

DISCUSSION

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1. Some General Comments Related to the Three Papers

My discussion relates to the Current Population Survey (CPS), the Annual Housing Survey (AHS), and the National Health Interview Survey (NHIS). It is important, especially when decennial redesign is under consideration for these surveys, to have this kind of review of goals, and of how to redesign them within limitations of resources. Also planning for redesign involves reexamination of the levels of resources that will or may be available, and that are justified to serve the various program needs. I commend the agencies and the authors for their progress and attention to this important effort.

I will briefly mention a general principle that seems to me to apply in each of the surveys. This is concerned with sample allocation to provide local area statistics to be used for funds distribution. Presumably the goal, in funds distribution, is to maximize the welfare of disadvantaged individuals, or of individuals in a specified program. To serve such a goal, funds should be allocated in proportion to the number of recipients rather than to achieve equal accuracy in each area. An allocation to achieve equal accuracy will risk robbing large numbers of recipients in the very large states (or areas) in order to assure equal relative accuracy of allocations for the much smaller number in the smaller states or areas. Approximately proportionate allocation minimizes the numbers of individuals that receive too much or too little. In practice, this means, roughly, sample allocation should be in proportion to total housing units (or total population, or possibly a measure such as total households with incomes below a cutoff or in some specified program).

The approach of equalized sample sizes for equal precision by states is in the wrong direction, except possibly to set a cutoff for minimum precision that does not require a large fraction of the total sample. It may not take a high proportion of a total sample to establish an approximate maximum sampling error for a few small areas (states in the case of CPS or the NHIS, perhaps HUD divisions in the case of the AHS). Such a minor modification of proportionate allocation should receive serious consideration, as distinguished from equal precision for the relevant areas. Equal precision seems to focus on political issues rather than technical. Of course political compromises may be necessary to achieve funding.

Following are some more specific comments with respect to each of the three surveys.

2. The CPS

2.1. The general comment that I just made about allocating the sample is immediately relevant to the new CPS design considerations.

2.2. The Methods Development Survey (MDS) is to be highly commended, and I wish to put special emphasis on this topic.

I would like to mention, in passing, that many problems that are sometimes currently regarded as new or newly important are in fact the same old problems that have been recognized and subjects of research over time, but that have not yet been solved. This holds for the problems being addressed by the Methods Development Survey. These are especially the problems that arise out of response errors in surveys, and that are resistant to easy solutions. Unfortunately, response errors are exceedingly large in some of the key labor force measures, such as unemployment. Response variance contributes about 30 percent of the total simple random sampling variance for unemployment measures, and response errors account for about half of the month-to-month gross changes as measured by the CPS. The rotation group bias is also important. These manifestations of response errors challenge the validity of results, in spite of evidence of substantial compensations or offsetting errors in estimating aggregates or averages from the CPS. For measuring gross changes in employment status, especially, the response errors are additive with little or no opportunity for compensation.

These old but still startling results point to the urgent need for research on measurement in surveys, and in particular in the CPS, on how to control and reduce sources of response variance and response bias. The CPS sample size is large enough that, in most important national estimates, response biases are far larger than sampling errors. Enlarging the sample is not the right way to go until substantial progress is made in controlling response errors. Response errors can undermine the validity of measures for minority groups, for marginal workers, and others receiving special attention.

2.3. The Methods Development Survey (MDS) seems to be the right way to go to understand and to guide improvements, but the problems do not have easy solutions and extensive long-range research is called for. Vigorous continuing support of several types is needed.

- a. There is a need to reexamine and formulate hypotheses on sources of error and how to reduce them. Some areas for attention include "best" respondent, possibly sending mail questionnaires to individuals in advance to fill out and hold for the interview, more intensive questioning, reconciled interviews, and other procedures. One should test and evaluate the utility of such methods through MDS and perhaps other exploratory studies. A program at the level of 5 to 10 percent of the ongoing CPS total cost of perhaps 20 to 25 million dollars a year seems modest

compared to the importance of making progress in solving these problems. One shouldn't expect payoffs in the first year, or the second, or necessarily even very substantial ones in the first five years. The problems are tough nuts and don't yield easily. They are the same problems we focused on 15 and 20 years ago, and little progress has been made. But neither has there been a strong, sustained research effort.

- b. An earlier counterpart of MDS demonstrated that answers are exceedingly difficult to obtain, and will call for sustained continuing effort. One should bring in outside advice and participation in developing and evaluating the research program. Also there is a need to broaden continuing participation, beyond BLS and Census and other government participants. I suggest reconstituting a panel of consultants. Also, advantage should be taken of broader participation through the use of contracts and grants.
- c. The need for gross change or "flow" measures to understand what is happening in the labor market is recognized as important now, but was equally recognized 20 years ago. Still, because of the large impact of response errors, the problems in interpreting the gross-change measures from the CPS are exceedingly great, and use of the available measures may cause serious misinterpretations.

(1) As indicated above, response errors constitute about half of total gross change as measured.

(2) If gross changes are important, it may be necessary to pay the price of follow-up of movers, to do additional follow-up on nonresponse, and to use "best" respondents. It may be necessary to alter the time schedule for CPS to bring response errors under better control, by allowing, say, an extra few days or week to allow use of improved data-collection procedures.

- d. It is important to recognize the great returns that come from the present system, but also to recognize the primitive state of measurement for some of the important items, and that it is important to learn how to improve control, and to do this it is necessary to obtain funding and use it in effective research.

3. The AHS

The paper reports on an encouragingly thorough review of goals of various users and of how sample and survey design can be adapted to serve those with maximum effectiveness.

Some additional specific comments are as follows:

- a. Rotation of the sample. With respect to the proposed considerations for rotation of the sample, reducing respondent burden is mentioned as one. It seems to me that this is a trivial factor. In spite of much public discussion of respondent burdens on households from surveys I believe that, to the contrary, such surveys might be regarded as negative burdens. In my experience, many (and I believe most) households welcome the opportunity to participate in a useful survey. I don't believe respondent burden should be an important argument for rotation.

The issue of rotation is, nevertheless, very important and should receive intensive consideration for other reasons. The proposal for two samples to be taken in odd and even years is an interesting one. However, this particular approach to rotation has an important disadvantage that should be considered. This is a substantial loss in measuring year-to-year changes. For an item with $\rho = .8$, the variance of year-to-year change will increase by a factor of approximately $2/2(1-\rho) = 5$, or more than a doubling of the standard error, as compared with a fixed panel.

An alternate rotation plan that might deserve serious consideration would be to divide the proposed 120,000 units to be interviewed over a two-year period into three subsamples, a, b, and c, of 30,000 each with a rotation pattern as follows:

year	
1	a and b
2	b and c
3	c and a
4	a and b
	etc.

and use a composite estimator. Such an approach would give components of change estimates for a one-year interval for half the sample, and also for any two- or more year interval for half the sample. A composite estimator could be used to achieve considerably better year-to-year change estimates than would result from simple weighted tabulations, and also considerably better aggregate estimates each year. The latter should be especially important for any use of the data for funds distribution. New panels could be introduced decennially, with overlap if desired.

- b. The desire for a neighborhood index seems to me to represent an important need. The authors recognize that a high price would have to be paid in increased sampling variances by increasing cluster sizes to adjust for this, although I believe they may understate it somewhat. I suggest two possible alternatives for consideration:

- (1) Possibly have an interviewer observe the two adjacent residential structures on each side, and also the two closest across the street up to some distance, possibly approximately 100 yards, and give them a rating based on external observations with respect to housing quality and characteristics. This might include a rating such as equal, better, or worse than the sample housing unit with respect to two or three observational characteristics that seem relevant. It would be highly subjective, but possibly useful.
- (2) An alternative would be to develop neighborhood measures through an administrative record program development. Such a program was developing some years ago and was actively supported by HUD, the Bureau of the Census, and other agencies. It now seems to be dormant as far as national support is concerned. It involves geocoding of local administrative records that are computerized, including property records, welfare records, permit records, license records (local and state), condemnation records, etc. I believe the District of Columbia is continuing to do pioneering work in this area. The program has great potential in the long run, but also substantial cost. It should be reconsidered.
- (3) The idea of a common core of data each year for fast results seems highly important and desirable.
- (4) Reducing the time-lags for processing is difficult, but with appropriate attention it seems to me that substantial gains can be achieved.

4. NHIS

Again, the NCHS staff is to be commended for this important reexamination to identify principal goals and a redesign that will be responsive to them. Here I wish to repeat the emphasis I placed earlier on two or three points, and possibly add an additional remark or two.

- a. I question that serious consideration should be given to an alternative that would yield equal precision for each state, for the reasons I gave earlier. Consideration should also be given to the use of composite (as distinguished from synthetic) estimation to improve estimates for individual states. It may or may not be effective but is worth exploration.
- b. The potential relationship of the telephone survey work being pursued in NCHS (and also elsewhere) is an area of importance, for possible integration into redesign, particularly for special supplementation or topical studies.
- c. I am glad to see the emphasis being placed on total design considerations, and on the need for research on measurement errors. We have serious measurement problems in many surveys, including the NHIS. Again, I emphasize the need for a great deal more emphasis in this area. I do not expect that an intensive research program for a year or so once a decade is likely to make substantial contributions to the hard-core problems. A substantial continuing research program on measurement is needed. I would like to see some integration of this effort with the kinds of recommendations I made for the CPS. Also, I would like to see continuing work with a panel of consultants (broadly constituted), and also the use of contracts and grants to extend and broaden participation.