

Possible Methods for Improving Response Quality in the Consumer Expenditure  
Survey and the Consumer Population Survey

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A variety of interesting issues were raised at the Questionnaire Design Advisory Conference on January 15-16. This report discusses many of the issues addressed at the conference and offers some recommendations which may lead to improvements in the quality of the data collected for the CES and CPS. Comments and suggestions pertaining to the CES (including both the diary and the quarterly survey) and the CPS are presented separately in the following sections.

### THE CONSUMER EXPENDITURE SURVEYS

The purpose of the expenditure surveys is to provide timely and detailed information on consumption patterns of households. The information collected in the surveys also is used as the basis for changes in the Consumer Price Index. Two surveys are used to gather this information, the Diary Survey and Interview Survey. Problems and recommendations pertaining to these surveys are addressed separately.

#### The Diary Survey

The primary objective of the Diary Survey is to collect accurate data on inexpensive, frequently purchased non-durable goods. However, the information obtained in the diary is not limited to such non-vivid, difficult to recall purchases; information also is collected on all expenses which the household incurs during the week. Each household remains in the sample for two consecutive weeks.

There is evidence which indicates that the estimates of expenditures obtained in the diary are not as accurate as desired. Some evidence of problems include (but are not limited to) the following: comparison of total food at home expenditures to Personal Consumption Expenditures in the National Income and Product Accounts, "first day bias" or the decreasing trend in reports by diary day, the percentage of diaries completed by total or partial

recall (24%), and some of the disturbing results of the supplemental survey administered to the diary respondents (and interviewers) at the end of the second diary week (Giesman 1986; Tucker 1986). Some possible methods for improving the quality of reporting in the diary are presented in the following section.

### Possible Methods for Improving Reporting

#### General issues

Before offering specific ideas about how reporting may be improved, there are several issues which should first be addressed. A variety of recommendations will be provided by the panel, both for the expenditure surveys and the Current Population survey. Rather than attempt to conduct large field studies in which only one or two experimental variables can be examined, it seems that small, laboratory-based studies and small field experiments (where sample size = 200 or 300) would be a beneficial first step. This would allow BLS to assess a larger number of experimental manipulations and thus "prescreen" the possible changes before testing in large, expensive field studies.

In conducting lab-based or small field studies for the diary and the interview survey, some valid criteria should be used to assess the effect of the manipulations. The use of data from National Accounts, Progressive Grocer, etc., is laudable but some doubt remains about the accuracy of this comparison data. The possibility of testing survey manipulations with members of electronic-scanner based panels should be investigated. (Several articles which identify specific companies with scanner panels are attached to this report.) While such panels may not produce validating data for all types of expenditures of interest, they should provide far greater detail on the

*Summary  
points*

magnitude of errors at the individual-level and serve as a criterion against which the effectiveness of manipulations may be compared for at least a significant subset of expenditures.

Potential methods for improving the quality of response to the diary discussed in the remainder of this section include (1) increasing respondent motivation, (2) minimizing the respondent burden necessary to provide accurate data, and (3) a variety of other methods. Specific suggestions for each of these categories are discussed in turn.

#### Increasing respondent motivation

A primary problem of the diary appears to be inadequate motivation on the part of the respondent. Several possible methods for increasing motivation are discussed below.

*Signed  
Commitment*

Use of a signed commitment manipulation may increase respondent motivation. A commitment agreement reported by Cannell et al. (1977), is shown in the Appendix.

*Signed  
and dated  
diary*

A similar commitment could be signed by the interviewer and each available member of the CU over 12 years of age at the first meeting. In addition, the member of the CU completing the diary should be told to sign and date the diary each day after the purchases for the day have been entered. (A signature and dating area should be added at the bottom of the page for each day's entry in the diary.) The commitment should contain information about how the data is used and why it is vital to obtain accurate information. The confidentiality of the data should also be emphasized. Hopefully, this initial formalized commitment process and the act of signing and dating each day's entries will encourage respondents to provide more timely and accurate information.

The downside of the use of a signed commitment manipulation is that it may

lead to refusals to participate. (One may argue that perhaps the reports obtained from those that would refuse are of such poor quality that an initial refusal is not too great a loss.) Probably an "intermediate" manipulation of commitment (in which respondent motivation is increased somewhat without pushing so hard that refusals result) is most desirable. A positive aspect of the commitment is that very few resources are needed to implement such a change. Small field tests could be conducted in which the commitment manipulation is compared to a control group in which the manipulation is not used. Results across groups may be compared on the accuracy/completeness of reporting, the percentage of respondents using recall to complete the diary, the number of initial refusals to participate and mortality rates, and general attitudes and opinions about the diary.

There may be some benefit to setting up a specific time each day for completing the diary. This may allow the interviewer to show concern and empathy for the schedule of the respondent which may increase the respondent's motivation to comply with the task. In addition, it would reinforce the idea that it is important to complete the diary each day.

Concern was expressed about how to motivate respondents to accurately complete the diary during the second week. The interviewer certainly should assess and provide appropriate feedback pertaining to the performance during the first week. The reasons why it is important to obtain accurate information on a daily basis should be reiterated. The initial signed commitment may be repeated and initialed by the interviewer and the respondent. There seems to be concern that the interviewers place too little emphasis on the diary and it seems likely that this feeling may be communicated to the respondent when the diary is picked up after the first week. It seems imperative that the

importance of these data be emphasized through feedback and other actions of the interviewer.

#### Reduction in respondent burden

Other methods which could possibly improve the quality of the diary data reduce the burden placed on the respondent. These methods are discussed below.

The provision of individual diaries for each member of the CU over twelve years of age would decrease the burden on any single respondent and may improve reporting. The supplemental survey indicated that 14% of other CU members did not report; while this is obviously a problem, it is unclear how large an effect this has on data quality. Use of multiple diaries for each CU also leads to operational problems (e.g., training of individual family members, constructing different diaries for different CU members, etc.), and these problems may outweigh any increase in the quality of reporting. Small scale field experimentation of multiple diaries versus a single diary for each CU could be conducted to determine the feasibility and effect on reporting of the use of multiple diaries. If operational difficulties associated with the use of multiple diaries prove too great, some improvement in getting reports from all family members may be obtained by (1) setting up an initial appointment when as many members of the CU as possible will be available, (2) asking each CU member to enter his own purchases in the diary and then initial and date the diary daily, and (3) establishing a CU "leader" to check that each CU member completes his/her daily diary entries.

Further increases in the number of specific examples listed in the description for major item groupings probably will increase reporting. When recalling items within a group, the provision of specific items makes the recall of other items in the group (which are not mentioned) more difficult.

This effect (called a part-list cuing effect) should lead to greater reporting for mentioned items and less reporting of non-mentioned items. The comparison between the 72/73 and 80/81 diaries provides some support for this hypothesized impact on reporting.

The future implications of the diffusion of scanners in grocery stores should be considered. For example, if respondents can be taught to retain receipts from scanned purchases, perhaps the burden of recording the information should be shifted from the respondent to BLS coders.

In the longer run (i.e., the next ten to twenty years), BLS should think about the possibility of setting up an electronic panel. Assuming further dissemination of scanners, it seems that for a wide variety of expenditures of interest in the diary, scanned purchase information will be available. Purchases not electronically scanned could continue to be recorded in the diary. While scanned expenditures will not be available for all panel members, having electronically recorded information for part of the sample would be beneficial in establishing "true" error rates and developing correction estimators for the conventional pencil and paper panel members. Studies suggest that even in the best designed diary panels and surveys, non-sampling errors dwarf sampling errors. Therefore, researchers should at least begin to think about how we can become less dependent upon the less than perfect motivation and memory of respondents.

Some experimentation on the best ways for respondents to retrieve expenditure data may improve reporting when the diary is completed via recall. It would be useful to conduct lab studies which focus on how much time respondents spend in attempting to retrieve expenditure information, their confidence in the accuracy/completeness of their responses, and protocols on

the strategies used to recall the information. Recalling such information from two or three days ago is probably a difficult task for many respondents; interviewers should encourage respondents to take their time and search their memory. Orienting cues such as having the respondent think on a day-by-day basis about what she/he did in the morning, at lunchtime and early afternoon, in the late afternoon, and in the evening may increase processing time and aid in retrieval. A question about retail stores visited on a particular day may act as an additional cue and provide a "check" on items not recalled. A special form could be designed to help respondents subdivide and frame the recall period. Recalling expenditure information is not a simple task and formalizing and slowing down the process may encourage the "resisters" and "misleaders" to exert greater effort in retrieving expenditure events.

#### Other Ideas and Comments

Focus groups should be conducted with misleaders, resisters, and accommodators in an attempt to determine why attitudes and behavior were not favorable. In-depth questioning may reveal possible changes that would lead to better reporting. It would be particularly interesting to contrast the misleaders and the resisters in the hope of uncovering how respondents with negative attitudes can be convinced to provide positive behavior.

The supplemental survey provides important information at little cost and should definitely be continued, but there is a variety of other useful information pertaining to how people respond to diaries which should be collected. For instance, information of interest includes the length of time respondents spend in filling out the diary, which records are used, the specific individuals in the CU who are consulted, the order in which the items are filled out, whether or not all example items are read, the nature of the

immediate environment when the diary entries are made, etc. Unobtrusive observational research would be optimal, but given the operational difficulties involved, use of telephone surveys immediately following participation in the diary panel is probably most reasonable. Combining these data with measures of data quality would increase the understanding of the diary task and hopefully would lead to the development of specific instructions for respondents that would aid in the ease and accuracy of reporting.

There are suspicions that there is too little emphasis put on the diary by the interviewers. Focus groups and/or surveys with interviewers may be conducted to determine interviewer attitudes and behavior regarding the diary. It is disturbing to think that the interviewers may be (unconsciously) communicating to respondents that the accuracy of diary reports are not important. Perhaps interviewers should be required to spend some minimum amount of time in going over the instructions and example section during the first meeting and some minimum amount of time for recalling additional purchases in subsequent meetings. The interviewer should strongly urge respondents to call him/her when questions arise. A toll-free number also could be offered to help solve problems since the interviewer may not be available when needed. A more active (and expensive) option would be to have the interviewer telephone the CU on the third day of in-home placement to see if problems had arisen and to reinforce the importance of responding daily.

Lastly, BLS personnel who work with the diary should be required to complete the diary for their CU every year or two. This focuses attention on the degree of burden placed on respondents and alerts researchers to potential problems which may not be evident until researchers occupy the role of the respondent.

### The Consumer Expenditure Survey

The quarterly consumer expenditure survey collects data pertaining to durable goods and other expenditures that respondents are expected to be able to recall for a period of three months. Consumer units remain in the sample for five consecutive quarters with the first quarter interview used as a bounding interview. Comparisons with the Personal Consumption Expenditures suggest that there is substantial underreporting in the survey, particularly for categories such as house furnishings and equipment, apparel, and entertainment.

Problems and suggestions pertaining to the expenditure survey are discussed in the following two sections. The first section discusses more general issues which seem to suggest large-scale changes in the CE survey. The second section focuses on more minor changes which may improve reporting without altering the general format and administration of the survey.

#### Major Problems and Possible Solutions

It appears that the CES in its present form puts a substantial burden on a large percentage of respondents. There is some evidence that suggests that this burden leads to a significant amount of error (Gresman 1986). It seems doubtful that respondent motivation can be raised to a level that will result in accurate reporting of fairly irregular, non-vivid purchases. Many of the cognitive tasks faced by respondents would be difficult to perform in isolation, not to mention performing these tasks rapidly in the midst of a 2-3 hour (or more) interview. For example, a consumption oriented individual has great difficulty retrieving small, non-vivid purchase events (e.g., socks, handkerchiefs, small household goods) in conjunction with determining when the purchase was made (e.g., 2 months ago or 4 months ago). Reducing the time

frame of interest to the most recent four weeks will improve reporting, but for near accurate episode-based retrieval of non-vivid items, I feel that most respondents probably have difficulty beyond a time frame of about two weeks.

In addition to questions about the accuracy of retrieval and placement in time of irregular, non-vivid purchases, there are questions concerning the cognitive strategies employed to estimate the amount of expenditures. I am not familiar with research in this area, but I feel that respondents would rarely retrieve specific episodic information on prices paid for non-vivid purchases. Instead, many respondents probably estimate an average price paid for the product and report this average. Such a strategy probably leads to large errors at the individual level, and thus attenuates estimated bivariate and/or multivariate relationships with other variables (Marquies et. al. 1986.) However, across respondents errors of underreporting and overreporting may cancel.

Another substantial problem with the CES is that a single respondent must report on purchases made for the entire household. Having interviewers call back other household members on "Don't Know" responses is commendable, but many respondents are probably not aware of what they do not know. For instance, my wife has her own source of income, own checkbook, own credit cards, etc., and she buys clothes and household items for which I am totally unaware. Therefore, she may have purchased a number of items that I did not report in the interview. I did not respond with a "Don't Know" unless I had a reasonably strong suspicion that she may have made a purchase within a specific category.

In sum, given the needs of the BLS, the difficulty of the cognitive task, and the burden placed upon the respondent in this survey, use of other methodologies should be considered. Diaries in which respondents report all

non-food and other expenditures not obtained in the current non-durable goods diary should be tested and results compared to the present survey. Non-expenditure information could continue to be collected via personal interview. Alternatives in which all CU members over 12 years of age kept a diary of expenditures also may be compared to a single diary per CU condition. While change to a partial-diary format will require major changes in the way in which estimates are derived, it seems to offer the greatest opportunity for improved reporting.

The manipulations currently being considered for the CPS reflect the concern over the negative impact of the difficulty of the cognitive task. Reduction of the time frame and the length of the interview may improve reporting to some degree, but the burden and the ability of the respondent to provide accurate responses may still be questioned. Testing the collection of the expenditure data in small scale field tests may offer greater potential benefit. If desired, the diary format could be tested against experimental conditions in which fewer sections were included and a shorter time frame employed, as well as the current survey (or control) condition.

#### Other Recommendations

There are several possibilities which may improve the expenditure estimates provided by the survey in its present form. As indicated in the previous section, in the long run, large format-related alterations are viewed as needed to substantially improve reporting. The ideas listed below are less dramatic changes involving little or no modification to current procedures.

It would be worthwhile to conduct a short supplemental survey for the CES as has been done for the diary. The survey could examine respondents' attitudes and opinions about the CES and feelings about the completeness and

accuracy of the data provided by "typical" respondents. The supplemental survey could be conducted by telephone following the fifth CES interview.

Interviewers' opinions of the respondent could be combined with the survey responses. This supplemental survey may provide data on the severity of many of the perceived problems at a relatively low cost.

Past data should be used to compare the responses of respondents who use records against those that do not. Interviewers should be instructed to meticulously record for which specific items records were used. Assuming that such analyses indicate that use of records lead to higher quality reports, the requests for record-keeping might be emphasized more strongly. The interviewer could dwell on the importance of accurate reporting and the difficulty in recalling items without records. The interviewer and respondent should select a location in which the record file can be kept. This location should be in plain sight so that the file will act as a reminder to keep expenditure records. The interviewer should "plead with the respondent" to keep these records and attempt to obtain some sort of commitment from the respondent that household members will "do their best" in this respect. Finally, a follow-up telephone call should be made to remind them to keep the records and to answer any questions several days after placement of the record file in the CU. Follow-up reminder post cards should be sent every several weeks during the first quarter in which the CU is part of the sample.

For many households, some fairly large errors probably arise from having a single respondent report on expenditures of all CU members. The diversity in today's household composition often makes it difficult for one person to be aware of all purchases. It seemed unclear as to exactly how often and for how many categories interviewers normally made callbacks to non-interviewed CU

members. Unless the interviewers are incredibly motivated to supply the best possible data and well-trained, it seems easy to imagine that such callbacks may not always be made.

Research into the use of an initial screening interview may prove beneficial. Screening questions might provide information concerning the importance of having more than one respondent available during the interview and the chances of arranging a time when more than one CU member could respond. Screeners also may suggest which CU member would be in a position to provide the highest quality data. Also, it would provide an opportunity to estimate the length of the CE for a given CU and allow the respondent to choose whether s/he would rather complete the interview in one or two sessions.

Changes in which member of the CU responds to the CES across quarters probably adversely affects estimates. Efforts should be made to identify the respondent in the CU capable of providing the highest quality reports and efforts should be made to conduct each of the five interviews with this single respondent.

Ideas for possible improvements may be generated through conducting surveys with CES interviewers. Information may be obtained on their attitudes and opinions about the survey and perceived problems with specific questions.

#### Specific question wording problems

There are a number of questions which are probably difficult for respondents to answer because of failure to understand the question or failure to retrieve the information needed to accurately respond. Many of these questions appear appropriate for laboratory research. A few examples of questions which are candidates for lab research are listed below.

Section 1, Q6 - When the question is asked in this manner, can people

accurately identify "the inner core material of the exterior walls?"

Q8b. - Do people understand this question and if so, what do you realistically expect them to do in formulating a response?

Section 2, Q2c, 2f, etc. - From the respondent's perspective, these questions asking about the number of payments since the first of the month are very difficult because of the difficulty of placing the payment in time (without record checks). For bills that occur regularly (telephone, gas, electricity, mortgage, etc.), most respondents will report that 3 - payments have been made in the past 3 months. However, when interviewed in the middle of a month and asked to report about payments since the first of the month three months ago, it is difficult to date payments and thus confidently provide a frequency response. Respondents strongly desire to use rate-based processing while your question implicitly promotes episodic retrieval.

2f. - Do respondents perceive "current month" as the actual calendar month or the past 30 days?

Section 3 - My wife would have problems answering questions throughout this section. Also, she would be unable to find the appropriate records needed to respond. I do not think that everybody understands escrow accounts, types of mortgages, or even concepts such as principal versus interest.

Section 4, Q3 - Do respondents provide names of companies for both local telephone service and long distance telephone service?

Section 6-9 - Inclusion of as many sub categories as possible probably increases overall reporting, but there is a part-list cueing effect that makes it difficult to recall the "other" items not mentioned.

For these sections, it would be interesting to ask respondents how

confident they were about the completeness their reports of purchases for other family members as well as themselves.

Deciding if a purchase had been made and then placing it in time is an extremely difficult cognitive task for many of these items. I imagine that few respondents expend a sufficient amount of cognitive effort necessary to formulate optimal responses.

Section 12 - These questions are extremely difficult to answer in multi-car households for cars for which the respondent is not the primary driver or car maintenance person. How often are callbacks made for this section?

Section 13-15 - Parts of these sections may be very difficult for some respondents to answer even when good records are available. If records are not available, heaven help the respondent and the user of the data.

While this is not a complete list of potential problems associated with the questions, it is sufficient to convey the idea that the number and scope of problems associated with understanding the question, retrieving relevant information, and formulating and reporting a response are not trivial.

Requiring that the conference participants respond to the questionnaire was valuable; I also believe that CES administrators would find participating as a respondent under actual survey conditions a worthwhile learning experience.

#### THE CURRENT POPULATION SURVEY

The CPS provides information on labor force utilization and in a more general sense, serves as a barometer for the U.S. economy (Bregger et. al. 1986). Information is collected on the number of individuals who are employed, unemployed, or not in the labor force and the national unemployment rate is constructed from these data.

BLS is interested in improving data quality through gaining an

understanding of cognitive and/or conceptual problems and determining how they may be reduced or eliminated. The BLS - Census Bureau Questionnaire Design Task Force already has taken a large step in this direction by developing a proposed questionnaire to alleviate suspected problems and improve reporting. I think the proposed test instrument is a substantial improvement over the currently used questionnaire. Because I feel that (1) potential data quality problems of CPS were not as large as CES to begin with and (2) the survey design task force has already recognized and taken steps to improve data quality, the suggestions presented in the following sections are relatively minor recommendations concerning the wording of specific questions and the testing of the proposed questionnaire.

#### Some Recommendations about Specific Questions in the Proposed Questionnaire

Q19 - Specification of the precise days in which you are interested should be helpful. Respondents do interpret "last week" ambiguously. For some of the questions, day-by-day processing is probably desired. To fix the week of interest in the minds of respondents in face-to-face interviews, showing them a calendar with the days of interest circled may be helpful. In telephone interviews, this introduction should be read slowly to allow respondents to focus on these dates. Also, repeating the dates of interest in a couple of the subsequent "last week" questions would be useful in reminding respondents of the dates of interest and would ensure that the dates had been processed when initially read in this introduction.

Q20 - Lab research on how individuals with non-routine jobs and those with occupations performed at home interpret and respond to this question should indicate if there is a problem.

Q20A. - "Incapacitate" does not seem appropriate for a survey administered to a general population. Could you replace "incapacitate" with "keep?" Also, can respondents accurately report whether or not they will be able to work in the next 6 months, and if not, is this a problem in this survey?

Q20B - "Layoff" is ambiguous. Either ask this in the context of a job to which they expect to be recalled or ask an additional, specific question about expectation of recall.

Q20C - 20K - This series of questions provides helpful context cues for the respondent that should aid in the reporting the number of hours worked. Lengthening the question about how many additional hours (20G,H) would give the respondent greater time for processing and response formulation. Other techniques could be used if individual day-by-day processing was desired. However, if BLS is only interested in whether more or less than 35 hours was worked, such alterations probably would not be cost efficient. Similarly, BLS needs to construct split sample tests to assess the benefit of the proposed version to the current survey in terms of response quality relative to the extra cost incurred.

Lab studies should be used to determine if there are problems associated with what is perceived as "work," "overtime", etc. Do respondents perceive picking up a co-worker at the airport or having a company physical (during working time) as "work?" Do office workers paid a fixed monthly salary consider an after hours business dinner as "extra work?"

21C. - If this is an important question, it might be interesting to check the validity of the response by asking in the reinterviews (following the eight month out-of-sample period) whether or not they had been recalled to work and if so, when. Respondents out of work for a while can probably

provide fairly accurate estimates of the dates in which they are recalled to work.

21D. - Because the time frame is being changed (one week, six months, four weeks), clarity may be increased for some respondents by adding a specific date to the question. ("Even though you eventually expect to be called back to work, in the past month, that's since \_\_\_\_\_, have you been looking for work?") The interviewer would fill in the blank with the date one month prior to the current date.

21F,22C - Obviously, many respondents will round off their responses here (e.g., about 6 months, about 1 year, etc.), or estimate the number of months and then multiply by number of weeks to supply an answer. There are also some social desirability problems which may lead to underreporting; many respondents probably feel guilty and/or incompetent because of their inability to find a job after a significant amount of time has passed. Replacing "weeks" with "months" (which is discussed in the text but not shown in the proposed questionnaire) seems reasonable. Variations in question wording that attempt to reduce problems of social desirability may improve reporting.

21G,22D,G - How do respondents perceive the terms "full-time" and "part-time?" Could you simply ask them about jobs in which they work more than or less than 35 hours per week?

26C - My income was misreported on the CPS because I am paid differently for teaching in the summer than I am for the fall or spring. When asked about my normal rate of pay, I thought about the constant pay I receive for the months of September through May. This potential for misreporting remains in the proposed survey; however, inconsistency in pay may be too unusual

to be of concern.

#### Other Recommendations

Perhaps the greatest potential for improvement in data quality relates to the within-household selection of the respondent. Intuitively, I believe that potential respondents should be restricted to either a male or female head of household. Uncles, aunts, nephews, etc. should not be eligible respondents. Once the respondent is selected, efforts should be made to ensure that this individual is the target respondent for future interviews. If the target respondent cannot be reached after three callbacks, then a co-head-of household could be interviewed. This may be the easiest way to improve response quality at a relatively low cost.

To test whether or not such procedures could lead to improved reporting, family members could be interviewed individually and then the consistency of responses compared across reports. Efforts should be made to conduct such tests in communities in which unemployment is very high. Hopefully, the cooperation of major employers in the area could be obtained in order to gauge the accuracy of some of the responses. Such research may help to determine if there are characteristics of a "most responsible respondent" for which screening questions could be developed.

It seems obvious that in conducting both small field experiments and laboratory research, the subjects most likely to have problems with the questions should be recruited. As suggested above, this argues for testing in communities with significant unemployment, and where there are a minimum number of companies that dominate employment and are willing to permit record checks to aid in validity assessment. Some research should also be conducted with "typical," employed respondents, but it seems that the questions and concepts

of greatest concern pertain to the unemployed, and thus effort should be made to obtain a mix of subjects that could provide data which result in the greatest benefits.

#### SUMMARY

A number of possible methods for improving the quality of reporting have been presented. This section summarizes the recommendations viewed as research priorities. Suggestions for the diary, expenditure interview, and CPS are provided below.

##### The Diary

(1) Focus groups and/or in-depth interviews should be conducted with misleaders and resisters to determine if reporting behavior can be improved for these groups of respondents. Additional data should be collected on how respondents complete the diary. These are low cost research alternatives which should help determine if data collected in its present form can be substantially improved and may suggest some methods for possibly doing so.

(2) The effectiveness of a commitment manipulation should be tested. This offers some opportunity for improved quality of reporting at a relatively low cost.

(3) Electronic scanner purchase panels should be used in between subjects tests of manipulations so that results can be compared to some (accurate) criterion. BLS should also begin to consider how electronically scanned purchases could be used to directly improve expenditure estimates.

##### CES Interview

(1) Telephone interviews should be conducted with a sample of respondents who have recently completed the personal interview to gauge attitudes toward the survey and perceptions of the completeness and accuracy of their responses.

The results should be useful in determining whether or not a different format (i.e., diary) should be considered for obtaining the necessary expenditure data.

(2) If the present interview format is retained, BLS should test the use of an initial screening interview to determine (a) the importance of having more than a single respondent available during the interview and (b) the ability to project which CU member could provide the "best" data. Strong effort should be made to conduct all interviews with the respondent(s) viewed as capable of providing the highest quality data.

(3) Lab research would be helpful in determining problems with question comprehension, response formulation processes, confidence in response accuracy and/or completeness, etc. for many questions in the CES.

#### The CPS

(1) Tests should be conducted to determine if specific respondents within a household can provide superior data. Once a respondent is selected, this individual should be the target respondent for all subsequent CPS interviews.

(2) Specific question wording concerns for the proposed questionnaire are given in the text. Laboratory research should be useful in determining the severity of these problems and in identifying other potential problems.

APPENDIX  
AGREEMENT FORM

That's the last of this set of questions. The rest of the questions are about health, your daily life, and how you have been feeling lately. It is important for us at the University of Michigan to get an accurate picture of these things in this area. We have selected a small scientifically chosen sample of people to represent this area. We are asking these people to give us extra cooperation and try hard to answer accurately, so we can get accurate information about health. You are one of the people who we hope is willing to make this effort.

Here is an Agreement which explains what we are asking you to do. (HAND OVER AGREEMENT STATEMENT.) As you can see, it says, "I understand that the information from this interview must be very accurate in order to be useful. This means that I must do my best to give accurate and complete answers. I agree to do this." We are asking people to sign this agreement so that we can be sure they understand what we are asking them to do. The Agreement is for you to keep for yourself. It is up to you to decide—if you are willing to agree to do this, we'd like you to sign your name here (POINT OUT LINE). Down below there is a statement about confidentiality, and I will sign my name here (POINT OUT LINE). (IF R HAS NOT ALREADY SIGNED): Are you willing to make the extra effort to continue the interview?

AGREEMENT

I understand that the information from this interview must be very accurate in order to be useful. This means that I must do my best to give accurate and complete answers. I agree to do this.

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*Signature of Respondent*

All information which would permit identification of the people being interviewed as a part of this project will be held in strict confidence. No information that would allow identification will be disclosed or released to others for any purpose.

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*Signature of Interviewer*