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2 January 10, 2012

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NOTE TO THE  
REVIEWER OF:

OMB CLEARANCE 1220-0141  
"Cognitive and Psychological  
Research"

FROM:

Jennifer Edgar  
Research Psychologist  
Office of Survey Methods  
Research

SUBJECT:

Submission of Materials for the  
Consumer Expenditure Survey  
Card Sort Task

6

7

8

9 Please accept the enclosed materials for approval under the OMB  
10 clearance package 1220-0141 "Cognitive and Psychological Research."  
11 In accordance with our agreement with OMB, we are submitting a brief  
12 description of the study.

13

14 The estimated respondent burden for the card sort is 43 hours and 20  
15 minutes.

16

17 If there are any questions regarding this project, please contact  
18 Jennifer Edgar at  
19 202-691-7528.

20

### 211. Introduction and Purpose

22The Consumer Expenditure Quarterly Interview Survey (CEQ) provides  
23data on the buying habits of American consumers, including both  
24expenditures and income for the consumer unit (i.e., families and  
25single consumers). CEQ asks respondents questions about a wide  
26range of expenditures, from monthly utility bills to irregular  
27entertainment expenses. The U.S. Census Bureau administers the  
28survey for the Bureau of Labor Statistics.

29

30The CEQ is both a high profile and important survey because it is the  
31only Federal survey to provide information on the complete range of  
32consumers' expenditures and incomes, as well as the characteristics of  
33those consumers. The data from the CEQ are put to a variety of uses,  
34from shaping the economic policy of the nation to businesses  
35evaluations of potential markets, to academics studying the spending  
36habits of Americans. A number of the critical economic indicators use  
37the data from the CEQ, for example, the Consumer Price Index.

38

39The current expenditures in the CEQ are grouped into more than 20  
40categories (e.g., household appliances, clothing) which were defined  
41more than 30 years ago as part of the initial survey development. New  
42expenditure items (e.g., downloaded videos, iPods) have been put into  
43the existing categories, resulting in groupings which may not be as  
44meaningful or adequately reflect the way respondents think about  
45these expenditures.

46

47The Consumer Expenditure Survey is currently undergoing a redesign  
48that aims to reduce measurement error, improve the efficiency of data  
49collection methods, and reduce respondent burden. Part of this multi-  
50front, broad effort is to verify the way respondents think about and  
51group their expenditures. The proposed card sort task is designed to  
52allow respondents to chose their own categories for expenditures and  
53discuss the reasons for their choices. This research will provide a  
54measure of the degree to which the current expenditure groupings  
55reflect the way respondents think about their expenditures, and  
56provide input into the redesign process.

57

58The study objectives are to:

59

- 60 1. Identify meaningful groups of expenditure items;
- 61 2. Identify the minimum number of groups meaningful to  
62 participants; and
- 63 3. Identify the vocabulary participants use to describe expenditure  
64 groupings.

65

66

67This work will be conducted by Westat, Inc. under a task order contract  
68to BLS. Westat will conduct all of the recruiting, venue selection, card  
69sorting sessions, preparation of the SynCaps cards, and analysis.

70

**712. Overview of Research Design**

72To examine the way respondents conceptualize the expenditures in the  
73CEQ, a card sorting task will be conducted. The card sort will allow  
74respondents to create and name their own expenditure categories,  
75thus giving us insight into the way respondents think about these  
76expenditures. Respondents will be asked to think aloud as they sort  
77the cards, and they will be debriefed after they have completely sorted  
78their cards. We will analyze the cards using the SynCaps software to  
79determine which expenditures tend to be sorted into the same  
80categories. The analysis will yield diagrams that display the categories  
81that the participants created. We will record the labels that the  
82respondents gave these categories and the vocabulary that they used  
83to describe the categories.

84

**853. Recruitment**

86Participants will be recruited from the Westat database of study  
87subjects and from announcements placed in the target venues.  
88Potential volunteers are asked to call into a toll-free number and leave  
89their contact information. They are also given an email address in case  
90they prefer that mode of contact. A Westat recruiter will call the  
91volunteers who have expressed interest in participating and administer  
92a very short screener. Participants with the most desirable mix of  
93demographics and socio-economic characteristics will be scheduled for  
94a session.

95

96Participants will come to one of six testing sites. The target testing  
97sites are:

- 98 1. Rockville, MD,
- 99 2. Baltimore, MD,
- 100 3. Washington, DC,
- 101 4. Buffalo, NY,
- 102 5. Rural North Carolina, and
- 103 6. Rural Maryland or Rural Virginia

104

105These locations were chosen for their ability to provide a geographic  
106spread and for operational convenience. The sites in rural North  
107Carolina that Westat has used previously are in Pitt and Greene  
108Counties and we expect to place these sessions in either one of those  
109counties. Rural Maryland could be the Eastern Shore of Maryland or  
110Western Maryland. Rural Virginia would be the area around Brunswick,  
111VA or even Harpers Ferry, WV. The exact location will depend on the  
112availability of appropriate venues and the success of the recruiting  
113effort.



114

**1153. The Card Sorting Task**

116We will use SynCaps to create the 101 cards that the participants will  
117sort. Each card will contain the name of an expenditure collected by  
118the CEQ (Appendix A) as well as a unique bar code to identify it. Two  
119sample cards from the list of expenditures are pictured below.

120

7  
8  
121  
122

|  |  |
|--|--|
| <b>Watches &amp; Jewelry</b><br><br><br><br>1 | <b>books and supplies for school</b><br><br><br><br>2 |
|--|--|

123  
124  
125

126 Each participant, regardless of location, will be seated at a large table  
127 in the testing room. The moderator, also in the testing room, will  
128 explain the research procedure to the participant and ask the  
129 participant to sign the BLS's consent form. Informed consent covers  
130 both participation and any recording (audio or video). The moderator  
131 will give the participant a set of pre-shuffled cards to sort. The card  
132 sort protocol can be found in Appendix B.

133

134 Participants will be asked to sort cards into groups. There are no  
135 criteria on the number of groups that respondents create or on the  
136 number of cards in each group, but participants will be instructed to  
137 create as few groups as possible. Participants will also be invited to  
138 create sub-groups within each main grouping. Each sub-group must  
139 have at least two cards in order to qualify as a sub-group. Participants  
140 will be given blank "group label" cards and blank "sub-group label"  
141 cards. They will then be asked to label any groups and sub-groups  
142 using whatever labels they wish to come up with by writing those  
143 labels on the cards and placing these cards on top of each pile of  
144 sorted cards.

145

146 The moderator will then debrief the participant to gain greater insight  
147 into the participant's rationale for creating the particular groups. This  
148 debriefing will give the interviewer the chance to inquire about  
149 anything unusual or puzzling about the participant's card groups or  
150 subgroups.

151

#### 152 **4. Data Analysis**

153 With SynCaps, data entry is straightforward. A research assistant will  
154 type in the name that a participant gave to a category or subcategory.  
155 Then the research assistant will scan the bar codes on the cards in that  
156 category or subcategory.

157

158 After all the cards from all the participants are scanned, SynCaps  
159 software will analyze the sorts and provide the following output:

10

160

- 161 1. A dendrogram which graphically displays the consensus groups
- 162 and the degree to which the cards in each group tended to be
- 163 sorted together.
- 164 2. A pair map that displays the extent that each card was sorted
- 165 into the same group as each other card.
- 166 3. An item by group matrix.

167

168

169The lengths of the branches in the dendrogram suggest the strength of  
170the associations among the various cards. SynCaps can also employ  
171color to indicate the optimum groupings, based upon the desired  
172strength of the associations among the cards within each grouping.

173

174We will conduct these analyses using the entire dataset. Then we will  
175repeat the analyses, for each of the separate audience groups  
176(suburban, urban and rural settings; high and low education; male and  
177female) and will review at the dendrograms of these separate  
178audience groups to see if any clear differences appear between those  
179in different groups.

180

181The interviewer will take notes during each session and if necessary,  
182will review the video recordings of the sessions to study the  
183participants' statements during the think-aloud sessions and during the  
184post-task debriefings. We will also note the names that the participants  
185gave to the categories.

186

187The session notes and recordings will be treated as qualitative data  
188and analyzed using standard qualitative methods. The qualitative  
189analyst will look for the vocabulary that respondents use to talk about  
190each category of expenditures. We will probe about any discrepancies  
191between the vocabulary used by the survey and the vocabulary used  
192by the participants and report these as part of the qualitative findings.

193

195The qualitative analysis will examine the following types of findings:

196

- 197 • Comments that show overlapping groups and the reasons
- 198 participants think the expenditures can be in more than one
- 199 group;
- 200 • Cards that participants have difficulty classifying;
- 201 • Alternative names of groupings that were considered and the
- 202 reasons for considering them; and
- 203 • All grouping alternatives suggested across participants, showing
- 204 overlaps and variations.
- 205 • Suggestions for reducing the current number of groups based on
- 206 the strength of the associations in the dendograms.

207

208

### 2095. Participants

210

211The card sort will be conducted with 40 participants in different  
212geographic regions with a reasonable distribution across demographics  
213(age, gender, race, ethnicity, education), and urbanicity.

214

215Respondents will be offered a \$40 incentive.

216

217To ensure some regional distribution and a reasonable distribution  
218across urbanicity, card sorts will be conducted in six locations:

219

| Location             | Type     | N  |
|----------------------|----------|----|
| Rockville, MD        | Suburban | 6  |
| North Carolina       | Rural    | 7  |
| Buffalo              | Suburban | 7  |
| Baltimore            | Urban    | 6  |
| Wash, DC             | Urban    | 7  |
| Rural MD or Rural VA | Rural    | 7  |
| Total                |          | 40 |

220

221

222The recruitment advertisement is found in Appendix C and the  
223recruitment screener is in Appendix D.

224

### 2256. Burden Hours

226Our goal is to obtain no more than 40 participants across all of the  
227venues. We anticipate that each session will last no longer than one  
228hour, for 40 burden hours for the sorting task and 3 hour and 20  
229minutes for the screening. The screener consists of 6 questions. A rule

14

231of thumb for telephone surveys is that 4 questions usually take 1  
232minute to deliver. To recruit 40 participants across 6 venues, we  
233expect to screen about 100 individuals. To allow for 6 questions and  
234some other conversation, we have assumed 2 minutes per screener,  
235which gives 3 hours and 20 minutes for the entire screening activity.  
236This gives total burden hours of 43 hours and 20 minutes for both the  
237card sort and the screening of participants.

238

**2397. Data Confidentiality**

240No pledge of confidentiality will be given. Participants will be informed  
241of the voluntary nature of the study. Participants will also be informed  
242that the study will be used to improve the design of a national  
243consumer expenditure interview survey. Information related to this  
244study will not be released to the public in any way that would allow  
245identification of individuals.

246

247An informed consent authored by Westat's IRB will be delivered  
248verbally to all participants.

249

250

251

252

**254 Appendix A: List of Expenditures**

256 1. watches &amp; Jewelry

257 2. books and supplies for school

258 3. college and technical school tuition and fees

259 4. elementary and high school tuition and fees

260 5. childcare, daycare and nursery school

261 6. postage and package delivery services

262 7. mobile and landline telephone services

263 8. computer hardware and software

264 9. internet service to your home or at an internet café

265 10. internet entertainment fees (such as online games)

266 11. telephones

267 12. calculators

268 13. cigarettes and tobacco products

269 14. hair products

270 15. toiletries all combined (include dental, shaving, deodorant,  
271 sunscreen, sanitary foot products)

272 16. electric personal care products

273 17. cosmetics, perfume, bath products and nail polish

274 18. haircuts

275 19. legal services

276 20. funeral expenses

277 21. laundry and dry cleaning services

278 22. clothing alterations and repair including shoe repair

279 23. watch and jewelry repair

280 24. banking services

281 25. tax preparation and accounting services

282 26. stationery, giftwrap and office supplies

283 27. luggage

284 28. equipment for infants (such as bouncy chairs, high chairs,  
285 play mats, and baby bottles)

286 29. rental of primary residence

287 30. lodging while at school

288 31. rental and homeowners insurance

289 32. home heating oil

290 33. propane, kerosene, and firewood

291 34. natural gas

292 35. electric utility

293 36. water utility

294 37. garbage and trash collection

295 38. floor coverings including carpets and hardwood floor

296 39. window coverings

297 40. linens for bedroom, bathroom, kitchen and dining room

298 41. indoor furniture including bedroom, living room, kitchen,  
299 dining room and infant furniture

300 42. outdoor furniture

301 43. refrigerators and freezers

302 44. washers and dryers



- 17  
18
- 303 45. kitchen appliance (range, cooktops, microwave ovens)  
304 46. lamps and lighting fixtures  
305 47. household decorative items including clocks, artwork and  
306 knick knacks  
307 48. indoor plants and fresh-cut flowers  
308 49. dishes and flatware  
309 50. nonelectric cookware and tableware  
310 51. paint, wallpaper tools and supplies  
311 52. power tools  
312 53. non-powered hand tools  
313 54. lawn and garden and outdoor equipment and grills  
314 55. household cleaning and other domestic products  
315 56. gardening and lawn care services  
316 57. moving and storage expenses  
317 58. appliance repair  
318 59. reupholstery of furniture  
319 60. indoor home maintenance and repair services  
320 61. medical, dental, and eye care services  
321 62. nursing homes and adult day services  
322 63. home care services for the elderly or disabled  
323 64. Medicare and health insurance  
324 65. prescription and nonprescription drugs  
325 66. medical equipment and supplies  
326 67. televisions  
327 68. cable and satellite television and radio service  
328 69. audio and video media (including DVDs and downloaded  
329 files)  
330 70. pet food, supplies and accessories  
331 71. veterinarian services  
332 72. motorized sports vehicles as well as non-motorized  
333 vehicles such as bicycles  
334 73. sports equipment  
335 74. hunting, fishing, and camping equipment  
336 75. cameras and camcorders  
337 76. photographer's services  
338 77. toys, games, hobbies and playground equipment  
339 78. videogame hardware, software and accessories  
340 79. sewing machines, fabric and supplies  
341 80. music instruments and accessories  
342 81. club membership for participant sports and group  
343 exercises  
344 82. fees for lessons & instructions  
345 83. admission to movies, theaters, and concerts and sporting  
346 events  
347 84. newspapers, magazines and books  
348 85. purchase of new and used vehicles  
349 86. rental of cars and trucks  
350 87. motor fuel such as gasoline  
351 88. tires for motor vehicles  
352 89. parts and equipment for motor vehicles

20

- 353 90. motor vehicle maintenance and repair
- 354 91. motor vehicle insurance
- 355 92. motor vehicle fees such as state and local registration and
- 356 license
- 357 93. parking fees and tolls
- 358 94. automotive service clubs
- 359 95. global positioning subscription services such as OnStar
- 360 96. airline fares
- 361 97. bus and train fares
- 362 98. ship fares
- 363 99. taxi fares
- 364 100. car and van pools
- 365 101. fares for mass transit within a city
- 366
- 367
- 368

**370Appendix B: Card Sort Protocol****3721. Introduction**

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374[Before the sort begins, make sure that cards are shuffled, and that there are enough  
375group cards and subgroup cards available].

377Thank you for agreeing to help us out today.

379My name is \_\_\_\_\_ [introduce others observing, taking notes, etc.] I work at Westat,  
380which is a social science research company located in Rockville MD. We are conducting  
381this study for the Bureau of Labor Statistics.

383Today, we are looking at the categories used by the Bureau of Labor Statistics, or BLS, to  
384classify products and services that people pay for. We're going to ask you to sort a set of  
385cards, each card lists a product or service the BLS is interested in. Be assured that this is  
386not a test of you or your skills in any way and there are no right or wrong answers here.

387We will look at how you sort cards and get your feedback on the process. This study will  
388help the BLS improve their surveys.

**3892. Informed Consent**

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390There are some points I need to cover about your participation.

392**Purpose and Task:** We are inviting you to participate in a research activity. The  
393research involves sorting cards of expenditure items into categories. The information  
394from this study will help BLS design more effective questionnaires. There are no right or  
395wrong sorts – we are interested in how you think the cards should best be sorted.

397**Sponsorship:** Westat is conducting this project on behalf of, and funded by, the Bureau  
398of Labor Statistics (BLS). The OMB control number for this study is 1220-0141 and  
399expires on February 29, 2012.

401**Voluntary Nature:** Your participation in this research project is voluntary, and you have  
402the right to stop at any time or to refuse to answer any question. The session will take  
403approximately 60 minutes.

405**Risks:** We would like to record the interview. Sometimes it is helpful to review a  
406portion of a recording as we make recommendations for improving the survey. If the  
407recording is reviewed later, it will only be by a few Westat staff and possibly the client,  
408BLS.

410You will never be identified by name. The things you say may be put in a written  
411summary of this discussion, but there will be no way to identify who said what, and your  
412name will not be used anywhere.

414The only cost to you is the time and effort to answer questions. You may skip any  
415question that you do not want to answer, both in the questionnaire and in the discussion  
416afterwards. The recordings will be destroyed within 6 weeks of the end of the study.

417

418**Benefits:** There are no direct benefits to you for participating in this study. However,  
419you will be helping with an important research project.

420

421**Questions:** If you have questions about the project, you may call the Task Manager, Pat  
422Dean Brick, at 800-937-8281, Ext. 4196. For questions about your rights and welfare as  
423human subjects in this study, you may call the Institutional Review Board at Westat at  
424301-610-8828.

425

426**Incentive:** You will be paid \$40 cash for completing the session.

427

428

**4303. Instructions**

---

431 Here's how the process will work. In front of you is a stack of cards. These cards  
432 represent categories of products and services that people pay for. Your task is to sort the  
433 cards into groups that make sense to you. What we're interested in is seeing how you  
434 group these cards and why they belong in the same group. Here are some specific  
435 instructions:

- 436 • Put all the cards into groups that seem to make the most sense to you.
- 437 • If a word or term written on the card is unclear, please let us know as you work.
- 438 • Once your groups are established, use these [group cards] to give each group a  
439 name that makes sense to you.
- 440 • You are allowed to make sub-groups within a bigger group if you feel that's  
441 appropriate. You can have as many sub-groups as you'd like but each sub-group  
442 must contain at least two cards. After creating a sub-group, use these [sub-group]  
443 cards to give the sub-group a name that makes sense to you.
- 444 • Groups can include as many or as few cards as you wish.
- 445 • Please create as few groups as possible.
- 446 • If you can't decide which of two groups you want to put a card into, please tell us  
447 and then put the card into whichever group offers the better fit, however slight.
- 448 • Throughout this exercise please share with us your thought process and logic for  
449 the decisions you make. Along the way, I may also ask you some additional  
450 questions. Meanwhile, you can feel free to ask questions during the exercise if  
451 you feel the need. I can't guarantee that I can answer them immediately, but I'll  
452 do my best to answer them when you're finished.

453

454 Do you have any questions before we begin?

**4564. Card Sort Activity**

---

457 Participants will now sort the cards.

458

459 *Participants may be prompted to express what they are thinking if they look confused or*  
460 *frustrated or pause the sort for a length of time. However, it is important to only have*  
461 *participants do what comes naturally to them, as forcing them to talk more than is*  
462 *natural for them would hinder their sorting ability.*

463

464

**4655. Debriefing**

---

466

467 1. How comfortable did you feel with your ability to sort cards overall?

468

469 2. Could you very briefly describe your general approach to sorting your cards?

470

471 3. Which cards were easiest to group? Why?

472

473 4. Which cards were hardest to work with? Why?

474

475 5. Which was the most challenging group for you? Why?

476

477 6. Did you find yourself changing your general strategy at any point? Why?

478

479 7. How easy or difficult was it to come up with the labels for your groups?

480

481 Why was it [easy or difficult]?

482

483 Thank you all very much for your time.

25

484

26

485

486

487

488



**489Appendix C: Advertisements for Participants**

490

491

492

**493Survey Research- Receive \$40**

494Reply to: (see message body)

495Date: 2012-1-XX

496Westat, a social science research company, needs individuals to participate in an  
497interview about household expenditures. Adults, ages 18 and over, men and women, are  
498encouraged to participate. We encourage as diverse a group of individual as possible to  
499participate. The interview will take place in [Name of Venue]. The interview will last  
500about 60 minutes. If you are interested, send an email to **studies@westat.com** or call **1-**  
501**800-XXX-XXXX** and include your name, telephone number, email address and the best  
502time to reach you. This is a Federally-sponsored study  
503WESTAT  
504EOE

505

506 **Appendix D: Screener**

507

508 NAME \_\_\_\_\_

509 PHONE \_\_\_\_\_

510 RESPONDENT NUMBER \_\_\_\_\_

511

512 Thank you for your interest in our study. We need people with diverse backgrounds to  
513 participate in a card sorting task. We are going to ask you some questions about yourself  
514 so we can make sure that people with varying backgrounds are represented in the task.  
515 This will only take a few minutes.

516

517 1. What is your age?

518 |\_\_| |\_\_|

519 AGE

520

521 IF AGE 17 OR YOUNGER.....(END STATEMENT)

522 AGES 18+ (GO TO 2)

523

524

525 NO NEED TO ASK IF OBVIOUS:

526 2. Are you male or female?

527

528 Male.....1

529 Female.....2

530

531

532 3. Are you of Hispanic, Latino or Spanish origin?

533 YES.....1

537 NO.....2

538

539 4. What is your race? Please select one or more.

540

541 White..... 1

542 Black or African American.....2

543 Asian..... 3

544 Native Hawaiian or other Pacific Islander... ..4

546 American Indian or Alaska Native .....5

547

548

549 5. What is the highest level of education you have completed?

550 8th grade, some high school, but not a diploma.....1

551 12 grade/high school diploma or GED.....2

552 Some college, Associate’s degree, Bachelor’s degree or higher..3

553

554Where did you see our ad for volunteers?

555 \_\_\_\_\_

556 \_\_\_\_\_

557 \_\_\_\_\_

558 \_\_\_\_\_

559

560**IF ELIGIBLE:** It appears you are eligible for our study. We'd like to schedule you at  
561XXXX. Let me read you the days and times I have available, and you can tell me what  
562would be best for you. This will take about 1 hour of your time and we will pay you \$40  
563cash. May I please have your full name and address? (We need your address so that we  
564can send you directions to venue. It will include a map that shows you exactly where the  
565room is).

566

567Name:

568Address:

569E-mail address:

570

571I will send the directions out to you shortly. If you have to cancel your interview, please  
572call back so that we can schedule someone in your place, OK? You can reach me at:  
573[Recruiter's Phone Number].

574

575If you have any friends, relatives or acquaintances who would be interested in  
576participating, please give them our contact information: [studies@Westat.com](mailto:studies@Westat.com) or call 1-  
577**800-XXX-XXXX**.

578

579**IF NOT ELIGIBLE:** Thank you so much for answering our questions. We will get back  
580to you once we figure out how many people we will actually be needing for this study.  
581Please provide your contact information so we can get back to you.

582

583Name:

584Address:

585E-mail address:

586

587Could we also add your name to our respondent database so we can call you in the future  
588for other studies?

589

590Yes\_\_\_\_\_

591No\_\_\_\_\_

592

593If you have any friends, relatives or acquaintances who would be interested in  
594participating, please give them our contact information: [studies@Westat.com](mailto:studies@Westat.com) or call 1-  
595**800-XXX-XXXX**.

596

597**IF NOT AGE 18+:** It appears that you are probably not eligible for our study. Thank you  
598very much for your interest and willingness to help out.

599