

DISCUSSION

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I would like to thank Shail Butani for asking me to participate in this session. I began my tenure at BLS during the late stages of the CPS redesign incorporating information from the 1980 Decennial Census, and left in the midst of the planning and development for the 1990 redesign. It gives me a sense of completeness to take part in the closing exercises of that tremendous effort.

Before commenting on the individual papers, I feel it is useful to review the broader objectives of the CPS redesign and of the impact measurement which the authors have reported on in this session.

As noted in the article by Tom Plewes in *Chance* (1994), the CPS redesign was intended to bring CPS back to a role as a "leading edge" survey operation. This would be accomplished through the implementation of more precise and conceptually sound labor-force measures, covering a broader range of labor force characteristics, collected more efficiently and cost-effectively. The redesign was to have brought into play state-of-the-art statistical estimation, cognitive research, and computer technology.

The impact measurement for the implementation of the CPS redesign was intended to provide a bridge between the old and new design, explain the components of change, and measure the impact of previous refinements (such as the move toward centralization of data collection). (See Bowie, Cahoon, and Martin, 1993.) Impact measurement becomes extremely important with a series with the visibility and importance of the CPS. Although the overlap sample was not designed to meet the latter two objectives, BLS and Census did carry our evaluations, some of which were presented in this session, to provide useful information relative to these objectives.

Finally, but perhaps most importantly, was the need to disseminate the findings of the results. If users are not made aware of the design changes and their impact, the value of the overall application of the series would be lessened.

There was, obviously, broad publication of the redesign and potential impact to professional users. This was carried in publications such as *Monthly Labor Review* and *Chance*, through meetings with data users, and at professional meetings, such as here at ASA. An article in *JASA* or *American Statistician* would have been equally appropriate, given the

historical importance of the CPS to survey methodology.

Based on a cursory review of data write-ups by news organizations, it appears that they seemed to have heard the message, but they did not necessarily fully comprehend what was being said. When reporting January unemployment estimates, news organizations did tend to report changes from December either on an old design or a new design basis.

However there were publications of lower level results that either ignored or glossed over the redesign implementation. In particular, publication of results for discouraged workers and for employed part-time for economic reasons did not directly mention potential impact of the redesign on changes from December to January.

Butani, Cahoon, Fay, and Kostanich covered the major design effects of the redesign. The paper provides a good view of the components, the relative impact, plus the impact into the future given anticipated changes.

While the authors mention the change to 1990-based population controls, it would have been interesting to see whether there was any impact on the differential survey coverage of population subgroups and, if so, what were the implications of such impact. For example, historically the CPS covers Black males at lower rates than it does White males. Was this relative coverage impacted by the redesign?

I would hesitate to go as far as did the authors in stating that the impact of the redesign on the composite estimator was measured. The constraints the authors were under given the timing and design of the overlap sample did not allow them to measure impact on month-in-sample (MIS) effects and there was little data from MIS 6-8 for their analysis. The relative sizes of the MIS effects can impact the composite estimator. I will touch on this issue more in my closing comments.

Tucker, Kojetin, Blass, and Tucker provided an interesting view of the interaction between technology, training and interviewer characteristics, as well as providing measurement with a view toward reducing interviewer error.

They found higher levels of nonresponse and proxy response with the use of CAPI. Next steps would appear to be determining implications of this

finding on interviewer training, education of respondents, and estimation methods. Improved training may be able to alleviate this situation, given the regional office impacts observed.

I would return once again to my theme of what are the implications of these findings on MIS effects, and again postpone further thoughts until my closing comments.

Miller provides us with a clearer view of the relationship between the old and new design over time. The data that he is able to present in hindsight are surely much less confusing than what BLS and Census had available real-time to explain differences between designs.

The data presented appear to show a decrease in the difference between old and new design over time for the unemployment rate for women and an increase for men. I would be curious as to whether the author has any suggestions as to what may be behind this.

It was interesting to see the relationship between the establishment-based Current Employment Statistics estimates and the household-based CPS estimates in the paper by Tiller and Welch. This relationship has been looked at in the past by Dick in state-level estimation, but I don't recall seeing this done at the national level. I feel one of the most valuable applications of this work would be in the use of the prediction approach for data review, looking for unexpected results.

Given what has been done in the past to develop state-level estimates using the prediction approach, I would ask if any of these results have implications for refinement of the state-level methodology.

In closing I would like to thank all of the authors for their portrayal of the impact of a major survey redesign on a series trend. The combination of papers presents the interaction between survey design, interviewer effects, centralization of data collection and technology advances. By looking at the various components and viewing the impact under different measurement approaches and over time, the CPS has set a standard for other surveys, becoming the "leading edge survey not only in methodology but also in technical information and explanation of series breaks.

While I do not see the need for more detailed evaluation of the impact of the redesign, I do see the need to use this work as a basis for future redesigns. Future methodological research should be built on this work, to identify areas of application and to build "what if" scenarios.

This work extends the understanding of nonsampling error impacts of a survey redesign. In

addition, it recognizes the importance of nonsampling errors and attempts to make them a key component of the evaluation.

Finally, I would make a plea for work to be focused in the area of MIS effects. This is an area which is little understood, except for the basic fact that there is differential effect on estimates by time in sample. However, with a change in the survey design as radical as what was implemented, with a redesigned questionnaire, use of CAPI, and centralization of data collection, a logical hypothesis is that the MIS effect was impacted. The question becomes to what extent and what is driving the impact.

MIS effects are reflective, apparently, of underlying nonsampling error due to an impact on response based on prior interviews. These effects are incorporated into the development of the composite estimator. Followup work could help clarify, or at least improve the application of, the relationship of the MIS effects and the estimator.

Preliminary work, looking at the problem from a time in sample (TIS) perspective, was conducted at BLS in the early 1980's by Janice Shack-Marquez. This differs slightly from the more well-known statement of the problem wherein the MIS is determined based on time eligible for interview. TIS is determined based on time actually interviewed. This perspective may be a logically starting point for future research into MIS effects.

REFERENCES

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