Vanuatu Experience in processing census and survey questionnaires (Session 4.3)

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Questionnaire processing in the 2009 census project – listing and census forms
(Document presented by the Vanuatu National Statistics Office)

PURPOSE

1. To briefly summarize questionnaire processing practices in Vanuatu for censuses and surveys and particular planning for the 2009 census questionnaire processing;
2. To discuss choice of methodologies, tests, and execution, including lessons learnt from pilot census that were incorporated into the 2009 census questionnaire processing with a view towards what we could have done better if we were to start again;

BACKGROUND

Data processing for censuses in Vanuatu is quite new and a technical area that only recently the VNSO staffs are starting to take control of the task. In the past, it was mostly controlled by technical support and very little documentation has been made on what has been gone thru in terms of data processing.

The 1979 census was processed outside the then New Hebrides. It was the 1989 Census that first saw the introduction of microcomputers and being able to process the census forms in country. In spite of the availability of microcomputers, it still took 2 years for the processing to take place and similarly for the 1999 census. This has been a concern especially the timing of the availability of the data and its usefulness to the policy making process. For the 2009 Census, it was decided that a step further in data processing be opted and hence, the automated data processing system, the OCR (Optical Character Recognition).

EXPECTED OUTPUTS

Vanuatu is the first country working with SPC to implement fully-automated census data capture. However before that could happen, the traditional data processing which was through key data entry had to be piloted along side automation for comparison purposes. Being the first to embark on this, stakeholders wanted to clearly see a comparison between manual and automated entry. From existing literature, it was hard to find a simultaneous comparison of traditional and modern methods and this pilot census presented an ideal case to run the two methods side-by-side and assess the results.

The results were summarized according to accuracy, time and cost as outlined below.

- Accuracy: There was no significant difference in reported data quality between the 2 approaches. Output tables were very similar which totals almost identical.

- Time: Using the results from the pilot, we anticipate that data tabulations using scanning will be 40 weeks (or 10 months) earlier than manual data entry.

It was through the above 2 assumptions that saw the 2009 census opting for the automation of census forms.

PROGRESS TO DATE

The actual automation was first used for the household listing form. Despite being a basic form with very few variables and carried out 3 months prior to enumeration, it served its purpose and was able to determine the workload for the actual enumeration.

The final data processing has taken longer than anticipated and much of the delays had been going through error checking, much of which was supposed to be minimized through field checks however this does not appeared to work as anticipated.

The usual programs such as MS Access and CSPro were not totally left out as continued to be utilized for the processing. Through out the process, the data had to be transferred from different formats and each had their own purpose and strengths, thanks to the compatibility of these different platforms.

Being a first in the region to fully implement new technologies for data processing leads the VNSO to have a lot in store in terms of experiences to share with the region. If there is any country to rectify certain weaknesses within the current data processing system, it would have to be Vanuatu's experience that would lead to improvements for future censuses. There has been several study tours from regional countries namely Cook Islands, Kiribati, Solomon Islands and Samoa to get a feel of what scanning is like.

KEY POINTS FOR DISCUSSION

Being the first to implement fully-automated technology, has in many ways, been also used as a trial and error basis. This could be one of the reasons for the delays in data processing whereby unforeseen circumstances were experienced.

There appeared to be an absence of mechanism for consistency checks. The high optimism in the capability of the new technology left a vacuum for new ideas or strategies to be developed as checks for monitoring purposes. Additional database had developed for monitoring purposes and consistency checks. This has been proved vital although the experience from the pilot was probably insufficient to pick this up.

It remains to be seen if the assumption of timeliness and accuracy in opting for the automation of census forms would hold true not to mention the costs of acquiring and maintaining the new technologies.