

# The Good, The Bad, and The Online Diaries

Ian J. Elkin

Branch of Research and Program Development  
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*Any opinions expressed in this presentation are those of the authors and do not constitute policy of the Bureau of Labor Statistics.*



# Outline

- I. Background
- II. Web Diary Feasibility Test
- III. Individual Diaries Feasibility Test
- IV. Proof of Concept Test
- V. Online Diary Improvement Project
- VI. Large Scale Feasibility Test



# I. Background - Consumer Expenditure Diary Overview (i.e. Single and Searching)

- CE currently uses one paper diary to collect household expenditures for a week
- Interviewers “place” the diary in-person and conduct one more visit
- The Diary gathers more detailed expenditures than the Consumer Expenditure Interview Survey
- Single proxy reporter for all HH expenditures
- The Diary is divided into four sections:
  - ▶ Food Away From Home
  - ▶ Food for Home Consumption
  - ▶ Clothing, Shoes, Jewelry and Accessories
  - ▶ All Other Products, Services and Expenses



## II. Web Diary Feasibility Test (i.e. The Meet Cute)

### Overview

- Mode: Desktop Diary
- New materials
  - ▶ Interviewer Talking Points
  - ▶ User Guide
- Eligible cases
  - ▶ English only
  - ▶ No Multi-CU HHs or Replacement HHs
- Single proxy reporter for all HH expenditures
- Assignment Protocol
  - ▶ If a HH screened in as eligible, HH was assigned a single diary for the entire HH, similar to official assignment protocols

### Findings

- Higher median expenditures for the following sections:
  - ▶ Clothing, Shoes, Jewelry, and Accessories
  - ▶ Food and Drinks for Home Consumption
- Lower item nonresponse, as defined for a diary instrument
- Week-to-week drop-off potentially validate shift to one-week collection period

# II. Web Diary Feasibility Test


CONSUMER EXPENDITURE  
DIARY SURVEY


About the Survey
Help
User Guide

Submit  
Logout

**Please report expenses for these people in your household:**  
**John Doe**

Food and Drink Away from Home
Food and Drink for Home Consumption
Clothing, Shoes, Jewelry, and Acc.
All Other Products/Services

Meal Type	Description	Where Purchased	Total Cost with tax and tip	Alcohol Included? (Check all that apply) Wine Beer Other	Total Alcohol Cost	Date Purchased	Clear
Breakfast	coffee	Employer or School Ce	\$1.00	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		10-22-2012	X
Breakfast	fruit cup	Employer or School Ce	\$2.50	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		10-24-2012	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X
Select One		Select One		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Select One	X

Add Rows
Save

Burden Statement
Accessibility
Privacy
Security



# III. Individual Diaries Feasibility Test (i.e. The Honeymoon Period)

## Overview

- Modes: Desktop and Mobile
- New materials
  - ▶ User Guide
- Eligible Cases
  - ▶ English only
  - ▶ No Multi-CU HHs or Replacement HHs
  - ▶ Home internet access via PC, tablet, Smartphone
- Person-level reporting, main R recorded expenditures for ineligible Rs and for any HH members not participating
- Assignment Protocol
  - ▶ If a HH screened in as eligible, HH members were offered modes sequentially
  - ▶ Mobile first &, if they did not possess a Smartphone, then
  - ▶ Desktop mode
  - ▶ Absent eligible members were assigned mode by main R

# III. Individual Diaries Feasibility Test (i.e. The Honeymoon Period)

## Findings

- No improvement in household cooperation rates
- Determining the extent of contemporaneous reporting of expenses was hampered by data limitations
- Difficulty distinguishing single proxy respondents versus multi-member HHs
- Fewer entries and lower reported expenditure totals
- Positive feedback regarding the ease of recording expenses and the security of the data



# III. Individual Diaries Feasibility Test

AT&T 11:29 AM 36%

Enter Date  
respond.census.gov/ce/ Search

Logout CE Diary Info

March 14, 2013

Enter Description

\$0.00

Select Category

Cancel Save

United States Census Bureau CONSUMER EXPENDITURE DIARY SURVEY

About the Survey Help User Guide Change Password

Submit Logout

Food and Drink Away from Home Food and Drink for Home Consumption Clothing, Shoes, Jewelry, and Acc. All Other Products/Services

What did you buy or pay for?	Is this item?	Total Cost without tax	Purchased for someone outside your household	Date Purchased	Recorded for another household member	Clear
wheat bread	Fresh	\$3.19	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
eggs	Fresh	\$2.99	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
skim milk	Fresh	\$2.25	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
chicken wings	Frozen	\$6.60	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
orange juice	Bottled/Canned	\$2.99	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
canola oil	Bottled/Canned	\$3.29	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
baby food (5 jars)	Bottled/Canned	\$4.95	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
ketchup	Bottled/Canned	\$2.20	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
apples	Fresh	\$2.65	<input type="checkbox"/>	07-15-2014	<input type="checkbox"/>	X
	Select One		<input type="checkbox"/>	Select One	<input type="checkbox"/>	X

Add Rows Save

Burden Statement Accessibility Privacy Security





# IV. Proof of Concept Test (i.e. Honey You're Great, but...)

## Overview

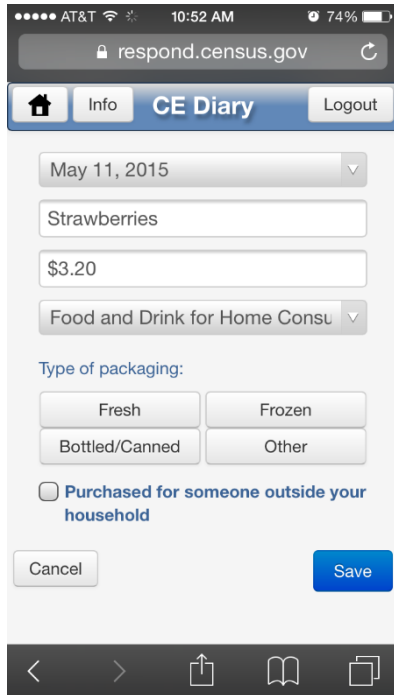
- Tested full redesign
  - Modes: Desktop, Mobile, & Paper
  - Incentivized
  - Person-level reporting, main R recorded expenditures for ineligible Rs, HH level expenses, and for any HH members not participating
  - Interviewers had access to a summary report of web diaries for their cases
  - Interviewers were told to call the main R within 2 days of placement, if a R hadn't logged in or if R hadn't made entries
- Assignment Protocol
    - ▶ Member-level internet access and level of use were determined
    - ▶ Members with internet access were offered an online diary or a paper diary
    - ▶ Members without were offered the paper diary
    - ▶ Absent eligible members were assigned mode by main R

# IV. Proof of Concept Test (i.e. Honey You're Great, but...)

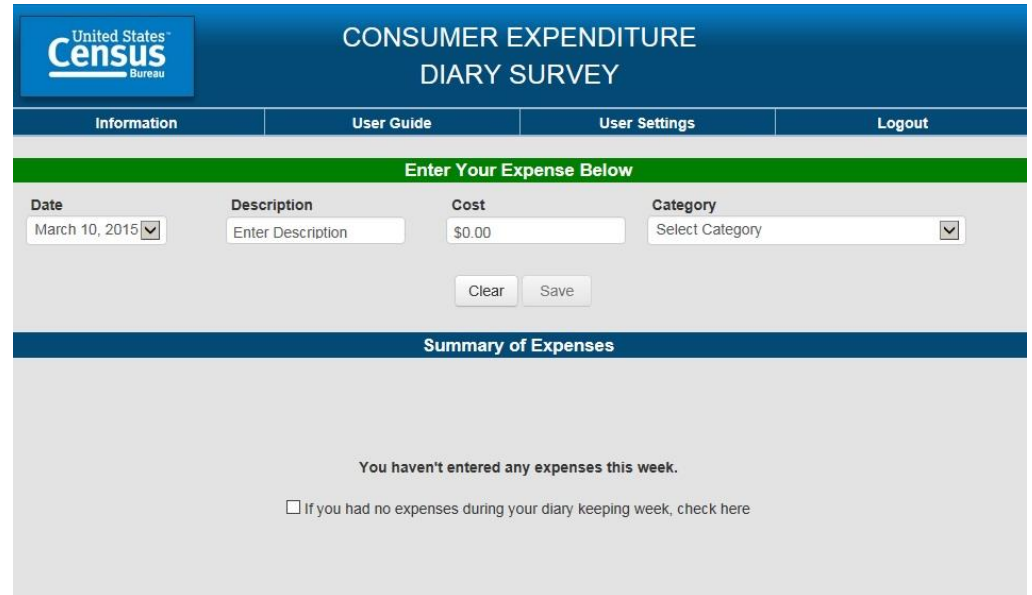
## Findings

- Participation within HHs was much broader for the POC than in prior tests
- Respondents generally higher educated and under the age of 39
- Lower take up rate for the online diary when offered a paper option
- Diary expenditures were not significantly different than equivalent production amounts
- However, HHs reported lower median expenditure totals and
- Greater numbers of small-value expenditures

# IV. Proof of Concept Test



Mobile app interface for the Consumer Expenditure Diary Survey. The screen shows a date selector set to May 11, 2015, a description field containing "Strawberries", a cost field with "\$3.20", and a category dropdown set to "Food and Drink for Home Consu". Below these fields are buttons for "Type of packaging" (Fresh, Frozen, Bottled/Canned, Other) and a checkbox for "Purchased for someone outside your household". At the bottom are "Cancel" and "Save" buttons.



Web interface for the Consumer Expenditure Diary Survey. The header includes the United States Census Bureau logo and the title "CONSUMER EXPENDITURE DIARY SURVEY". Navigation tabs include Information, User Guide, User Settings, and Logout. A green bar prompts "Enter Your Expense Below". The form has fields for Date (March 10, 2015), Description (Enter Description), Cost (\$0.00), and Category (Select Category). Below the form are "Clear" and "Save" buttons. A blue bar at the bottom is titled "Summary of Expenses" and contains the text "You haven't entered any expenses this week." and a checkbox "If you had no expenses during your diary keeping week, check here".

# V. Online Diary Improvement Project (i.e. The Self Reflection Stage)

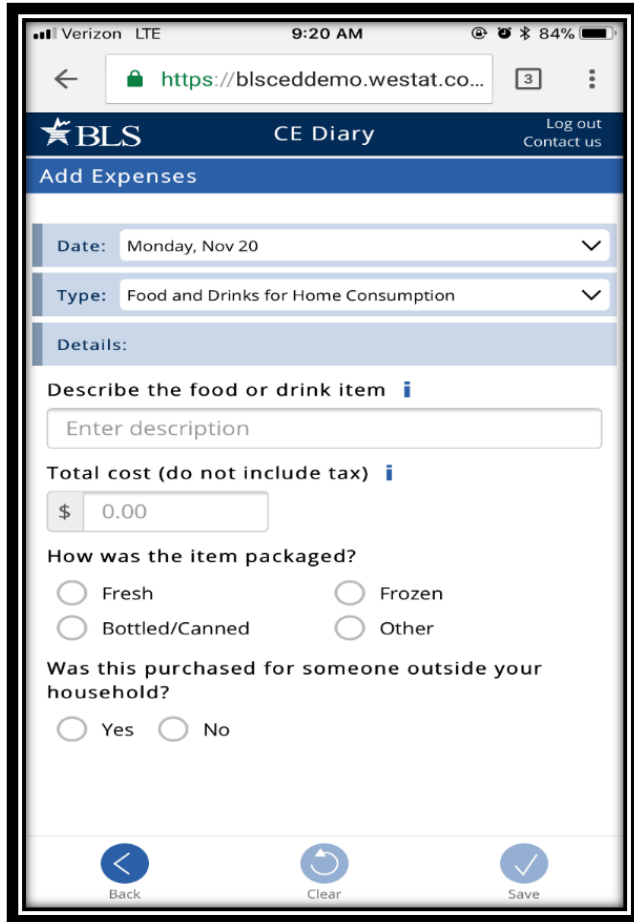
## Overview

- Two instruments optimized to the R's device (mobile or desktop/laptop) and accessed through a single portal
- Incentivized
- Person-level diary design
- Developed based on previous CE online diaries
- Robust paradata output
- Modular design that allows for technological enhancements

## Findings

- Mobile devices were frequently used, but not as expected
  - ▶ Most respondents used at home
- Expenses entered via mobile device were more timely
- Password the biggest barrier to access & mobility
- Low incidence of data quality issues, but still problematic

# V. Online Diary Improvement Project



Verizon LTE 9:20 AM 84%

https://blsceddemo.westat.co...

**BLS** CE Diary Log out Contact us

Add Expenses

Date: Monday, Nov 20

Type: Food and Drinks for Home Consumption

Details:

Describe the food or drink item *i*

Enter description

Total cost (do not include tax) *i*

\$ 0.00

How was the item packaged?

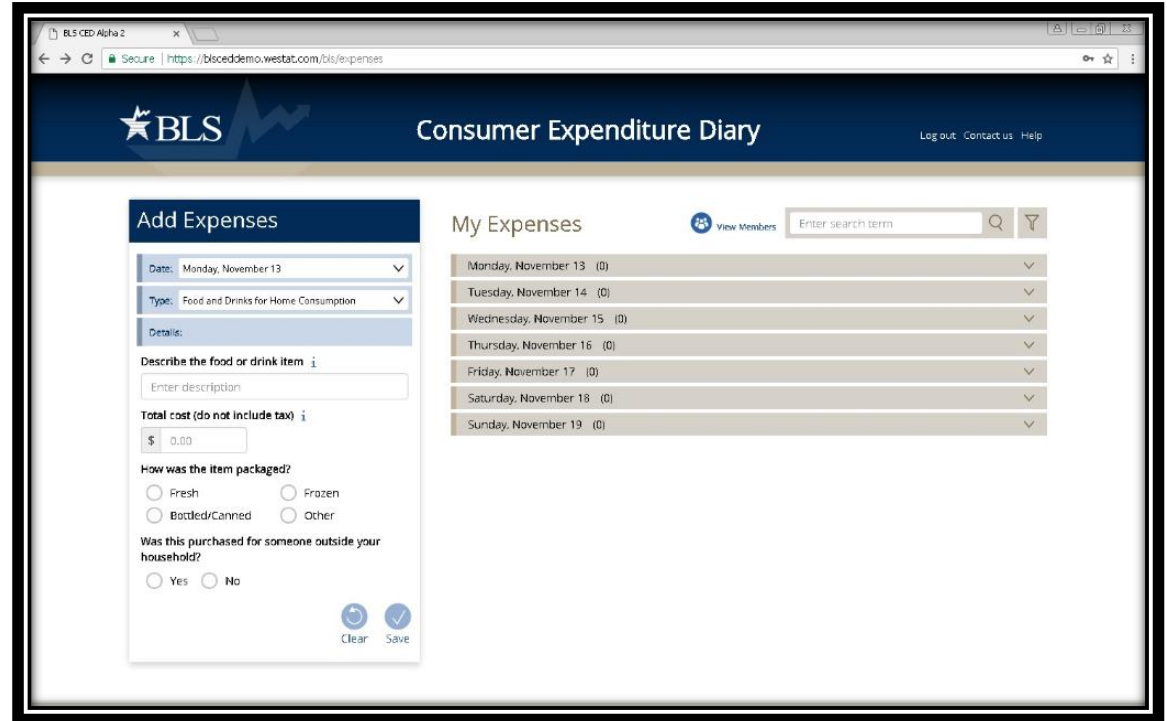
Fresh  Frozen

Bottled/Canned  Other

Was this purchased for someone outside your household?

Yes  No

Back Clear Save



BLS Alpha 2

Secure https://blsceddemo.westat.com/bls/expenses

**BLS** Consumer Expenditure Diary Log out Contact us Help

Add Expenses

Date: Monday, November 13

Type: Food and Drinks for Home Consumption

Details:

Describe the food or drink item *i*

Enter description

Total cost (do not include tax) *i*

\$ 0.00

How was the item packaged?

Fresh  Frozen

Bottled/Canned  Other

Was this purchased for someone outside your household?

Yes  No

Clear Save

My Expenses *View Members* Enter search term

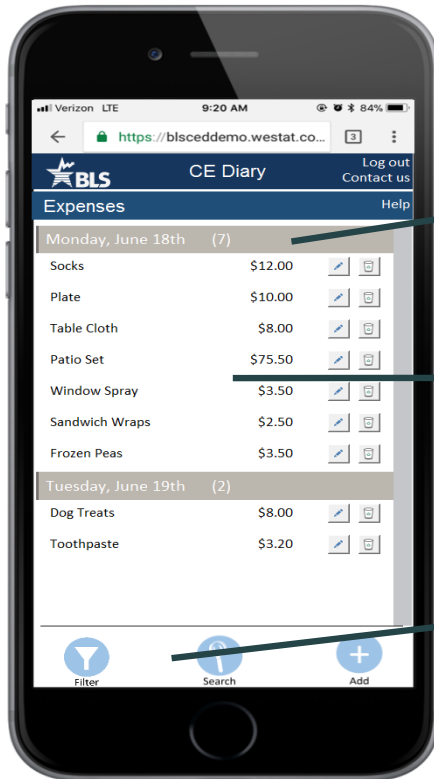
- Monday, November 13 (0)
- Tuesday, November 14 (0)
- Wednesday, November 15 (0)
- Thursday, November 16 (0)
- Friday, November 17 (0)
- Saturday, November 18 (0)
- Sunday, November 19 (0)



## VI. Large Scale Feasibility Test (i.e. Does a Large Feasibility Test Mean Forever?)

- Large-scale implementation of Online Diary Improvement Project diary design
- Return to HH-level diary in lieu of personal diaries
- Restores two one-week diary design
- Introduction of outlet question for recording business where item was purchased/consumed at
- Elimination of conditional incentives with token incentive remaining

# VI. Large Scale Feasibility Test

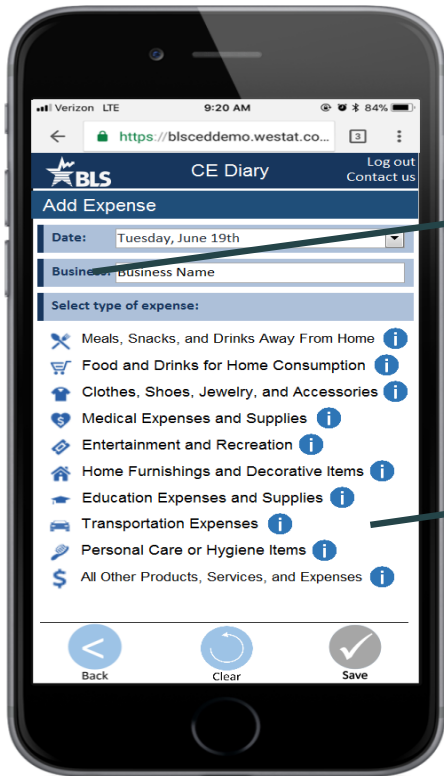


**Date & Number of Expenditures**

**List of Expenditures, Price Paid, & Edit and Delete Buttons**

**Bar with Filter, Search, & Add Buttons**

# VI. Large Scale Feasibility Test



**Outlet  
Question**

**Expanded  
“Other”  
Categories**






# VI. Large Scale Feasibility Test

The image shows a smartphone screen displaying the 'Add Expense' form in the CE Diary app. The form includes the following fields and options:

- Date:** Tuesday, June 19th
- Business:** Business Name
- Type:** Food and Drinks for Home Consumption
- Details:**
  - Describe the food or drink item** (with an information icon)
  - Total cost (do not include tax)** (with an information icon) \$
  - How was the item packaged?**
    - Fresh
    - Frozen
    - Bottled/Canned
    - Other
  - Was this purchased for someone outside your household?**
    - Yes
    - No

At the bottom of the screen are three navigation buttons: Back, Clear, and Save.

 Food and Drinks for Home Consumption ×

Briefly describe the individual food or drink item purchased such as eggs, orange juice, or ground beef. Identical items such as "2 gallons of milk" can be combined with the total cost entered.

# VI. Large Scale Feasibility Test

Verizon LTE 9:20 AM 84%

https://blsceddemo.westat.co...

**BLS** CE Diary Log out Contact us

**Add Expense**

Date: Tuesday, June 19th

Business: Business Name

Type: Food and Drinks for Home Consumption

Details:

Describe the food or drink item

Total cost (do not include tax)

How was the item packaged?

Was this purchased for someone outside your household?

Back Clear Save

Receipt examples

### Food and Drinks for Home Consumption

**Purchase Date:** 10/31/2015

**Description:** 2 Jars of Peanuts

**How was the item packaged?:** Bottled/Canned

**Item Amount:** \$6.36

Item	Quantity	Price
CLEANING SUPPLIES	1	\$1.79
GRAND	1	\$6.36
HEALTH BEAUTY CARE ITEMS	1	\$3.02
HOME	1	\$6.99
TOYS-SPORTING GOODS	1	\$7.98
MISC	1	\$9.99



## VI. Large Scale Feasibility Test

- Desktop version will render similar to the mobile version, but allow for more screen real estate
- Screenshots forthcoming



# The Good, The Bad, and The Online Diaries

**“You see, in this world there’s two kinds of surveys, my friend: Those that are online and those that aren’t. This one’s online” – Blondie**



# Contact Information

**Ian J. Elkin**

Senior Economist

Branch of Research and Program Development

The Consumer Expenditure Survey

[Elkin.Ian@bls.gov](mailto:Elkin.Ian@bls.gov)



# Double Secret Slide – Wonder Twins Powers Activate!

