

Topic: Response Options

Encouraging Difficult-to-interview Households' Participation in Population Census Undertaking through the use of Self-Administered Online or Offline Electronic Questionnaire

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I. Introduction

1. Based on previous Philippine National Statistics Office (PNSO) (merged with other statistical offices now known as Philippine Statistics Authority) census of population undertakings, it is an accepted fact that a substantial number of persons were missed out. Unfortunately, the exact degree of under count or under coverage is too difficult to measure because unlike in developed countries, the Philippines has no computerized population registry of its citizens that can be used as reference to locate and count those persons that were not enumerated – what the office has is registry of facts of vital events of a person, i.e., birth, marriage, and death but no data about the current address, current civil status, etc. *Worse, it is illegal for the Philippine government (executive branch) to create and maintain registry of its inhabitants' current personal data because in 1988, the Supreme Court of the Philippines has declared that it is unconstitutional on grounds that only the Congress can establish a National ID system.*

2. From the report of field interviewers in previous surveys/censuses, most of those who were not enumerated (refusal, cannot be located, etc.) and were too difficult to interview are the people who belong to the affluent class, those living in exclusive subdivisions and high end condominiums, the Filipino Chinese in china town, and some who are usually not at home possibly due to the nature of their work or other causes. It can be surmised (there was no formal study done yet) that the possible reasons are the following:

- a) Did not want their privacy invaded
- b) Security reason, i.e., did not trust the enumerator
- c) Interviewer wasn't able to get an appointment for a face-to-face interview
- d) Respondent has no time to spare for a face-to-face interview
- e) Apathy / Indifference towards the census or the government itself
- f) Didn't feel compelled to participate due to very light penalty (PHP 600 or USD 14)

3. In general, for any census undertaking not only in the Philippines but also in other developing countries, the possible root cause of under coverage may be unwillingness by the respondents to complete the census form, or absence at the time of the visit, or oversight on the part of the enumerator, or worse, a breakdown of the census procedure itself.

4. For the coming mid-decade Census of Population which will be conducted next year (2015) in the Philippines, the PSA will try to address the first two general possible root causes through the use of E-questionnaire, that is, respondents from those identified as difficult to interview household (DIH) will be given the options to either fill-out an e-Questionnaire offline and submit it via email or by uploading it to a server; or to fill-out the e-Questionnaire online.

II. Rationale of developing and implementing system on the use of e-Questionnaire

5. In the absence of a computerized registry of addresses of the populace and most of them do not have access to the internet (only 6% of the households are connected to an ISP, 2012 FIES), it is deemed too difficult if not impossible to implement a census where all respondents will be asked to submit or fill out the form using the internet. What is possible is through the use of paper questionnaire where the interviewer records the answers of the respondents in a face-to-face interview or self-administered questionnaire (SAQ) where the questionnaire with detailed instructions on how to fill it out will be distributed to households which will then be collected by the interviewer on a scheduled later date. And for those households that are identified as DIH, the face-to-face interview and SAQ techniques have been found to be too difficult to do and some were even not successful, hence, a need for a different method of census taking – the use of e-Questionnaire. The e-Questionnaire would somehow (hopefully!) encourage them to fill out and submit the data due to the following reasons:

- a) There will be an impression that due to voluminous documents that the office will process, no one will ever identify them from the data that they will provide (addresses the issue of privacy)
- b) The data that they will provide will be sent directly to the office, hence, the enumerator will never see the data about the household (addresses the security apprehensions)
- c) The respondent will have time to fill out the questionnaire at his own convenient time during the census enumeration period (addresses the unavailability issue)

6. Although the cost benefit analysis of developing and implementing the system shows that the cost of development is too high per possible household (DIH) that will actually use it, the high cost can be justified by the intrinsic value of data that can be collected from those households. It will contribute to improving census coverage. Conceptually, it is more expensive to miss out those households as this has negative implications on completeness and accuracy.

7. The use of e-Questionnaire cannot address the problems of indifference and lack of compelling reasons on the part of the respondent. These can be dealt with by developing an effective information and education campaign (IEC) tools that would impress upon the Filipinos their duty to respond to census data collection activity, and making the penalty for not providing the requested data considerably more severe that even the most unwilling stubborn and affluent respondents would be forced to participate. But in case the well thought off IEC and/or the stiffer penalty forced them to participate, there is a big possibility that they will use the e-Questionnaire.

III. Overview of the e-Questionnaire system

Respondent Side (HIH)

8. Respondents will be provided by the enumerator with SAQ questionnaire together with CP Form 7 (SAQ instructions with letter). CP Form 7 has the following texts:

- The law that mandates the conduct of census
- Confidentiality of the data gathered and assurance that their household cannot be identified based on the data that they will provide since their questionnaire will be anonymously processed
- Their liability (penalty) in case he/she failed to provide requested data about their household
- Brief description of data in the questionnaire

- Reference Number (pre-printed or pre-pasted or written)
- Blank spaces where the Name of the respondent, contact details, address of the household, target date the form will be collected, and Census Receipt Confirmation Number (CRCN) could be written
- Instructions on how to participate in the census. There are three options on how to provide the requested data to the PSA. These are:
 - 1) Fill out the paper SAQ questionnaire and the flier, put the SAQ questionnaire (only) inside the envelope provided and seal it, then give it back together with the filled out flier to the census enumerator/collector (**Paper Questionnaire**)
 - 2) Download e-Questionnaire (PDF, Word, or Excel), fill it out, send it to PSA office as attachment to an email or upload it to the web server, write name, contact details, and receipt confirmation number (CRCN) in the flier, give it back together with the blank SAQ questionnaire to census enumerator/collector (**Offline e-Questionnaire**)
 - 3) Log-in into the census web server using the reference number as user name, fill-out the data in the 'online' questionnaire, save/submit it, write name, contact details, and receipt confirmation number (CRCN) in the flier, give it back together with the blank SAQ questionnaire to census enumerator/collector (**Online e-Questionnaire**)

Enumerating the DIH (Enumerator Side)

9. There are two types of DIHs that can be classified according to the area where they live. The first is households who live in an area that allows enumerator to do house-to-house listing of all households and the other is households in an area where house-to-house listing is not allowed. In the latter case, it is the subdivision/condominium administrator who distributes the forms - either by going house-to-house/unit-to-unit or waits for the residents at the entrance of the subdivision or building and hand their forms to them.

10. In the first case, the enumerator writes the reference number in the remarks column of the listing form (CP Form 1), writes the due date (both in the flier and listing form) when the filled out form will be collected, then gives the SAQ form (with the flier) to the household. The enumerator collects the questionnaire and the flier on the scheduled date. Once the form is collected, he/she copies the name and address (if not yet provided on the 1st visit) supplied in the flier to its corresponding entry in the listing form. If the flier has CRCN, the enumerator will copy that number in the remarks column below the reference number. If the envelope containing the filled out questionnaire is sealed, the enumerator should not be allowed to open the envelope in front of the respondent or anyone in the household.

11. In the second case, the enumerator will coordinate with the administrator to find out how many forms will be given to him/her for distribution to all the residents in the subdivision or building. If possible, the enumerator should ask for the list of permanent residents (not the owner of the houses / units) to be used in writing the entries in CP Form 1 (Listing Form). If the list of residents is available, the enumerator should prepare SAQ form for each resident by writing the name of the (possible) respondent in the flier, the reference number (if not pre-printed/pasted), and the date the form will be collected. Each SAQ Form (or resident) will be recorded in the Listing Form by copying the name of respondent, address, due date, and the reference number in the flier. Give the forms to the administrator then return on the scheduled date to collect the forms.

12. If the list is not available, the enumerator should ask the administrator to estimate the number of forms needed. The enumerator will prepare SAQ forms by writing the due date, and reference number in the flier. Give the forms to the administrator. SAQ forms will not be recorded in the Listing

Form yet because only those filled out SAQ forms (paper, offline or online) shall be recorded once the filled out forms and/or fliers have been collected.

The above procedures in administering SAQ questionnaires are recommendations only. It is best to leave the actual strategy to the field offices since they are more experienced in dealing with these situations in their area of responsibility. The idea is for them to exert their best efforts to be able to minimize if not eliminate the number of households that were not enumerated.

13. During collection of SAQ questionnaires, the enumerator or the team leader can check if those who declared that they use the e-Questionnaire (has CRCN in the flier) have actually submitted their e-Questionnaire by texting the reference number to the PMS using the key word “PMEQ” which will reply with the status of that e-Questionnaire. This verification technique of the truthfulness of the submission of the form will cost at least PHP 2 (the cost of 2 SMS) per household. But before texting, the validity of the CRCN can be checked by comparing some digits in the CRCN with their corresponding digits in the reference number (the technique will be discussed later!)

IV. Procedure in using e-Questionnaire

14. Respondent will download e-Questionnaire (PDF, MS-Word, or MS-Excel) from PSA website. Before being allowed to download, the web server will prompt for the Reference Number. Downloading will be allowed only if the supplied Reference Number is valid, i.e., the computed check digit matches with the check digit in the supplied Reference Number. The filename of the downloaded e-Questionnaire file will be the Reference Number (or a hashed series of alpha characters). After filling out the e-Questionnaire, the household can either submit the file as attachment to an email with Reference Number as the subject or upload it into the same PSA web server. The server will check if the filename of the e-Questionnaire corresponds with the reference number and will inform the household accordingly. If the submission is valid, a census receipt number will be sent to the sender or shown on the screen in case the file is uploaded to the server. This number will be written in their CP Form 7 (flier) as their proof that the e-Questionnaire has been received by the office.

15. Another way a household can provide census data is via online e-Questionnaire using the reference number as his/her user-id when the server prompts to enter the id during log-in. Respondent will be asked to supply a password to enable him/her to access the e-Questionnaire in case the transaction was not completed in one sitting or changes have to be done after the e-Questionnaire has been submitted. Once completed or concluded (submitted) by the respondent, a receipt number will be provided by the server which the respondent writes in their CP Form 7 (flier).

V. Post Census Evaluation of e-Questionnaire

16. Measuring the effect of this simple innovation can be done by just looking at the extent of the increase in the number of households that submitted completed forms to the office in areas known to be problematic based on previous census and/or surveys. Unfortunately, for the coming mid-decade census of population, the exact cause-and-effect due to the use of e-Questionnaire cannot be measured since there are other changes that will be done. These other changes are the use of sealed envelope and the increase in penalty (PHP 100,000 or USD 2,272) for not participating in the census. But since the main objective of the proposed changes in the census methodology in those special areas is to minimize if not to eliminate the problem of under coverage, achieving this goal is considered a success by itself. To approximate the success of e-Questionnaire, the number of those who were given the option to use the e-Questionnaire must be compared vis-à-vis the number who actually used it. ***A very high percentage of usage will somehow bolster the office confidence of institutionalizing the use of e-Questionnaire not only in census undertakings but also in all household-based surveys that will be done in the future.***

Appendix – General Design

Main Page Contents – Welcome page

1. PSA logo, Census 2015 logo
2. Instructions on how to use e-Questionnaire
3. Link to About the census and data items description
4. Link to Download Page
5. Link to Upload Page
6. Link to Online e-Questionnaire

Data Base (MySQL)

1. Reference Number
2. Census Receipt Confirmation Number (CRCN)
3. Type of e-Questionnaire (offline/online)
4. Date Downloaded
5. Date Uploaded (offline) or completed (online) or Date received if emailed
6. Filename of the downloaded form – Reference number + file extension name
7. Filename of the uploaded form
8. Password

Reference Number – Hashed Geo-ID (PRV+MUN+BGY+EA) code + 3 digit HH sequence number. Hashed Geo-ID code is the Hexadecimal equivalent of the EA sequence number suffixed with a checked digit computed using the algorithm:

ABCD – the Hexadecimal equivalent number

$$\text{Check Digit (c)} = (D*10 + C*10 + B*10^2 + B*10^3) \text{ MOD } 11$$

Hence, check digit values are 0 – A

The complete Reference Number is as follows:

ggggcnnnb

where gggg is the hashed geo-id, c is the check digit, nnn is HH sequence number, and b is the HH sequence number check digit computed as follows:

XYZ – the HH sequence number

$$\text{Check Digit (b)} = (X * 10^2 + Y * 10 + Z) \text{ MOD } 11$$

Census Receipt Confirmation Number (CRCN) – the number that will be given (shown on the screen after uploading or emailed back if the form was submitted through email) to the respondent once the form has been received by the server. This number is the 1st digit of the reference number + hashed geo-id check digit + HH sequence number check digit + the 1st digit of the HH sequence number. Hence the CRCN is ***g***(1st)***c******bn***(1st).

Because of the complex (too difficult to manually generate) algorithm of generating the Reference number, a small program that will enable the POs to list Reference Numbers that can be used in an EA will be developed by ITSRD and will be deployed to the POs.