

# Measuring What We Spend: Toward a New Consumer Expenditure Survey



## **RECOMMENDATIONS**

Carol House, Committee on National Statistics,  
Panel on Redesign Options for the Consumer Expenditure Survey  
Presented at FESAC December 14, 2012

# CHAPTER 6: PATHWAY



*The current detail and requirements imposed by the multiple and divergent CE data uses are difficult to satisfy efficiently within a single design, and the panel believes that tradeoffs must be made. Survey designs always involve compromise, and the current CE design tries to meet the data requirements of all users and then compromises by accepting the heavy burden and unsatisfactory data quality that emerges. The cognitive and motivational issues associated with the current Diary and Interview surveys cannot be fixed through a series of minor changes.*

**\* Determine priorities among the data requirements of the many uses of the CE so that tradeoffs can be made in a planned and transparent manner ---recommendation 6-1:**

**\* Implement a major redesign of the CE based on those priorities - recommendation 6-2:**

# Charge to the Panel



*The charge to this panel was to provide a “menu of comprehensive design options with the highest potential, not one specific all-or-nothing design.”*

*Prior to BLS setting priorities for data collected on the CE, the panel’s most effective course of action is to suggest alternative design prototypes, each of which has a higher potential for success when enlisted to achieve a different prioritized set of objectives.*

***Three different prototype designs are proposed.***



**\*The panel's proposed designs need testing. BLS should conduct major feasibility studies to investigate key aspects. These studies will help provide the empirical basis for final decision-making - recommendation 6-3:**

**\*Pay close attention to issue of non-expenditure items synchronized with expenditures - recommendation 6-4:**

# Panel's Fundamentals



The panel considered many approaches to a redesign of the CE, and sorted through those numerous options by focusing on the following fundamentals:

- Improve data quality,
- Be mindful that the resources (both out-of-pocket and staff) available to support this survey are constrained,
- Be mindful that the survey processes have to be workable across the entire population of U.S. households — the more distinct processes that need to be designed for different population groups, the more resources will be required,
- Keep it simple — to the extent possible,
- Provide respondents with relief from the current burden level of the CE,
- Provide respondents with sufficient motivation to participate,
- Support the use of records and receipts,
- Support the current uses of the CE to the extent possible, and provide options in support of the prioritization of those uses in the future,
- Utilize newer data collection methodology and external data sources when supportive of the above fundamentals.

# Commonalities in three designs



- Integrate Design
- Reduce Burden
- Use Incentives to Increase and Focus Motivation
- Support Accurate Use of Records
- Redesign Survey Instruments
- Increase Use of Self-Administration
- Reduce Proxy Reporting
- Utilize Newer Data Collection Technology
- Use Administrative Data Appropriately but with Caution
- Create a Panel Component and Measure Life Event Changes

# Design A--Detailed Expenditures through Self Administration



**Design A** focuses on obtaining expenditure data at a detailed level through a “supported journal,” a diary-type self-administered data collection with tools that reduce record-keeping while encouraging the entry of expenditures when memory is fresh and receipts available. Design A also has a self-administered recall survey to collect larger and recurring expenses.

It collects a picture of household expenses over six months.

Reporting periods vary by expense group.

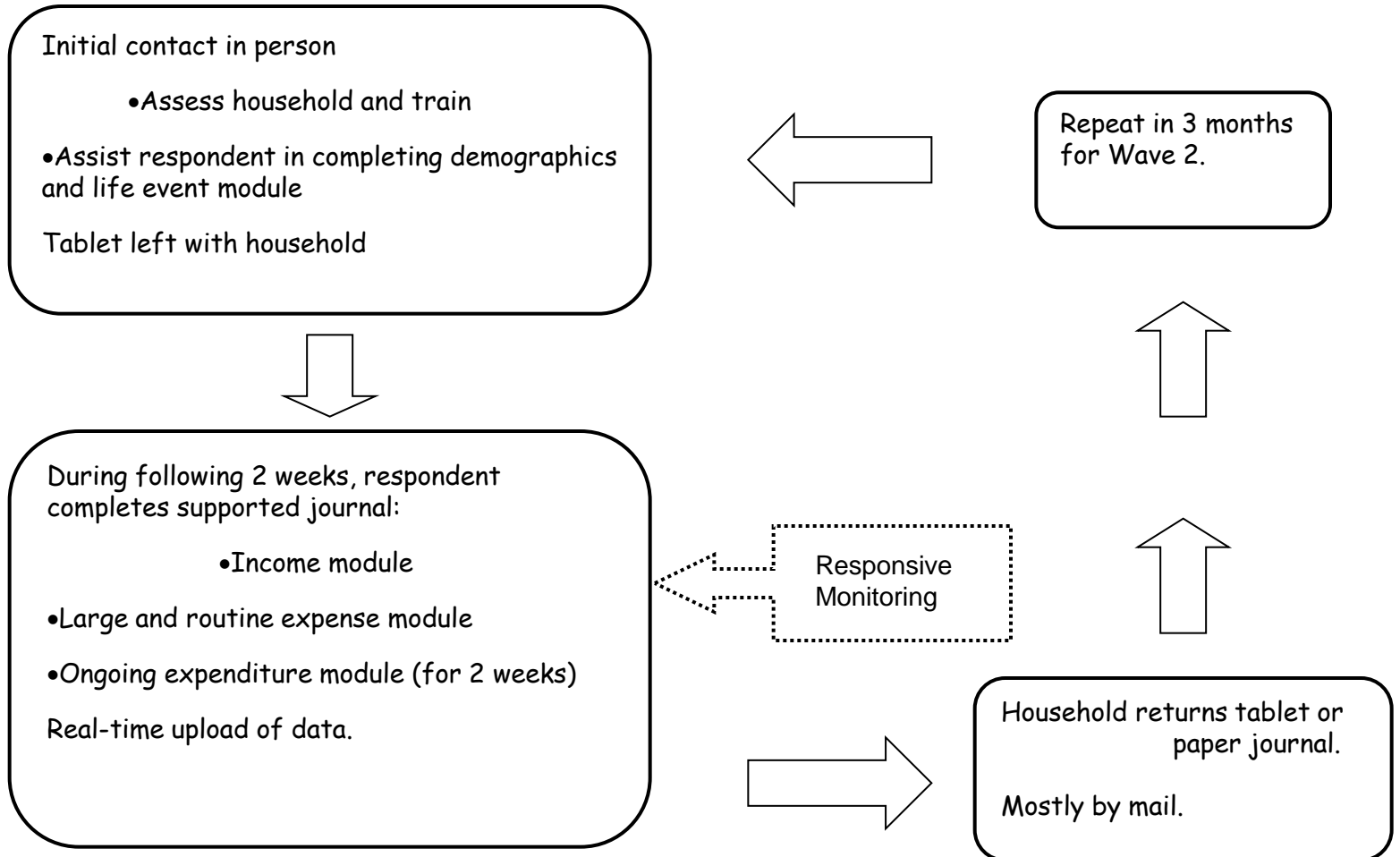
# Design A - Objectives



- Promote accurate reporting of **detailed expenditure data** by allowing sufficient time and space for careful enumeration while using records and receipts
- Reduce the effort it takes to report those expenditures by providing support and technology tools
- Reduce respondent's tendency to estimate, guess, satisfice or underreport.



## Design A - Detailed Expenditures Through Self-administration



# Design A

## Research Topics for Specific Designs



Develop models that would estimate quarterly and annual expenditures and income at the household level from the four weeks of reported detailed data plus the data reported on larger and routine expenditures.

# Design B

## A Comprehensive Picture of Expenditures and Income



***Design B*** uses a recall interview coupled with a short supported journal.

It provides data for 96 expenditure categories (rather than the more detailed expenses provided by Design A) and collects complete expenditures over an 18-month period in three waves.

It builds a dataset particularly useful for economic and policy analysis.

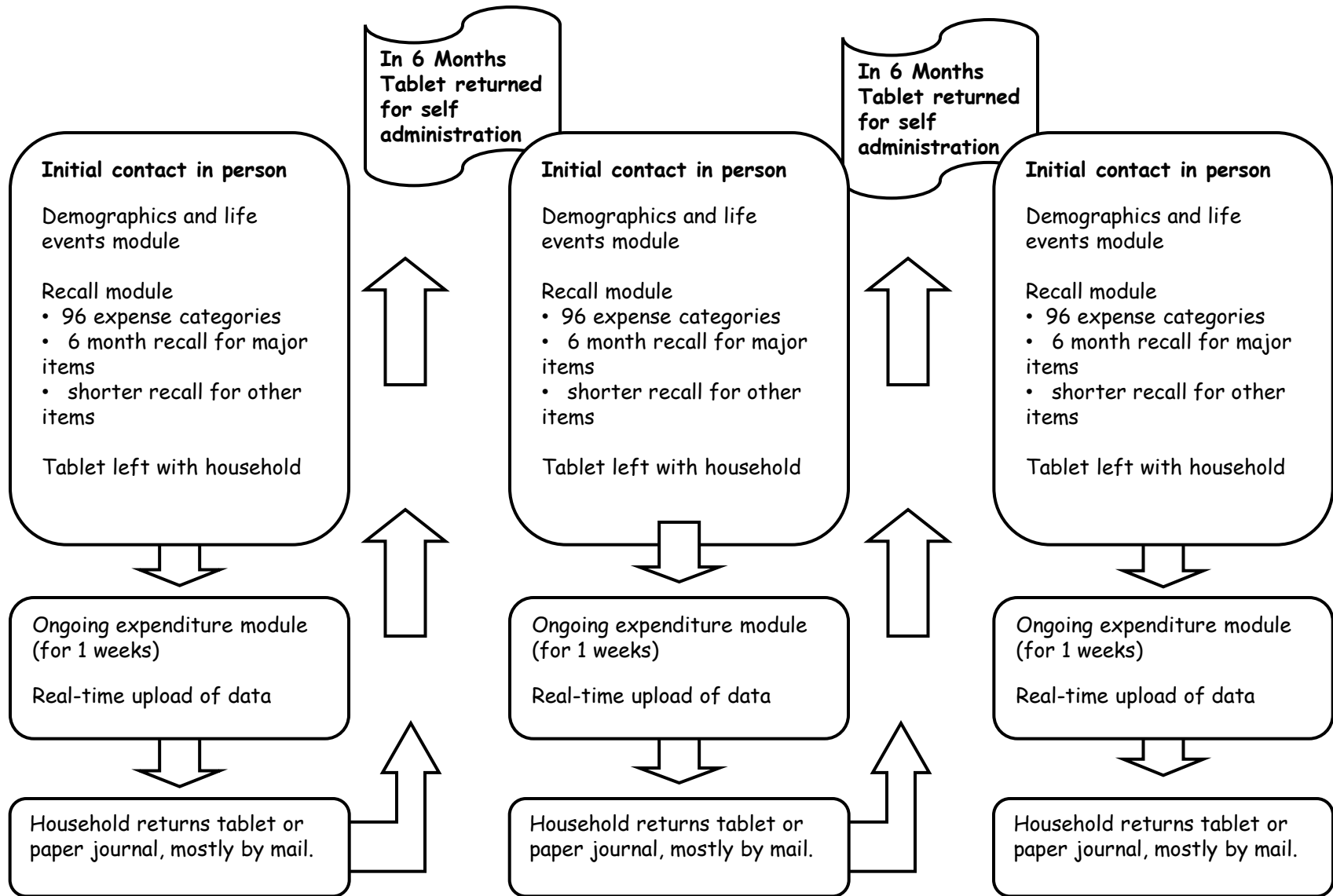
This design also involves a small follow-on survey used to help understand measurement errors in the main survey.

# Design B - Objectives



- Use basic recall mode of reporting - which has provided aggregate expenditures closer to the PCE
- Use a broader level of aggregation than currently used in the CE interview
- Facilitate the respondent to “estimate” expenditures that can not be recalled
- Use self-administered process in waves 2 and 3
- Provide a comprehensive picture of expenditure, income and assets for 18 months
- Use subsample to explore accuracy of collected data

# Design B - A Comprehensive Picture of Expenditures and Income



# Design B

## Research Topics for Specific Designs



- Investigate the assumption that a “bounding” interview is unnecessary to avoid telescoping and other issues.
- Investigate the accuracy and completeness of aggregated expenditures for periods up to six months and for estimates of averages (i.e., average monthly spending gasoline) used in this prototype to construct a full set of microdata for the entire six-month period.
- Develop appropriate models to “disaggregate” aggregated expenses using data from the one-week supported journal.
- Develop methodology for a successful component that will use an intensive interview and process based on prior collation of records and financial software to achieve a budget balance for the year at the household level as described below. Extend existing research done by Fricker, Kopp, and To (2011) to fully evaluate its potential and limitations.

# Design C

## Dividing Tasks among Multiple Integrated Samples



***Design C*** incorporates elements of both Designs A and B. It collects the detail of expense items as in Design A while providing a household profile for six months.

To do both, it uses a more complex sample design and employs modeling, collecting different information from different households.

# Design C - Objectives



- Avoid asking every household to perform exactly the same tasks
- Provide estimates of detailed expenditures as in Design A, relying on correlations between three components to increase precision of these estimates
- Minimize need for recall data, using pro-active self administered data collection
- Provide panel data with a complete picture of a household on a subset of the overall sample



# Design C - Dividing Tasks among Multiple Integrated Samples

## Base Survey

- In-person Interview
- Demographics and other data for stratification

**Detailed Expenditure Component**

**Household Profile Component**

Independent sample selected from base for each month

2 samples selected from base  
 -- for quarters 1 & 2  
 -- for quarters 3 & 4

### Procedures similar to Design A

- Initial contact in person
- Assess household and train
- Tablet left with household

- Ongoing expenditure module (for 1 month)
- Real-time upload of data

Responsive Monitoring

### Initial contact in person - Wave 1

- Assess household and train and set up for table use
- Tablet left with household

### Household records expenditures throughout the quarter.

- Expenditures recorded for modified 96 - level aggregation (some smaller categories not collected)
- More detailed demographics, income and labor force status

### 3 Months Later

#### Wave 1 ends, Wave 2 Begins

- In-person Visit
- Fill information gaps
- Encourage continued reporting
- Tablet left with household

### Household records expenditures throughout the quarter.

- Expenditures recorded for modified 96 - level aggregation (some smaller categories not collected)
- More detailed demographics, income and labor force status

### 3 Months Later - Wave 2 ends

- In-person Visit
- Fill information gaps
- Tablet retrieved

# Design C

## Research Topics for Specific Designs



- Research and develop models for estimation using the base survey and two components of data collection.
- Research and develop models for imputing at the household level “smaller expense items” collected on the *Detailed Expenditure Component* and not on the *Household Profile Component* into the household-level dataset to complete the overall household expense profile.

# Comparison Across Designs



|  | Design A   | Design B                                  | Design C                   |
|--|--|---|----------------------------|
| Provides estimates for 96-items                  | Yes  | Yes                                       | Yes                        |
| Provides details at level currently used by CPI. | Yes  | No, 96-items only                         | Yes. Improved with models. |
| Uses proactive vs recall data collection         | Focus on proactive<br>Recall of larger repetitive items. | Recall                                    | Proactive                  |
| Self Administration with tablet PC               | All  | 2 <sup>nd</sup> & 3 <sup>rd</sup> Contact | All                        |

# Other Recommendations



- 6-5 Use of tablet computer
- 6-6 Develop roadmap document
- 6-7 Use of incentives
- 6-8 Pursue long-term research agenda
- 6-9 Increase research staff and capability
- 6-10 Engage outside experts
- 6-11 Program of target research to inform redesign
- 6-12 Fund a “methods panel”