
Official Charge to the Committee

**CNSTAT Panel on the
Redesign of the CE
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Mission of the CE

The mission of the Consumer Expenditure Survey program (CE) is to collect, produce, and disseminate information that presents a statistical picture of consumer spending for the Consumer Price Index, government agencies, and private data users.

Mission of the CE

The mission encompasses analyzing CE data to produce socio-economic studies of consumer spending, and providing CE data users with assistance, education, and tools for working with the data.

CE supports the mission of the Bureau of Labor Statistics, and therefore CE data must be of consistently high statistical quality, relevant, timely, and must protect respondent confidentiality.

CNSTAT Tasks

Summary of Work Statement

- The National Research Council, through its Committee on National Statistics, will convene an *Expert Panel* to contribute to the planned redesign of the Consumer Expenditure (CE) Surveys by the U.S. Bureau of Labor Statistics (BLS).
- The Panel will review the output of a *data user needs forum* and a *methods workshop*, both convened by BLS.

CNSTAT Tasks

Summary of Work Statement

- The Panel will conduct a *household survey data producer workshop* to ascertain the experience of leading survey organizations in dealing with the types of challenges faced by the CE surveys.
- The Panel will conduct a *workshop on redesign options for the CE surveys*.
- The redesign options workshop will be based on *papers on design options* the Panel commissions from one or more organizations.

CNSTAT Tasks

Summary of Work Statement

- Based on the workshops and its deliberations, the Panel will produce a *consensus report* at the conclusion of a 24-month study with findings and recommendations for BLS to consider in determining the characteristics of the redesigned CE surveys.

What CE expects from the report

- A. The report should synthesize information gathered through the BLS data user needs forum, BLS methods workshop, CNSTAT household survey data producer workshop, CNSTAT CE redesign options workshop, and independent papers into multiple comprehensive design recommendations.

What CE expects from the report

- A. Design recommendations (ctn)
 - ▶ The design recommendations should include a menu of comprehensive design options with the highest potential, not one specific all-or-nothing design.
 - ▶ The design recommendations should be flexible to allow for variation in program budget, staffing resources and skills, ability of the data collection contractors to implement, legal agreements to be obtained (e.g., access to other data sources), etc.

What CE expects from the report

- B. The report will include recommendations about future research that needs to be done, but that is not the focus. As much as possible, the focus should be on concrete design proposals that could be implemented.
- C. The report should focus on a comprehensive design, and include an approximate timeline for development, pilot testing, and implementation.
 - ▶ This timeline should not exceed 5 years for development and pilot testing, and a new survey in the field within 10 years.

What CE expects from the report

- D. In the recommendation, the Panel should focus special attention on addressing issues with the current CE surveys:
 - ▶ Underreporting of expenditures
 - ▶ Fundamental changes in the social environment for collection of survey data
 - ▶ Fundamental changes in the retail environment (e.g., online spending, automatic payments)
 - ▶ The potential availability of large amounts of expenditure data from a relatively small number of intermediaries such as credit card companies
 - ▶ Declining response rates at the unit, wave and item levels

What CE expects from the report

- E. The Panel should develop a carefully balanced evaluation of the prospective benefits, costs and risks of their proposed design recommendations compared to the current CE surveys.
 - ▶ The evaluation be based on extensive and carefully balanced evaluation of literature and industry knowledge on methodology and practice that is currently available or likely to be available in practical form in the next five years;

What CE expects from the report

- E. Balanced evaluation (ctn)
 - ▶ data collection technologies currently available or likely to be available in practical form with the next five years;
 - ▶ administrative record and external data sources and technologies currently available or likely to be available in practical form with the next five years; and
 - ▶ the evaluation should be reflective of the tradeoff between cost and improvement on measurement error.

Two Roads to CE Redesign

- CE is pursuing two roads to the redesign:
 - ▶ a redesign from scratch, and
 - ▶ changes within the current design
- The focus of the Panel should be on the redesign from scratch. In doing so, BLS would like the Panel to keep the following considerations in mind:

Two Roads to CE Redesign

- The Panel should be aware of the research that CE is undertaking to improve the current design.
 - ▶ Web Diary
 - ▶ Individual Diaries
 - ▶ Streamlining the Interview Survey
 - ▶ Reducing the length of the bounding interview
 - ▶ Double placement of diaries
 - ▶ Reconciliation of expenditures and income/assets

Two Roads to CE Redesign

- In considering a new design options, CE is particularly interested in approaches that focus on proactive approaches to gathering expenditure data
 - ▶ Examples can include information gathered from records, receipts, etc. or by providing respondents the ability to easily record purchases in real time.
 - ▶ While retrieval of data from memory in a standard reactive interview is appropriate for a number of data elements, CE views a proactive data collection methodology for expenditure data as a high priority.

What we know

- Need to stay within budget
- Need to maintain the value of the survey to taxpayers and data users
- Need to support the needs of CPI
- Need to support other data users as much as possible as long as the design meets the needs of the core CE mission
- What makes CE unique is the complete picture of spending, in all categories, at the household level, with household income, assets and demographics.

What we don't know

- The final level of expenditure detail that will be needed to support CPI's needs after redesign
 - ▶ CE has a very detailed set of current technical requirements from CPI.
 - ▶ In cases where CE does not provide enough detail to meet CPI's needs, CPI adopts alternative approaches.
 - Example: Level of detail in the CE for gasoline
 - Example: CE sample size is not sufficient such as in calculating Entry Level Item selection probabilities at the PSU level

What we don't know

- CPI final post design requirements (ctn)
 - ▶ CE is currently looking anew at its own data requirements and in that process will attempt to clearly state where it can and cannot meet CPI's needs in terms of CPI's current detailed technical requirements.
 - A report will be completed by the end of April, in advance of the award of the contract for the redesign option RFP.

What we don't know

- CPI final post design requirements (ctn)
 - ▶ As the redesign process develops it is critical that ongoing dialog be maintained between CE and CPI in terms of how the redesign options would affect/change the CPI's current detailed technical requirements.
 - In particular, CPI will need to make assessments as to the efficacy of the inputs received from CE, along with possible alternative approaches, to meet its technical requirements.
 - BLS views this dialog as an iterative process that must accompany the evaluation of redesign options.

What we don't know

- What importance should we place on possible future CPI information needs that could be provided by a redesigned CE?
 - ▶ Rob Cage's presentation, along with supporting documentation outlines some possible future CPI information needs that could be provided possibly by a redesigned CE.
 - ▶ Example: collection of the name of the outlet where purchases were made.

What we don't know

- These possible future CPI information needs are not requirements of the redesigned CE.
 - ▶ CE views these future information needs as ones to be evaluated in terms of the following:
 - Does the redesign meet the data needs of CE?
 - Does the redesign meet the current requirements of CPI, an assessment of which includes an evaluation by CPI of the efficacy of alternative approaches in the cases where the redesigned CE does not meet its current technical detailed requirements.
 - Within the framework of the redesigned CE, is there sufficient flexibility, especially with respect to time and cognitive burden, to collect additional data from respondents that could meet possible future information needs by CPI?

What we don't know

- Possible administrative data sources that could be used to replace some of the data CE collects, or could be used to model data.
- All of the feasible technological solutions for data collection.
- Data users' reaction to collecting less than the complete picture of spending and using more imputed/modeled data to create that missing data.

What we don't know

- ▶ That is, would they find it acceptable to collect less data, either as part of a multiple matrix design, or because there are some expenses we won't collect, either because they are too hard to collect (like tolls on trips) or because they are such a small percentage of total spending (like reading materials)?
- ▶ Whether an approach to impute/model for a much larger amount of missing data is feasible depends on the reaction of data users and issues related to staffing and implementing a much larger statistical modeling system into production.

What we don't know

- ▶ Or would a split sample and data collection design be feasible – one that is based on a smaller sample for which all expenditures are collected and a larger sample that takes advantage of matrix sampling and greatly reduces the burden of any given interview.

Consensus on the redesign so far

- CE needs to publish a complete picture of spending, but we do not need to collect all of those data directly from respondents.
- To reduce burden and improve data quality, CE is interested in moving away from a retrospective recall based design to one that is more proactive.

Consensus on the redesign so far

- Proactive design (ctn)
 - ▶ The current Interview design calls for collecting almost all categories of spending from all households (the Diary is used to collect some small frequently purchased items, food and clothing). For the most part, this collection is done through a three-month recall.
 - ▶ The proposed design should not be based on a retrospective recall survey, but instead should focus on features that are proactive in collecting information from respondents or other sources.

Consensus on the redesign so far

- Proactive design (ctn)
 - ▶ These design elements would be fundamentally different from those of the current CE surveys, and potentially include innovative features such as the use of mobile devices (e.g., smartphones, PDAs, tablets), financial software, electronic purchase records, receipt scanning, and auxiliary data.
 - ▶ Retrospective recall may be incorporated into the proposed design as a method of “filling in gaps” or collecting information not otherwise provided.

Consensus on the redesign so far

- The constraint of maintaining the current budget needs to be considered, particularly since moving data capture from a respondent recall based approach to one involving greater use of technology and data extraction from receipts, scanners, and administrative sources has the potential to increase collection costs.

Consensus on the redesign so far

- The CE Program produces two main data products: published tables and microdata files.
 - ▶ Currently, data from the CE Interview (for large and regular purchases) and data from the CE Diary (for small and difficult to recall items) are integrated at an aggregate level for publication tables.
 - ▶ They are NOT integrated in the microdata files.

Consensus on the redesign so far

■ Integration of data (ctn)

- ▶ The redesigned CE may capture data from a variety of sources (scanners, receipts, diaries, recall interviews, administrative sources).
- ▶ The redesigned CE must allow for a straightforward integration of the various data sources into one complete picture of spending at the microdata level.

FY 2011 Budget

- The FY 2011 budget provides funding for the CE program that will allow for a research sample to conduct field tests of redesign options.
- If this initiative is not funded, CE will continue to use its existing resources, which includes the ability to conduct field tests on production sample units, to explore redesign options.
- Receipt of the FY 2011 CE funding initiative will place the work of redesign on a faster track.

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