

Past, Present, and Future of Federal Surveys: Discussion

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1. The Past and Present

Larry Brown and Connie Citro have presented a fascinating overview of the impressive range of activities of the Committee on National Statistics (CNSTAT) since it was established in 1972, together with some ideas about the future of federal surveys and CNSTAT's evolving role. My discussion is based on my experiences in a number of these activities over the years, including several panels, workshops, and other activities. In my opinion, CNSTAT has made many very valuable contributions to Federal statistics, especially through its panels. My remarks will focus on CNSTAT panels.

Panels may be commissioned by Congress, by the federal department, or by the federal statistical agency. Most panels are concerned with specific federal surveys, but CNSTAT's role is not restricted to surveys. The first panel on which I served, back in the late 1980's, was commissioned by the Department of Education to evaluate the National Center for Education Statistics (NCES). At that time NCES was too small to adequately serve its function as a statistical agency, as reflected in the title of the panel's report *Creating a Center for Education Statistics: A Time for Action*. Another CNSTAT panel on which I served was one that was required under the 1994 Improving America's Schools Act to determine whether the model-dependent Small Area Income and Poverty Estimates (SAIPE), produced by the Census Bureau, were sufficiently reliable to be used for the allocation of Title I funds under the Elementary and Secondary Education Act. At that time more than \$7 billion annually was allocated for educationally disadvantaged children.

I believe that nearly all the panels on which I have served have made significant contributions to various aspects of federal statistics. For example, I believe that the NCES panel's report provided important support for the development of an NCES that would satisfy the requirements of a federal statistical agency. Although the SAIPE panel had reservations about the quality of the SAIPE estimates for Title I fund allocation it did recommend that, lacking anything better, the SAIPE estimates should be used for this purpose. The panel worked closely with Census Bureau statisticians to develop tests to evaluate the small area estimates of poor school-age children and to improve the models involved. The outcome of this work not only addressed the panel's charge but also likely had ripple effects that led to the much greater acceptance of small area estimates that now exists across many statistical agencies.

A key requirement of a CNSTAT panel is that it provides, and is seen to provide, high-quality independent advice and recommendations. To provide a report of high quality, the panel should comprise knowledgeable persons in the various fields involved, and panels are therefore usually multi-disciplinary. The CNSTAT study directors are also very important in ensuring the quality of the reports. The panel members need to be interested and fully engaged in the panel's charge. Sometimes it can be advantageous to include a panel member who lacks direct knowledge of the subject-matter but who can think broadly and may come up with non-standard approaches. However, this only works if

that person is willing to get intimately involved. A notable side benefit of CNSTAT panels is that, in learning the challenges and constraints faced by federal statisticians in conducting a given program, panel members can often become supporters of the program in general, even while recommending some changes.

To satisfy the independence requirement, the panel needs to prepare its reports without outside influence from the agency or those commissioning the study. However, this requirement does not preclude exchanges with the agency that may indicate the ideas that the panel is considering. The ultimate aim is to effect changes that will improve the work under review in the smoothest possible way. It is a fine outcome if the agency realizes where the panel is heading, agrees with the direction of the changes, and implements them before the panel has formally reported.

Whether a panel is successful in its mission depends in part on outside circumstances. Is the agency ready for change? Does it have the resources for making changes? To what extent does it accept the panel's recommendations? How drastic are the recommended changes? The panel's final report needs to address all the issues arising out of its charge. However, I do not think it should be confined to the charge if it sees other important issues that need to be addressed. In the case of the first of the panels to evaluate the Survey of Income and Program Participation on which I served, the panel determined that management and oversight were of great importance to the success of the survey and we included a chapter on these topics in the report. Going outside the charge is not always popular with the commissioning agency, but I believe it right to do so if it leads to recommendations that affect the success of a program.

Panel reports are made widely available through their publication by the National Academy Press. The panels also often take up opportunities to present their main findings at the meetings of various professional associations, and at the Joint Statistical Meetings in particular. Despite these efforts, I think that sometimes the findings could be better disseminated to a broader readership. Panel reports are written for the client agency and are often lengthy and detailed. When the key findings are more generally applicable, it would be useful to publish them in articles in journals that will be read by staff in other statistical agencies and elsewhere. This also applies to some workshop reports, such as the recent one on *The Future of Federal Household Surveys*. The excellent *Principles and Practices for a Federal Statistical Agency* is also worthy of wide distribution in the US and abroad. It could well be required reading for those entering a federal statistical agency.

2. The Future of Federal Surveys and CNSTAT

The enormous growth in CNSTAT's activities over the past twenty years or so is indicative of its success and its value to the federal statistical system, as well as of the increasing demand for survey data to meet policy makers' needs. This growth raises a question about how many activities CNSTAT can handle while retaining its reputation for high quality products. If it needs to be more selective, how should the projects be selected (to the extent that selection is an option)? Will the future demand for CNSTAT activities stay the same, grow, or decline? How will the nature of the demand change with the changing statistical environment?

There are many reasons why the world of survey research in general, and government surveys in particular, are at a point of major change:

- The widely discussed declining response rates and increasing costs of surveys based on probability sampling have stimulated greater interest in nonprobability samples and internet panels.
- The internet and smart phones expand the range of possible modes for data collection beyond face-to-face interviewing, telephone interviewing, and mail questionnaires. Other modes, such as activity monitors, are also possible for particular measurements. Mixed mode data collections are increasingly popular, but differential mode effects need to be considered.
- In many cases, surveys have become increasingly burdensome to respondents in response to data demands from analysts. The growth in the collection of biospecimens is one example. The wider use of panel surveys is another.
- Interest in the use of administrative data for statistical purposes has increased considerably. These data may be used as an adjunct to the survey data collection, reducing the response burden by not needing to collect the data from respondents, or by appending data to the respondents' records that could not be obtained in the survey (e.g., longitudinal data from before or after the data collection). Alternatively, analyses of the administrative data can be used as a replacement for new data collection. The potential for this alternative increases greatly when data from several administrative sources can be merged for analysis.
- The role of big data for federal statistical purposes is a subject of great interest, but as yet it is not clearly articulated. Some scrapings from the internet can be valuable, such as the prices of certain commodities for the Consumer Price Index. However, the expanded use of big data will require a careful assessment of data quality and relevance.
- The increasing demand from policy analysts for estimates for small communities has given rise to the explosion of interest in, and use of, model-dependent small area estimates. The quality of these estimates needs to be carefully reviewed for each application.
- The concern to make expensively-collected survey data available to secondary analysts has resulted in recent developments in methods of data disclosure control, and to mechanisms for providing access to restricted use files or to outputs from analyses of these files that satisfy disclosure control criteria.
- Survey data are increasingly being used for international comparisons, and international surveys are an area of growth. If international comparisons are to be valid, the surveys in the various countries must be well-coordinated and controlled. Issues of translation and the social context in each country need to be recognized.
- An important type of policy-relevant statistical study is one designed to evaluate the effectiveness of a specific federal program. Since these evaluation studies are often not carried out by federal statistical agencies, they are not well-represented in CNSTAT's portfolio. This is an area where CNSTAT might seek to increase its contributions.

In addition to the changing world of federal statistics, it is also important to note the enormous growth in published research on all aspects of survey methodology that has occurred in the past twenty or so years. There are many new journals and edited volumes

and also numerous general and subject-specific conferences and workshops on survey methodology. Furthermore, research on survey methodology has become an accepted international activity, with important contributions from researchers in many countries. In addition, there have been major developments in postgraduate training during the past twenty years, leading to a more highly trained workforce of survey statisticians and methodologists to support the changes that are going to be needed in the next several years.

Federal statistical agencies will need to be nimble to address the rapid pace of change in the world of federal statistics that is now emerging. They will, of course, need to keep current on the changing needs of policy analysts. They will also need to be prepared to innovate on a more-or-less continuous basis in the light of advances in methodology and technology, while protecting the interpretability of trends. To meet the needs for change, they will need a cadre of well-trained survey statisticians, methodologists, and data analysts. Moreover, they should find ways to regularly update the skills of their employees to keep them up-to-date with recent methodological developments.

There are also implications for CNSTAT in the way it performs its activities. Addressing the probable increasing speed of innovation in federal statistics is a major challenge for CNSTAT. Even now, the time it takes to complete a CNSTAT panel study is often considered by the agencies to be too long and the costs too high. These problems are likely to be exacerbated in the future, but there does not appear to be an easy solution that maintains the high quality review that is the hallmark of panel reports. With the expansion in methodological research in survey statistics and methodology, resulting in researchers often now specializing more narrowly than in the past, it may sometimes become necessary in forming a CNSTAT panel to include experts in different aspects of the field and draw more heavily from international experts. Experts in administrative record systems and data analysts can be expected to play a more prominent role in the future. As the federal statistical system changes, to be responsive CNSTAT will also need to change. The system as a whole will likely benefit from more cross-cutting CNSTAT activities that assist a number of agencies in grappling with the changes that are coming.