



# Assessing the Socioeconomic Profile of the Beneficiaries of an Intervention: A Step-by-Step Guide

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The purpose of this note is to describe a simple and low-cost method for assessing the socioeconomic profile of the beneficiaries of an intervention and to determine whether the intervention is pro-poor.<sup>1</sup> The note provides details on each step of the analysis.<sup>2</sup>

## WHAT CAN BE EXPECTED?

Through this method, it is possible to see the socioeconomic profile of the beneficiaries of an intervention. Where along the socioeconomic spectrum of the country does their socioeconomic status fall? To which of the national socioeconomic groups can the beneficiaries be assigned?

The analysis results in a frequency distribution of the beneficiaries of the intervention across socioeconomic groups, often socioeconomic quintiles. Are the benefits of the intervention evenly distributed across the five quintiles (with 20% of the beneficiaries in each quintile)? Is the intervention pro-poor, with a larger proportion falling into the lower numbered quintiles? Or is it favoring the better off, with relatively more beneficiaries falling into the higher numbered quintiles?

This method is attractive for two reasons: it is relatively low cost and it is easy to apply. More particularly, it has the following advantages:

- The socioeconomic profile of beneficiaries can be compared to already-calculated national asset (wealth) indices, thus considerably simplifying the calculations needed to analyze the survey of intervention beneficiaries.
- Country-specific asset questions previously developed by those who conducted the reference survey can be used. They can simply be added to an already-planned survey, including household surveys or exit surveys of facility users.
- The sample size required is relatively small, given that there is no need to *create* new socioeconomic quintiles from the sample of beneficiaries. The analysis *borrow*s information from an existing household survey, in which a representative sample of the national population was already divided into national wealth quintiles.

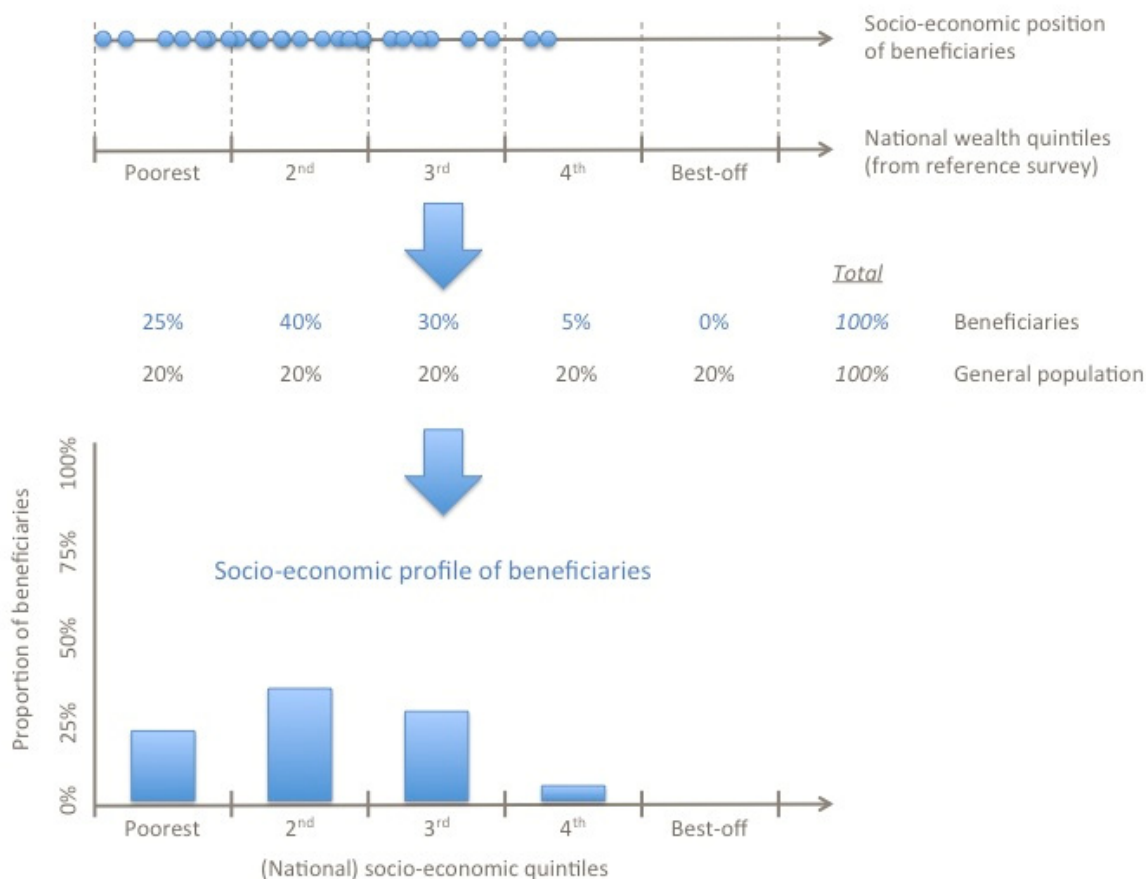
Figure 1 illustrates the main idea behind the method. In this example, the intervention benefits mostly people who are in the three lowest national socioeconomic quintiles, with the largest share falling into the second quintile. This suggests that the intervention is relatively pro-poor.

<sup>1</sup> This method was first proposed by Gwatkin et al. See for example: Gwatkin DR, Rutstein S, Johnson K, Suliman E, Wagstaff A & Amouzou A (2007). *Socioeconomic differences in health, nutrition, and population: Nepal*. Washington, DC: World Bank.

<sup>2</sup> The method specifically relates to socioeconomic inequalities in health. Inequalities due to other factors, such as ethnicity or geographical location, would require different methods of analysis.

There is still considerable scope to make it even more pro-poor, however. Such results may trigger discussions within the implementing organization as to how to reach the poorest.

**Figure 1. Main Idea behind the Method**



While the socioeconomic status of beneficiaries is typically compared to the national socioeconomic spectrum, it is often also possible to use regional or area-specific (i.e., rural or urban) populations as a reference. Whether this is possible depends on the features of the reference survey, down to what level the survey represents.

Before turning to the steps involved in the basic method, we will say a few words about what an asset index and an asset quintile are and how they are constructed.

## WHAT IS AN ASSET INDEX?

An **asset index**, also sometimes referred to as a **wealth index**, combines the answers to questions relating to household asset ownership, housing characteristics, and access to basic services such as water and sanitation. Principal components analysis, or PCA, is a statistical method typically used to generate a weight for each item covered by the questions. The index is then calculated for each household by standardizing the response to each item, weighting it by the score associated with the first principal component, and adding up the weighted responses. Each respondent is given an asset index value. All the respondents are subsequently sorted based on the value of their asset index, and the sample is then divided into five socioeconomic groups of equal size. These are the **asset quintiles**, also sometimes referred to as **wealth quintiles**.

## WHAT IS NEEDED TO GET THERE?

Two types of data are needed to apply the basic method:

- A **reference household survey** that provides information about the socioeconomic status, measured using an asset index (or wealth index), of the country's population at large. Common reference surveys are the most recent Demographic and Health Survey (DHS), Reproductive Health Survey (RHS), or Living Standard Measurement Survey (LSMS).
- A **survey of beneficiaries** that can provide information about the socioeconomic status of the beneficiaries of the intervention. This information needs to be collected for a sample of beneficiaries of the intervention, either at the site(s) offering the services of interest or in the beneficiaries' households. This is described further below.

## HOW IS IT DONE?

The socioeconomic profile of beneficiaries is determined in seven steps:

1. Determine the groups you want to compare
2. Obtain information from the selected reference survey
3. Collect information from a sample of beneficiaries
4. Prepare the data for analysis
5. Calculate the value of the asset index for each respondent
6. Assign respondents to reference survey quintile groups
7. Generate the socioeconomic profile of the beneficiaries

Each step is discussed in detail in the following text. Each step is also illustrated using the example of Honduras where it was applied by ChildFund International.<sup>3</sup>

Box 1 provides some background information to the case study.

### Box 1. Case Study—Background

#### Use of the method in a project implemented by Child Fund International in Honduras

From October 1, 2009, to September 30, 2013, Child Fund International (CFI) implemented a community-based (CB) maternal, neonatal, and child health project in Francisco Morazán Sur, Honduras. The goal was to decrease maternal, neonatal, infant, and under-five child mortality in the project area through three CB health innovations:

- Define and standardize the role of communities in order to increase institutional deliveries and strengthen CB obstetric and neonatal care within a national decentralization strategy;
- Create self-sustaining CB health units, known as UCOS, which integrate vertical Ministry of Health (MOH) maternal, neonatal, and child health programs and various cadres of community volunteers; and
- Adapt and implement CB continuous quality improvement systems for UCOS.

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**What are UCOS?** UCOS are small freestanding structures located in selected communities, equipped with essential drugs, basic equipment, and health education materials. Community volunteers offer care, attention, and education to persons in need, with an emphasis on women, infants and children. They are self-sustaining financially, managed by the community, supervised by the MOH, and given technical and logistical support by ChildFund Honduras. UCOS sustainability depends upon a functioning revolving drug fund.

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The UCOS strategy was developed to better reach the most underserved populations, which tended to be families of low socioeconomic status. In order to check whether UCOS were reaching a poor population compared with MOH facilities, CFI conducted exit surveys of UCOS clients and separately of clients of MOH facilities and compared the socioeconomic profiles of each set of clients using the method presented in this document. The exit surveys complemented assessments of health coverage and costs. The MOH was interested in reviewing information from all three assessments to determine whether the UCOS strategy should be adopted as national policy.

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<sup>3</sup> Funded by USAID's Child Survival and Health Grants Program (CSHGP)

## STEP 1—DETERMINE THE GROUPS YOU WANT TO COMPARE

For this first step, you need to answer the following questions:

- What intervention are you assessing and who benefits from this intervention?
- What are you comparing the intervention with and who are the beneficiaries of the comparison activity?

For example, you may be interested in finding out whether an integrated community case management (iCCM) program is reaching a poorer population than is reached by health facilities. In this case, the intervention is iCCM with corresponding beneficiaries being those who have received services from a community case management worker. For the comparison, you will also need to assess the socioeconomic profile of the users of services provided by the health facilities, preferably in the same geographical area.

### Box 2. Case Study (cont'd)

CFI wanted to determine whether the UCOS were more or less able to reach the poorer segments of the population than were the health centers (CESAMO) of the Ministry of Health. CFI therefore collected asset information from two groups of service users: users of UCOS services and users of CESAMO services.

## STEP 2—OBTAIN INFORMATION FROM THE SELECTED REFERENCE SURVEY

The following pieces of information need to be obtained from the organization that conducted the household survey that will be used as a reference.<sup>4</sup>

1. **All the questions and predefined responses used to generate the asset index:** these can be directly extracted from the questionnaire, which can in many cases be found online.
2. **The exact weights associated with each of the responses** to those questions. Typically, the organization will not provide the calculated weights; rather, it will provide the different pieces of information that will allow you to calculate those weights. This information will not only be provided for the entire (national) sample but also for both the urban and the rural subsamples (more on this later). This information consists of the following:
  - The mean
  - The standard deviation
  - The component score coefficients
3. **The estimated regression coefficients** to be used in the conversion from area-specific (i.e., rural or urban) asset index to national asset index (more on this later).
4. **The cutoff points for the asset quintiles.** These are the values of the asset index that delimit the quintiles. Again, this information will be provided for the entire (national) sample and for both the urban and the rural subsamples.

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<sup>4</sup> You will need to identify a person within that organization who was involved in the construction of the asset index for that particular survey.

### Box 3. Case Study (cont'd)

The reference survey used for this study was the 2011–2012 Honduras DHS. The following is the link to the survey: <http://dhsprogram.com/what-we-do/survey/survey-display-369.cfm>. The DHS questionnaire, in Spanish, is part of the final report.

Communication from DHS specified that questions 121–146 from the Honduras DHS household questionnaire were used to construct national, rural, and urban wealth indices. These same questions (from the Spanish DHS questionnaire used in Honduras) were therefore added to the CFI questionnaire. For categorical variables they used the same predefined responses. By adopting the same questions and predefined responses, DHS calculations used to construct wealth indices could be directly applied to CFI's study data.

DHS provided the different pieces of information used in their calculations (see accompanying Excel file named “Case study – Honduras DHS 2011 – Information received from DHS.xls”). The file consists of three worksheets:

- **“Urban”** contains the information needed to calculate the urban asset index (i.e., the information to be used for urban respondents). This includes, for each asset variable, the mean (column B), the standard deviation (column C), and the component score coefficient (column H).
- **“Rural”** provides the same pieces of information for the construction the rural asset index (i.e., the information to be used for rural respondents).
- **“Combined score”** contains the regression coefficients needed to convert urban and rural asset indices into a national asset index. These are given on rows 6 and 7 for an urban asset index and on rows 8 and 9 for a rural asset index. The worksheet also shows the cutoff points to be used to assign respondents to national asset quintiles. These are expressed as percentiles (cells A28 to C31). A respondent with a national asset index that falls below  $-.9165920$  is assigned to the first (poorest) quintile, a respondent with an asset index between  $-.9165920$  and  $-.3085255$  is assigned to the second quintile, and so on.

## STEP 3—COLLECT THE NECESSARY INFORMATION FROM A SAMPLE OF BENEFICIARIES

In order to assess the socioeconomic status of the beneficiaries of the intervention, information needs to be collected from a sample of beneficiaries, either through exit interviews conducted at the site(s) offering the services of interest or through interviews conducted at the household level. The interview instrument should include the same questions and predefined responses used by the selected reference survey (e.g., the DHS) to generate the asset index. It should also include a question regarding the area (rural or urban) where the respondent lives. The same definition of rural or urban should be applied as the one used in the reference survey.<sup>5</sup>

If the information is to be collected through exit interviews, the interviews could either be conducted at all the sites or in a randomly selected sample of sites, depending on the number of sites supported by the intervention. Likewise, depending on the volume of patients visiting these sites, the interview could either be administered to all patients seen within a given period of time or to a randomly selected sample of patients.<sup>6,7</sup> Sometimes a survey with a different primary objective has already been programmed within the community where most beneficiaries come from. The survey may for instance be part of the project evaluation, in which case both beneficiaries and non-beneficiaries are likely to be interviewed.<sup>8</sup> In the context of performance-based incentives, it may be part of household-level verification, in which case the sample may consist of only (presumed) beneficiaries selected from the health facility's registers. Already programmed surveys offer a great opportunity to piggyback by adding the relevant questions to the existing questionnaire. Rather than having to estimate the sample size, what is more likely to

<sup>5</sup> The definition can usually be found in the survey report, which is typically available online.

<sup>6</sup> As a general rule of thumb, we would advise including at least 300 randomly selected beneficiaries in your survey.

<sup>7</sup> If the intervention of interest involves multiple sites, the socioeconomic profile of the beneficiaries may vary across sites. Whether this needs to be taken into account will depend on the question you seek to answer. If comparisons across sites are of interest, the required sample size will need to be increased accordingly.

<sup>8</sup> An additional question may need to be added to the questionnaire to determine whether the respondent can be considered a beneficiary of the intervention.

be needed in such situation is ensuring that the sample selected for the purpose of the original survey is adequate for the purpose of assessing the socioeconomic profile of the beneficiaries.

Please remember that the questionnaire must include **all** the asset questions and related predefined responses from the reference survey (e.g., a DHS) and that these questions and predefined responses need to be formulated in exactly the same terms as in the reference survey's questionnaire, using the same language and wording as in the reference survey for that country. This is absolutely critical if we want the asset indices that we will calculate for the interviewed beneficiaries (see next steps) to be comparable to the asset indices calculated in the reference survey. Omitting assets or changing (adding, removing, or altering) predefined responses will make the use of the weights available from the reference survey invalid.

#### Box 4. Case Study (cont'd)

##### Sampling

**For UCOS beneficiaries:** All users (334 in total) of 11 UCOS during the month of July 2012 were surveyed. **For Health Center (CESAMO) beneficiaries:** 20% of clients were randomly selected from health center records in five health centers during July 2012, corresponding to 143 out of 715 clients.

##### Data collection

Interviews were conducted over a period of three weeks, from August 3 to August 24, 2012. Four interviewers were selected and hired for the job in the geographical area where the survey was to be conducted. All had previous experience as an interviewer. They were trained in a one-day workshop. Training was performed by CFI's Honduras health specialist and the CSHGP project manager. It covered the following areas:

- The data collection instrument
- Interview techniques
- Sample selection
- Field-testing the instrument

The interviewers visited each beneficiary's household to conduct the interview and observe owned assets and characteristics of the dwelling. Interviews began with introductions, including information about the survey. Consent was obtained before conducting the interview. The response rate was 100% for clients from both UCOS and Health Centers. Three supervisors monitored the quality of collected data. All three were CFI Honduras employees living in the project area. One data person was hired to enter the 477 questionnaires into Excel.

##### Cost

In total, including the data analysis discussed below, the cost of the study amounted to US\$2,000, broken down as follows:

ITEM	LOCAL CURRENCY	U.S. DOLLARS
Photocopies of surveys	L. 3,417.00	\$174.25
Training workshop	L. 2,016.00	\$102.80
Interviewers and data entry person	L. 26,285.77	\$1340.43
Translation of document	L. 450.00	\$22.95
Analysis	L. 6,651.23	\$359.57
<b>Total</b>	<b>L. 38,820.00</b>	<b>\$2,000.00</b>

*Exchange Rate: 1 \$US = L. 19.61*

This amount does not include the technical assistance provided by MCHIP over email and Skype.

## STEP 4—PREPARE THE DATA FOR ANALYSIS

Once the information from a sample of beneficiaries has been collected, responses need to be entered into the computer. Having a clean, well-structured, and properly coded dataset is essential. A few simple rules relating to the coding of responses should be adhered to. In addition, a number of manipulations need to be performed on the data prior to analysis. The fastest way to perform these manipulations is to perform them in a statistical software such as STATA or SPSS. Alternatively, they can be performed in Excel.



Asset variables can be categorical, continuous, or binary:

- A categorical variable is one that has two or more categories, but there is no intrinsic ordering to the categories. An example is the material used for the walls of the household's dwelling, which may have many different predefined responses.
- A continuous variable is a variable that can take any value within a certain range. An example is the number of acres of agricultural land a household owns.
- A binary variable is one that can only have two responses, namely *true/false*, or *yes/no*.

## Recode Missing Values

For both binary variables and continuous variables, missing values should be replaced by the variable's mean from the reference survey;<sup>9</sup> the mean should be part of the information obtained from the organization that conducted the reference survey (see Step 2, number 2).

For categorical variables, missing values should be given the code associated with the category "other." In a DHS, for example, this is typically the code "96."

## Recode Binary Variables

All binary variables should be given the value "1" for "yes" and the value "0" for "no."

## Convert Each Categorical Variable into a Series of Binary Variables

Each of the categorical variables needs to be converted into a series of binary variables. In the 2011–2012 Honduras DHS, for example, the categorical variable "walls," which relates to the material used for the walls of the household's dwelling, has the following 14 different predefined answers or categories:

1. No walls	6. Lumber	11. Stone and cement
2. Reed	7. Wood rods	12. Bricks
3. Bamboo	8. Cast-off material	13. Prefabricated material
4. Stone	9. Cement blocks	14. Other material
5. Adobe	10. Finished wood	

This variable will need to be converted into 14 different binary variables, that is, one for each category. For instance, a newly created binary variable "cmtwall" would take the value "1" if the answer to the categorical variable "walls" indicates that the house has cement block walls (i.e., if the categorical variable has the value "9" that corresponds with the predefined response "cement blocks")<sup>10</sup>; it would take the value "0" otherwise.

## Separate Rural and Urban Respondents

In the next step, we will be using area-specific information: rural-specific weights will be calculated for rural respondents while urban-specific weights will be calculated for urban respondents. The dataset therefore needs to be split into two subsets: one with all the rural respondents and one with all the urban respondents.

<sup>9</sup> While an imputation method would be more appropriate, it would also be overly burdensome. In most cases, the list of assets included in the asset index is relatively long. If the number of missing values for any given household is limited, imputation versus mean substitution is unlikely to affect the household's ultimate quintile allocation. If the number of missing values is large, however, the only meaningful solution may be to exclude the household from the analysis. It is important to thoroughly document such decisions and their rationale.

<sup>10</sup> Note that if the house has cement block walls, the 13 binary variables corresponding to the other predefined responses (i.e., all the newly created binary variables except "cmtwall") will all take the value "0."

## Box 5. Case Study (cont'd)

The preparation and analysis of the data were guided by an earlier version of this instructional document with technical assistance from MCHIP. It was conducted in Excel, given that no one in the CFI Honduras team was familiar with statistical software packages such as STATA or SPSS. The Excel file used for data entry and analysis was prepared 'on the go'. A 'cleaner' version was prepared to illustrate the calculations in this document (see accompanying Excel file named "Case study – Honduras analysis.xlsx").

The file consists of four worksheets:

- **"DHS Info"** contains the relevant information from the sheet "Rural" of the Excel file received from DHS ("Case study – Honduras DHS 2011 – Information received from DHS.xls"): for each asset variable, it shows the mean (column C), the standard deviation (column D,) and the component score coefficient (column E). Note that in this case, all respondents were from rural areas, meaning that only rural asset indices had to be constructed and converted to national asset indices. This is why we only needed to transfer information from the "Rural" worksheet. Column A shows the name of the variable from the CFI survey that corresponds to each DHS variable listed in column B.
- **"Dataset"** contains all the responses from the service users interviewed by CFI (range B7 to GE471). Each row corresponds to a questionnaire. Only the relevant variables (columns) are shown. The columns containing all the other variables are hidden. Rows 1 to 4 retrieve the relevant information from the worksheet "DHS Info" using the VLOOKUP function.

Note that most data manipulations (e.g., the conversion of each categorical variable into a series of binary variables) had already been done by CFI prior to the creation of this spreadsheet. For illustrative purposes, however, we replaced the values with the formulas that would need to be applied. In column S, for example, the variable IndAguaSup is one of the binary variables generated to replace the categorical variable relating to the source of drinking water (column R). The formula in cell S8 shows that, in case of a missing value, the mean of the variable (cell S2) should be used. Otherwise, the binary variable takes the value "1" when category with code 71 was selected. It takes the value "0" in all other cases.

- The other two worksheets are discussed later.

## STEP 5—CALCULATE THE VALUE OF THE ASSET INDEX FOR EACH RESPONDENT

In this step, we determine the socioeconomic status of each interviewed beneficiary by calculating the value of his or her asset index. The value of the asset index corresponds to the sum of all standardized and weighted asset variables. To calculate this value, we need to apply the weights (to be calculated using the information obtained under Step 2, number 2) to each beneficiary's standardized responses to the asset questionnaire and to add up the beneficiary's weighted responses. Once again, the calculations can be done in a statistical software such as STATA or SPSS, which is the fastest and easiest (if you are familiar with the software of course), or they can be done in Excel.

### Standardize and Weight the Responses

Using the area-specific information obtained from the organization that conducted the reference survey (see Step 2 above), each response is first standardized before being multiplied by the component score coefficient. In practice, this means that the following formula must be applied for each asset response:

$$([\text{respondent's answer}] - [\text{area-specific mean}] / [\text{area-specific standard deviation}] * [\text{area-specific component score coefficient}]$$



Example for a rural respondent:

Imagine the following information was received from the organization that conducted the reference survey (for rural households):

VARIABLE	MEAN	STANDARD DEVIATION	COMPONENT SCORE COEFFICIENT
Motorcycle	0.0614	0.2401	0.0480
Sheep	0.3795	2.4518	-0.0029

For the binary variable “Motorcycle”:

If the answer is “0” (= “no”):  $(0 - 0.0614) / 0.2401 * 0.0480 = -0.0123$

If the answer is “1” (= “yes”):  $(1 - 0.0614) / 0.2401 * 0.0480 = 0.1876$

For the continuous variable “Sheep”:

If the answer is “5”:  $(5 - 0.3795) / 2.4518 * -0.0029 = 0.0055$

### Calculate the Area-Specific Asset Index for Each Respondent

All the standardized and weighted responses we just calculated are then added up for each respondent. The resulting value represents the area-specific asset index.<sup>11</sup>

### Calculate the National Asset Index for Each Respondent

For each respondent, we now need to convert the area-specific asset index to a *national asset index*. This is where we need to use the regression coefficients provided by the organization that conducted the reference survey. For each area, these include the estimated constant term ( $\beta_0$ ) and the estimated coefficient associated with the area-specific asset index ( $\beta_1$ ).

For a rural respondent, the national asset index is calculated as follows:

$$[\text{national asset index}] = [\beta_0[\text{RUR}] + \beta_1[\text{RUR}]] * [\text{rural asset index}]$$

For an urban respondent, the national asset index is calculated as follows:

$$[\text{national asset index}] = [\beta_0[\text{URB}] + \beta_1[\text{URB}]] * [\text{urban asset index}]$$

After this step, each respondent will have two asset indices: an area-specific asset index and a national asset index.

#### Box 6. Case Study (cont'd)

These calculations are done in the third worksheet, named “Calculations,” of the accompanying file “Case study – Honduras analysis.xlsx”). Again, only the relevant variables are shown. The columns containing all the other variables are hidden. Each of the cells in the range S7 to GR471 shows the standardized and weighted response.

For each respondent, the rural asset index, that is, the sum of all standardized and weighted values of the asset variables, is calculated in column GU. It is then converted into a national asset index in column GV by plugging the regression coefficients into the formula:  $= (-0.533)+0.744*[\text{cell containing the respondent's rural asset index}]$ .

<sup>11</sup> Because we used the area-specific (i.e., rural or urban) mean, standard deviation, and component score coefficient from the reference survey, the resulting value of the asset index, calculated for each respondent in your survey, is referred to as the area-specific asset index.

## STEP 6—ASSIGN RESPONDENTS TO THE ASSET QUINTILES FROM THE REFERENCE SURVEY

Based on the value of its asset index, each respondent can be positioned in the socioeconomic spectrum using the quintile cutoff points provided by the organization that conducted the reference survey. These cutoff points correspond to the 20th, 40th, 60th, and 80th percentiles of the reference survey’s asset index (see Figure 2). The reference population can either be the area-specific population (e.g., the rural population) or the national population.

### Using the Area-Specific Population as Reference

The area-specific asset index of each respondent is compared to the area-specific quintile cutoff points of the reference survey. Imagine that the following rural cutoff points were obtained:

20th percentile:	-0.628
40th percentile:	-0.238
60th percentile:	0.142
80th percentile:	0.808

- A household with a rural asset index of -0.503, for example, will fall into the second rural quintile
- A household with a rural asset index of -0.653 will fall into the first, or poorest, rural quintile

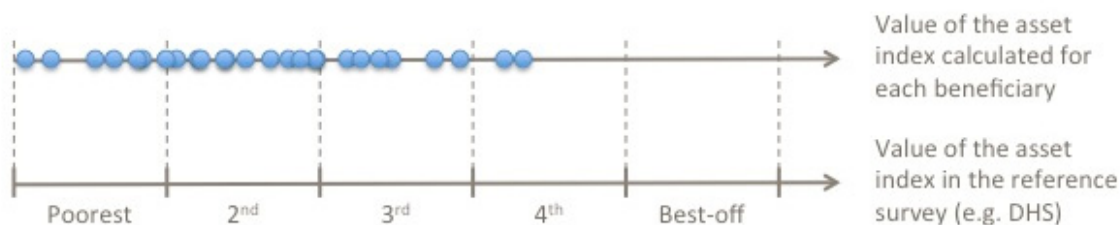
### Using the National Population as Reference

The national asset index of each respondent is compared to the national quintile cutoff points of the reference survey. Imagine that the following national cutoff points were obtained:

20th percentile:	-0.782
40th percentile:	-0.498
60th percentile:	-0.186
80th percentile:	0.514

- A household with a national asset index of -0.742, for example, will fall into the second national quintile
- A household with a national asset index of -0.838 will fall into the first, or poorest, national quintile

**Figure 2. Assigning Respondents to the Reference Survey’s Asset Quintiles**



### Box 7. Case Study (cont’d)

The assignment of respondents to the asset quintiles from the reference survey is done in column GW of the same worksheet (“Calculations”). The cutoff points provided by DHS are plugged into the formula.

Column GX indicates whether the respondent was a user of UCOS or health center services.

# STEP 7—GENERATE THE SOCIOECONOMIC PROFILE OF THE BENEFICIARIES

In order to generate the socioeconomic profile of the beneficiaries of the intervention, one only needs to calculate the proportion of beneficiaries in each asset quintile. This distribution will show the extent to which the intervention is able to reach the poor. If more than 20% of the respondents fall into each of the poorest quintiles, the intervention can be described as pro-poor.

Again, this can be done at two levels: area-specific and national. The proportion of rural (or urban) respondents can be calculated in each or the rural (or urban) quintiles. The proportion of respondents rural and urban combined can be calculated in each or the national quintiles.

If this analysis was piggybacking on an already programmed household survey, and the survey covered both beneficiaries and non-beneficiaries, it will be possible to assess the extent to which the socioeconomic profile differs between these two categories.

### Box 8. Case Study (cont'd)

The results of the analysis are presented in the fourth worksheet named “Findings.” The pivot table in range A5–D12 summarizes the data from columns GW and GX of worksheet “Calculations.” The absolute numbers from the pivot table are then converted into proportions in range E6–G12 (reproduced in the table below). These are the data used to generate the graph, which is also presented below.

Both the table and the figure demonstrate clearly that UCOS are considerably more pro-poor than are MOH health centers. While almost half of the users of services provided by MOH health centers belong to the middle socioeconomic quintile and only 5% of the users belong to the poorest quintile, the reverse is true for users of services provided by UCOS. More than half of them are from the poorest quintile and more than 90% of them come from households that can be counted among the country’s 40% poorest ones.

	CESAMO	UCOS
Poorest quintile	5%	55%
Second quintile	32%	37%
Middle quintile	46%	7%
Fourth quintile	16%	1%
Best-off quintile	1%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>

