Quick Poverty Score Toolkit

User's Guide
Azerbaijan

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INTRODUCTION

The Quick Poverty Score (QPS) for Azerbaijan is a simple, easy-to-use tool that health service programs can use to assess the prevalence of poverty among their clients. Using three components, the QPS provides a snapshot of uptake of program services by those living below the national poverty line, below $2/day, and below $1/day:

> 1. A short survey, with 10 simple, objective questions on housing conditions, household assets, and household amenities (such as "What are the dwelling's floors made of?" or "What is the main source of lighting for your main living rooms?")

> 2. A data entry template in Microsoft Excel for entering, storing, and analyzing survey responses; and

> 3. A prediction model that calculates the rate of poverty among program beneficiaries at three separate poverty lines—the national poverty line, the $1/day line, and the $2/day line.

This User's Guide explains how to apply the QPS and interpret its outputs.

STRUCTURE OF THE SURVEY

Each QPS questionnaire includes survey tracking information and 10 survey questions.

At the top of each form, there are pre-defined fields for survey tracking information. Each client interview must have a unique identification number, which is entered into the first field <<Survey Number>>.

Following the survey number are fields that identify where the interview was conducted, including the name of the organization, the particular service delivery point, the location of the service delivery point (province/region, district, community) and the identification number of the service delivery point. These fields can be filled in with **default values**[*] that have been previously entered into the "User definitions" page, or they can be filled in manually for each interview, or they can be left blank (for example, if all interviews will be conducted at a single service delivery site). If interviewing will be conducted at multiple service delivery points, including this identifying information allows the program to compare client poverty profiles at different sites, combine data from different sites within the same district or province, etc.

The <<Date>> field is automatically filled in with the date that the data are entered. Alternatively, the interview date can be entered manually.

Finally, there are six additional fields that can be used to tailor the questionnaire to the specific application. All of these are optional. <<Type of Service>> refers to the service that the client just received. <<label_field_1>> through <<label_field_6>> are **user-defined fields**[**] that can be defined by the analyst (for example, interview language, length of the interview, etc.) or left blank.

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[*] In the QPS Excel workbook, the **User Definitions** sheet allows the survey manager to fill in default fields with identifying information that does not vary across clients. The workbook then automatically populates the identifying information fields of each new scorecard with this information. If the surveys are done on paper, after defining default fields the survey manager can print out multiple copies and assign them unique identifying survey numbers.

[**] User-defined fields may be entered using the User Definitions sheet of the Excel workbook. The survey manager may choose to define the fields (<<Interview Language>> for example) and the default values for the fields, or the fields alone.

Client responses to the survey questions are entered below the tracking information. There are 10 short survey questions. To ease survey administration, the answer options for each question are pre-coded, close-ended, and restricted to Yes/No or multiple choice.

ADMINISTERING THE SURVEY

The QPS is administered in face-to-face interviews with clients at service points. Data quality is key to generating accurate outputs. There are several steps implementers should take in order to collect high-quality data.

Preparation
The first step is to plan for survey administration. How many clients will you interview? The more clients that are interviewed, the more reliable the final profile will be, but interviewing too many clients will increase costs. As a general rule of thumb, you should plan to interview at least 100 clients and probably no more than 300 clients for each poverty rate you plan to calculate. For example, if four different service points will be selected and you want to compare each service site with the others, you should plan on at least 100 interviews per site or at least 400 interviews in all.

When will clients be interviewed? For example, if the service point provides services throughout the day, interviews should be conducted throughout the day as well. How will clients be selected for interview? To avoid interviewer bias, interviewers should be instructed to interview all clients leaving the service, or every third client leaving the service, etc.

Most organizations will want to interview a representative sample of their clients. Some common ways to do this are:

- Interview all clients at all service points
- Interview all clients at a random sample of service points
- Interview a random sample of clients at a random sample of service points

Interviews could take place continuously, or for a set period of time (one month, for example). When taking a random sample of service points, the likelihood of drawing any given service point should be proportional to its share of all the organization's clients.

The next step is to prepare surveys before client interviews begin. The survey manager may use the User Definitions worksheet (see page five for more details) to fill in default tracking fields for characteristics that may be the same for all clients interviewed. If the QPS is being administered using paper surveys, after defining default fields the survey manager can print out multiple copies and assign them unique survey numbers. Preparing surveys ahead of time both shortens the client interview and ensures that each survey has adequate identifiers. This prevents important information, such as the survey number, from being completed as an afterthought and decreases the likelihood that survey numbers will be duplicated inadvertently.

Implementation
Once preparations are complete, survey administration may begin. Before administering the survey, the interviewer should introduce herself and the survey to the client. Be friendly, and begin the conversation with an introductory dialogue (preferably pre-scripted) explaining the service organization's interest in learning more about the client and ensuring confidentiality of the responses. Ask for the client's permission to interview him/her before asking any survey questions.

Next, begin administering the questionnaire. The important point here, simple though it may sound, is for the interviewer to read each question completely and exactly as it is written before accepting answers from the respondent. This is crucial to implementing standardized interviews and collecting reliable data.

While administering the survey, the interviewer should record the respondent's answers using the answer options provided in the survey. In most cases this will be straightforward—marking "yes" for a "yes" answer, etc. In other instances, recording respondents' answers may be more complicated. Although the QPS questions are designed to be simple, the answers offered by respondents may not be. This is most often the case with multiple-choice questions, when a respondent's answer does not fit neatly within any of the listed categories.

There are two strategies for dealing with this situation. The first is to mark the response closest to the respondent's answer. This may not work, however, if the answer is incomplete, confusing, or unexpected. The second strategy is to probe in a non-directive manner.

In all cases, interviewers should record one response for each question by clearly drawing a circle around the entire response option (not just its letter) on the paper scorecard.

> **Probing to Clarify Responses**
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> If a respondent's answer is incomplete, confusing or unexpected, the interviewer should probe in a non-directive manner. Strategies for probing may include:
> - Repeating the question, if the respondent seems not to have heard or understood the question;
> - Repeating the respondent's answer, if the answer is incomplete or inconsistent with the question; and
> - Asking for further clarification through neutral questions like "how do you mean?" and "could you tell me what you have in mind?"
>
> If the client asks for clarification or if it is not clear which response option corresponds to the client's answer, then interviewers will have to use their own best judgment. For example, if the question asks whether the household owns a television and the respondent asks whether a broken television counts, the interviewer will need to use his/her own best judgment – perhaps deciding that a television is a television, broken or not. In such cases, the interviewer should write a note on the questionnaire and discuss it later with the supervisor or survey director. In a multiple-choice situation, the interviewer may need to mark the response option judged to be the closest to the client's answer.

All 10 questions **must** be answered.
Incomplete surveys cannot be entered into the Excel workbook. Incomplete surveys will be excluded from the database, potentially undermining data quality.

After double-checking that all 10 questions have a response marked, the interviewer should thank the client for his/her time, particularly since this interview may come at the end of a long medical visit. The interviewer should also reiterate that answers will be kept confidential and inform the client that the survey is over.

USING THE QPS WORKBOOK

The QPS workbook contains *macros*, which must be enabled (turned on) to run properly. If your computer's security settings are set at "High" or "Very High", the workbook will not open correctly and you will not be able to enter or save data. To adjust the security settings, follow the instructions below.

1. Open Microsoft Excel©. If a new (blank) workbook does not appear, open a new workbook with File – New or the "New" icon.

2. Check your security settings with the following sequence: from the main menu bar, select Tools, then Options – Macro Security.

3. Check the Medium button on the Security Level menu (shown to the right) and then click OK.

4. You are now ready to use the QPS workbooks.

5. When you open a QPS workbook, you will see one or the other of the two Security Warnings below. You must click the button to Enable Macros to use the software.
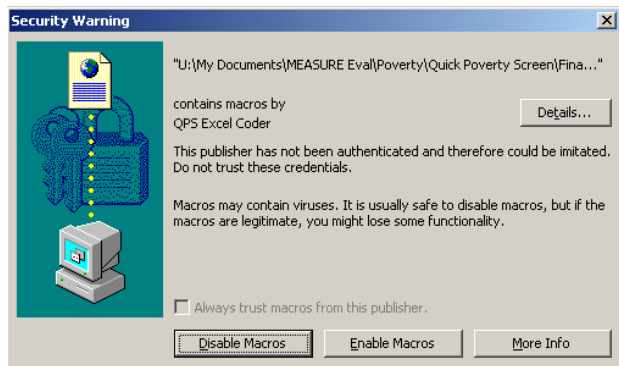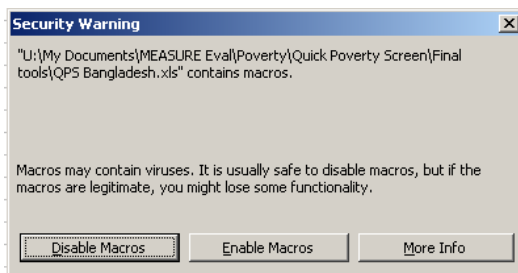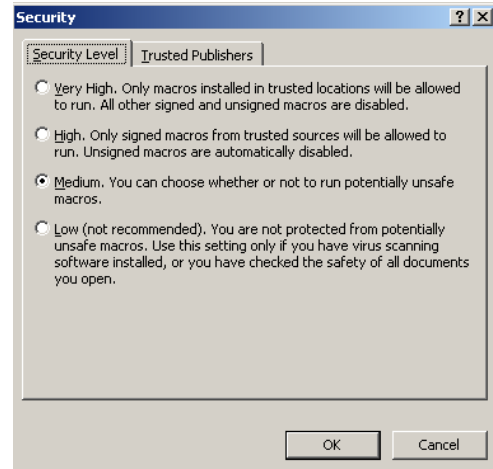
6. We recommend that you save the workbook with a new name to protect the original template. Use the newly-named version of the workbook for data entry and analysis.

7. After finishing QPS data entry and analysis, you may return your computer to its original security settings. However, you will need to re-set security to medium every time you use QPS.

DATA ENTRY AND MANAGEMENT

Before entering data into the QPS Excel workbook for the first time, be sure to save the workbook with a new name to protect the original template. For example, the user might rename the file to include the health center's name and the date when data collection began.

The QPS Excel workbook has three color-coded workbooks visible to the user:

- Data Entry (red)
- User Definitions (orange)
- Results (blue)

The user can only modify the Data Entry and User Definitions worksheets. The Results sheet is automatically generated from information entered in those pages.

The user should navigate between sheets by using the named and color-coded tabs at the bottom of the workbook.

Data Entry Worksheet

The red-tabbed Data Entry worksheet allows the user to input, retrieve, and modify survey records using a single Excel worksheet. Records are entered and managed via four buttons:

1. The *Submit Responses* button, located at both the top and bottom of the sheet, checks for complete survey information and stores the completed survey record in the database;

2. The *Retrieve Survey* button, located at the top of the worksheet, draws a specified survey (identified by survey number) from the database for viewing or modification;

3. The *Clear Entries* button, located at both the top and bottom of the sheet, resets all fields for the survey record currently being entered without entering the information into the database;

4. The *Delete Entry* button, located at the top of the worksheet, deletes a specified survey from the database.

Entering Data

At the top right of the Data Entry worksheet, there is a field for the survey number. <u>This field must be filled in by hand, and no two interviews may have the same survey number</u>. Following the survey number are several more fields for survey tracking information. These fields record geographic, administrative, and other identifying information. The user may complete these fields manually by entering text or numbers. Alternately, if there are default values that are likely to fit all of the clients (if an organization works only in one specific village, for example), the user can automatically complete the fields with default values using the User Definitions worksheet. See below for instructions on assigning default values. The user may leave any or all of these fields blank.

Just below the tracking information, the user finds the 10 survey questions and their response options. The questions and answers appear here exactly as they do in the survey. This eases the data-entry process. It also allows for the possibility of computer-assisted interviewing, in which interviewers enter survey responses into the database in the field in real time.

To input survey responses, the user clicks the radio button next to the appropriate response option. After entering all 10 responses, the user clicks the *Submit Responses* button, which stores the completed client record in the survey database. If any fields are missing, an error message appears, prompting the user to fill them in. The record cannot be stored in the database until all fields are complete. Successful submission to the database also requires a unique survey number. If you have forgotten to enter a survey number and are prompted to *"Please enter an ID in the ID field,"* you must enter a unique survey number and then hit the *Enter* key. Clicking the *Submit Responses* button will also automatically save the Excel workbook in which the new client record is being entered. If answers to two questions are contradictory — for example, if the number of children ages 0 to 17 in the household is entered as "0" and the answer to the question if all children ages 6 to 17 attend school is entered as "yes" instead of "no school-age children" — the software will display an error message and will not record the interview to the database until the problem is resolved by changing one or another response.

Retrieving, Modifying, and Deleting Data

To retrieve client records from the database, the user clicks the *Retrieve Survey* button and is prompted to enter a survey number or select one from a predefined list of survey numbers. The record is retrieved and the current worksheet is automatically populated with the responses recorded for that survey.

Once a record has been retrieved, the user can modify the survey answers and tracking information it contains. To save changes to the survey click the *Submit Responses* button. This will overwrite any earlier record with the same survey number. The user will be notified that the survey number

already exists and will be asked whether she wants to overwrite the record. In order to record the changes, the user must click "Yes."

If, for any reason, the user needs to delete a record from the database, this can be done by using the *Delete Entry* button. When the button is clicked, a dialogue box will ask which survey number the user wants to delete. The user picks the corresponding number from the drop-down box or types it in and clicks *Enter* to delete the record.

User Definitions

The orange-tabbed User Definitions worksheet allows users to define default values for the identifying fields at the top of the survey. The user simply types the default values for respondents into the yellow cells. Those default values then appear in the appropriate fields in the Data Entry worksheet. If the User Definitions sheet contains an *Update Data Entry* button, the user must click this button before the worksheet will populate the Data Entry worksheet.

Results

The blue-tabbed *Results* sheet shows the total number of respondents in the database, the estimated poverty rate among respondents according to three poverty lines: the national poverty line as defined by the country itself; the World Bank's estimate of "extreme poverty"[1] -- $1/day; and $2/day, and the estimated number of surveys from respondents who live in households below those poverty lines. This offers a snapshot of the service point's outreach to the poor.

Database

The green-tabbed *Database* sheet is hidden when opening the workbook, but can be opened to allow users to review all of the survey responses. Note that it is not possible to make changes directly to the *Database* sheet (see *Retrieving, Modifying and Deleting Data*, above). To unhide the Database worksheet, go to the menu bar at the top of the page, click on [**Format**, **Sheet**, **Unhide** and **Database**] [**Poverty Scoring** and **View Database**].

The user may export the Database sheet to other workbooks in Excel by using the copy worksheet function or to an Access or other database by using the import function in that database program. This may be useful if data gathered through this survey are being used in additional analyses.

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[1] In 2008, the World Bank switched their "international extreme poverty line" from 1.08 at 1993 Purchase-power parity to $1.25 at 2005 PPP. The lines never were actually $1.00/day because they were derived as the average national poverty lines of the world's poorest countries. For details, see S. Chen and M. Ravallion, *The Developing World is Poorer than We Thought, but No Less Successful in the Fight against Poverty.* World Bank Policy Research Working Paper 4703, August 2008. http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/08/26/000158349_20080826113239/Rendered/PDF/WPS4703.pdf

DOCUMENTARY DETAILS

The Quick Poverty Score Toolkit for Azerbaijan was developed by the IRIS Center at the University of Maryland for MEASURE Evaluation. Further information on the organization's work is available at http://www.iris.umd.edu/.

Data
The instrument is based on the 8,157 households in Azerbaijan's 2002 Household Budget Survey conducted by the State Statistical Committee of Azerbaijan Republic.

Poverty lines
The national poverty line comes from:

State Statistical Committee of Azerbaijan Republic. (2004) "Estimation of Poverty Statistics in Azerbaijan Republic, http://www.nscb.gov.ph/poverty/conference/papers/11azerbaijan.pdf

The median poverty line was computed as the median expenditure of those below the national poverty line.

Indicators
The MAXR procedure in SAS was used to select the best poverty indicators (for variables found to be practical) from the pool of potential indicators in an automated manner. MAXR is commonly used to narrow a large pool of possible indicators into a more limited, yet statistically powerful set of indicators. The MAXR technique seeks to maximize explained variance (i.e., R^2) by adding one variable at a time (per step) to the regression model, and then considering all combinations among pairs of regressors to move from one step to the next. Thus, the MAXR technique allows us to identify the best model containing 10 questions (not including control variables for household location). These 10 questions were then double-checked to ensure that they constituted a practical questionnaire.

The MAXR procedure yielded the best 10 questions for the OLS model (also used for the Quantile model) and another set of the best 10 for the Linear Probability model (also used for the Probit model). The final set of indicators and their weights, therefore depended on selecting one of these four statistical models—OLS, Quantile, Linear Probability, or Probit—as the best model.[2] This selection of the best model for each poverty line was based on the accuracy of the model at predicting the overall poverty rate at that line.

The weights attached to the indicators in the QPS are the estimated regression coefficients found in the best model.

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[2] The set of indicators and their weights also depended on the selection of a 1-step or 2-step statistical model.

Azerbaijan Quick Poverty Score Questionnaire

Survey number: _____ Organization: _____ Service delivery point: Oblast: _____ District: _____ Community: _____ Location: ☐Urban ☐ Rural Org. ID of service delivery point: _____ Date: _____	Label_field_1: _____ Label_field_2: _____ Label_field_3: _____ Label_field_4: _____ Label_field_5: _____

Indicator	Response
1. What type of accommodation do you have?	☐A separate house ☐Part of separate house ☐Shared apartment ☐Hostel ☐Other
2. Do you have central heat?	☐Yes ☐No
3. What is the source of your household's drinking water?	☐Running water inside dwelling ☐From a well in its yard ☐From local community tap ☐From public well ☐From a spring, river, lake ☐Water cistern car
4. Does your household have a land plot?	☐Yes ☐No
5. How many poultry does your household own?	☐None ☐1 to 10 ☐11 to 20 ☐21 or more poultry
6. How many geese and ducks does your household own?	☐None ☐1 to 5 geese or ducks ☐6 to 10 geese or ducks ☐11 or more
7. Does your household own a sewing machine?	☐Yes ☐No
8. Does your household own an air conditioner?	☐Yes ☐No
9. Does your household own a satellite dish?	☐Yes ☐No
10. Does your household own a car?	☐Yes ☐No