

Findings and Recommendations from Cognitive Testing of the Commodity Flow Survey: Round 2 Draft

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Background

The Commodity Flow Survey (CFS) is a mandatory survey conducted every five years as a component of the Economic Census and is co-sponsored by the Census Bureau and the Bureau of Transportation Statistics (BTS). The CFS is a mail-out/mail-back survey that collects characteristics about outbound shipments made by establishments in mining, manufacturing, wholesale, and selected retail and other industries. Among the unique features of the CFS is the selection of a sample of shipments by respondents, for their one-week reporting period.

In 2005 – 2006, the co-sponsors asked members of the Response Improvement Research Staff (RIRS), then known as the Establishment Survey Methods Staff, to conduct cognitive interviews for the CFS, in preparation for the 2007 mail-out. Of particular interest were respondents' comprehension of "outbound shipments," their ability to draw their own sample from their records, correctly report on various aspects of their sampled records, and the ability to report on a new item regarding third-party logistics providers.

Though improvements to the form for the 2007 mail-out proved favorable, in 2010-2011 co-sponsors asked RIRS to evaluate potential changes to the form. For information regarding the first round of testing, please refer to the corresponding Findings and Recommendations Document. In the second round of testing, changes include questions regarding the physical location and mailing address in Items A and B, the revised definition of outbound shipments in Item D, the comprehension of the revised sampling instructions in Item E, the addition a temperature controlled question in Item F, the functionality of the revised Instruction Guide and SCTG Commodity Code Manual, the addition of the web reporting option for Item F, and the interchange of Items G and H, resulting in the new Item H header.

Research Questions

- Are the physical location and mailing address the same?
- Are the instructions clear enough for respondents to correctly draw their own sample?
- Do respondent records track temperature controlled modes of transportation?
- What number of shipments utilize same day/overnight or 2-3 business day delivery methods?
- Which method is best for collecting shipment characteristics via the Web?

Research Methodology

We employed a cognitive interview technique to understand respondents' reporting practices and limitations and to assess the validity of the survey items on the form. We gave respondents copies of the form, along with verbal instructions to complete it. Most respondents chose not to report data from records, but provided estimates for numeric values and descriptions for how they would attempt to answer questions. As respondents went through the form, we asked non-leading questions about their interpretations of the items and how they would go about retrieving data. We non-directively probed

their responses until we had a thorough and accurate understanding of the response process for each item.

During July 2011, we conducted 17 interviews in the Baltimore, Maryland; Fredericksburg, VA; Hampton Roads, Virginia; and Savannah, Georgia areas to evaluate these changes and the overall process of filling out the form. Subject area specialists from the Census Bureau's Service Sector Statistics Division accompanied us on all interviews except the Hampton Roads, VA area. They assisted with respondent debriefing, especially in cases where additional clarification of the subject matter was required. Interviews were 30-90 minutes in length, and audio recorded with respondents' permission. One respondent refused audio recording.

Our findings are qualitative and do not indicate any sort of expected respondent distribution. Rather, our findings are illustrative of the range and types of response issues that may occur during data collection.

A further discussion of cognitive interview methodology can be found in Appendix A. Appendix B contains a copy of the protocol we used for each interview. A copy of the form that was tested in Round 2 can be found in Appendix C. This document presents the highlights of the testing and makes draft recommendations for changing the questionnaire for finalizing the questionnaire.

Overall Findings and Recommendations

Finding #1:

Most respondents were familiar with the form, and recalled completing the form in the past. Some brought completed copies of the 2007 form to the interview sessions. Some respondents were unfamiliar with the form for different reasons, and had difficulty completing it. They were either new to the position or company that had been in the 2007 cycle, or the company had not previously been in the 2007 cycle. One of these respondents had a language barrier that prevented full comprehension of the questions. At the time of that interview, there was no interpreter to assist him, but he stated that in real time he would have this assistance.

Another respondent did not thoroughly read the questions and repeatedly made incorrect assumptions about what was asked. We have determined that this type of cognitive process makes this respondent an extreme outlier. Therefore, we will not consider many of his responses for this report. This determination is based on the fact that he verbally expressed what seemed to be incorrect preconceived notions about the purpose of the form. Repeated interviewer guidance and probing was rejected by his aggressive insistence and suggestions for change. He often went into tangents about the government and how processes could be improved. It became apparent that he was an extreme case.

After several interviews, respondents expressed that the proposed changes to the form will not be difficult to contend with.

Recommendation: None.

Finding #2:

Respondent titles varied, though responsibilities can be categorized into 4 types: Company President (1), Finance (5), Export/Import Logistics (8), and Office Management (3). The number in parentheses represents the number of companies visited with respondents in the corresponding category. All except two respondents were in management or supervisory positions. The other two were assistants.

Recommendation: Nearly every respondent had a different specific title. We thought it would be too arduous to read through in this report. If interested in specific titles, please confer with interviewers.

Finding #3:

A few new respondents relied heavily on the Instruction Guide for clarification of questions. They were then able to answer the questions and provide detail on their methodology for answering the questions. Other respondents who utilized the Instruction Guide did so with ease.

Recommendation: None.

Finding #4:

Generally, shipping records are kept in both paper and electronic formats and respondents generally have easy access to these records. A few respondents mentioned that shipping records are kept in a specified shipping department, and access may not be easy. Instead, these respondents would have to get permission from the head of the shipping department, and further consult with him/her to complete the form. Most respondents indicated that an invoice, bill of lading or a queried computer report would be used to complete the form. A few indicated the use of a packing slip in combination with an invoice or bill of lading.

Recommendation: None.

Finding #5:

Time to complete this form ranged from thirty minutes to thirteen hours, depending on sampling, researching, and consulting records. Several respondents mentioned that their time would be decreased if utilizing the web reporting option.

Recommendation: None.

Question-specific Findings and Recommendations

In this section of the report, we present findings and recommendations for specific questions on specific forms.

Item A - Verification of Shipping Address

Finding #6:

Most respondents had no problem completing this Item. When they answered, “Yes” or “No,” they correctly followed the corresponding instructions to these response options. Two respondents marked “Yes”, and made minor changes to the label.

A few respondents skipped the first page and started with Item C on Page 2. These respondents were later redirected to the first page. They indicated that they interpreted the word “Verification” in Items A and B, to mean that they needed to look at the address in the label. If the address was correct, they assumed they were to move on to the next page.

One respondent was initially confused by the word “originate,” in the instruction. She thought it meant that products were manufactured at the address in the label. In this case, products come from other U.S. companies and are then distributed by her company. Later, she correctly determined that Census is most likely looking for whether or not products leave the address listed in the label.

Recommendation: Overall, this Item worked well. We do not recommend further changes. However, interviewers noticed that Item A is the only section on the form that does not ask a question. To make Item A consistent with the rest of the form, turn the instruction to a question. It should read, “Is the address listed above the location from which this establishment’s shipments originate?”

Resolution: This finding/recommendation was not discussed. Further information is needed from SSD.

Item B – Verification of Mailing address

Finding #7:

Almost all respondents answered this Item correctly. Those that marked the first response option in B1 correctly followed the skip pattern. One respondent marked the second response option in B1 correctly then entered the mailing address in the spaces provided. The company has a P.O. Box and the respondent noted that it is preferred for all mail to be sent there. When sent to the P.O. Box, the form would then be directed to the same respondent. There was one respondent, who marked both response options and entered “same as above” in the space provided for B2.

One respondent, who was familiar with the form, did not understand the intention of Item B. He stated that if we mail the form to him, then why do we want to know where the form should be mailed to? With interviewer explanation, the respondent then understood the intent of the question, but indicated that this will confuse companies whose shipping and mailing addresses are the same. He suggested that we ask something like, “If your shipping address is different from your mailing address, then what address should this form be mailed to?”

Recommendation: The concern of the latter respondent is valid. However, since he was the only respondent with this concern, in two rounds of testing, we do not suggest further changes.

Item C - Operating Status

Finding #8:

All respondents easily answered the question in this Item. Respondents were informed that the week would be pre-printed in the question. For interview purposes, respondents were asked to consider “last week,” which was the Monday through Friday prior to the day of the interview. All respondents answered “In operation.” There was one company that closes during the week between Christmas and New Years, but was in operation for the week inquired.

Recommendation: None.

Item D - Total Number of Outbound Shipments

Finding #9:

Most respondents understood the definition of an outbound shipment and indicated that the definition matched their company’s definition well. A few respondents were confused by the definition. One respondent explained that there was no inventory done at the company. Typically, when a customer places an order, the respondents’ company contacts one of several contracted vendors. The vendor then directly ships to the customer, which is called “drop-ship”. Occasionally, the company ships directly to the customer. This happens when a customer asks for several items that need to be collected from various vendors. The company then compiles the items and ships them to the customer. Therefore, the phrase “from your shipping address” within the definition, gave this respondent pause. She initially stated she would exclude drop-ships. Then she determined that she would include them, after reading “...total number of outbound shipments,” in question D1. Finally, after verbally reviewing the definition again and pondering the phrase, “...from your shipping address” she concluded that she would exclude drop-ship shipments from her response.

One respondent explained that they ship commodities on behalf of other companies. The shipping records from other companies are not maintained in their computer system. Instead, the records are housed in the other company’s computer system. He was not sure if he would report those shipments. He stated that he would have to call Census, if completing this form in real time.

One respondent was not certain if he should report shipments to stores or on truckload routes. The former would be easier to report because there was at least one weekly shipment to a store. The latter would be more difficult because, many times, trucks make several stops on one route. He was not sure that he would have this information. He stated that if he were completing the form in real time, he would report store shipments and then make clarifications in the “Remarks” section.

Respondents said they would consider their invoices, packing slips, computer queried reports, or bill of lading to determine the number of outbound shipments. For the interviews, respondents were once again asked to consider “last week,” however, many respondents were not comfortable looking up the actual records. They estimated, instead. Their estimates were based on the number of outbound shipments that company typically ships in any given week. Respondents that did choose to look up records used computer or paper based records.

All respondents followed the parenthetical instructions after the response options in D2.

Recommendation: None.

Resolution: Although there were no recommendations BTS and Census discussed “drop-ship” at length, and agreed it was a growing trend in companies. Therefore, the decision was made to add “drop-ship” instructions to the Instruction Guide. The form will remain as is.

Item E - Sampling Instructions

Finding #10:

Most respondents had no problems comprehending the instructions and interpreting them in their own words. Instructions were particularly easy for respondents who had completed the survey in the past. One respondent ran a sampling query in his software system that was specifically constructed for CFS. Others stated that they would hand count their records until they reached their “Report Every” number.

The example brought clarity to those who were confused after reading the instruction. In one case, a language barrier hindered the respondent’s comprehension of the instruction. After reading it several times he left the room to solicit assistance from a colleague. No one was available, so he returned and stated he did not understand this Item. After some probing on the example, he read it and was then able to correctly explain what the instruction was asking for. In another interview, the respondent correctly referred to his Item D1 response, 75, and correctly marked the row for reporting every 2nd outbound shipment. However, he incorrectly interpreted every 2nd outbound shipment to mean reporting 75 x 2. He re-read the instruction again, and after verbalizing his thoughts, he seemed to have the correct understanding. Unfortunately, he second guessed himself and determined that he should report all 75 outbound shipments. It was only until he read the example aloud that he had clarity. As he read it, he repeatedly stated “Oh! I got it!” and then followed the instructions correctly.

One respondent stated there was no single report that would capture all of his shipping records. There were multiple spreadsheets he would have to retrieve, as well as some records that were not captured electronically. These “non-system” shipments, as he referred to them, had a bill of lading but no invoice, because there was no cost associated with the shipment. In conclusion, he stated he would have to talk to his IT staff and see if they could consolidate all of the reports, however, he anticipated this to be a time consuming task.

Recommendation: None

Item F - Shipment Characteristics

Finding #11:

Column D – Shipment Value

Most respondents noticed the parenthetical instruction, to exclude shipping cost, and the text indicating that estimates are acceptable. Many respondents interpreted shipping cost to mean the cost of freight, and that this number would be on the record they identified with their shipping ID number. A few respondents mentioned that they would have to research other records to determine shipment value.

Recommendation: None.

Column F – SCTG Code

Despite reading, “...from accompanying booklet,” in the header, some respondents were unsure of where to find the code. These same respondents also had no previous knowledge of the form. Eventual interviewer guidance helped respondents understand that the coding manual is provided.

All respondents had highly favorable reactions to the coding manual. Most indicated that the Quick Reference was the biggest help. Those who were familiar with the form recalled how determining the best code was extremely difficult. They were previously overwhelmed by the categories and had difficulty with navigation. This time, they were able to find their code easily. One such respondent stated that, in 2007, he and his assistant spent a large quantity of time trying to determine the best code. He called his assistant into the interview and both of them agreed that the manual was much easier. They were able to find the same code they used in 2007, without looking at the form for that cycle. Then, they pulled out a copy of the 2007 manual and observed the differences between the two. This confirmed their belief that the revised manual was more efficient. Respondents who were unfamiliar with the form also found the appropriate code with ease. After one such respondent chose a code, he then took about 5 minutes browsing through the manual. He stated that he was “very impressed” with the large number of categories, yet it was easy to navigate through. He thought about his past employment and claimed he found appropriate codes for those products.

Recommendation: None.

Column H – Temperature Controlled

This question worked well in Item F. The location of the question made sense to respondents and they immediately understood the meaning of the question, without looking at the definition. Most respondents did not read the definition at the bottom of the page. There were a few respondents who answered “Y” to this question.

Recommendation: Consider removing the definition at the bottom of the page. Respondents did not notice it and were still able to comprehend the question. This was also true in Round 1, despite the fact that this question was a separate Item in that round of testing.

Resolution: This recommendation was not accepted. The definition will stay on the form in its current placement.

Column J – U.S. Destination or U.S. Exit Port

Most respondents had no problem reporting for this column because sampled shipments were predominately domestic. Some respondents for companies in Savannah, GA and Hampton Roads, VA indicated that this question is easy to answer because the ports in close proximity to the companies. The implication is that respondents knew what the actual address was and would be able to provide it. Probing later confirmed this.

Recommendation: None.

Columns K and N – Modes of transportation

All respondents noticed the transportation codes at the bottom of the page, either from recalling past experience with the form or reading the instruction at the top of Column J. For the most part, respondents understood the meaning of the codes. A few respondents were unsure of the difference between “private truck” and “for-hire truck.” One of these respondents looked up these terms in the

Instruction Guide and found clarity. One respondent referred back to the 2007 form and found that the new terms “Inland water” and “Deep Sea” were more comprehensible. The other respondents made correct assumptions about what the terms mean.

Recommendation: None.

Item F – Web Reporting Option

Finding #12:

Respondents responded favorably to the creation of a Web collection tool. Its benefits include faster completion time, less paper, and not contending with illegible handwriting. There were no downsides. All respondents gravitated toward the Excel spreadsheet upload feature as their primary method for inputting data. The familiarity of Excel, for respondents and their IT staff’s, prompted respondents’ choice of the upload feature. Between the dashboard and tab option, most respondents chose the dashboard option. It was easy to navigate and a great way to see all the characteristics of shipping records on the same page. Two respondents selected the tab option over the dashboard because they liked being able to input an entire column at once before proceeding to the next column.

With the exception of Shipment ID, Shipment Date, and Destination city, State/Country, respondents gave varied responses regarding what headers they would want to see saved at the end of the dashboard option. Those with the same commodity for each shipment did not think the SCTG code or commodity description would be that useful, while others who had varied commodities deemed them necessary.

Several respondents inquired about a review process before submission. In particular, one respondent, who favored the dashboard over the tab version, said he would like to review the data in the tab format. The interviewer and observer explained that, although the online tool is not yet complete, there will likely be some way to review the data. Most other respondents mentioned the desire to review their data in a PDF.

Recommendation: Make the dashboard as the alternative method in addition to the upload feature. Consider a review option in PDF format.

Resolution: Sponsors agree that the dashboard should be the alternative method, in addition to the upload feature. A review option in PDF format was not discussed, but it will be further addressed with SSD.

Item G – Rush Deliveries

Finding #13:

This Item worked very well. The definition proved useful for respondents and helped their comprehension. Respondents correctly answered the questions. Most respondents mentioned that a better term to use for this Item is “expedited” deliveries. A few respondents mentioned that “More than 3 business days,” as a response option in G2, is not a rushed or expedited delivery. Instead, they consider it to be ground shipping.

Some respondents mentioned that they would like to know ahead of time that they will be required to account for this type of delivery, because their systems may not capture it. It may require a more in-depth search through other record sources. A few suggested noting this requirement on an advanced letter.

Recommendation: Since there will be a pre-notification letter sent, indicating the weeks that respondents will need to report for, consider adding a statement about the need to report rush deliveries from their sample.

Resolution: This recommendation was not accepted because it would significantly lengthen the pre-notification letter. This letter can only be one page (pre-note can only be one page). Instead, the statement will be added to the cover letter that respondents receive in the mailout package. Respondents will receive the mailout package 2 weeks prior to the collection date, so this does allow them advanced notice.

Item H – Monthly Value of Outbound Shipments

Finding #14:

All respondents easily answered this Item. For the most part, respondents did not need to consult records because they had good working knowledge to make the best estimate. Most stated they would check with their accounting or finance department or sales reports if they needed to verify. Many respondents favored the broad dollar range within each response option because it was easier to select the correct answer.

Some respondents, who had knowledge of their annual sales figures, divided that number by 12 to calculate the monthly value. They indicated that they would perform this same calculation each quarter because the figures do not vary much and would likely fall within the same range.

There were varying interpretations of, “...most recently completed month.” Most respondents interpreted the phrase to mean the end of the previous calendar month. One respondent stated it would be the last month that her books were closed. For example, if she received the form in late July she would report for June. If she received the form at the beginning of July, she would report for May because her June books were not closed yet.

Recommendation: None

Works Cited

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Gower, A. (1994). Questionnaire Design for Business Surveys. *Survey Methodology*, 20, 125-136.

About the Response Improvement Research Staff (RIRS)

The Response Improvement Research Staff (RIRS) in the Office of Economic Planning and Innovation (OEPI) assists economic survey program areas and other governmental agencies with research associated with the behavioral aspects of survey response and data collection. The mission of RIRS is to improve data quality in surveys while reducing survey nonresponse and respondent burden. This mission is achieved by:

- Conducting expert reviews, cognitive pretesting, site visits and usability testing, along with post-collection evaluation methods, to assess the effectiveness and efficiency of the data collection instruments and associated materials.
- Assisting program areas with the development and use of nonresponse reduction methods and contact strategies.
- Conducting empirical research to help better understand behavioral aspects of survey response, with the aim of identifying areas for further improvement as well as evaluating the effectiveness of qualitative research.

For more information on how RIRS can assist your economic survey program area or agency, please visit the [RIRS intranet site](#) or contact the staff chief, [Diane Willimack](#).

Appendix A: Cognitive Research Methodology

Cognitive research is used in survey methodology “(a) to understand the thought processes used to answer survey items, and (b) to use this knowledge to find better ways of constructing, formulating, and asking survey questions” (Forsyth and Lessler, 1991).¹ Cognitive interviews traditionally focus on the four steps of Tourangeau’s (1984)² cognitive response model: comprehension, retrieval, judgment, and communication/reporting. Comprehension refers to the respondent’s interpretation and understanding of the question’s language, structure, and grammar. In order to answer the question, a respondent must understand what information is being requested on the survey. Retrieval is the step where relevant information is obtained, either from records or from memory. The next step, judgment, describes the respondent’s evaluation of the completeness or relevance of the data obtained. It is here that estimates are made based on partial or incomplete data. The last step, communication or reporting, deals with mapping the response to the answer space provided and possibly altering the answer.

While Tourangeau’s model is suitable for household and social surveys, the establishment survey setting presents additional factors that must be considered. First, instead of or in addition to a reliance on memory, establishment surveys rely heavily on records and the information contained within them. Second, organizations tend to have distributed knowledge. Some people are experts in one type of information, while others keep information about something else. Third, competing priorities, both for the organization and the individual(s) completing the questionnaire, mean that the survey sometimes does not receive the amount of attention that researchers and data collectors would like. Finally, organizations regularly authorize only a few individuals to release data. If the data provider is not authorized to release the data, an additional step must be added to the response process. Tourangeau’s model was expanded by Sudman *et al* (2000)³ to account for these factors.

¹ Forsyth, B.H. and Lessler, J.T. (1991). “Cognitive Laboratory Methods: A Taxonomy.” In Measurement Errors in Surveys, P.P. Biemer, R.M. Groves, L.E. Lyberg, N.A. Mathiowitz, S. Sudman (eds). New York: John Wiley & Sons, Inc.

² Tourangeau, R. (1984). “Cognitive Sciences and Survey Methods.” In Cognitive Aspects of Survey Methodology, T.B. Jabine, M.L. Straf, J.M. Tanur, and R. Tourangeau (eds). Washington, DC: National Academy Press.

³ Sudman, S., Willimack, D.K., Nichols, E., and Mesenbourg, T.L. (2000). “Exploratory Research at the U.S. Census Bureau on the Survey Response Process in Large Companies.” Paper prepared for presentation at the Second International Conference on Establishment Surveys, Buffalo, NY.

Appendix B: Cognitive Interview Protocol for Round 1

Before the Questionnaire

- Tell me a little about your role in this business. How long have you been here, and what are your major responsibilities? What is your title?
- Have you filled out government forms in the past?
- Generally speaking, how do government forms get completed?
- Shipping records:
 - What do they look like?
 - What information is contained within them?
 - How your shipping records are kept? (Are they paper-based or spreadsheet-based? If paper based, do they get lost or misplaced and how are they stored? What system do you use for creating spreadsheets? Are records in more than one format?)
 - Are they easily accessible or is there a process you need to go through in order to access them? Who has access to these records?
 - How are they filed (by date, customer, product, something else)?
 - How long do you keep the records on hand?

Now I'm going to hand you a copy of the questionnaire. We'll go through it page by page. Please write on it, and complete it as if we weren't here. I'll ask you questions when you've finished each page.

Item A – Verification of Shipping Address

- Observe R to see if they have to make corrections. Probe as necessary.

Item B – Verification of Mailing Address

- Observe R to see if they have to enter a different mailing address. Probe as necessary.

Item C – Operating Status

- How did you arrive at your answer to this question?
- How easy or difficult was it to come up with your response to this question?

Item D – Total Number of Outbound Shipments

- How did you arrive at your answers to this question? What records, if any, do you consult in order to come up with an answer?
- How easy or difficult was it for you to answer this question?
- Did you happen to notice the definition of an outbound shipment?
 - How well or how poorly does this definition match your own definition of “outbound shipment”?

- If R didn't read the definition before providing an answer: does this definition change your answer? In what ways? Does it change the process that you would use to come up with an answer?
- Did you happen to notice the instructions after the definition of outbound shipments?
 - Were there any problems incorporating those instructions to generate your response?
- Did you happen to notice the instructions after the response options in the second question?

Item E – Sampling Instructions

- Observe how R works through Item E. Note if they have difficulty working through the item.
- **Report every:** How did you come up with your “report every” number?
- In your own words what is this Item asking you to do?
- **Example:** Did you read the example? Did the example help to clarify the instruction or make them more difficult? Is there a better way to help you understand the instruction in Item E?

Item F – Shipment Characteristics

- Ask Rs to complete 2-3 lines of shipment data on Item F, using their own data. Observe Rs navigation and completion of pages 4-5. Are Rs following the arrows across the page or are they completing page 4 before starting page 5?
 - **Column D:** If R says “don't know value,” ask about range/approximation.
 - **Column F:** How helpful is the SCTG code manual? How easy/difficult was it for you to find the codes you were looking for? What do you think of the way the codes are organized? Do you have any suggestions for improvement?
 - **Column H:** (See if R reads the * at the bottom of the page). How did you arrive at your answer? Is this information available within your shipping records? Was the statement at the bottom of the page helpful?
 - **Column J:** How did you arrive at your answer? Is this information available within your shipping records or not?
 - **Columns K & N:** How do you track the modes? Do you know if the modes vary within shipments? What does your answer represent (just when it left the facility vs. all modes until it reaches recipient?) What do each of the transport codes mean to you?

Item F – Web Reporting Option

We are currently working on a web reporting option for Item F.

- How likely are you to complete this questionnaire online?
- What are the benefits, if any, for completing the questionnaire online?
- What is the downside, if any, to completing the questionnaire online?

Now I'd like to show you screen shots of three versions of how Item F may look online. (Explain how each one is structured and how the respondent would navigate through the pages. Mention how the excel spreadsheet upload feature as already a definite option).

- What are your thoughts of each version?
- Which of these two versions (show dashboard and tab spreadsheet) would you prefer to utilize if you were completing the questionnaire online? Why?
- Do you think both of these options (dashboard and tab spreadsheet) are easy to navigate through?
- On this (dashboard) version, once you have answered all of the questions a row will be created. However, due to space limitations, the row will not display all of the items you have answered, but would display the most important items for you to be able to identify that record. What items do you think should be displayed on this page?

Item G – Rush Deliveries

- How did you arrive at your answers?
- Is this information tracked in your records? If yes, how so?
- Does the company have a specific term or phrase used to describe these delivery methods?
- If any of these services are used, probe why they were used. What kinds of commodities were moved by rushed services? How was it determined which commodities should be rushed?
- Did you read the definition at the top? Was it helpful? How so?
- Did you notice the “exclude” sentence in the definition?
 - If yes - Were you able to follow that instruction when answering the question?
 - If no – Does that change your answer? Are you able to incorporate that instruction when answering that question?

Item H – Monthly Value of Outbound Shipments

- How did you come up with this answer? (Records? Estimate? “Usual” month?)
- What period of time does this amount refer to?
- What does “most recently completed month” mean to you, in the context of this question?

Wrap-up

- How much time would it take you to complete this report (actual time, not elapsed time)?
- Are you the person who would probably answer these questions, or would someone else answer them?
- Would the information requested on this form generally be available to you, or would information have to come from someplace else?
 - How would you go about getting that information?
 - Would you pass the form over to that department, or just get information from them over the phone/e-mail?

- Overall, how easy or difficult was it to complete this form?

Any other comments?

Appendix C: Questionnaire Used During Round 1 Cognitive Testing



2012 Commodity Flow Survey

FORM
CFS-1000 (2012)
(07-15-2011) Draft 7

OMB No. xxxx-xxxx: Approval Expires xx/xx/xxxx

DUE DATE:	
Return via Mail: U.S. Census Bureau 1201 East 10th Street Jeffersonville, IN 47132-0001 OR Return via Internet: www.census.gov/econhelp/cfs	
Username:	
Password:	
Need help or have questions? Call: 1-800-772-7851, option "3" M-F, 8:30 a.m. - 5:00 p.m. ET	

Make corrections to name, address, and ZIP code if necessary.

YOUR RESPONSE IS REQUIRED BY LAW. Title 13, United States Code, requires businesses and other organizations that receive this form to answer the questions and return the report to the U.S. Census Bureau. By the same law, **YOUR U.S. CENSUS BUREAU REPORT IS CONFIDENTIAL.** It may be seen only by persons sworn to uphold the confidentiality of U.S. Census Bureau information and may be used only for statistical purposes. Further, copies retained in respondents' files are immune from legal process.

INSTRUCTIONS:

- Refer to the accompanying Instruction Guide for help in answering specific questions.
- More information is available at <http://bhs.econ.census.gov/bhs/cfs/index.html>.

Item A VERIFICATION OF SHIPPING ADDRESS

Verify the address listed above is the location from which this establishment's shipments originate.

- Yes, the address listed above is correct. (Proceed to Item B.)
- No, the address is incorrect. (Make changes directly to the address label above.)

Item B VERIFICATION OF MAILING ADDRESS

1. What address should the 2012 CFS questionnaire be mailed to?

- Mail the 2012 CFS questionnaire to this establishment's shipping address. (Proceed to Item C.)
- Mail the 2012 CFS questionnaire to the address entered below.

2. Enter your mailing address.

Company Name 1

Company Name 2

Address

City

State

ZIP Code



Item C OPERATING STATUS

Which of the following best describes this establishment's operating status during the week of

?

In operation

Temporarily or seasonally inactive

Ceased operation - Enter date ceased operation →

Date (MM-DD-YYYY)

- -

Item D TOTAL NUMBER OF OUTBOUND SHIPMENTS

For this survey, it is important to obtain information about a sample of the outbound shipments made from this establishment.

An outbound shipment in this survey is defined as a movement of commodities from your establishment to another *single* location.

- Remember to include only outbound shipments from your shipping address (address printed on the label).
- Also include customer pick-ups, parcels, and all other outbound shipments.

1. What was the total number of all outbound shipments for this establishment the week of

?

Total number of outbound shipments

Estimates are acceptable.

For further information, refer to the Instruction Guide, page 2.

2. Did you enter 40 or fewer shipments above?

Yes (Skip Item E and report all outbound shipments in Item F, pages 4-7.)

No (Proceed to Item E, on page 3.)



Item E SAMPLING INSTRUCTIONS

In order to avoid asking you for information regarding all of your shipments, we will only ask about a sample of them. This section will help you **identify your sample of shipments** that should be reported in Item F.

Using the table below, mark the row that includes the total number of outbound shipments reported in Item D, and the corresponding "report every" number.

Number of outbound shipments reported in Line 1	Report every...	Mark (X) one
1-40	Report every outbound shipment	
41-80	Report every 2nd outbound shipment	
81-100	Report every 3rd outbound shipment	
101-200	Report every 5th outbound shipment	
201-400	Report every 10th outbound shipment	
401-800	Report every 20th outbound shipment	
801-1600	Report every 40th outbound shipment	
1601-3200	Report every 80th outbound shipment	
3201-6400	Report every 160th outbound shipment	
6401-12800	Report every 320th outbound shipment	
More than 12800	Call Census at 1-800-772-7851 or go to www.census.gov/cfs	

Example:

If an establishment reported 253 shipments in Item D, it would correspond to the range of 201-400 in the table above, and every 10th outbound shipment record would be selected. This means the establishment would count 10 shipment records, select that record, and report it in Item F. Continuing with the next shipment record, the establishment would count 10 shipment records again, select that record, and report it in Item F. The establishment would repeat this until it had gone through the full set of shipment records for the week named in Item D.

For further information, refer to the Instruction Guide, page 3, or visit the business help site at <http://bhs.econ.census.gov/bhs/cfs/index.html> to view an instructional video on how to sample.



Item F SHIPMENT CHARACTERISTICS

NOTE: Each line runs across pages 4 and 5. After entering column (I) data on page 4 for any line, continue with column (J) on page 5 for the same line.

Line No. (A)	Your Shipment ID Number (B)	Shipment Date (C)		Shipment value (excluding shipping costs) in whole dollars. Estimates acceptable. (D)	Net Shipment Weight in pounds (E)	SCTG commodity code from accompanying booklet (F)	Commodity Description (G)	Temperature controlled? (Y/N)* (H)	If a hazardous material, enter the "UN" or "NA" number (I)	Continue with column (J) on page 5
		Month	Day							
0	123-5	4	26	224,235	4,840	34520	Mechanical machinery	Y		→
00	402H	4	26	1,375	50,125	20222	Sulfuric acid	N	1830	→
1										→
2										→
3										→
4										→
5										→
6										→
7										→
8										→
9										→
10										→
11										→
12										→
13										→
14										→
15										→
16										→
17										→
18										→
19										→
20										→

*Temperature controlled (column H) - includes shipments in refrigerated, heated, or insulated containers and vehicles.



Item F SHIPMENT CHARACTERISTICS - Continued

NOTE: Each line runs across pages 6 and 7. After entering column (I) data on page 6 for any line, continue with column (J) on page 7 for the same line.

Line No. (A)	Your Shipment ID Number (B)	Shipment Date (C)		Shipment value (excluding shipping costs) in whole dollars. Estimates acceptable. (D)	Net Shipment Weight in pounds (E)	SCTG Commodity Code from accompanying booklet (F)	Commodity Description (G)	Temperature controlled? (Y/N)* (H)	If a hazardous material, enter the "UN" or "NA" (I)	Continue with column (J) on page 7
		Month	Day							
21										→
22										→
23										→
24										→
25										→
26										→
27										→
28										→
29										→
30										→
31										→
32										→
33										→
34										→
35										→
36										→
37										→
38										→
39										→
40										→

*Temperature controlled (column H) - includes shipments in refrigerated, heated, or insulated containers and vehicles.



Item G RUSH DELIVERIES

For this survey, rush deliveries require the purchase of a faster level of service by the shipper or buyer (e.g., same day/overnight or 2-3 business days). It also includes faster service provided by hired carriers, as part of an arrangement. Excluded, are shipments that would arrive in the same amount of time without the purchase of a faster level of service, and shipments delivered by company operated vehicles.

1. Considering the shipments reported in Item F, did you use rush delivery service?

Yes

No (Proceed to Item H.)

2. How many shipments, reported in Item F, required the use of the following rush delivery services?

Same day/Overnight

2-3 business days

More than 3 business days

Item H MONTHLY VALUE OF OUTBOUND SHIPMENTS

Which of the following represents your best estimate of the total value of all outbound shipments originating from this establishment for the most recently completed month?

Less than \$1 Million

\$40 Million or more but less than \$100 Million

\$1 Million or more but less than \$10 Million

\$100 Million or more but less than \$400 Million

\$10 Million or more but less than \$40 Million

\$400 Million or more

Contact Provide the information below for the contact person regarding this report.

Name - *Please print*

Title - *Please print*

Signature

Area Code

Phone Number

Extension

Remarks Use this space to clarify your responses, if appropriate.

Please return this survey in the enclosed envelope or send it to:

U.S. CENSUS BUREAU
1201 East 10th Street
Jeffersonville IN 47132-0001

THANK YOU FOR COMPLETING THIS REPORT.

