Are We Reaching the Worst-Off?
How the Myanmar Census Helped to Answer This Question

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Key Messages

- Program implementers need to explicitly measure who is benefiting from their program or project if they want to make sure they are reaching those most in need.
- Drawing upon existing censuses and household surveys and using an asset index as a measure of socioeconomic position (SEP), it is possible to assess the socioeconomic profile of a program or project's beneficiaries at relatively low cost.
- The EquityTool (2017) is a user-friendly platform for analyzing the socioeconomic profile of program beneficiaries in over 30 different countries using a simplified asset index.
- Myanmar's census includes questions that allow construction of asset indices, providing a unique opportunity to conduct equity analysis at both national and subnational levels.
- The EquityTool can now be applied in Myanmar; this is the first country where census data were used as a reference.
- The tool to assess the socioeconomic profile of a program or project's beneficiaries in Myanmar has already been used by at least two programs.

Introduction

Many programs and projects are designed with the goal to benefit the worst-off, but how often do they live up to this commendable goal? Unfortunately, few have reliable data to answer that question.

With limited funding, covering the entire population is rarely a feasible option for implementers. Instead, they usually need to find ways to reach those who will benefit the most from their program or project, i.e., the worst-off. Geographic targeting—or focusing on areas known to be relatively deprived—is one way of reaching the worst-off. But even in an area that is relatively deprived, better-off households may benefit disproportionately from the program.

Implementers should measure the extent to which their program or project truly reaches those most in need, but there exist several barriers that too often prevent them from doing so. Constructing a measure of SEP is complex; conducting a survey that is sufficiently large to achieve statistical significance is time-consuming and costly as well. Deterred by measurement challenges, time constraints, and cost, implementers often skip this important analysis and fail to demonstrate that they are able to reach those who might need their program's benefits the most. If implementers can piggyback on an existing large representative household survey or a census, however, these obstacles can be alleviated.

What Is an Asset Index?

To design programs or projects intended to benefit the worst-off, one must first determine how to distinguish between better-off and worse-off. Traditionally, SEP has been determined through money-metric measures such as income, expenditure, or consumption, based on the assumption that a person's standard of living can serve as a proxy for his or her well-being (Falkingham and Namazie, 2002).

Socioeconomic position (SEP) refers to the social and economic factors that influence what positions individuals or groups hold within the structure of a society. It is related to various exposures and resources that may affect a person's health outcomes (Galobardes et al., 2006).

Over the past 20 years, however, household assets have emerged as an alternative to measuring SEP due, in part, to some of the limitations of money-metric measures. Data sources such as the Demographic and Health Survey (DHS) or the Reproductive Health Survey lack the information necessary to calculate money-metric measures of SEP. Scholars such as Sahn and Stifel (2003) have also argued that a money-metric measure tends to define the poor too narrowly. By contrast, the data needed to construct asset indices as proxies of SEP are more straightforward and cheaper to collect; they are also less prone to measurement errors.

An asset index is seen as a proxy for a household's longer-run living standard because it combines questions of ownership of assets, dwelling characteristics, and access to basic services (Chen and Schreiner, 2009; Filmer and Pritchett, 2001; Lindelow, 2006; Sahn and Stifel, 2003). To accurately gauge a household's relative wealth, responses to certain survey questions are weighted more heavily than others. Having a radio, for example, would not contribute as much as owning a car. A household's asset index is then calculated as the sum of the weighted responses to the survey or census questions. Socioeconomic groups are then determined by sorting all individuals in the survey or census based on the value of their respective household's asset index, and dividing them into five groups of equal size, or quintiles.

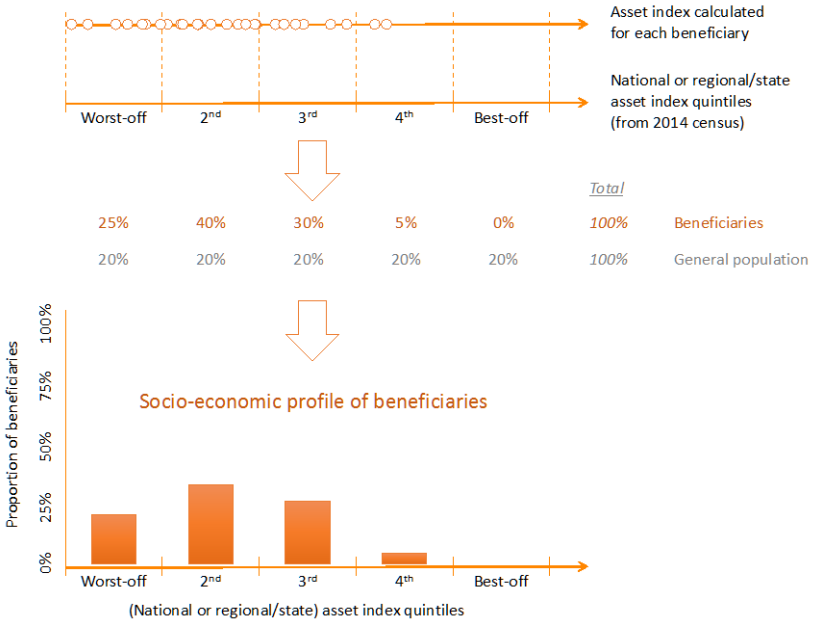
An **asset index** is a composite indicator used to reflect an individual's, or household's, ownership (or lack thereof) of a range of assets. Assets can be broadly defined, ranging from traditional household goods—such as cars or televisions—to indicators like the number of years of schooling of the head of household or the number of cattle heads owned by the household (Sahn and Stifel, 2003; Johnston and Abreu, 2016).

How an Asset Index Helps Equity Programming

An asset index can be used for a wide range of equity analyses. For example, it can be used to assess the socioeconomic profile of users of a specific health service, or of beneficiaries of a particular program or project (Ergo and Winestock Luna, 2014). A program implementer may simply ask a small random sample of service users or beneficiaries the same questions as those used to construct an asset index in an existing reference census or household survey, such as the DHS or the Reproductive Health Survey. The asset index is then constructed for each service user, using the same weights as those used to construct the asset index in the reference census or survey. The asset indices of service users or program/project beneficiaries can then be compared with those of people in the reference census or survey. Each service user or program/project beneficiary can then be assigned to an asset quintile based on the quintile cutoff points—i.e., the values of the asset index that separate adjacent asset index quintiles—calculated for the reference census or survey. This process makes it possible to estimate the proportion of service users or program/project beneficiaries falling into each of the national asset quintiles.

Program analysts can use this information to examine how program beneficiaries are spread across quintiles. If beneficiaries are more represented in the lower quintiles, the program or intervention is pro-poor; conversely, if beneficiaries fall into the higher quintiles, the program or intervention favors the better-off. This is illustrated in Figure 1.

Figure 1. Comparing the socioeconomic profile of program beneficiaries to that of the general population in Myanmar



Adapted from: Ergo A, Winestock Luna J. Assessing the Socioeconomic Profile of the Beneficiaries of an Intervention: A Step-by-Step Guide. Washington, DC: USAID/MCHIP and USAID/MCSP; 2014.

This method of assessing equity is attractive for at least two reasons (Ergo et al., 2016): it is relatively low cost and it is easy to apply. More particularly, it has the following advantages:

- The socioeconomic profile of service users or beneficiaries can be compared with national asset indices that are already calculated, thus considerably simplifying the calculations needed to analyze the survey of intervention beneficiaries.
- Country-specific asset questions can easily be added to a planned survey, such as household surveys or exit surveys of facility users.
- The sample size required is relatively small: since the reference survey already divides the national population into asset quintiles, it is not necessary to create new asset quintiles from the sample of service users or beneficiaries.

How Does the Myanmar Census Help Equity Programming?

The approach to assess the socioeconomic profile of service users or beneficiaries was applied in Myanmar using the 2014 census as a reference. The census gathered all information needed to construct an asset index,* including questions related to housing characteristics, access to basic services, and ownership of assets. Using the 2014 census as a reference allowed the subsequent asset indices to be constructed with information disaggregated for each state and region, including information on urban and rural populations.
This level of detail allows program analysts to choose among a variety of reference populations for comparison. For example, they can assess how destitute or well-off the beneficiaries of their program are in comparison to the national population, or in comparison to the population of the state/region where the program is being implemented. If the program targets an urban population, they have the option of using the urban population (either national or within a selected state or region) as a reference for comparison. Likewise,

* Note that the weights were estimated separately for rural and urban households (Rutstein, 2008). Regression analysis was then used to calculate a combined asset index.

for a rural program, they may choose to compare the SEP of the beneficiaries to that of the national or state/region-specific rural population.

The Myanmar Ministry of Labor, Immigration and Population (MoLIP) has made all required information publicly available on its website to allow implementers to apply this approach, including the list of asset questions, the different sets of weights, and asset quintile cutoff points.† An Excel worksheet that performs all the calculations was developed to assist anyone interested in applying the described approach. This worksheet, along with a set of instructions, can be downloaded from MoLIP's website (MoLIP, 2017).

Simplifying the Asset Index

The approach to assess socioeconomic profile relies on the full set of questions used by the census to construct the asset index. In total, this consists of more than 20 questions, many of which are multiple-choice questions with up to 10 possible predefined responses. This length may deter some implementers from adopting the approach.

Aware of this risk, two recent studies have researched the feasibility of simplifying the asset index (Chakraborty et al., 2016; Ergo et al., 2016). Because all variables do not contribute equally to the asset index, they investigated the effect of dropping the variables that contribute the least. Both studies concluded that a highly reliable and valid asset index can be obtained using a smaller number of variables. This therefore makes it possible to shorten and simplify the questionnaire, rendering the approach more attractive to implementers. The asset index constructed using data from the Myanmar 2014 census was simplified in this manner.

The EquityTool

The EquityTool can be used to apply the approach described above in over 30 different countries. It is a user-friendly interface for comparing the socioeconomic profile of program beneficiaries to the national or urban population. Because they rely on a simplified asset index, its surveys are relatively short; on average, each survey is only 12 questions long. With the web-based app, EquityTool results can be calculated automatically and formatted into a simple report. Data can also be collected through DHIS 2 or any other paper- or computer-based data collection platform. This ease of use gives EquityTool users the ability to easily analyze how program beneficiaries compare to the rest of those living in their country or to those living in urban areas.‡ It therefore offers program implementers the ability to assess how well a project or program targets the worst-off.

For most countries, the EquityTool uses the latest DHS as a reference. Myanmar is the first country for which the EquityTool used census data as a reference. Use of census data allows implementers to compare program beneficiaries with the national population or only those in urban or rural area. It will soon also allow comparison with populations of a specific region or state.

How Is This Information Being Used?

There are a variety of potential applications for using the Myanmar asset index, whether using the instructions posted on the MoLIP website or the more user-friendly EquityTool. While the two examples given below both relate to health, the approach is by no means limited to that sector.

Example 1—Assessing the Effectiveness of Targeting

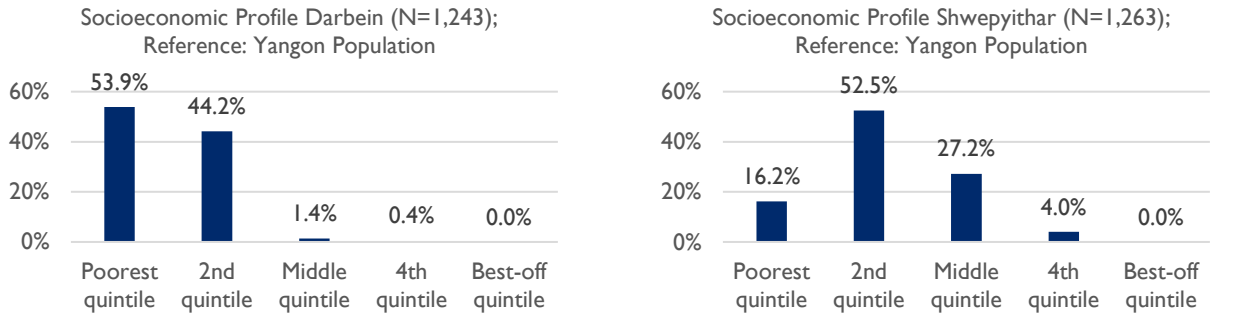
Population Services International/Myanmar runs a large social franchise in Myanmar—the Sun Quality Health network—which aims to improve and standardize quality of care among private general practitioners.

† And the regression coefficients needed to combine rural and urban wealth indices (see previous note).

‡ The EquityTool will soon provide the option to assess how relatively well-off or destitute respondents are in comparison to other households in a given region or state. The results will be presented alongside those from the analysis in which the national population is used as a reference

Population Services International recently launched a pilot project through which it purchased a package of enhanced primary care services on behalf of poor households from participating general practitioners within the Sun Quality Health network. A combination of capitation payments and performance-based incentives is used to replace the current system, wherein patients pay on a fee-for-service basis. The experiment required the identification of poor households—which were registered and given a health card—based on the external appearance of dwellings and listings provided by local authorities. The EquityTool was then used for an ex-post assessment of the effectiveness of the targeting, by measuring the socioeconomic profile of identified households. The results are displayed for each of the two project areas in Figure 2. Targeting was clearly effective in Darbein, with more than 98% of the identified households falling into the two lowest socioeconomic quintiles. Figure 2 suggests that targeting was slightly less effective in Shwepyithar (around two-thirds of identified households fall into the two lowest quintiles). One possible explanation for this difference is that Shwepyithar attracts large groups of migrant workers, which were considered ineligible for the pilot—it was felt that the project would not be able to guarantee continued access to the package of services for the entire duration of the project to a transient population. Another possible explanation is that there are just fewer people in the bottom quintiles relative to the more rural Darbein.

Figure 2. Socioeconomic profile of cardholders in the two project areas of Darbein and Shwepyithar



Example 2—Assessing the Socioeconomic Profiles of Study Participants

Save the Children Myanmar was commissioned by the World Bank to conduct a qualitative study of out-of-pocket expenditures on health. The EquityTool was used to assess the socioeconomic profile of respondents included in in-depth interviews across Myanmar. The EquityTool was essential for ensuring that populations most relevant to the study were being interviewed, as the consequences of out-of-pocket spending are likely to be more dire for households in the lowest asset quintiles.

What Are Other Uses of This Type of Analysis?

The approach presented in this paper can be adopted to answer numerous questions, including— but not limited to—the following:

- What is the socioeconomic profile of users of a particular service, or of the beneficiaries of a particular program or project?
- Does the socioeconomic profile of the users of a service or the beneficiaries of a program or project differ from that of nonusers/nonbeneficiaries?
- Does the socioeconomic profile of the users of a particular service vary with the service delivery mechanism?

The case study described in Ergo and Winestock Luna (2014) is a good example of the third type of question. In that study, the socioeconomic profiles of two different groups of users of a service are compared: users who receive the service in the community and users who seek the service at a health facility. These relatively simple analyses can help implementers determine whether they are truly reaching the worst-off populations.

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