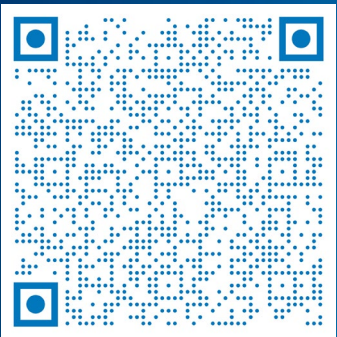


Developing More Effective Interview Materials for a World with Increasing Telephone Surveys

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October 24, 2024



This presentation provides a summary of research results. The information is being released for statistical purposes, to inform interested parties, and to encourage discussion of work in progress. The presentation does not represent an existing, or a forthcoming new, official BLS statistical data product or production series.

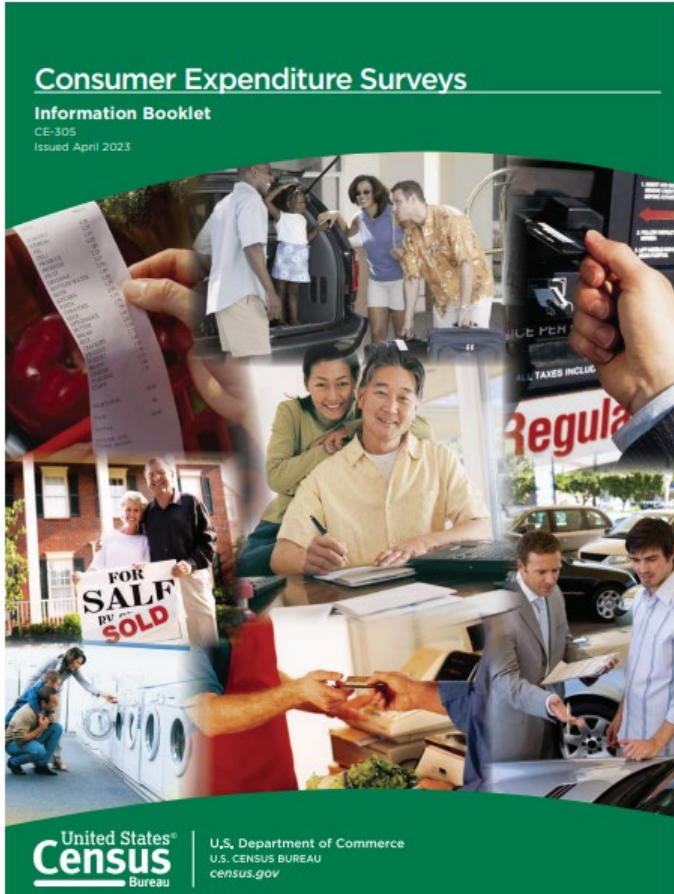


Background

- The Consumer Expenditure Surveys are nationwide household surveys sponsored by the U.S. Bureau of Labor Statistics
- The Census Bureau collects the data for BLS in two surveys:
 - ▶ Interview Survey
 - ▶ Diary Survey



Background



- The information booklet (“Infobook”) is a paper booklet designed to assist in the CE surveys
- Acts similar to showcards, with examples of expenditure items for each question
- There is an electronic PDF available as well

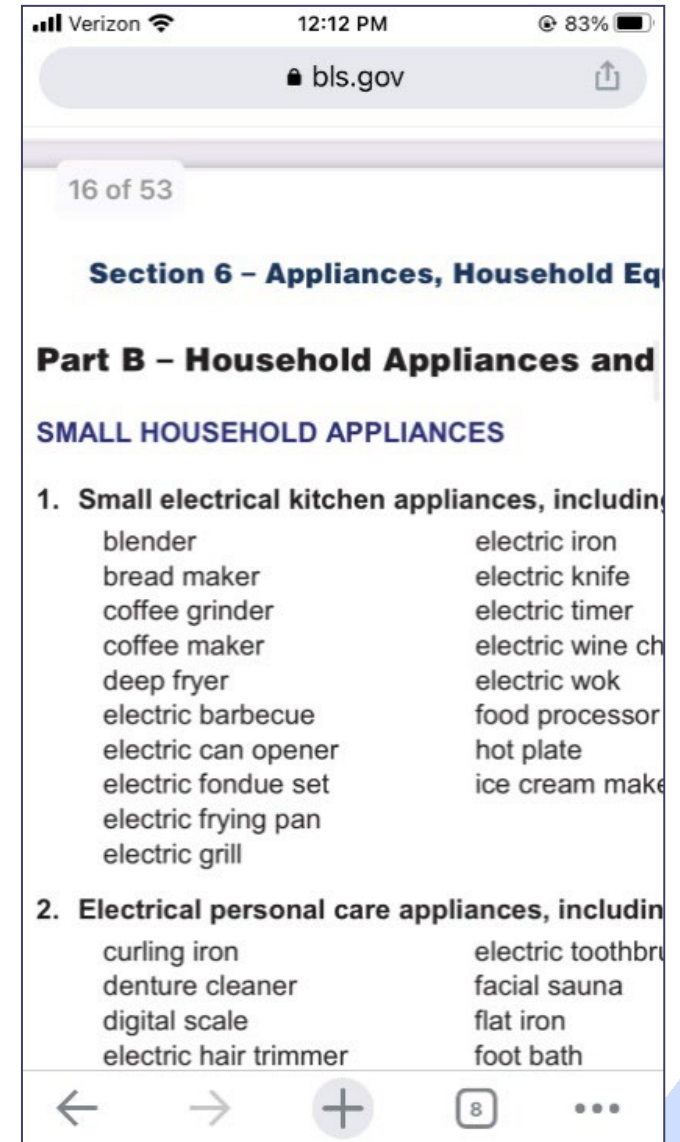
Background

- CE Interview Surveys have been increasingly conducted over the phone
- 80% of our interviewers reported either “never” or “seldom” asking respondents to refer to the electronic PDF version over 12 months (2021 CE Field Staff Survey)



Current Online Infobook

- CE Interview Survey Infobook is not optimized for mobile use – currently in PDF format (at right)
- A visual re-design of the Interview Survey Infobook was conducted to improve overall usability and look in two phases
- No content was changed – this was outside of the team’s purview



Phase 1



Phase 1: Methods

- 25 research participants
- Participants were given access to a test version of the Infobook while responding to an abridged Interview Survey (*in-person*)
- Each Infobook version was a different combination of visual redesign features
- Participants used their own smartphones to access the test version

Summary of demographics (n=25)

Variable	Mean or Count
Age	Mean = 44 years (SD = 11.9; Min = 24; Max = 64)
Smartphone usage frequency	Always = 18 out of 25 (72%) Very often = 7 out of 25 (28%) Sometimes = 0 out of 25 (0%) Rarely = 0 out of 25 (0%)
Internet browsing on smartphone frequency	Always = 13 out of 25 (52%) Very often = 9 out of 25 (36%) Sometimes = 3 out of 25 (12%) Rarely = 0 out of 25 (0%)

Visual Redesign Areas

■ *Number of examples displayed: Full Example List, Limited Example List*

3. Electrical floor cleaning equipment		
floor polisher/buffer	hand vacuum	
rug shampooer	vacuum cleaner	
4. Other household appliances		
air purifier	burglar alarm	carbon monoxide detector
home security device	smoke detector	trash compactor
water filters	water leak alarm	

VS.

3. Electrical floor cleaning equipment		
floor polisher/buffer	hand vacuum	
rug shampooer	vacuum cleaner	
4. Other household appliances		
air purifier	burglar alarm	carbon monoxide detector
+ VIEW MORE EXAMPLES		



Results: Number of Examples (n=25)

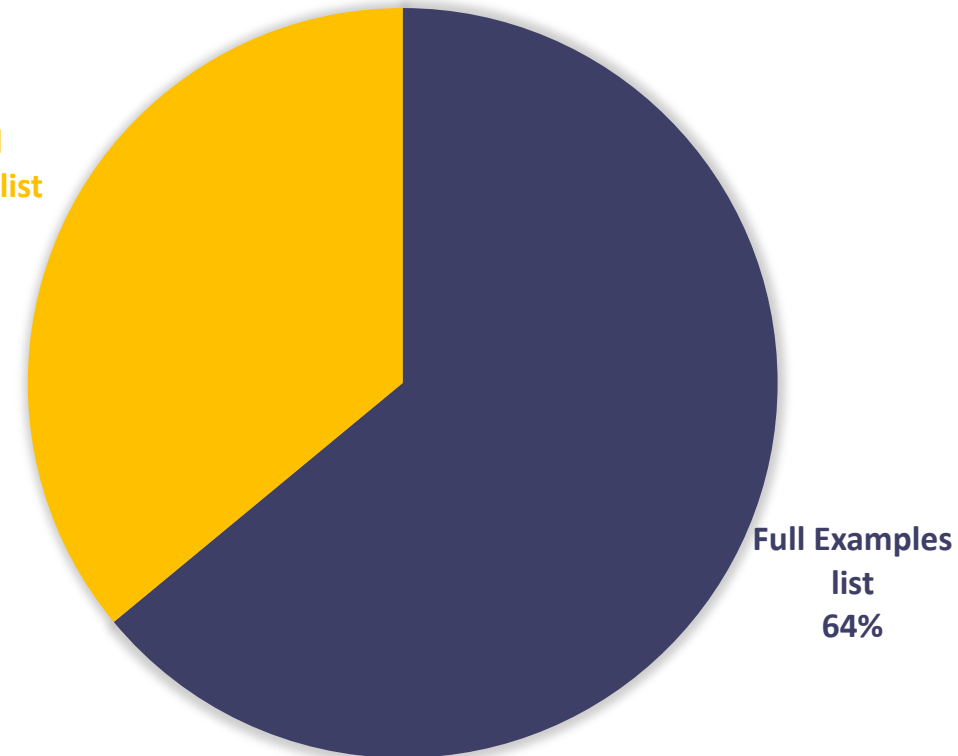
Majority of participants (16 out of 25) preferred the full-length list

- “easy enough to skim”
- “I can just scroll down as someone talks”

For the longest lists, multiple participants suggested aggregating items into higher level clusters

- Baseball bat
 - Baseball glove
- } Baseball

Limited Examples list
36%



■ **Recommendation: full-length examples list**

Visual Redesign Areas

■ *Order of examples displayed: Alphabetical, Random*

3. Electrical floor cleaning equipment		
floor polisher/buffer	hand vacuum	
rug shampooer	vacuum cleaner	
4. Other household appliances		
air purifier	burglar alarm	carbon monoxide detector
home security device	smoke detector	trash compactor
water filters	water leak alarm	
— VIEW FEWER EXAMPLES		

VS.

3. Electrical floor cleaning equipment		
floor polisher/buffer		hand vacuum
rug shampooer	vacuum cleaner	
4. Other household appliances		
trash compactor	water filters	smoke detector
+ VIEW MORE EXAMPLES		



Results: Order of Examples (n=5)

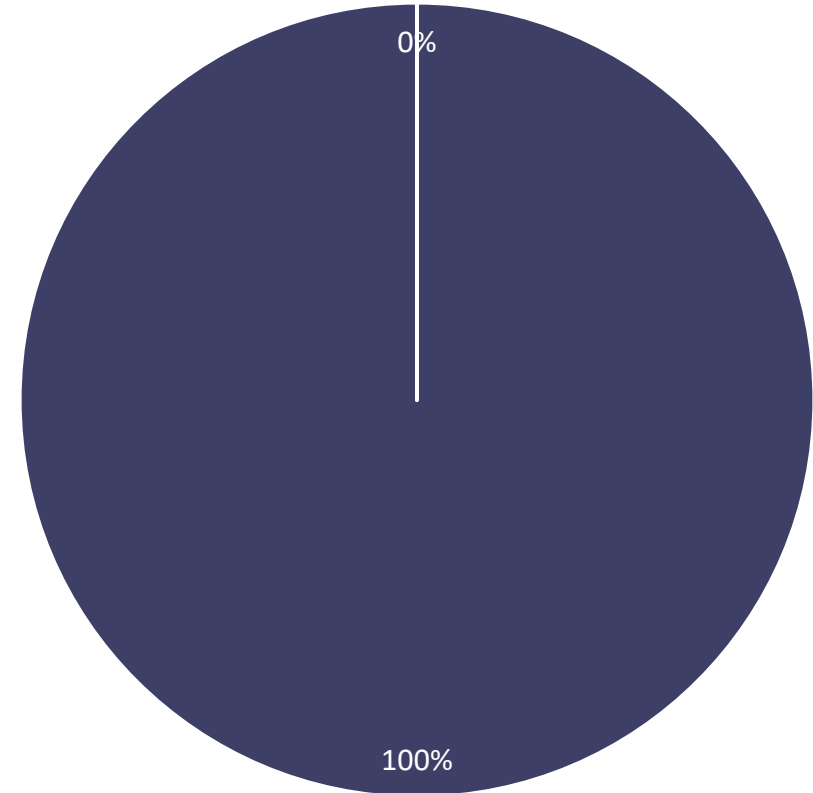
All participants preferred alphabetical order

- Participants were able to search for items easier in alphabetical list

Random order:

- Several participants suggested listing more common items first

Random assignment design was discontinued early in the study



■ Alphabetical ■ Random Order


Visual Redesign Areas

■ Structure of web pages: Paged, Infinite Scroll

cooperative

2. Property taxes
3. Property insurance
4. Management
5. Repairs or maintenance, including lawn care or snow removal
6. Improvements
7. Recreational, including swimming, golf, or tennis, facilities
8. Security, including guards or alarm systems
9. Utilities, such as gas, electricity, water, heat
10. Trash collection
11. Other (specify)

◀ Section 2 Section 6 ▶

Section List 

VS.

SECTION 3 – OWNED LIVING QUARTERS AND OTHER OWNED REAL ESTATE


or tennis, facilities

8. Security, including guards or alarm systems
9. Utilities, such as gas, electricity, water, heat
10. Trash collection
11. Other (specify)

SECTION 6 – HOUSEHOLD APPLIANCES AND OTHER SELECTED ITEMS

SMALL HOUSEHOLD APPLIANCES

1. Small electrical kitchen appliances
 - blender
 - bread maker
 - coffee grinder

Section List 



Results: Webpage Structure (n=25)

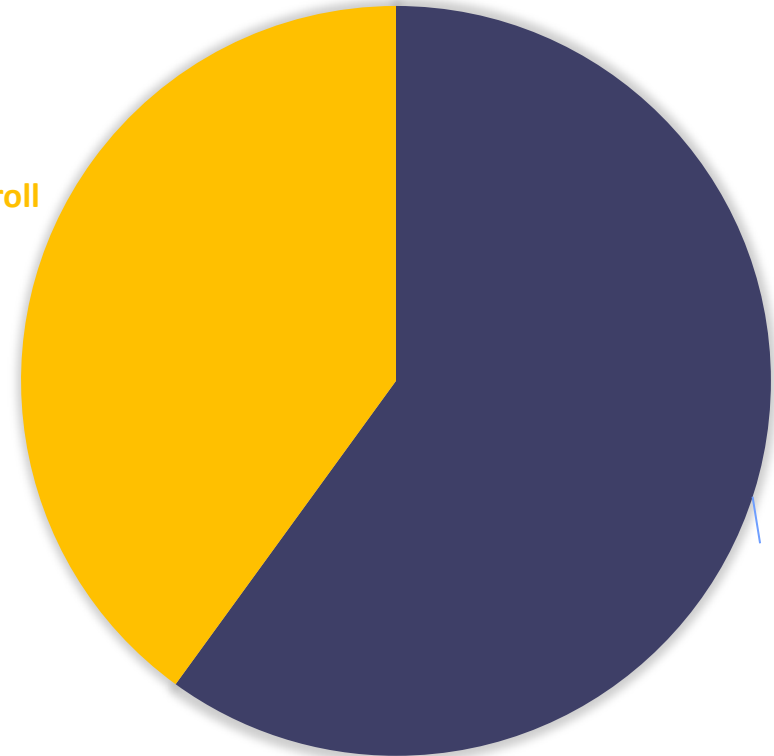
Majority (15 out of 25) preferred the paged version

- Familiar structure
- Liked the clear end to each section

Infinite scroll version

- Familiar structure
- Less effort to move around between pages
- Easy to lose one's place
- Allowed participants to move ahead of the interviewer in the survey

Infinite Scroll Version
40%



Paged Version
60%

■ *Recommendation: paged version*

Visual Redesign Areas

■ *Navigation: Static Homepage Menu, Navigation Bar*

Consumer Expenditure Interview Survey

Table of Contents

- 2 Rented Living Quarters
- 3 Owned Real Estate
- 6 Appliances
- 13 Medical and Health Expenses
- 17 Trips and Vacations
- 18 Clothing and Clothing Services

PRIVACY ACT STATEMENT

The U.S. Census Bureau is conducting the Consumer Expenditure Quarterly Interview Survey for the Bureau of Labor Statistics of

VS.

SECTION 2 – RENTED LIVING QUARTERS

Included in the Housing Unit

1. Cooking stove, range, or oven
2. Refrigerator or home freezer
3. Built-in dishwasher
4. Portable dishwasher
5. Clothes washer
6. Clothes dryer

Included with the Rental Payment

1. Electricity
2. Gas
3. Piped-in water
4. Heating
5. Trash/garbage collection

2PNFA

Section List



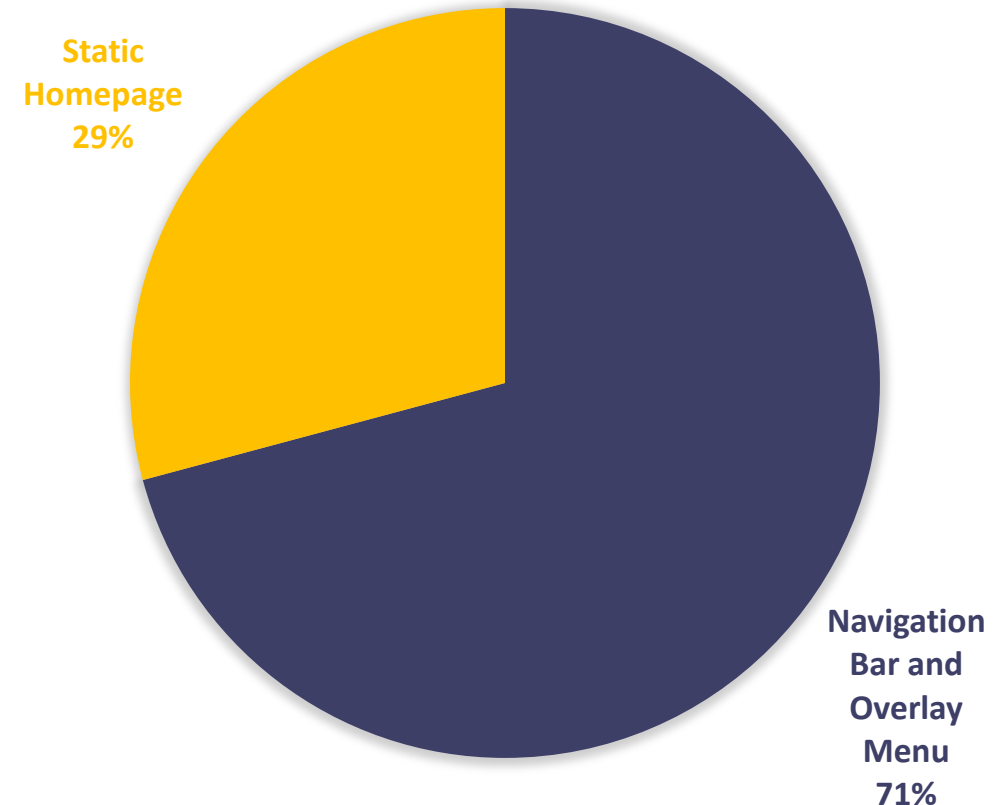
Results: Navigation (n=24)

- The majority of participants (17 out of 24) preferred the navigation bar and overlay menu
- Participants found the navigation bar less burdensome when moving between sections

HOWEVER:

- Many participants did not use the navigation bar due to not recognizing its function on the screen
- For some participants, their browser blocked visibility of navigation bar

Recommendation: static homepage menu, unless a navigation bar with a revised design and better navigation features can be created



Phase 2



Phase 2: Methods

- 20 participants
- Mix of in-person and remote interviews
- Participants accessed the Infobook using their own device
 - ▶ In remote interviews, used same device for the interview video call
- Aimed for a range of smartphone usage frequency, but:
 - ▶ All 20 reported “very often” or “always” for smartphone usage and for using a smartphone for browsing the internet

Questions for Phase 2



How do participants react to the proposed version (which uses optimal elements from previous phase)?

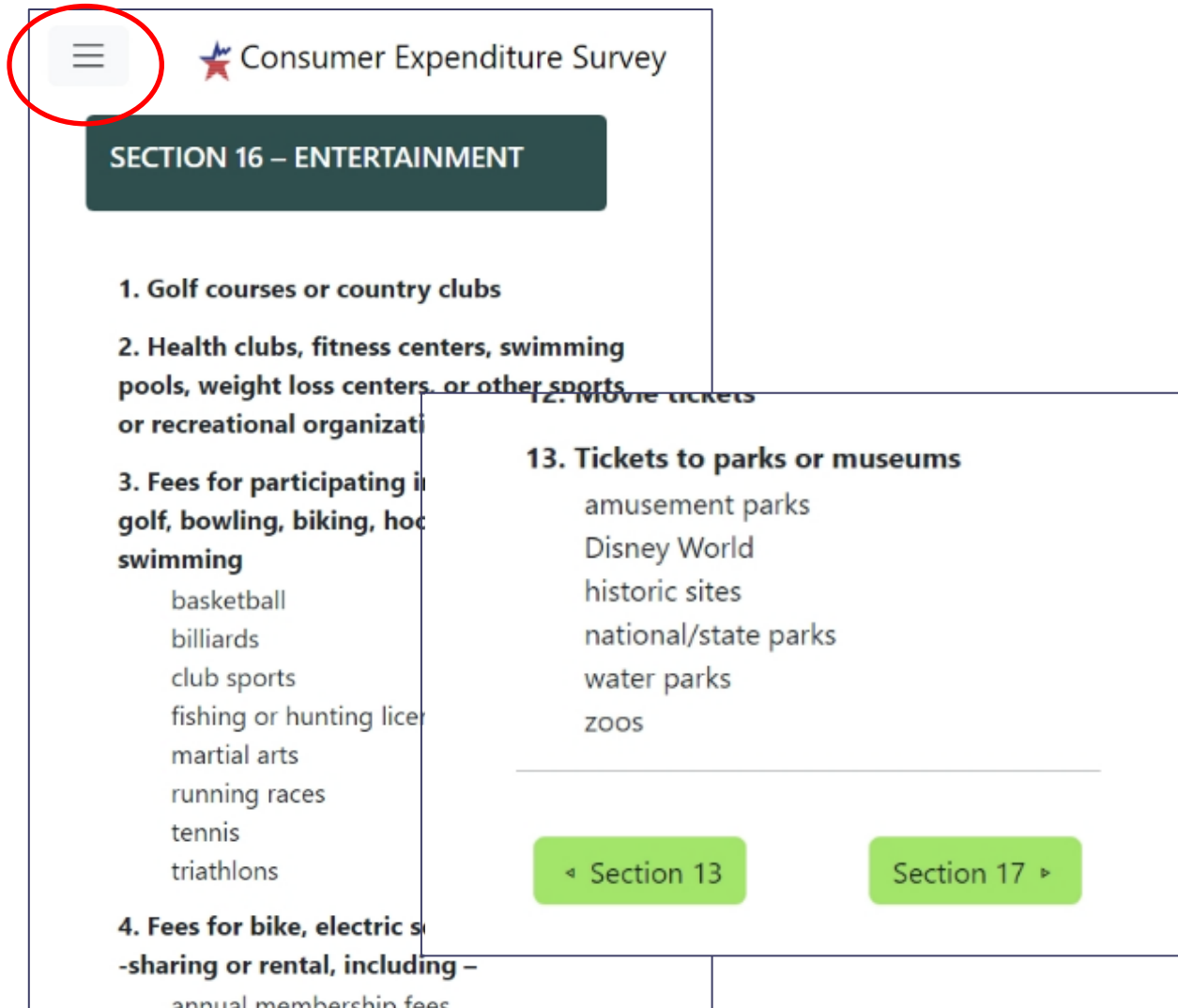


Are participants able to easily navigate the Information Booklet using the redesigned navigation menu?



Which question reading style most effectively encourages participants to engage with the Information Booklet?

Current Study Infobook Design



☰ Consumer Expenditure Survey

SECTION 16 – ENTERTAINMENT

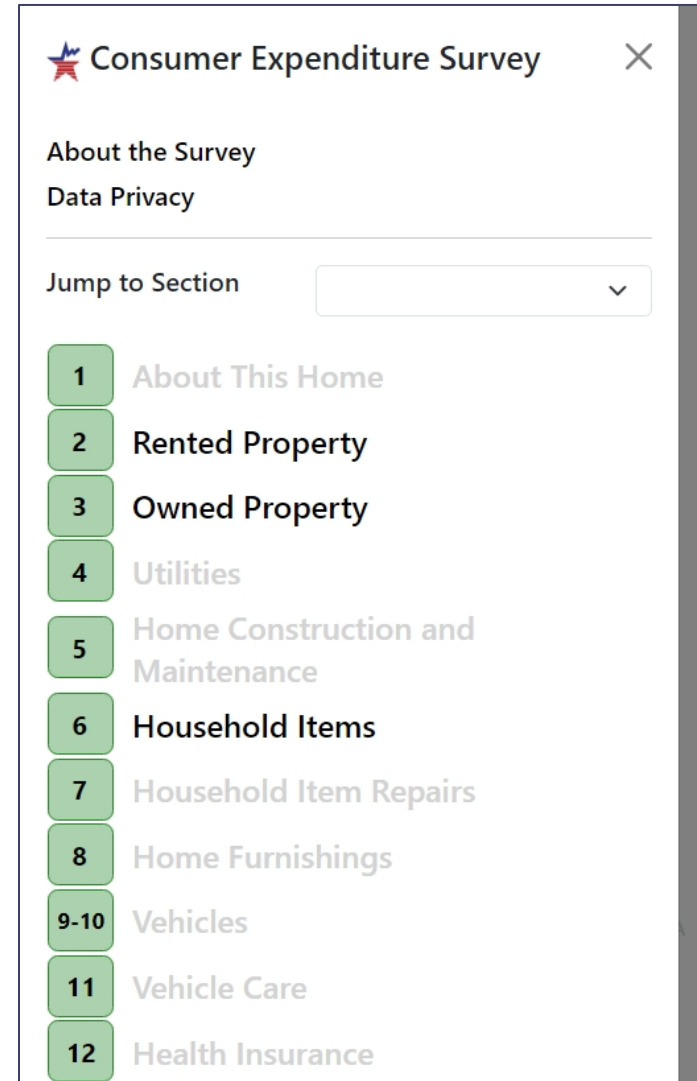
1. Golf courses or country clubs
2. Health clubs, fitness centers, swimming pools, weight loss centers, or other sports or recreational organizations
3. Fees for participating in golf, bowling, biking, horseback riding, swimming, basketball, billiards, club sports, fishing or hunting licenses, martial arts, running races, tennis, triathlons
4. Fees for bike, electric scooter, or car-sharing or rental, including annual membership fees

12. Movie tickets

13. Tickets to parks or museums

- amusement parks
- Disney World
- historic sites
- national/state parks
- water parks
- zoos

◀ Section 13 Section 17 ▶



★ Consumer Expenditure Survey ✕

About the Survey
Data Privacy

Jump to Section

- 1 About This Home
- 2 Rented Property
- 3 Owned Property
- 4 Utilities
- 5 Home Construction and Maintenance
- 6 Household Items
- 7 Household Item Repairs
- 8 Home Furnishings
- 9-10 Vehicles
- 11 Vehicle Care
- 12 Health Insurance



Question Reading Styles

Infobook
Reference
Only

Take a look at
Section 6.
Did you have any of
those expenses?

Scripted
Question
Only

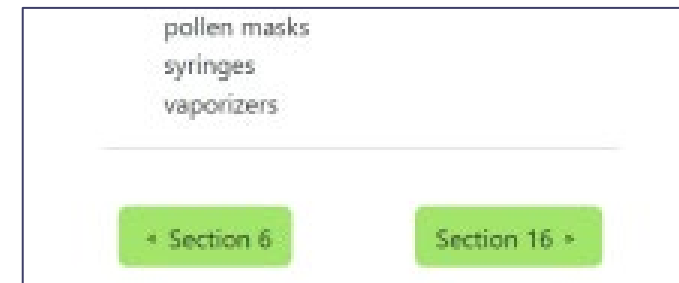
Digital book
readers or tablets?

Scripted Question
+ Infobook
Reference

We're on #7 now –
Digital book
readers or tablets?

Observations

- All participants utilized the Infobook during the interview without need for assistance
 - ▶ About half of participants did not move ahead in Infobook
- 18 out of 20 participants did not use the navigation menu during the interview (most participants recognized it but reported it to be redundant during the discussion session)
 - ▶ Green buttons were utilized instead even when jumping between sections



Preferences for Question Reading Style

Question Reading Style	Preference Count
Scripted Question + Infobook Reference	10
Infobook Reference Only	8
No preference	2
Scripted Question Only	0

We're on #7 now – Digital book readers or tablets?

Take a look at Section 6. Did you have any of those expenses?

Digital book readers or tablets?

Impact of Question Reading Style on Data Quality

- Section duration
 - ▶ Infobook Reference Only had shortest duration
- Number of items reported
 - ▶ Infobook Reference Only had lowest number of items reported
- Missed expenses identified during debriefing
 - ▶ Infobook Reference Only had most missed expenses

Infobook Reference Only

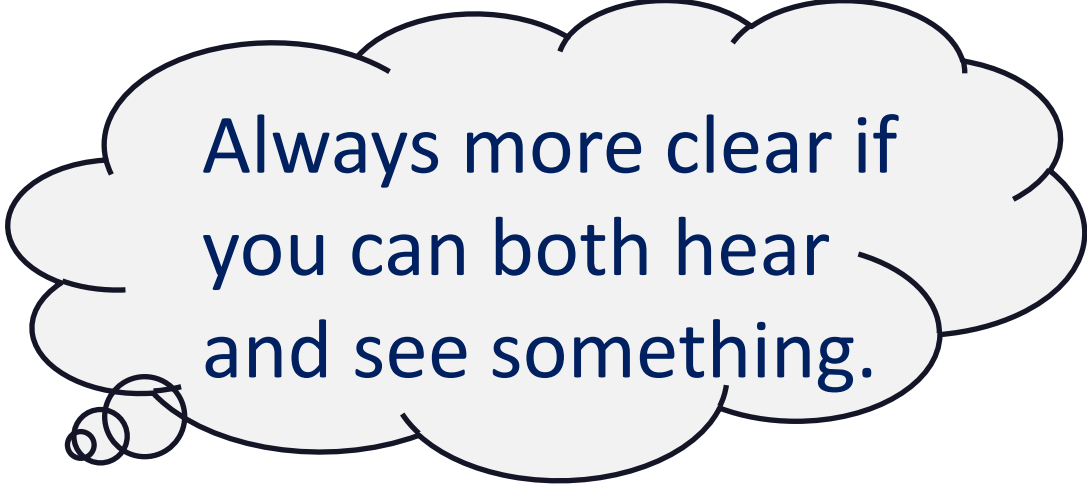
I like to see what's coming up ahead and anticipate.

Even when you were reading it aloud, I was still skimming it [the Infobook].

- Multiple participants liked the ability to move more quickly through the interview compared to if the interviewer read the questions.
- Underreporting: lower number of items reported for this style and confirmed missed expenses

Scripted Question + Infobook Reference

- Style was more engaging
- Style resulted in more interaction with the interviewer
- Some participants did report expenses in advance by reading ahead
- One participant reported feeling overwhelmed by the extra information given by the interviewer



Always more clear if you can both hear and see something.

Conclusion

- All participants were able to successfully use the experimental version of the online Infobook
- The Navigation menu was not utilized much
- About half of participants preferred the *Scripted Question + Infobook Reference* question reading style
- Although some participants preferred the quicker Infobook Reference Only style, this style may miss expenses



Recommendations

- Design a navigation style that is streamlined and draws user's attention
- Align Infobook content with interview questions
- Participants preferred organizational design features that would help them answer the survey
- Encourage interviewers to use the *Scripted Question + Infobook Reference* approach



To reach out for further questions:

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Q&A Period

