

DISCUSSION
Joseph Steinberg, Survey Design, Inc.

These two papers are in the fine tradition of the Census Bureau of:

- (1) Identification of a problem;
- (2) Carrying out research; and
- (3) Publication of results.

Both papers are informative, thorough, and well organized. The Federal statistical system continues to be strengthened by publication of results of such research efforts.

The paper by Menning, Woltman, and Isaki has two methodological interests:

- (1) Record checks using different kinds of records, and
- (2) Multi-frame methodology with evaluation of differences in estimation between two estimators.

Useful insights are presented about operations of the record check. It was found necessary to use ad-hoc procedures in various local areas because of the diversity of local record systems. This is a familiar problem and has been encountered in other experiences. The Menning, et al, paper cites that estimated differences in the record check versus reported voting rates in four of the twelve sample areas included in this phase of the research were especially suspect. These four areas were therefore excluded from the detailed analysis. There are two possibilities that are consistent with the end result. Either there was a deficiency in some aspect of the research procedure or an insufficient amount of control of field aspects obtained. In budgeting the needs of control of field research may tend to be slighted. However, the risk in too thin supervision can only be appreciated after the fact when some portion of a research effort needs to be discarded because evaluation shows results to be suspect. The authors also cite the not surprising result that there were somewhat better outcomes with the use of more current (voting) records than with older (registration) records.

The multiple frame methodology results are as yet incomplete. However, it is worth highlighting the point made in the paper that it would have been useful for the research to have had added information developed during the interview in the parent RAV survey. Information about voting precinct, or voting location, and name and address likely to appear on the registration list would have been useful information. This illustrates the need for survey managers to involve researchers in survey planning. The involvement in this instance likely would have achieved more satisfying outcomes for the survey evaluation processes. Needs of evaluation research as well as quality of survey results are served better by early participation of a broad range of interests. It seems obvious to us, but needs to be reiterated to survey managers that if researchers are included in the earliest phases of survey planning, some of the products are better.

The operational decisions on classifying units

in each frame as overlap or non overlap were somewhat different. This is an important practical issue in multiple frame methodology identified by the paper. It is an area of continuing interest in multiple frame methodology as is illustrated further by the paper by Boecker (1978) presented at an earlier session of this annual meeting.

The authors present results involving multiple frame data with simple weights in the overlap domain and an estimate of the non overlap domain for comparison with a simple estimate for each domain. They indicate they are continuing their research and will have further results including analyses on a MSE/cost basis. This set of further results is likely to be influenced by and include discussion of the effects of optimum weighting reflecting the theory and practice of existing papers in the literature by Fuller and Burmeister (1973) and Hartley (1974). Further results by the authors will provide additional useful insights.

Now, I'd like to turn to the Malmuth paper. The rising level of refusal rates over the span of the Annual Housing Surveys (AHS) apparently has generated some concern at Census. The worry evidently is that successive annual results of AHS may be poorer in quality.

The paper addresses one aspect of quality-- do non-responses affect quality differentially; do they lead to material biases in published results even after adjustment for the non-responses; and, is the refusal rate likely to get much worse as a result of the cumulative effects of repeated interviewing of the same panel?

A primary AHS objective is to provide reliable measures of change over time. This led to the start to the use of a constant panel rather than a rotating sample. Thus, the need to estimate housing losses over time seems to have been a primary reason for not using a rotating sample. Three research projects that are discussed in the paper help to answer the question-- are various aspects of the non-response problem sufficient reason for an introduction of some form of sample rotation?

Extensive results of the three projects have been made available. In general, the answer in each case is--no--the results do not indicate the need to shift to a rotating sample. (The paper does not address the issue-- is there a conditioning effect in AHS responses over time. This aspect presumably will be reported on separately when data are available from AHS itself.)

I should like to make several comments about the general policy followed in the AHS. First, I have the concern-- suppose a crisis develops-- say there is a larger than expected increase in refusals for a particular survey--far larger than is considered reasonable in terms of public perception of what is a reasonable and what is

in one field operation by tracking a constant not a reasonable refusal rate. The current approach of use of a constant panel does not introduce the leavening effect of fresh samples and rests on the hope that a crisis of confidence will not occur. Secondly, there is likely to be a major redesign of the AHS, say in 1982-83 when the results of the 1980 Census become available. In such an event, the particular year-year changes when measured by AHS would be subject to a larger standard error all at once because two completely independent samples were involved. Further, as every five years thereafter a quinquennial Census provides the same situation, there will be periodic large variances of differences following a set of smaller ones. Wouldn't it be better to have a gradual rotation scheme that would provide protection in the first case and approximately the same year-year variance of difference in the second case? Then, to deal with the need for measurement of losses with small standard errors, a more complex sample design could be developed. For example, one such approach might entail that losses be identified

set of units over time-- just as now, but only for change measurements. The other concomitant operation of the sample would involve a rotating sample--say with a five year cycle to tie into the quinquennial cycle--for use with the extensive AHS questionnaire.

References

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