| 16 | +0.2 | 20.7 | 24.6 | 30.4 |
| 32 | 0.0 | 14.4 | 18.2 | 24.1 |
| 64 | –0.1 | 10.7 | 13.1 | 17.5 |
| 128 | 0.0 | 7.6 | 9.0 | 11.8 |
| 256 | –0.1 | 5.5 | 6.4 | 8.0 |
| 512 | 0.0 | 3.9 | 4.5 | 5.7 |
| 1,024 | –0.1 | 2.6 | 3.1 | 3.9 |
| 2,048 | –0.1 | 1.9 | 2.3 | 2.7 |
| 4,096 | –0.1 | 1.3 | 1.5 | 1.9 |
| 8,192 | –0.1 | 0.9 | 1.1 | 1.4 |
| 16,384 | –0.1 | 0.6 | 0.8 | 1.0 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($1.90/day 2011 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 4.3 | 26.9 | 1.2 | 67.6 | 71.9 | −68.8 |
| <=17 | 9.7 | 21.5 | 4.2 | 64.6 | 74.3 | −24.3 |
| <=20 | 13.0 | 18.3 | 7.4 | 61.4 | 74.3 | +6.7 |
| <=22 | 15.4 | 15.9 | 10.5 | 58.3 | 73.7 | +32.0 |
| <=25 | 18.2 | 13.0 | 14.4 | 54.4 | 72.6 | +54.0 |
| <=27 | 20.4 | 10.9 | 17.3 | 51.4 | 71.8 | +44.5 |
| <=29 | 21.9 | 9.3 | 20.8 | 47.9 | 69.8 | +33.3 |
| <=31 | 23.4 | 7.9 | 25.3 | 43.4 | 66.8 | +18.8 |
| <=33 | 24.5 | 6.7 | 29.8 | 39.0 | 63.5 | +4.7 |
| <=35 | 25.4 | 5.8 | 33.7 | 35.1 | 60.6 | −7.8 |
| <=37 | 26.6 | 4.6 | 38.6 | 30.2 | 56.8 | −23.6 |
| <=40 | 28.0 | 3.2 | 43.0 | 25.8 | 53.8 | −37.6 |
| <=43 | 29.0 | 2.2 | 47.8 | 21.0 | 50.0 | −53.0 |
| <=47 | 30.2 | 1.0 | 52.7 | 16.1 | 46.3 | −68.7 |
| <=52 | 30.7 | 0.6 | 57.6 | 11.2 | 41.8 | −84.4 |
| <=60 | 31.0 | 0.2 | 62.3 | 6.4 | 37.5 | −99.6 |
| <=100 | 31.2 | 0.0 | 68.8 | 0.0 | 31.2 | −120.2 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 ($1.90/day 2011 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 78.3 | 13.7 | 3.6:1 |
| <=17 | 13.9 | 69.9 | 31.2 | 2.3:1 |
| <=20 | 20.4 | 63.6 | 41.5 | 1.7:1 |
| <=22 | 25.9 | 59.5 | 49.2 | 1.5:1 |
| <=25 | 32.6 | 55.9 | 58.3 | 1.3:1 |
| <=27 | 37.7 | 54.0 | 65.2 | 1.2:1 |
| <=29 | 42.7 | 51.2 | 70.1 | 1.1:1 |
| <=31 | 48.7 | 48.0 | 74.8 | 0.9:1 |
| <=33 | 54.3 | 45.2 | 78.5 | 0.8:1 |
| <=35 | 59.1 | 43.0 | 81.5 | 0.8:1 |
| <=37 | 65.2 | 40.8 | 85.3 | 0.7:1 |
| <=40 | 71.0 | 39.5 | 89.7 | 0.7:1 |
| <=43 | 76.8 | 37.8 | 92.9 | 0.6:1 |
| <=47 | 82.9 | 36.5 | 96.8 | 0.6:1 |
| <=52 | 88.2 | 34.7 | 98.2 | 0.5:1 |
| <=60 | 93.4 | 33.2 | 99.4 | 0.5:1 |
| <=100 | 100.0 | 31.2 | 100.0 | 0.5:1 |

Scorecard applied to the validation sample.

# Tables for the $3.20/day 2011 PPP Poverty Line

# Table 3 ($3.20/day 2011 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|:---:|:---:|
| 0–12 | 91.6 |
| 13–17 | 86.3 |
| 18–20 | 76.5 |
| 21–22 | 73.8 |
| 23–25 | 70.3 |
| 26–27 | 68.9 |
| 28–29 | 65.1 |
| 30–31 | 65.1 |
| 32–33 | 62.0 |
| 34–35 | 54.4 |
| 36–37 | 54.4 |
| 38–40 | 54.4 |
| 41–43 | 46.7 |
| 44–47 | 36.5 |
| 48–52 | 34.2 |
| 53–60 | 26.2 |
| 61–100 | 12.8 |

**Table 5 ($3.20/day 2011 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals**

| Score | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | −3.0 | 2.1 | 2.2 | 2.5 |
| 13–17 | −5.0 | 3.2 | 3.3 | 3.5 |
| 18–20 | +3.8 | 2.6 | 3.0 | 4.0 |
| 21–22 | +1.9 | 2.7 | 3.3 | 4.4 |
| 23–25 | +0.3 | 2.7 | 3.1 | 4.1 |
| 26–27 | −2.6 | 3.0 | 3.6 | 4.9 |
| 28–29 | −1.9 | 3.1 | 3.6 | 4.7 |
| 30–31 | +14.2 | 2.8 | 3.3 | 4.5 |
| 32–33 | +13.1 | 3.1 | 3.8 | 5.0 |
| 34–35 | +12.4 | 3.4 | 4.0 | 5.5 |
| 36–37 | −8.8 | 5.8 | 6.0 | 6.4 |
| 38–40 | +13.9 | 3.1 | 3.7 | 4.9 |
| 41–43 | −15.2 | 9.2 | 9.5 | 9.9 |
| 44–47 | −8.7 | 6.0 | 6.3 | 6.9 |
| 48–52 | +4.0 | 3.2 | 3.8 | 5.0 |
| 53–60 | +9.3 | 2.8 | 3.4 | 4.9 |
| 61–100 | −18.0 | 11.3 | 12.0 | 12.6 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 6 ($3.20/day 2011 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | +1.6 | 66.9 | 69.8 | 88.1 |
| 4 | +0.5 | 43.8 | 49.9 | 58.9 |
| 8 | +0.9 | 31.9 | 38.5 | 45.4 |
| 16 | +0.8 | 22.2 | 27.4 | 33.0 |
| 32 | +0.5 | 16.4 | 19.2 | 25.4 |
| 64 | +0.7 | 11.1 | 13.9 | 18.1 |
| 128 | +0.9 | 7.9 | 9.5 | 11.2 |
| 256 | +0.7 | 5.8 | 6.7 | 8.6 |
| 512 | +0.7 | 4.0 | 5.0 | 6.2 |
| 1,024 | +0.6 | 2.8 | 3.5 | 4.4 |
| 2,048 | +0.6 | 2.1 | 2.5 | 3.3 |
| 4,096 | +0.7 | 1.5 | 1.8 | 2.3 |
| 8,192 | +0.7 | 1.0 | 1.2 | 1.6 |
| 16,384 | +0.7 | 0.7 | 0.9 | 1.1 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($3.20/day 2011 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.1 | 52.0 | 0.3 | 42.5 | 47.6 | −81.5 |
| <=17 | 12.8 | 44.4 | 1.1 | 41.7 | 54.5 | −53.3 |
| <=20 | 17.4 | 39.8 | 3.0 | 39.9 | 57.3 | −33.9 |
| <=22 | 21.4 | 35.7 | 4.4 | 38.4 | 59.8 | −17.3 |
| <=25 | 26.1 | 31.1 | 6.5 | 36.3 | 62.4 | +2.6 |
| <=27 | 29.7 | 27.4 | 8.0 | 34.9 | 64.6 | +18.0 |
| <=29 | 33.0 | 24.2 | 9.7 | 33.1 | 66.1 | +32.5 |
| <=31 | 36.2 | 21.0 | 12.6 | 30.3 | 66.4 | +48.5 |
| <=33 | 39.0 | 18.1 | 15.2 | 27.6 | 66.6 | +63.3 |
| <=35 | 41.5 | 15.7 | 17.6 | 25.2 | 66.7 | +69.2 |
| <=37 | 45.1 | 12.1 | 20.2 | 22.7 | 67.7 | +64.7 |
| <=40 | 47.7 | 9.4 | 23.3 | 19.6 | 67.3 | +59.3 |
| <=43 | 50.9 | 6.3 | 25.9 | 16.9 | 67.8 | +54.7 |
| <=47 | 53.5 | 3.7 | 29.4 | 13.4 | 66.9 | +48.5 |
| <=52 | 55.1 | 2.1 | 33.1 | 9.7 | 64.8 | +42.0 |
| <=60 | 56.2 | 0.9 | 37.1 | 5.7 | 61.9 | +35.0 |
| <=100 | 57.2 | 0.0 | 42.8 | 0.0 | 57.2 | +25.0 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 ($3.20/day 2011 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 93.7 | 9.0 | 15.0:1 |
| <=17 | 13.9 | 91.8 | 22.4 | 11.2:1 |
| <=20 | 20.4 | 85.4 | 30.4 | 5.9:1 |
| <=22 | 25.9 | 82.8 | 37.5 | 4.8:1 |
| <=25 | 32.6 | 80.0 | 45.6 | 4.0:1 |
| <=27 | 37.7 | 78.9 | 52.0 | 3.7:1 |
| <=29 | 42.7 | 77.3 | 57.7 | 3.4:1 |
| <=31 | 48.7 | 74.2 | 63.3 | 2.9:1 |
| <=33 | 54.3 | 71.9 | 68.3 | 2.6:1 |
| <=35 | 59.1 | 70.2 | 72.6 | 2.4:1 |
| <=37 | 65.2 | 69.1 | 78.8 | 2.2:1 |
| <=40 | 71.0 | 67.2 | 83.5 | 2.1:1 |
| <=43 | 76.8 | 66.3 | 89.0 | 2.0:1 |
| <=47 | 82.9 | 64.5 | 93.6 | 1.8:1 |
| <=52 | 88.2 | 62.4 | 96.4 | 1.7:1 |
| <=60 | 93.4 | 60.2 | 98.4 | 1.5:1 |
| <=100 | 100.0 | 57.2 | 100.0 | 1.3:1 |

Scorecard applied to the validation sample.

# Tables for the $5.50/day 2011 PPP Poverty Line

# Table 3 ($5.50/day 2011 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is ... | ... then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 97.1 |
| 13–17 | 95.5 |
| 18–20 | 93.4 |
| 21–22 | 92.1 |
| 23–25 | 92.1 |
| 26–27 | 92.1 |
| 28–29 | 86.3 |
| 30–31 | 86.3 |
| 32–33 | 84.8 |
| 34–35 | 84.0 |
| 36–37 | 82.3 |
| 38–40 | 82.3 |
| 41–43 | 80.3 |
| 44–47 | 75.3 |
| 48–52 | 68.8 |
| 53–60 | 60.3 |
| 61–100 | 36.0 |

# Table 5 ($5.50/day 2011 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | 0.0 | 1.1 | 1.3 | 1.6 |
| 13–17 | –2.7 | 1.6 | 1.6 | 1.7 |
| 18–20 | +2.5 | 1.7 | 2.0 | 2.7 |
| 21–22 | –7.9 | 4.0 | 4.0 | 4.0 |
| 23–25 | –5.4 | 3.0 | 3.0 | 3.2 |
| 26–27 | +1.0 | 1.9 | 2.2 | 2.7 |
| 28–29 | –2.9 | 2.3 | 2.5 | 2.8 |
| 30–31 | +2.9 | 2.0 | 2.3 | 3.1 |
| 32–33 | +9.3 | 2.7 | 3.3 | 4.4 |
| 34–35 | –9.4 | 5.3 | 5.5 | 5.7 |
| 36–37 | –12.0 | 6.6 | 6.7 | 6.9 |
| 38–40 | +8.9 | 3.2 | 3.7 | 4.8 |
| 41–43 | –3.7 | 2.8 | 3.0 | 3.4 |
| 44–47 | –6.3 | 4.3 | 4.5 | 4.8 |
| 48–52 | +19.1 | 3.5 | 4.3 | 5.6 |
| 53–60 | +7.4 | 4.4 | 5.4 | 7.0 |
| 61–100 | –14.1 | 9.2 | 9.6 | 10.6 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

**Table 6 ($5.50/day 2011 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals**

| Sample Size $n$ | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 1 | −0.7 | 61.0 | 75.1 | 78.7 |
| 4 | −0.8 | 29.8 | 36.7 | 48.4 |
| 8 | −1.1 | 20.1 | 26.1 | 35.8 |
| 16 | −1.2 | 14.5 | 16.9 | 22.6 |
| 32 | −1.3 | 10.6 | 12.4 | 16.1 |
| 64 | −1.2 | 7.2 | 8.9 | 12.1 |
| 128 | −1.2 | 5.2 | 6.2 | 7.9 |
| 256 | −1.1 | 3.8 | 4.4 | 5.6 |
| 512 | −1.1 | 2.7 | 3.2 | 4.1 |
| 1,024 | −1.1 | 1.8 | 2.2 | 2.9 |
| 2,048 | −1.1 | 1.3 | 1.6 | 2.0 |
| 4,096 | −1.1 | 0.9 | 1.1 | 1.4 |
| 8,192 | −1.0 | 0.7 | 0.8 | 1.1 |
| 16,384 | −1.1 | 0.5 | 0.6 | 0.8 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 9 ($5.50/day 2011 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.3 | 76.3 | 0.1 | 18.2 | 23.6 | −86.8 |
| <=17 | 13.5 | 68.1 | 0.4 | 18.0 | 31.5 | −66.4 |
| <=20 | 19.5 | 62.2 | 0.9 | 17.5 | 37.0 | −51.2 |
| <=22 | 25.0 | 56.7 | 0.9 | 17.5 | 42.4 | −37.7 |
| <=25 | 31.3 | 50.3 | 1.2 | 17.1 | 48.5 | −21.7 |
| <=27 | 36.0 | 45.6 | 1.7 | 16.7 | 52.7 | −9.7 |
| <=29 | 40.3 | 41.3 | 2.4 | 16.0 | 56.3 | +1.7 |
| <=31 | 45.1 | 36.5 | 3.6 | 14.8 | 59.9 | +14.9 |
| <=33 | 49.4 | 32.2 | 4.8 | 13.5 | 62.9 | +27.0 |
| <=35 | 53.8 | 27.9 | 5.3 | 13.0 | 66.8 | +38.2 |
| <=37 | 59.4 | 22.2 | 5.8 | 12.5 | 71.9 | +52.7 |
| <=40 | 63.9 | 17.8 | 7.1 | 11.2 | 75.1 | +65.1 |
| <=43 | 68.4 | 13.2 | 8.4 | 10.0 | 78.4 | +77.9 |
| <=47 | 73.1 | 8.5 | 9.8 | 8.6 | 81.7 | +88.0 |
| <=52 | 76.0 | 5.7 | 12.3 | 6.1 | 82.1 | +85.0 |
| <=60 | 79.0 | 2.6 | 14.4 | 4.0 | 83.0 | +82.4 |
| <=100 | 81.6 | 0.0 | 18.4 | 0.0 | 81.6 | +77.5 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 ($5.50/day 2011 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 97.8 | 6.5 | 45.4:1 |
| <=17 | 13.9 | 97.2 | 16.6 | 35.1:1 |
| <=20 | 20.4 | 95.7 | 23.9 | 22.1:1 |
| <=22 | 25.9 | 96.6 | 30.6 | 28.0:1 |
| <=25 | 32.6 | 96.3 | 38.4 | 25.8:1 |
| <=27 | 37.7 | 95.5 | 44.1 | 21.4:1 |
| <=29 | 42.7 | 94.4 | 49.4 | 17.0:1 |
| <=31 | 48.7 | 92.6 | 55.3 | 12.6:1 |
| <=33 | 54.3 | 91.1 | 60.5 | 10.2:1 |
| <=35 | 59.1 | 91.0 | 65.9 | 10.1:1 |
| <=37 | 65.2 | 91.1 | 72.8 | 10.2:1 |
| <=40 | 71.0 | 90.0 | 78.2 | 9.0:1 |
| <=43 | 76.8 | 89.1 | 83.8 | 8.2:1 |
| <=47 | 82.9 | 88.2 | 89.6 | 7.5:1 |
| <=52 | 88.2 | 86.1 | 93.1 | 6.2:1 |
| <=60 | 93.4 | 84.6 | 96.8 | 5.5:1 |
| <=100 | 100.0 | 81.6 | 100.0 | 4.4:1 |

Scorecard applied to the validation sample.

# Tables for the $21.70/day 2011 PPP Poverty Line

# Table 3 ($21.70/day 2011 PPP): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|:---:|:---:|
| 0–12 | 100.0 |
| 13–17 | 100.0 |
| 18–20 | 100.0 |
| 21–22 | 100.0 |
| 23–25 | 100.0 |
| 26–27 | 100.0 |
| 28–29 | 100.0 |
| 30–31 | 100.0 |
| 32–33 | 100.0 |
| 34–35 | 100.0 |
| 36–37 | 99.9 |
| 38–40 | 99.7 |
| 41–43 | 99.3 |
| 44–47 | 98.6 |
| 48–52 | 98.6 |
| 53–60 | 98.6 |
| 61–100 | 96.4 |

# Table 5 ($21.70/day 2011 PPP): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| Score | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | 0.0 | 0.0 | 0.0 | 0.0 |
| 13–17 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18–20 | +3.5 | 1.2 | 1.4 | 1.9 |
| 21–22 | 0.0 | 0.0 | 0.0 | 0.0 |
| 23–25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 26–27 | 0.0 | 0.0 | 0.0 | 0.0 |
| 28–29 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30–31 | 0.0 | 0.0 | 0.0 | 0.0 |
| 32–33 | 0.0 | 0.0 | 0.0 | 0.0 |
| 34–35 | 0.0 | 0.0 | 0.0 | 0.0 |
| 36–37 | –0.1 | 0.1 | 0.1 | 0.1 |
| 38–40 | +0.8 | 0.5 | 0.6 | 0.8 |
| 41–43 | –0.7 | 0.3 | 0.3 | 0.3 |
| 44–47 | –0.6 | 0.5 | 0.5 | 0.6 |
| 48–52 | –1.3 | 0.7 | 0.7 | 0.7 |
| 53–60 | –1.3 | 0.7 | 0.7 | 0.7 |
| 61–100 | –3.0 | 1.6 | 1.6 | 1.7 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 6 ($21.70/day 2011 PPP): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size $n$ | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval ($\pm$percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 1 | −0.4 | 1.8 | 1.8 | 1.8 |
| 4 | +0.2 | 0.5 | 0.6 | 21.7 |
| 8 | +0.1 | 0.4 | 0.9 | 11.9 |
| 16 | 0.0 | 0.3 | 3.0 | 7.2 |
| 32 | +0.1 | 1.6 | 2.9 | 4.3 |
| 64 | +0.1 | 1.5 | 1.7 | 2.3 |
| 128 | +0.1 | 0.9 | 1.1 | 1.8 |
| 256 | +0.1 | 0.7 | 0.8 | 1.1 |
| 512 | +0.1 | 0.5 | 0.6 | 0.7 |
| 1,024 | +0.1 | 0.4 | 0.4 | 0.6 |
| 2,048 | +0.1 | 0.3 | 0.3 | 0.4 |
| 4,096 | +0.1 | 0.2 | 0.2 | 0.3 |
| 8,192 | +0.1 | 0.1 | 0.2 | 0.2 |
| 16,384 | +0.1 | 0.1 | 0.1 | 0.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 ($21.70/day 2011 PPP): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.5 | 94.1 | 0.0 | 0.4 | 5.9 | −89.0 |
| <=17 | 13.9 | 85.7 | 0.0 | 0.4 | 14.3 | −72.0 |
| <=20 | 20.2 | 79.4 | 0.1 | 0.3 | 20.5 | −59.2 |
| <=22 | 25.7 | 73.9 | 0.1 | 0.3 | 26.0 | −48.2 |
| <=25 | 32.4 | 67.2 | 0.1 | 0.3 | 32.7 | −34.7 |
| <=27 | 37.5 | 62.0 | 0.1 | 0.3 | 37.8 | −24.4 |
| <=29 | 42.6 | 57.0 | 0.1 | 0.3 | 42.8 | −14.4 |
| <=31 | 48.6 | 51.0 | 0.1 | 0.3 | 48.8 | −2.3 |
| <=33 | 54.1 | 45.5 | 0.1 | 0.3 | 54.4 | +8.9 |
| <=35 | 58.9 | 40.6 | 0.1 | 0.3 | 59.2 | +18.5 |
| <=37 | 65.1 | 34.5 | 0.1 | 0.3 | 65.4 | +30.9 |
| <=40 | 70.8 | 28.8 | 0.2 | 0.2 | 71.0 | +42.3 |
| <=43 | 76.6 | 23.0 | 0.2 | 0.2 | 76.8 | +54.0 |
| <=47 | 82.6 | 16.9 | 0.3 | 0.1 | 82.8 | +66.2 |
| <=52 | 88.0 | 11.6 | 0.3 | 0.1 | 88.1 | +76.9 |
| <=60 | 93.1 | 6.5 | 0.3 | 0.1 | 93.2 | +87.2 |
| <=100 | 99.6 | 0.0 | 0.4 | 0.0 | 99.6 | +99.6 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 ($21.70/day 2011 PPP): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 100.0 | 5.5 | Only poor targeted |
| <=17 | 13.9 | 100.0 | 14.0 | Poor |
| <=20 | 20.4 | 99.3 | 20.3 | 136.4:1 |
| <=22 | 25.9 | 99.4 | 25.8 | 173.5:1 |
| <=25 | 32.6 | 99.5 | 32.6 | 218.7:1 |
| <=27 | 37.7 | 99.6 | 37.7 | 253.3:1 |
| <=29 | 42.7 | 99.7 | 42.7 | 287.2:1 |
| <=31 | 48.7 | 99.7 | 48.8 | 327.7:1 |
| <=33 | 54.3 | 99.7 | 54.4 | 365.2:1 |
| <=35 | 59.1 | 99.7 | 59.2 | 397.7:1 |
| <=37 | 65.2 | 99.8 | 65.4 | 439.1:1 |
| <=40 | 71.0 | 99.7 | 71.0 | 328.7:1 |
| <=43 | 76.8 | 99.7 | 76.9 | 355.8:1 |
| <=47 | 82.9 | 99.7 | 83.0 | 305.3:1 |
| <=52 | 88.2 | 99.7 | 88.3 | 295.2:1 |
| <=60 | 93.4 | 99.7 | 93.4 | 303.4:1 |
| <=100 | 100.0 | 99.6 | 100.0 | 239.3:1 |

Scorecard applied to the validation sample.

# Tables for the Line that Marks the Poorest Half of People below 100% of the National Poverty Line

# Table 3 (Poorest half of people below 100% of national line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|:---:|:---:|
| 0–12 | 52.7 |
| 13–17 | 39.8 |
| 18–20 | 29.1 |
| 21–22 | 26.4 |
| 23–25 | 23.8 |
| 26–27 | 23.8 |
| 28–29 | 23.8 |
| 30–31 | 18.6 |
| 32–33 | 14.7 |
| 34–35 | 13.1 |
| 36–37 | 11.4 |
| 38–40 | 10.1 |
| 41–43 | 7.4 |
| 44–47 | 7.0 |
| 48–52 | 4.9 |
| 53–60 | 4.9 |
| 61–100 | 1.1 |

# Table 5 (Poorest half of people below 100% of national line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
|---|---|---|---|---|
| 0–12 | −1.7 | 3.0 | 3.5 | 4.6 |
| 13–17 | −8.2 | 5.5 | 5.7 | 6.1 |
| 18–20 | +1.4 | 2.5 | 2.9 | 3.8 |
| 21–22 | +8.3 | 2.3 | 2.7 | 3.4 |
| 23–25 | −0.6 | 2.5 | 3.0 | 3.9 |
| 26–27 | +7.2 | 2.0 | 2.5 | 3.3 |
| 28–29 | +10.5 | 1.9 | 2.3 | 3.3 |
| 30–31 | +1.2 | 2.2 | 2.6 | 3.5 |
| 32–33 | 0.0 | 2.3 | 2.6 | 3.4 |
| 34–35 | −1.7 | 2.5 | 3.0 | 3.8 |
| 36–37 | +2.8 | 1.7 | 2.1 | 2.7 |
| 38–40 | −2.4 | 2.2 | 2.7 | 3.4 |
| 41–43 | +0.6 | 1.3 | 1.5 | 1.9 |
| 44–47 | −8.9 | 5.7 | 6.1 | 6.6 |
| 48–52 | +3.0 | 0.8 | 0.9 | 1.2 |
| 53–60 | +4.1 | 0.4 | 0.5 | 0.6 |
| 61–100 | +0.9 | 0.1 | 0.2 | 0.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (Poorest half of people below 100% of national line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | −0.8 | 58.0 | 63.3 | 72.8 |
| 4 | −1.3 | 35.8 | 42.1 | 51.0 |
| 8 | +0.3 | 25.3 | 30.7 | 40.7 |
| 16 | +0.5 | 18.7 | 21.7 | 28.9 |
| 32 | +0.5 | 13.3 | 16.5 | 22.5 |
| 64 | +0.5 | 9.7 | 11.4 | 14.9 |
| 128 | +0.6 | 6.6 | 7.8 | 10.1 |
| 256 | +0.6 | 4.8 | 5.4 | 6.7 |
| 512 | +0.7 | 3.4 | 3.9 | 4.9 |
| 1,024 | +0.6 | 2.3 | 2.8 | 3.8 |
| 2,048 | +0.6 | 1.6 | 1.9 | 2.5 |
| 4,096 | +0.6 | 1.1 | 1.4 | 1.8 |
| 8,192 | +0.6 | 0.8 | 1.0 | 1.3 |
| 16,384 | +0.6 | 0.6 | 0.7 | 0.9 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (Poorest half of people below 100% of national line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 2.9 | 15.8 | 2.6 | 78.7 | 81.6 | −55.3 |
| <=17 | 6.8 | 11.8 | 7.1 | 74.2 | 81.1 | +11.1 |
| <=20 | 8.8 | 9.9 | 11.5 | 69.8 | 78.6 | +38.2 |
| <=22 | 9.9 | 8.8 | 16.0 | 65.3 | 75.2 | +14.5 |
| <=25 | 11.6 | 7.1 | 21.0 | 60.3 | 71.9 | −12.1 |
| <=27 | 12.8 | 5.9 | 24.9 | 56.4 | 69.2 | −33.3 |
| <=29 | 13.6 | 5.1 | 29.1 | 52.2 | 65.8 | −55.7 |
| <=31 | 14.6 | 4.1 | 34.1 | 47.2 | 61.7 | −82.6 |
| <=33 | 15.3 | 3.4 | 38.9 | 42.4 | 57.7 | −108.2 |
| <=35 | 16.0 | 2.7 | 43.1 | 38.2 | 54.1 | −130.7 |
| <=37 | 16.5 | 2.2 | 48.7 | 32.6 | 49.1 | −160.7 |
| <=40 | 17.2 | 1.5 | 53.8 | 27.5 | 44.8 | −187.5 |
| <=43 | 17.7 | 1.0 | 59.1 | 22.2 | 40.0 | −215.9 |
| <=47 | 18.4 | 0.3 | 64.5 | 16.8 | 35.2 | −245.0 |
| <=52 | 18.6 | 0.1 | 69.7 | 11.6 | 30.2 | −272.7 |
| <=60 | 18.6 | 0.0 | 74.7 | 6.6 | 25.2 | −299.6 |
| <=100 | 18.7 | 0.0 | 81.3 | 0.0 | 18.7 | −334.9 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

# Table 10 (Poorest half of people below 100% of national line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 52.9 | 15.5 | 1.1:1 |
| <=17 | 13.9 | 49.2 | 36.6 | 1.0:1 |
| <=20 | 20.4 | 43.3 | 47.2 | 0.8:1 |
| <=22 | 25.9 | 38.2 | 52.8 | 0.6:1 |
| <=25 | 32.6 | 35.6 | 62.1 | 0.6:1 |
| <=27 | 37.7 | 33.9 | 68.3 | 0.5:1 |
| <=29 | 42.7 | 31.9 | 72.8 | 0.5:1 |
| <=31 | 48.7 | 29.9 | 77.9 | 0.4:1 |
| <=33 | 54.3 | 28.3 | 82.1 | 0.4:1 |
| <=35 | 59.1 | 27.0 | 85.4 | 0.4:1 |
| <=37 | 65.2 | 25.3 | 88.2 | 0.3:1 |
| <=40 | 71.0 | 24.2 | 92.0 | 0.3:1 |
| <=43 | 76.8 | 23.1 | 94.9 | 0.3:1 |
| <=47 | 82.9 | 22.2 | 98.5 | 0.3:1 |
| <=52 | 88.2 | 21.0 | 99.3 | 0.3:1 |
| <=60 | 93.4 | 20.0 | 99.7 | 0.2:1 |
| <=100 | 100.0 | 18.7 | 100.0 | 0.2:1 |

Scorecard applied to the validation sample.

# Tables for the First-Quntile (20<sup>th</sup>-Percentile) Poverty Line

# Table 3 (First-quintile line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 43.7 |
| 13–17 | 35.9 |
| 18–20 | 26.3 |
| 21–22 | 23.4 |
| 23–25 | 20.5 |
| 26–27 | 20.5 |
| 28–29 | 17.1 |
| 30–31 | 14.3 |
| 32–33 | 12.6 |
| 34–35 | 11.1 |
| 36–37 | 10.7 |
| 38–40 | 9.8 |
| 41–43 | 6.4 |
| 44–47 | 6.0 |
| 48–52 | 3.9 |
| 53–60 | 3.9 |
| 61–100 | 1.0 |

**Table 5 (First-quintile line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals**

| Score | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | –8.9 | 5.9 | 6.2 | 7.1 |
| 13–17 | –7.7 | 5.1 | 5.4 | 6.0 |
| 18–20 | +5.0 | 2.2 | 2.5 | 3.1 |
| 21–22 | +6.8 | 2.3 | 2.7 | 3.5 |
| 23–25 | –1.8 | 2.4 | 2.9 | 3.7 |
| 26–27 | +7.5 | 1.8 | 2.1 | 2.8 |
| 28–29 | +5.6 | 1.9 | 2.2 | 3.0 |
| 30–31 | +1.1 | 2.1 | 2.4 | 3.2 |
| 32–33 | –1.2 | 2.3 | 2.6 | 3.4 |
| 34–35 | –2.3 | 2.5 | 3.0 | 3.9 |
| 36–37 | +2.8 | 1.7 | 2.0 | 2.7 |
| 38–40 | –2.4 | 2.3 | 2.7 | 3.4 |
| 41–43 | 0.0 | 1.3 | 1.5 | 1.8 |
| 44–47 | –9.2 | 5.9 | 6.2 | 6.6 |
| 48–52 | +3.2 | 0.4 | 0.5 | 0.6 |
| 53–60 | +3.1 | 0.4 | 0.5 | 0.6 |
| 61–100 | +0.7 | 0.1 | 0.2 | 0.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (First-quintile line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
| --- | --- | --- | --- | --- |
| | | Confidence interval (±percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | 0.0 | 57.7 | 61.7 | 68.7 |
| 4 | −1.7 | 34.5 | 40.4 | 50.2 |
| 8 | −0.4 | 24.7 | 29.1 | 38.5 |
| 16 | −0.2 | 18.1 | 21.3 | 27.3 |
| 32 | −0.2 | 12.8 | 15.2 | 21.0 |
| 64 | −0.3 | 9.3 | 11.0 | 14.8 |
| 128 | −0.2 | 6.5 | 7.6 | 10.3 |
| 256 | −0.1 | 4.8 | 5.4 | 6.7 |
| 512 | −0.1 | 3.2 | 3.9 | 4.8 |
| 1,024 | −0.1 | 2.2 | 2.7 | 3.4 |
| 2,048 | −0.1 | 1.6 | 1.9 | 2.5 |
| 4,096 | −0.1 | 1.1 | 1.4 | 1.7 |
| 8,192 | −0.1 | 0.8 | 0.9 | 1.2 |
| 16,384 | −0.1 | 0.5 | 0.7 | 0.9 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (First-quintile line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 2.7 | 13.6 | 2.7 | 81.0 | 83.7 | −49.7 |
| <=17 | 6.2 | 10.1 | 7.7 | 76.0 | 82.2 | +23.4 |
| <=20 | 7.9 | 8.4 | 12.5 | 71.2 | 79.1 | +23.4 |
| <=22 | 8.8 | 7.5 | 17.0 | 66.6 | 75.5 | −4.6 |
| <=25 | 10.3 | 6.0 | 22.3 | 61.4 | 71.7 | −36.6 |
| <=27 | 11.2 | 5.1 | 26.5 | 57.2 | 68.5 | −62.3 |
| <=29 | 11.9 | 4.4 | 30.8 | 52.9 | 64.8 | −88.8 |
| <=31 | 12.7 | 3.6 | 36.0 | 47.7 | 60.4 | −120.9 |
| <=33 | 13.4 | 2.9 | 40.9 | 42.8 | 56.2 | −150.7 |
| <=35 | 13.9 | 2.4 | 45.2 | 38.5 | 52.4 | −177.1 |
| <=37 | 14.4 | 1.9 | 50.9 | 32.8 | 47.2 | −212.0 |
| <=40 | 15.0 | 1.3 | 56.0 | 27.7 | 42.7 | −243.2 |
| <=43 | 15.5 | 0.8 | 61.3 | 22.4 | 37.9 | −276.0 |
| <=47 | 16.1 | 0.2 | 66.8 | 16.9 | 33.0 | −309.8 |
| <=52 | 16.2 | 0.1 | 72.1 | 11.6 | 27.8 | −342.0 |
| <=60 | 16.3 | 0.0 | 77.1 | 6.6 | 22.9 | −372.8 |
| <=100 | 16.3 | 0.0 | 83.7 | 0.0 | 16.3 | −413.3 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 (First-quintile line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 50.2 | 16.8 | 1.0:1 |
| <=17 | 13.9 | 44.5 | 38.0 | 0.8:1 |
| <=20 | 20.4 | 38.6 | 48.3 | 0.6:1 |
| <=22 | 25.9 | 34.1 | 54.0 | 0.5:1 |
| <=25 | 32.6 | 31.6 | 63.1 | 0.5:1 |
| <=27 | 37.7 | 29.8 | 68.9 | 0.4:1 |
| <=29 | 42.7 | 27.9 | 73.2 | 0.4:1 |
| <=31 | 48.7 | 26.0 | 77.8 | 0.4:1 |
| <=33 | 54.3 | 24.7 | 82.1 | 0.3:1 |
| <=35 | 59.1 | 23.5 | 85.3 | 0.3:1 |
| <=37 | 65.2 | 22.0 | 88.1 | 0.3:1 |
| <=40 | 71.0 | 21.1 | 92.1 | 0.3:1 |
| <=43 | 76.8 | 20.2 | 95.0 | 0.3:1 |
| <=47 | 82.9 | 19.4 | 98.7 | 0.2:1 |
| <=52 | 88.2 | 18.3 | 99.2 | 0.2:1 |
| <=60 | 93.4 | 17.4 | 99.7 | 0.2:1 |
| <=100 | 100.0 | 16.3 | 100.0 | 0.2:1 |

Scorecard applied to the validation sample.

# Tables for the Second-Quntile (40<sup>th</sup>-Percentile) Poverty Line

# Table 3 (Second-quintile line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 73.4 |
| 13–17 | 63.4 |
| 18–20 | 50.3 |
| 21–22 | 43.5 |
| 23–25 | 39.7 |
| 26–27 | 39.7 |
| 28–29 | 39.7 |
| 30–31 | 39.7 |
| 32–33 | 31.0 |
| 34–35 | 24.2 |
| 36–37 | 24.2 |
| 38–40 | 23.8 |
| 41–43 | 20.1 |
| 44–47 | 13.5 |
| 48–52 | 11.0 |
| 53–60 | 11.0 |
| 61–100 | 4.4 |

**Table 5 (Second-quintile line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals**

| Score | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | –13.9 | 7.8 | 8.0 | 8.3 |
| 13–17 | –8.3 | 5.3 | 5.5 | 5.9 |
| 18–20 | +2.4 | 2.8 | 3.5 | 4.6 |
| 21–22 | –9.6 | 6.2 | 6.6 | 7.4 |
| 23–25 | –8.1 | 5.5 | 5.7 | 6.4 |
| 26–27 | +5.6 | 3.0 | 3.5 | 4.5 |
| 28–29 | +14.4 | 2.7 | 3.2 | 4.0 |
| 30–31 | +11.6 | 2.4 | 3.0 | 4.0 |
| 32–33 | +11.8 | 2.4 | 2.8 | 3.4 |
| 34–35 | +2.7 | 2.8 | 3.4 | 4.5 |
| 36–37 | +0.4 | 2.5 | 3.1 | 4.0 |
| 38–40 | +2.5 | 2.4 | 3.0 | 4.0 |
| 41–43 | +4.2 | 2.0 | 2.5 | 3.1 |
| 44–47 | –10.3 | 6.5 | 6.8 | 7.5 |
| 48–52 | +0.9 | 1.9 | 2.3 | 2.9 |
| 53–60 | +5.8 | 1.4 | 1.6 | 2.2 |
| 61–100 | +1.0 | 1.2 | 1.4 | 1.8 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (Second-quintile line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
| --- | --- | --- | --- | --- |
| | | Confidence interval ($\pm$percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | –2.1 | 63.0 | 71.7 | 81.2 |
| 4 | –1.6 | 41.4 | 47.7 | 56.2 |
| 8 | +0.1 | 30.2 | 36.0 | 44.8 |
| 16 | +0.5 | 21.0 | 24.5 | 32.3 |
| 32 | +0.4 | 14.8 | 18.3 | 23.6 |
| 64 | +0.3 | 10.7 | 13.1 | 16.7 |
| 128 | +0.4 | 7.6 | 9.1 | 11.8 |
| 256 | +0.3 | 5.4 | 6.5 | 8.0 |
| 512 | +0.3 | 3.8 | 4.6 | 6.0 |
| 1,024 | +0.3 | 2.5 | 3.0 | 3.9 |
| 2,048 | +0.3 | 1.9 | 2.3 | 2.9 |
| 4,096 | +0.3 | 1.3 | 1.5 | 1.9 |
| 8,192 | +0.2 | 0.9 | 1.1 | 1.4 |
| 16,384 | +0.3 | 0.7 | 0.8 | 1.0 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (Second-quintile line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 4.5 | 29.4 | 0.9 | 65.1 | 69.6 | −70.6 |
| <=17 | 10.5 | 23.5 | 3.5 | 62.6 | 73.1 | −28.1 |
| <=20 | 13.8 | 20.2 | 6.6 | 59.5 | 73.2 | +0.6 |
| <=22 | 16.6 | 17.4 | 9.3 | 56.8 | 73.4 | +25.0 |
| <=25 | 19.7 | 14.3 | 12.9 | 53.2 | 72.9 | +53.9 |
| <=27 | 22.0 | 12.0 | 15.7 | 50.3 | 72.3 | +53.7 |
| <=29 | 23.6 | 10.3 | 19.1 | 46.9 | 70.5 | +43.7 |
| <=31 | 25.3 | 8.7 | 23.5 | 42.6 | 67.9 | +30.9 |
| <=33 | 26.4 | 7.5 | 27.8 | 38.2 | 64.7 | +18.0 |
| <=35 | 27.5 | 6.4 | 31.6 | 34.5 | 62.0 | +7.0 |
| <=37 | 28.9 | 5.0 | 36.3 | 29.8 | 58.7 | −6.9 |
| <=40 | 30.4 | 3.6 | 40.6 | 25.4 | 55.8 | −19.6 |
| <=43 | 31.5 | 2.4 | 45.3 | 20.8 | 52.3 | −33.3 |
| <=47 | 32.8 | 1.2 | 50.1 | 15.9 | 48.7 | −47.7 |
| <=52 | 33.3 | 0.6 | 54.9 | 11.1 | 44.4 | −61.8 |
| <=60 | 33.7 | 0.2 | 59.7 | 6.4 | 40.1 | −75.7 |
| <=100 | 33.9 | 0.0 | 66.1 | 0.0 | 33.9 | −94.6 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

# Table 10 (Second-quintile line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 82.7 | 13.3 | 4.8:1 |
| <=17 | 13.9 | 75.2 | 30.9 | 3.0:1 |
| <=20 | 20.4 | 67.6 | 40.6 | 2.1:1 |
| <=22 | 25.9 | 64.1 | 48.9 | 1.8:1 |
| <=25 | 32.6 | 60.4 | 58.0 | 1.5:1 |
| <=27 | 37.7 | 58.3 | 64.7 | 1.4:1 |
| <=29 | 42.7 | 55.2 | 69.5 | 1.2:1 |
| <=31 | 48.7 | 51.8 | 74.4 | 1.1:1 |
| <=33 | 54.3 | 48.7 | 77.9 | 0.9:1 |
| <=35 | 59.1 | 46.6 | 81.1 | 0.9:1 |
| <=37 | 65.2 | 44.4 | 85.2 | 0.8:1 |
| <=40 | 71.0 | 42.8 | 89.4 | 0.7:1 |
| <=43 | 76.8 | 41.1 | 92.9 | 0.7:1 |
| <=47 | 82.9 | 39.5 | 96.5 | 0.7:1 |
| <=52 | 88.2 | 37.8 | 98.2 | 0.6:1 |
| <=60 | 93.4 | 36.1 | 99.3 | 0.6:1 |
| <=100 | 100.0 | 33.9 | 100.0 | 0.5:1 |

Scorecard applied to the validation sample.

# Tables for the Median (50<sup>th</sup>-Percentile) Poverty Line

# Table 3 (Median line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 80.4 |
| 13–17 | 74.0 |
| 18–20 | 63.7 |
| 21–22 | 56.6 |
| 23–25 | 51.9 |
| 26–27 | 51.9 |
| 28–29 | 51.9 |
| 30–31 | 49.8 |
| 32–33 | 39.8 |
| 34–35 | 32.9 |
| 36–37 | 32.9 |
| 38–40 | 32.3 |
| 41–43 | 27.9 |
| 44–47 | 20.9 |
| 48–52 | 18.0 |
| 53–60 | 15.4 |
| 61–100 | 6.2 |

# Table 5 (Median line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| Score | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | −12.4 | 6.9 | 7.0 | 7.3 |
| 13–17 | −2.7 | 2.4 | 2.6 | 3.5 |
| 18–20 | −1.4 | 2.6 | 3.2 | 4.1 |
| 21–22 | −8.2 | 5.5 | 5.8 | 6.4 |
| 23–25 | −3.5 | 3.2 | 3.5 | 4.9 |
| 26–27 | −9.6 | 6.5 | 6.9 | 7.2 |
| 28–29 | +8.8 | 3.2 | 3.8 | 5.0 |
| 30–31 | +12.4 | 2.6 | 3.2 | 4.5 |
| 32–33 | +7.3 | 2.9 | 3.4 | 4.7 |
| 34–35 | +9.4 | 2.9 | 3.4 | 4.5 |
| 36–37 | +1.9 | 2.6 | 3.1 | 4.3 |
| 38–40 | +8.9 | 2.5 | 3.1 | 4.2 |
| 41–43 | −2.3 | 2.9 | 3.4 | 4.8 |
| 44–47 | −9.7 | 6.4 | 6.7 | 7.4 |
| 48–52 | −4.9 | 4.0 | 4.2 | 4.8 |
| 53–60 | +2.4 | 2.6 | 3.2 | 4.4 |
| 61–100 | +0.2 | 1.5 | 1.7 | 2.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

**Table 6 (Median line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals**

| Sample Size $n$ | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval ($\pm$percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 1 | −1.8 | 64.4 | 71.4 | 82.5 |
| 4 | −1.6 | 44.0 | 50.3 | 60.2 |
| 8 | −0.1 | 32.0 | 37.4 | 48.1 |
| 16 | −0.2 | 23.0 | 26.7 | 33.5 |
| 32 | −0.1 | 16.4 | 19.3 | 25.5 |
| 64 | −0.2 | 11.3 | 13.7 | 18.6 |
| 128 | −0.1 | 8.0 | 10.0 | 13.5 |
| 256 | −0.3 | 5.8 | 6.9 | 9.2 |
| 512 | −0.3 | 4.2 | 4.9 | 6.8 |
| 1,024 | −0.3 | 2.7 | 3.4 | 4.5 |
| 2,048 | −0.4 | 2.0 | 2.4 | 3.2 |
| 4,096 | −0.4 | 1.4 | 1.6 | 2.2 |
| 8,192 | −0.4 | 1.0 | 1.2 | 1.6 |
| 16,384 | −0.3 | 0.7 | 0.9 | 1.1 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (Median line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.0 | 38.3 | 0.5 | 56.3 | 61.2 | −75.9 |
| <=17 | 11.5 | 31.8 | 2.4 | 54.3 | 65.8 | −41.3 |
| <=20 | 15.5 | 27.8 | 4.9 | 51.9 | 67.4 | −17.1 |
| <=22 | 19.1 | 24.2 | 6.8 | 49.9 | 69.0 | +3.8 |
| <=25 | 22.8 | 20.4 | 9.7 | 47.0 | 69.9 | +28.1 |
| <=27 | 26.0 | 17.3 | 11.7 | 45.0 | 71.0 | +47.2 |
| <=29 | 28.4 | 14.9 | 14.3 | 42.4 | 70.8 | +64.4 |
| <=31 | 30.7 | 12.5 | 18.0 | 38.7 | 69.4 | +58.4 |
| <=33 | 32.6 | 10.6 | 21.7 | 35.1 | 67.7 | +49.9 |
| <=35 | 33.9 | 9.3 | 25.2 | 31.6 | 65.5 | +41.8 |
| <=37 | 35.9 | 7.3 | 29.3 | 27.4 | 63.4 | +32.2 |
| <=40 | 37.6 | 5.6 | 33.4 | 23.4 | 61.0 | +22.9 |
| <=43 | 39.4 | 3.8 | 37.4 | 19.4 | 58.8 | +13.5 |
| <=47 | 41.1 | 2.2 | 41.8 | 14.9 | 56.0 | +3.3 |
| <=52 | 42.1 | 1.1 | 46.1 | 10.6 | 52.7 | −6.7 |
| <=60 | 42.8 | 0.4 | 50.5 | 6.2 | 49.0 | −16.9 |
| <=100 | 43.2 | 0.0 | 56.8 | 0.0 | 43.2 | −31.2 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

# Table 10 (Median line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 91.0 | 11.5 | 10.1:1 |
| <=17 | 13.9 | 82.5 | 26.5 | 4.7:1 |
| <=20 | 20.4 | 76.1 | 35.8 | 3.2:1 |
| <=22 | 25.9 | 73.7 | 44.1 | 2.8:1 |
| <=25 | 32.6 | 70.1 | 52.8 | 2.3:1 |
| <=27 | 37.7 | 68.9 | 60.0 | 2.2:1 |
| <=29 | 42.7 | 66.5 | 65.6 | 2.0:1 |
| <=31 | 48.7 | 63.0 | 71.0 | 1.7:1 |
| <=33 | 54.3 | 60.1 | 75.4 | 1.5:1 |
| <=35 | 59.1 | 57.4 | 78.4 | 1.3:1 |
| <=37 | 65.2 | 55.1 | 83.1 | 1.2:1 |
| <=40 | 71.0 | 53.0 | 87.0 | 1.1:1 |
| <=43 | 76.8 | 51.3 | 91.1 | 1.1:1 |
| <=47 | 82.9 | 49.6 | 95.0 | 1.0:1 |
| <=52 | 88.2 | 47.7 | 97.4 | 0.9:1 |
| <=60 | 93.4 | 45.9 | 99.0 | 0.8:1 |
| <=100 | 100.0 | 43.2 | 100.0 | 0.8:1 |

Scorecard applied to the validation sample.

# Tables for the Third-Quntile (60<sup>th</sup>-Percentile) Poverty Line

# Table 3 (Third-quintile line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 87.3 |
| 13–17 | 82.3 |
| 18–20 | 70.3 |
| 21–22 | 67.4 |
| 23–25 | 64.2 |
| 26–27 | 63.6 |
| 28–29 | 61.2 |
| 30–31 | 61.2 |
| 32–33 | 54.3 |
| 34–35 | 44.8 |
| 36–37 | 44.8 |
| 38–40 | 44.8 |
| 41–43 | 40.1 |
| 44–47 | 29.8 |
| 48–52 | 27.4 |
| 53–60 | 21.2 |
| 61–100 | 9.6 |

# Table 5 (Third-quintile line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| Score | Error | 90-percent | 95-percent | 99-percent |
| 0–12 | –5.6 | 3.5 | 3.6 | 3.9 |
| 13–17 | –4.5 | 3.1 | 3.2 | 3.6 |
| 18–20 | –0.4 | 2.6 | 3.1 | 3.9 |
| 21–22 | –2.5 | 2.8 | 3.4 | 4.3 |
| 23–25 | +5.3 | 2.9 | 3.4 | 4.9 |
| 26–27 | –7.4 | 5.2 | 5.4 | 6.2 |
| 28–29 | –3.6 | 3.3 | 3.6 | 4.6 |
| 30–31 | +14.9 | 2.7 | 3.3 | 4.5 |
| 32–33 | +6.4 | 3.1 | 3.8 | 5.1 |
| 34–35 | +9.0 | 3.2 | 3.8 | 5.1 |
| 36–37 | –9.7 | 6.3 | 6.6 | 7.2 |
| 38–40 | +9.5 | 3.0 | 3.5 | 4.4 |
| 41–43 | –10.9 | 7.1 | 7.4 | 7.9 |
| 44–47 | –14.0 | 8.6 | 8.9 | 9.4 |
| 48–52 | –0.5 | 3.1 | 3.8 | 4.7 |
| 53–60 | +7.5 | 2.6 | 3.3 | 4.4 |
| 61–100 | +2.4 | 1.5 | 1.8 | 2.3 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 6 (Third-quintile line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size | | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval ($\pm$percentage points) | | |
| $n$ | Error | 90-percent | 95-percent | 99-percent |
| 1 | −0.4 | 67.2 | 71.5 | 85.9 |
| 4 | −1.0 | 45.4 | 50.4 | 59.6 |
| 8 | −0.1 | 33.2 | 38.3 | 46.7 |
| 16 | −0.4 | 23.1 | 27.2 | 35.5 |
| 32 | −0.4 | 15.8 | 19.2 | 25.6 |
| 64 | −0.4 | 11.3 | 13.7 | 18.6 |
| 128 | −0.4 | 8.0 | 9.5 | 12.1 |
| 256 | −0.6 | 5.7 | 6.8 | 9.1 |
| 512 | −0.7 | 4.0 | 4.9 | 6.3 |
| 1,024 | −0.8 | 2.8 | 3.3 | 4.3 |
| 2,048 | −0.8 | 2.0 | 2.5 | 3.2 |
| 4,096 | −0.7 | 1.5 | 1.7 | 2.2 |
| 8,192 | −0.7 | 1.0 | 1.3 | 1.7 |
| 16,384 | −0.7 | 0.7 | 0.9 | 1.2 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (Third-quintile line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.0 | 47.4 | 0.5 | 47.1 | 52.1 | −80.1 |
| <=17 | 12.3 | 40.1 | 1.6 | 46.0 | 58.3 | −50.0 |
| <=20 | 16.7 | 35.7 | 3.7 | 43.9 | 60.6 | −29.3 |
| <=22 | 20.5 | 31.9 | 5.3 | 42.3 | 62.8 | −11.5 |
| <=25 | 24.7 | 27.6 | 7.8 | 39.8 | 64.5 | +9.4 |
| <=27 | 28.3 | 24.1 | 9.4 | 38.2 | 66.6 | +26.0 |
| <=29 | 31.4 | 21.0 | 11.3 | 36.3 | 67.8 | +41.5 |
| <=31 | 34.2 | 18.2 | 14.5 | 33.1 | 67.3 | +58.3 |
| <=33 | 37.0 | 15.4 | 17.3 | 30.3 | 67.2 | +66.9 |
| <=35 | 39.1 | 13.3 | 20.0 | 27.7 | 66.8 | +61.9 |
| <=37 | 42.3 | 10.1 | 22.9 | 24.7 | 67.0 | +56.2 |
| <=40 | 44.6 | 7.8 | 26.4 | 21.2 | 65.8 | +49.6 |
| <=43 | 47.2 | 5.2 | 29.6 | 18.0 | 65.2 | +43.5 |
| <=47 | 49.6 | 2.8 | 33.4 | 14.3 | 63.8 | +36.3 |
| <=52 | 51.0 | 1.4 | 37.3 | 10.3 | 61.3 | +28.8 |
| <=60 | 51.8 | 0.6 | 41.5 | 6.1 | 57.9 | +20.7 |
| <=100 | 52.4 | 0.0 | 47.6 | 0.0 | 52.4 | +9.1 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

**Table 10 (Third-quintile line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted**

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 91.2 | 9.5 | 10.4:1 |
| <=17 | 13.9 | 88.2 | 23.5 | 7.5:1 |
| <=20 | 20.4 | 81.9 | 31.8 | 4.5:1 |
| <=22 | 25.9 | 79.4 | 39.2 | 3.8:1 |
| <=25 | 32.6 | 76.0 | 47.2 | 3.2:1 |
| <=27 | 37.7 | 75.1 | 54.1 | 3.0:1 |
| <=29 | 42.7 | 73.6 | 60.0 | 2.8:1 |
| <=31 | 48.7 | 70.2 | 65.3 | 2.4:1 |
| <=33 | 54.3 | 68.1 | 70.5 | 2.1:1 |
| <=35 | 59.1 | 66.2 | 74.7 | 2.0:1 |
| <=37 | 65.2 | 64.8 | 80.7 | 1.8:1 |
| <=40 | 71.0 | 62.8 | 85.1 | 1.7:1 |
| <=43 | 76.8 | 61.5 | 90.1 | 1.6:1 |
| <=47 | 82.9 | 59.8 | 94.6 | 1.5:1 |
| <=52 | 88.2 | 57.8 | 97.3 | 1.4:1 |
| <=60 | 93.4 | 55.5 | 98.9 | 1.2:1 |
| <=100 | 100.0 | 52.4 | 100.0 | 1.1:1 |

Scorecard applied to the validation sample.

# Tables for the Fourth-Quntile (80<sup>th</sup>-Percentile) Poverty Line

# Table 3 (Fourth-quintile line): Scores and their corresponding estimates of poverty likelihoods

| If a household's score is . . . | . . . then the likelihood (%) of being below the poverty line is: |
|---|---|
| 0–12 | 96.3 |
| 13–17 | 93.6 |
| 18–20 | 87.6 |
| 21–22 | 86.1 |
| 23–25 | 86.1 |
| 26–27 | 86.1 |
| 28–29 | 80.6 |
| 30–31 | 80.6 |
| 32–33 | 80.6 |
| 34–35 | 77.9 |
| 36–37 | 76.4 |
| 38–40 | 76.4 |
| 41–43 | 69.4 |
| 44–47 | 55.6 |
| 48–52 | 50.5 |
| 53–60 | 43.6 |
| 61–100 | 26.4 |

# Table 5 (Fourth-quintile line): Errors in a household's poverty likelihood (average of differences between estimated and observed values) by score range, with confidence intervals

| Score | Error | Difference between estimate and observed value | | |
|---|---|---|---|---|
| | | Confidence interval (±percentage points) | | |
| | | 90-percent | 95-percent | 99-percent |
| 0–12 | −0.8 | 1.1 | 1.3 | 1.6 |
| 13–17 | −1.1 | 1.0 | 1.2 | 1.7 |
| 18–20 | −0.2 | 1.9 | 2.2 | 3.1 |
| 21–22 | −10.1 | 5.5 | 5.7 | 5.8 |
| 23–25 | −3.0 | 2.3 | 2.4 | 2.8 |
| 26–27 | −4.3 | 3.0 | 3.2 | 3.4 |
| 28–29 | −6.6 | 4.3 | 4.4 | 4.8 |
| 30–31 | +6.2 | 2.5 | 2.9 | 3.9 |
| 32–33 | +9.8 | 2.9 | 3.6 | 4.3 |
| 34–35 | −2.9 | 2.8 | 3.3 | 4.3 |
| 36–37 | −13.2 | 7.3 | 7.5 | 7.7 |
| 38–40 | +12.3 | 3.2 | 3.9 | 5.1 |
| 41–43 | −10.4 | 6.3 | 6.5 | 6.9 |
| 44–47 | −11.5 | 7.3 | 7.5 | 8.1 |
| 48–52 | +16.1 | 3.1 | 4.0 | 4.9 |
| 53–60 | +0.1 | 4.3 | 5.3 | 7.3 |
| 61–100 | −13.9 | 9.2 | 9.6 | 10.5 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

## Table 6 (Fourth-quintile line): Errors in households' poverty rates at a point in time (average of differences between estimated and observed values), with confidence intervals

| Sample Size $n$ | Error | Difference between estimate and observed value Confidence interval ($\pm$percentage points) | | |
| --- | --- | --- | --- | --- |
| | | 90-percent | 95-percent | 99-percent |
| 1 | –0.2 | 65.1 | 71.3 | 82.1 |
| 4 | –1.6 | 34.6 | 41.7 | 53.5 |
| 8 | –1.9 | 24.1 | 28.9 | 39.4 |
| 16 | –2.0 | 17.3 | 19.9 | 26.8 |
| 32 | –2.1 | 12.3 | 14.8 | 20.2 |
| 64 | –2.0 | 8.7 | 10.3 | 14.3 |
| 128 | –2.0 | 5.9 | 7.1 | 9.7 |
| 256 | –2.0 | 4.3 | 5.2 | 6.4 |
| 512 | –2.0 | 3.2 | 3.7 | 4.9 |
| 1,024 | –2.0 | 2.1 | 2.5 | 3.4 |
| 2,048 | –2.0 | 1.5 | 1.8 | 2.4 |
| 4,096 | –2.0 | 1.1 | 1.3 | 1.7 |
| 8,192 | –2.0 | 0.8 | 0.9 | 1.3 |
| 16,384 | –2.0 | 0.5 | 0.7 | 0.9 |

Scorecard applied to 1,000 bootstraps of n = 16,394 from validation sample.

# Table 9 (Fourth-quintile line): Percentages of households by cut-off score and targeting classification, along with the hit rate and BPAC

| Targeting cut-off | Inclusion: Poor correctly targeted | Undercoverage: Poor mistakenly not targeted | Leakage: Non-poor mistakenly targeted | Exclusion: Non-poor correctly not targeted | Hit rate Inclusion + Exclusion | BPAC See text |
|---|---|---|---|---|---|---|
| <=12 | 5.3 | 68.7 | 0.1 | 25.9 | 31.2 | −85.4 |
| <=17 | 13.3 | 60.7 | 0.6 | 25.4 | 38.7 | −63.2 |
| <=20 | 19.0 | 55.0 | 1.4 | 24.6 | 43.6 | −46.8 |
| <=22 | 24.2 | 49.8 | 1.6 | 24.4 | 48.6 | −32.3 |
| <=25 | 30.1 | 43.9 | 2.5 | 23.5 | 53.5 | −15.4 |
| <=27 | 34.6 | 39.4 | 3.1 | 22.9 | 57.6 | −2.2 |
| <=29 | 38.8 | 35.2 | 3.9 | 22.1 | 60.9 | +10.2 |
| <=31 | 43.0 | 31.0 | 5.7 | 20.3 | 63.4 | +24.0 |
| <=33 | 47.0 | 27.0 | 7.3 | 18.7 | 65.7 | +36.9 |
| <=35 | 50.9 | 23.1 | 8.2 | 17.8 | 68.6 | +48.6 |
| <=37 | 56.1 | 17.9 | 9.1 | 16.9 | 73.0 | +64.0 |
| <=40 | 59.8 | 14.2 | 11.1 | 14.9 | 74.7 | +76.8 |
| <=43 | 64.1 | 9.9 | 12.7 | 13.3 | 77.3 | +82.8 |
| <=47 | 67.9 | 6.1 | 15.0 | 11.0 | 78.8 | +79.7 |
| <=52 | 70.1 | 3.9 | 18.2 | 7.8 | 77.9 | +75.4 |
| <=60 | 72.3 | 1.7 | 21.1 | 4.9 | 77.2 | +71.5 |
| <=100 | 74.0 | 0.0 | 26.0 | 0.0 | 74.0 | +64.9 |

Inclusion, undercoverage, leakage, and exclusion normalized to sum to 100. Scorecard applied to the validation sample.

# Table 10 (Fourth-quintile line): Share of all households who are targeted (that is, score at or below a cut-off), share of targeted households who are poor, share of poor households who are targeted, and number of poor households successfully targeted per non-poor household mistakenly targeted

| Targeting cut-off | % all HHs who are targeted | % targeted HHs who are poor | % poor HHs who are targeted | Poor HHs targeted per non-poor HH targeted |
|---|---|---|---|---|
| <=12 | 5.5 | 97.6 | 7.2 | 40.6:1 |
| <=17 | 13.9 | 95.5 | 18.0 | 21.0:1 |
| <=20 | 20.4 | 93.3 | 25.7 | 13.9:1 |
| <=22 | 25.9 | 93.6 | 32.7 | 14.7:1 |
| <=25 | 32.6 | 92.3 | 40.6 | 11.9:1 |
| <=27 | 37.7 | 91.9 | 46.8 | 11.3:1 |
| <=29 | 42.7 | 90.9 | 52.5 | 10.0:1 |
| <=31 | 48.7 | 88.3 | 58.2 | 7.6:1 |
| <=33 | 54.3 | 86.6 | 63.5 | 6.5:1 |
| <=35 | 59.1 | 86.1 | 68.7 | 6.2:1 |
| <=37 | 65.2 | 86.1 | 75.9 | 6.2:1 |
| <=40 | 71.0 | 84.3 | 80.9 | 5.4:1 |
| <=43 | 76.8 | 83.4 | 86.6 | 5.0:1 |
| <=47 | 82.9 | 81.9 | 91.7 | 4.5:1 |
| <=52 | 88.2 | 79.4 | 94.7 | 3.9:1 |
| <=60 | 93.4 | 77.4 | 97.7 | 3.4:1 |
| <=100 | 100.0 | 74.0 | 100.0 | 2.8:1 |

Scorecard applied to the validation sample.