

Consumer Expenditure Survey Redesign Options Workshop: Discussion of Methodological/Cognitive Issues and the Proposed Redesigns

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Background: Current Workshop

- Builds on extensive ongoing program of both internal and external research, advice and review (since the mid-1980s).
- A series of workshops, forums and expert panels, under the general aegis of the “Gemini Project”
- All focused on development of a *fundamental* redesign of the Consumer Expenditure Surveys
- Major component of the charge and work of the CNSTAT Panel

CNSTAT Panel Charge:

- Review output of other workshops and forums.
- Convene household survey data producer workshop on experience of how other survey organizations address similar challenges.
- *Contract with experienced data collection organizations to:*
 - *Develop concrete design options and*
 - *A discussion of their relative merits.*
- *Convene workshop based on results of this work.*
- Produce a consensus report of findings and recommendations on redesigned survey options.

Contractor Charge

- Provide balanced evaluation of benefits, costs and risks of proposed options compared with current CE surveys.
- Provide comprehensive proposal for survey design and/or process that collects required data.
- Provide clear recommendations for evaluating proposed design in the CE context.
- Focus in particular on: (1) measurement error; (2) changes in survey environment; and (3) flexibility in data collection modes.

Have they met this charge?

- Overall, each has done so, and in several instances their reports exceed these requirements.
- But: there are also several more implicit questions in this charge and the potential value that these reports may provide for the Panel and BLS.
- Given the very brief time period available for this work, these reports are very rich in innovative ideas and insights.
- However, is very much the case that the “devil is in the details.”

Discussion Outline

- What are the key features of each proposed redesign? Are these well justified relative to other alternatives and their feasibility? Which proposed aspects of these designs merit some additional thought and clarification?
- Are these two proposed designs fundamentally (or radically) different from the current CE surveys, and, in turn, from one another?
- Are there some additional insights, questions or themes that merit careful consideration or serious attention independent of the specific designs proposed by each contractor?

Westat—Key Features

- Maintains separate diary and quarterly interview surveys.
- Both provide several alternative methods for reporting data: electronic or paper; strong emphasis on use of receipts; downloading electronic data files; scanning of receipts and other paper.
- Both rely on submission of such data to a central repository, where data are received, extracted, translated, coded and evaluated with “smart” prompting by web survey or telephone to obtain additional information required by the CE program.

Westat—Key Features

- Both involve intensive monitoring and prompting by interviewers through multiple scheduled contacts to stimulate complete and timely reporting.
- Both are explicitly designed to reduce dependence on recall and recall interviews.
- In diary component, all CU members aged 14+ would self-respond by self-selected method of data collection.
- Quarterly interviews would maintain a three-month reference period (with recall interviews minimized), but with only two waves of data collection 12 months apart).

Westat: Observations/Questions

- An innovative, complex central depository is a particularly attractive feature of proposed design.
- Burden on this system to receive and dynamically manage multiple types of data and provide real-time feedback and queries is considerable.
- Detailed description of reading and interpreting various types of data submitted and generating queries in real time most impressive.
- But feasibility, especially in the diary component, with one-week data collection, seems problematic.
- Need for web survey prompting after submission for many (if not most) of the expenditures reported could serve as a barrier for reporting (analogous to “panel conditioning”) .

Westat: Observations/Questions

- Not clear whether actual or “objective” reduction in respondent burden will be *perceived* as real.
 - Downloading and submitting data daily in diary survey (especially banking and retail data) may be more burdensome.
 - Learning curve involved in electronic reporting of quarterly interview data may increase perceived burden with 12 months “downtime” between waves.
- Twelve months between quarterly interviews may also not be optimal for other reasons (e.g., significant changes in CU composition).
- While an Event History Calendar will likely improve recall (when a recall interview is necessary) in quarterly interview, its value in a one week diary seems more limited.

Westat: Observations/Questions

- Data requirements for CE analysts mostly met, other than panel component.
- Cost of proposed design substantially greater than current CE surveys, thereby requiring careful analysis of cost-benefit tradeoffs and priority setting.

Westat: Summary

- Proposed design focuses heavily on:
 - increased reporting flexibility, extensive use of monitoring, prompting and help to reduce respondent burden
 - greater use of personal electronic data, receipts and real time recording to reduce reliance on recall.
 - A sophisticated “data repository” (that serves as much more) to hold it all together.
- Feasibility testing of all components and at all levels is critical. Detailed evaluation protocol and plan described may not be sufficient.
- Most attractive features of design make it significantly more costly.

UWM: Key Features

- A key feature of the proposed design is a single sample that integrates diary and retrospective reports of expenditures.
- Reduces redundancies between the CEI and CED surveys.
- Single-sample design has two components:
 - A cross-sectional component, where each CU participates for one month.
 - A panel component, for which each CU participates three times (also for one month) at six month intervals.
- Minimizes reliance on retrospective reporting, promoting real-time recording of all expenditures, emphasizing self-reporting for all CU members.

UWM: Key Features

- Reporting task is the same for each component: maintaining a diary for a one month period in which all CU members record all purchases and expenditures.
- Use of shared computer tablets as primary “diary” recording device, with web-based data collection (or CASI and download).
- Capture and recording of both paper and electronic receipts.
- Use of portable diaries, cell and smartphones, and other technology (e.g., scanner, barcode and financial software) for real-time data capture and “memory triggers.”

UWM: Observations/Questions

- In principle, a fully-integrated design that emphasizes prospective, “real-time” collection of expenditures and payments.
- Takes full advantage of technology, broadly conceived, including a common platform for integrating input and information.
- Data captured by a flexible array of tools serving either as memory or recording aids, or for direct data input.
- In practice, however, there are some significant questions about the feasibility of this design.
- Some involve the design and integration of the technology, including their support, maintenance and training. Some relevant experience available from Knowledge Networks, Stanford and Abt SRBI, Nielsen and USDA, but requirements are significantly different and greater.

UWM: Observations/Questions

- Of greater uncertainty, however, is one's capacity to recruit and motivate CU members to maintain a diary for a full month rather than two weeks (three times for the panel component!), even with all of the tools to be leveraged in this effort.
- In principle, the preferred requirement to use a computer tablet for reporting is both a strength and weakness of the design.
- For example, the flexibility enhanced by use of the other technologies and methods proposed is undermined somewhat as they are relegated largely to “memory triggers” or aides.
- Use and integration of these various other technology- and paper-based methods as memory aids or triggers, versus direct sources for data input, requires significantly more thought and design work.

UWM: Observations/Questions

- Recognition that nonresponse is a key threat to this design, the need for a “responsive design” approach, and thoughts about how to carry this out is a major strength.
- Most data requirements for CE analysts are met by this design (one exception being quarterly panel change estimates by a CU), but it explicitly gives highest priority to improvement of data for the CPI.
- Costs of proposed design are substantially greater than current CE surveys, but since some of these (e.g., technology and development) would be amortized over multiple years, a more detailed analysis is necessary.

UWM: Summary

- A bold, creative design reflecting a number of the key concerns raised in previous workshops and forums of both methodologists and users.
- Proposes to take maximum advantage of virtually all recent and future technological and cultural changes identified in the survey and consumer environments.
- A clear focus on significantly, and perhaps dramatically, reducing our historical dependence and reliance on retrospection and recall for reporting expenditure data.
- However, in spite of its considerable appeal, there is little empirical evidence to date to make one confident that such a design is feasible.
- Achieving the full degree of flexibility envisioned requires more design thinking and work, likely beyond the types and sizes of evaluations proposed.
- Its costs, at least at the outset, need to be more carefully evaluated.

How Different Are These Designs?

- Both of these proposed designs are clearly different in fundamental ways from the current CE surveys.
- These differences clearly reflect insights and concerns from prior research, workshops and forums sponsored by BLS.
- The UWM design is self-described as a “radical” departure from the current approach, which is certainly true.
- The Westat design is somewhat less “radical,” maintaining more features of the current design, but with some important fundamental design changes as well.

How Different Are These Designs?

- And, at first blush, they are also quite different from one another.
- While the differences are significant and important, however, these are in part somewhat illusory.
- Philosophies driving both are to design a consumer expenditure survey that is more prospective (less dependent on recall), flexible, and technological.

How Different Are These Designs?

- One key difference is:
 - Westat's proposed use of a central data depository as a major element to support these features, versus
 - UWM's reliance on shared computer tablets as the primary "diary" recording device and platform.
 - Both were discussed as options in a previous Westat report for BLS.
- A second key difference is UWM's proposal to integrate the diary and interview surveys, an option also considered by Westat in its current report.
- Thus, one can certainly envision deriving various "hybrid" approaches that take advantage of the desirable features of both designs, some of which overlap in any case.

Additional Insights, Questions or Themes

- In their reviews of factors driving these redesigns, two key factors seem especially significant and worthy of more detailed attention:
 - The Westat report in particular does an excellent job of showing that *over 70 percent of consumer purchases are documented in electronic format.*
 - Both reports clearly show, based on experiences across a diverse array of surveys, that *use of records significantly improves the quality of data* obtained from respondent reports.
- While each proposed design encompasses key features that recognize and attempt to address and leverage these factors, these observations seem dramatic and significant enough to merit more detailed investigation.

Over 70% of Consumer Purchases Are in Electronic Format

- Encouraging respondents (1) to provide personal expenditure data by retrieving their information from these databases and then (2) obtaining their consent to seek such information from retailers and utility companies are sound ideas as far as they go.
- Far bolder, however, would be for BLS to use its credibility and clout (likely to require new legislation) to obtain such information directly for all CE households (with their consent) from all holders of these electronic records (as suggested by Westat).
- For retail purchases, creating a universal CE “loyalty card” issued in partnership by BLS and all retail vendors might also be explored.

Use of Records Significantly Improves Data Quality

- While both designs aggressively promote the use of receipts and records far beyond the current methodology in the CE surveys, this is such a significant factor for the likely success of any future design that it merits more direct and sustained attention.
- A “crash” program of both qualitative and quantitative research using a classic “Dillman” approach, which explores ways of highlighting the critical importance of this behavior and minimizing the burden of doing so, seems essential to assure the success of either of these two designs (or any other that would meet the requirements of the CE redesign effort).

Use of Records Significantly Improves Data Quality

- Work on the SIPP, noted in both reports, would be a good starting point for such an effort.
- Of particular note was their insistence that use of records was the “norm,” the usual, expected part of the respondent’s task.
- Similarly, the focus of respondent incentives would be on encouraging respondents to use records, rather than just responding to the survey in general.

Conclusions

- Both proposed redesigns provide significant, detailed advice, guidance and insights to the Panel and BLS.
- Neither, however, provides a “turn-key” design package that could be implemented as proposed without significant testing, a critical examination of costs (and benefits), and (unfortunately, given the BLS charge) some substantial additional research.
- Probably unrealistic at the outset to assume that they would.
- Very significant progress in providing the elements and a concrete roadmap for how a specific, well-conceived and well-tested design can be achieved.
- Both contractors are to be congratulated for their efforts.