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The April 2011 American Community Survey Internet Test: Attitudes and Behavior Study Follow-up

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Abstract:

In April 2011, the U.S. Census Bureau conducted an Internet Test in which different mailing materials and mailing strategies were used to offer an Internet reporting option for the American Community Survey (ACS). In two treatments, only an Internet reporting option was initially offered, with a paper form following in a subsequent mailing. The timing of the subsequent mailing varied. In two other treatments, both modes were offered simultaneously, but the treatments varied the amount of emphasis on the Internet option. In April and May, the Census Bureau fielded a follow-up telephone survey of approximately 1,200 ACS respondents and nonrespondents to the Internet Test survey. This follow-up study gathered information about how effectively the mailing materials for the Internet Test conveyed the response option choices. Follow-up questions focused on which components of the mailing materials or mailing strategy motivated sample households to respond by the Internet or by the paper form. Questions were also included to determine why some households did not respond at all.

This report presents results from the follow-up telephone study of respondents and nonrespondents to the 2011 ACS Internet Test. Results of the follow-up study show that the majority of respondents knew they could respond either by paper or via the Internet to the ACS. The mode choice did not seem to affect the decision not to respond. Many nonrespondents in this study claimed never to have received the ACS envelope; if they did receive the envelope, many said they did not open it because they were too busy.

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EXECUTIVE SUMMARY

Test Objective

In April 2011, the U.S. Census Bureau conducted the 2011 American Community Survey (ACS) Internet Test to evaluate the feasibility of providing an Internet reporting option to addresses selected for the ACS (Tancreto, Zelenak, Davis, Ruiter, & Matthews, 2012). In addition to the production sample which did not receive an Internet reporting option, four experimental treatments or notification strategies were designed to test different ways to inform potential respondents of the Internet option. Two "Push" strategies directed respondents to use the Internet option (by providing only the Internet option in the initial mailing package) and the other two "Choice" strategies offered the Internet and a paper form as alternate choices. The main objective of that test was to determine the best way to present the Internet mode in the ACS mailings to maximize self-response.

Within approximately three weeks of the April Internet Test, the Census Bureau conducted a study called the Internet Follow-up (IFU) to collect qualitative feedback on the mailing materials used in the test, to learn preferences with regard to reporting via the Internet, and to understand the reasoning behind the selection of mode of response (or the decision not to respond.) The results for this portion of the IFU, called the Attitudes and Behavior Study (ABS), are reported here.

Methodology

The ABS was a computer-assisted telephone interview study. ACS responding and nonresponding households with telephone numbers were sampled for the study. Three groups from the Internet Test were sampled: Internet responders, mail responders and nonresponders. In addition, a control group of mail respondents from the April 2011 ACS production sample were sampled for the ABS.

The ABS interviews consisted largely of open questions, gauging respondents' reactions to the mailing materials used in the Internet Test, their preferences with regard to reporting via the Internet, and their reasons for the selection of mode of response (or the decision not to respond).

The ABS response rate was 84 percent for Internet responders; 87 percent for Internet Test mail responders; 38 percent for nonresponders; and 82 percent for control mail responders. All total, 1,700 interviews were available for analysis.

Research Questions and Results

What is the respondent's motivation for responding to the ACS in the selected mode?

 Internet respondents reported choosing that mode because it was easy, faster, and convenient. Across all notification strategy treatments, reported ignorance of the paper form was also a reason cited for completing the survey on the Internet. • The primary reason cited by mail respondents for using the paper form was ignorance of the Internet option.

What are the reasons for not responding to the ACS?

- Not receiving the ACS envelope and not opening the envelope were the top two reasons given for not responding to the ACS across all notification strategies.
- There was no support for a hypothesis mentioned in the literature (Millar & Dillman, 2011) that presenting respondents with a choice of mode, per se, "paralyzes" them, leading to nonresponse.

Was the mode choice message effectively communicated in the different notification strategies?

- Generally, the mode choice message was placed on materials that were salient to ABS respondents.
- The mode choice message was one of the more salient messages spontaneously recalled from the letter, second only to the message informing respondents that survey participation was mandatory.
- When explicitly asked, not all Internet respondents were aware of the paper form, and not all mail respondents in the Internet Test reported knowing there was an Internet survey option. About 42 percent of the control mail respondents reported that there was an Internet option, despite the fact that they did not have an Internet option nor were they notified of one.

What are the characteristics of Internet respondents, mail respondents, and nonrespondents?

• Internet respondents tended to use the Internet more hours on a daily basis and to perform Internet activities more often than either mail respondents or nonrespondents.

How did Internet respondents, mail respondents, and nonrespondents interact with the online ACS survey?

• Most of the time, the online ACS form was completed at home, followed by at work, and then at a place other than home or work.

What are the attitudes toward completing the ACS online?

- Approximately 30 percent of the control mail sample said that they prefer the Internet.
- The percent of mail respondents who reported that they would not complete an online ACS form if the paper form was not available ranged from approximately 13 to 31 percent.

1. BACKGROUND

1.1 Motivation for the April 2011 ACS Internet Test Attitudes and Behavior Study

The Attitudes and Behavior Study (ABS) was designed to measure why respondents chose the Internet survey or paper form to respond to the April 2011 American Community Survey (ACS) Internet Test and whether anything specific in the mailing materials tested affected mode choice. The secondary objective was to measure why some people did not respond to the ACS at all, and whether nonresponse had to do with the multi-mode offer in the test (Nichols, 2011).

A frequent survey finding is that when people are given a choice of responding by Internet or mail, they are less likely to respond than when only a mail response is offered (Gentry & Good, 2008; Griffin, Fischer, & Morgan, 2001; Grigorian & Hoffer, 2008; Millar & Dillman, 2011; Smyth, Dillman, Christian & O'Neill, 2010). We do not know whether they do not respond because they actively cannot decide between the modes, whether they put off the decision so much so that they forget about the task, whether the choice itself makes them reconsider reporting altogether or makes the reporting task seem not as urgent, or whether some other mechanism is at work. One explanation, what might be called, "mode paralysis," is explained in Millar and Dillman (2011). They cite psychological research which posits that "...every option has opportunity costs associated with it, and when two options are compared to each other, individuals must consider tradeoffs. This makes each option appear less appealing than it would if offered alone, leading to no compelling reason to select either one... This suggests that by offering a choice between Web or mail response, surveyors are certainly not encouraging response and, in fact, they may even be discouraging it" (p. 252).

"Mode paralysis" was a concern of Census Bureau staff prior to the fielding of the April 2011 ACS Internet Test. In fact, the ABS was designed as a precautionary measure, just in case the 2011 ACS Internet Test followed the pattern of the 2000 ACS Internet Test, where the panel with the multiple-mode offer had a lower response rate than the control panel, which only offered the traditional paper form (Griffin, Fischer & Morgan, 2001). In contrast to that study and the other studies highlighted previously, there was no evidence of lower response rates in the experimental groups who were offered a mode choice in the 2011 April ACS Internet Test (Tancreto, Zelenak, Davis, Ruiter, & Matthews, 2012). Nonetheless, the ABS provides a rich dataset to examine the knowledge, attitudes and behaviors associated with respondents and nonrespondents of the ACS Internet Test.

1.2 Previous Testing

A portion of the 2011 ABS questions were similar to those questions used in the Applied Behavior Analysis in the 2000 ACS Internet Test (Nichols & Marquis, 2001). In 2000, the Applied Behavior Analysis questionnaire was administered to a sample of the ACS nonrespondents in the experimental panel to find out why they did not respond to either mode. Prior to data collection, mode paralysis was suggested as a reason for nonresponse in that test.

The results of the 2000 Applied Behavior Analysis were limited by the small sample size. Only 58 ACS "nonresponders" responded in the Applied Behavior Analysis study. Furthermore, the study was conducted five to seven months after the mailout of the multi-mode ACS

experimental panel. Many of the "ACS nonresponders" who answered the Applied Behavior Analysis questions did not even remember the ACS mailing package. Most of the people who claimed to have opened the package said that they considered answering the ACS by paper. Thus, the analysis did not find evidence to suggest that offering an Internet response option had somehow led to the nonresponse. Additionally, the analysis did not find that the nonrespondents were still trying to decide which mode to complete.

The 2011 ABS represents a more systematic attempt to uncover the reasons for nonresponse or response by a particular mode. Approximately 1,700 households completed the ABS in 2011. The follow-up interview took place much closer in time to when the ACS packages were mailed out. In addition to surveying nonrespondents, the ABS also surveyed mail respondents and Internet respondents to learn about their motivators for responding.

2. METHODOLOGY

2.1 ACS Internet Test Experimental Treatments

The 2011 April ACS Internet Test occurred concurrent with the April 2011 ACS panel. The Internet Test ran from late March to late May. In addition to having a control group drawn from the production sample for whom no Internet option for reporting was available, the April 2011 ACS had four experimental conditions or notification strategies (Zelenak, Ruiter, Davis, Horwitz, & Tancreto, 2010). There were two "Choice" strategies and two "Push" strategies. The strategies varied when the different reporting modes were offered and the emphasis placed on the Internet reporting mode. These changes were implemented in the ACS mailing pieces sent to respondents (pre-notice letter, initial questionnaire mailing, reminder postcard, and, for nonrespondents only, replacement questionnaire mailing and an additional reminder postcard¹).

In the two "Choice" strategy conditions, the paper form and the Internet reporting option were offered concurrently. These treatments were called the Prominent Choice and the Not Prominent Choice strategies. The strategies differed in the emphasis on the Internet reporting option. The Prominent Choice strategy explicitly mentioned the Internet option in the text of the letters and mailing materials and the Not Prominent Choice strategy only subtly mentioned the Internet option on the paper form itself. As explained in Tancreto et al., (2012), "...this strategy was to provide the Internet option to those who were looking for it while attempting to alleviate a respondent's tendency to do nothing when offered response mode choices...."

The two "Push" strategies offered the Internet mode first. For these treatments, access information for the Internet survey was offered at the time of the initial mailing and a paper form was offered in a replacement mailing for households that had not responded. The two Push strategies differed in how much time had elapsed between the mailing of the initial and replacement mailings, with the Push Accelerated strategy sending the form approximately one week earlier than the Push Regular strategy.

Copies of the questionnaire cover used in each strategy are presented in Appendix A. Copies of the letters used in the initial mailings are shown in Appendix B. A copy of the letter used in the

¹ The additional reminder postcard was mailed only to nonrespondents for whom the Census Bureau did

replacement mailing for the Push Regular treatment is presented in Appendix C. The English-language Internet Instruction Card is shown in Appendix D.

The letter sent in both the initial and replacement mailings was used to communicate the mode choice. The letter in the initial mailing explained the response mode options (paper or Internet) in the Prominent Choice and the two Push notification strategies. There was no mention of an Internet reporting option in the letter for the initial mailing in the Not Prominent Choice strategy. The letter in the replacement mailing followed the same pattern; that is, the two reporting modes were mentioned in the Prominent Choice and two Push strategies only.

In the two Push strategies, the letter in the initial mailing instructed households to complete the survey online, and, if they could not complete the survey online, they were to wait for a paper questionnaire to be mailed. The same initial letter was used for both Push notification strategies. The Push strategies' letter emphasized that completing the survey online conserves natural resources, saves taxpayers' money, and allows for quicker data processing. The replacement mailing letter was nearly identical between the two Push strategies, and offered the choice of modes. The only difference was the reference to when the initial mailing package was mailed (two weeks ago or three weeks ago).

In the Prominent Choice strategy letter, respondents were offered both response options (paper and Internet) and no emphasis was given to either. The Internet option was mentioned first in the letter in the initial mailing. The paper questionnaire was mentioned first in the replacement mailing.

The Internet option was mentioned on the front cover of the paper questionnaire in all of the notification strategies, with the offer being somewhat "buried" among other messages in the Not Prominent Choice strategy.

In the Push strategies and Prominent Choice strategy, an Internet Instruction card was mailed in both the initial and replacement mailings. This card contained yet another notification of the mode choice for the Prominent Choice strategy and the log-in information for the Internet for the two Push strategies.

In the mail control ACS panel, no mention of the Internet option was made in any of the mailing materials.

Figure 1 displays the materials used in each of the mailings (initial or replacement) by notification strategy and whether or not the materials contained reference to the Internet reporting option, denoted by an (I).

Materials in either				
the Initial or				
replacement		Not Prominent		
mailing	Prominent Choice	Choice	Push Regular	Push Accelerated
Form	Initial (I)*	Initial (I)	Replacement (I)	Replacement (I)
	Replacement (I)	Replacement (I)		
Letter	Initial (I)	Initial	Initial (I)	Initial (I)
	Replacement (I)	Replacement	Replacement (I)	Replacement (I)
Internet	Initial (I)		Initial (I)	Initial (I)
Instruction Card	Replacement (I)		Replacement (I)	Replacement (I)
Questionnaire	Initial	Initial	Replacement	Replacement
Guide	Replacement	Replacement		
FAQ	Initial	Initial	Initial	Initial
	Replacement	Replacement	Replacement	Replacement
Return Envelope	Initial	Initial	Replacement	Replacement
	Replacement	Replacement		

^{* (}I) means Internet option is mentioned on the material

2.2 ACS Internet Follow-up Interview Design

This study was part of a larger follow-up survey conducted by the Census Bureau called the ACS Internet Follow-up (IFU). A sample of the addresses selected for the ACS Internet Test was recontacted for the IFU, which had two components: the ABS and the Content Reinterview Assessment (CRA). The CRA is a separate project; its research goals are explained in Horwitz (2011) and results are found in Horwitz (forthcoming).

Four groups were sampled for the IFU: ACS Internet Test mail respondents, ACS Internet Test Internet respondents, Internet Test nonrespondents, and control mail respondents.

- There were 6,000 CRA sampled cases for the ACS Internet Test mail respondents and 560 were subsampled for the ABS. In the 560 cases with both an ABS and CRA component, the ABS questions preceded the CRA questions.
- There were 6,000 CRA sampled cases for the ACS Internet Test Internet respondents and 560 were subsampled for the ABS. In the 560 cases with both an ABS and CRA component, the ABS questions preceded the CRA questions.
- There were 2,900 ACS Internet Test addresses, which did not submit a response by Internet or mail, sampled for the ABS. These are the nonrespondents². These cases did not receive the CRA questions.
- There were 140 mail control respondents from the production panel, who did not have an opportunity to report online, sampled for the ABS. These cases did not receive the CRA questions.

Internet respondents who reported in Spanish did not receive ABS questions, but could have received the CRA questions.

² Households that logged on to the Internet, but did not submit data over the Internet are included in the nonrespondent universe in addition to those households which never logged on or returned a paper form.

The IFU Internet and mail universe for sample selection was households where the phone number and respondent name were available. The IFU was conducted only with the original ACS respondent. For mail respondents, if no respondent name was provided, Person 1 was used as the default respondent.

Nonrespondent households were eligible for sample selection only if a telephone number could be located. For these cases, the IFU (which consists only of the ABS questions) was conducted with someone 15 years or older who typically handled the mail and was knowledgeable about the household.

Mail and Internet households were selected for the IFU at two different times (April 12 and May 1). The early date allowed the Census Bureau to start interviewing very soon after an ACS response was received. The goal of selecting the early date was to reduce memory error associated with the ACS experience. Nonrespondent households were selected on May 1, 2011. This was the date that a telephone nonresponse follow-up operation would have started if such an operation had been part of this test, just as was done with the production sample.

The IFU was conducted through a centralized Computer-Assisted Telephone Interview (CATI) operation. Interviewers from the telephone centers in Jeffersonville and Tucson conducted the interviews. Interviewers were trained for one day for this study. The ABS interviewing period was from mid-April to mid-May of 2011.

Figure 2 shows the timing of the mailouts for the April ACS Internet Test, the sampling for the ABS, and the ABS data collection.

Figure 2: ACS Internet Test (IT) and Attitudes and Behavior Study Timing

Dates in 2011	Control	Prominent Choice	Not Prominent Choice	Push Regular	Push Accelerated
March 24	Mailed ACS	Mailed ACS IT	Mailed ACS IT	Mailed ACS IT	Mailed ACS IT
	Pre-notice letter	Pre-notice letter	Pre-notice letter	Pre-notice letter	Pre-notice letter
March 28	Initial ACS mailout	Initial IT mailout	Initial IT mailout	Initial IT mailout	Initial IT mailout
March 31	Reminder Postcard	Reminder Postcard	Reminder Postcard	Reminder Postcard	Reminder Postcard
April 12		1 st cut for ABS			
		sample selection (mail and Internet)	sample selection (mail and Internet)	sample selection (Internet)	sample selection (Internet)
April 14					Replacement ACS IT mailout
April 20		Began ABS interviewing	Began ABS interviewing	Began ABS interviewing	Began ABS interviewing
April 21	Replacement ACS mailout	Replacement ACS IT mailout	Replacement ACS IT mailout	Replacement ACS IT mailout	
May 1	Cut for ABS sample selection (mail)	2 nd cut for ABS sample selection (NR,mail and Internet)			
May 9	Began ABS interviewing				
May 23	Ended ABS data	Ended ABS data	Ended ABS data	Ended ABS data	Ended ABS data
	collection	collection	collection	collection	collection
May 31		Ended IT	Ended IT	Ended IT	Ended IT

2.3 Sample Selection and Response Rates

Within each of three groups in the ACS Internet Test (i.e., Internet respondents, mail respondents, and nonrespondents), cases were selected from each of the four notification strategies, with the goal of having 100 ABS respondents for each of the strategies within each response group. All of those groups had the opportunity to report either by paper or by the Internet to the ACS.

Sample was also selected to obtain 100 responses from mail respondents in the control panel part of the April 2011 ACS production sample. This group did not have the opportunity to respond online. We selected the sample in this way so that we could compare findings among the different notification strategies and compare findings among response group types.

The goal of 100 completed interviews per notification strategy per response group was met with one exception. We did not have enough interviews for the Push Regular mail respondents. This limitation is discussed in Section 3.

The ABS response rates were as expected, with relatively high rates for Internet and mail respondents (between 71% and 100%) and lower rates for nonrespondents (between 33% and 42%). Having said that, the response rates for the nonrespondent group were actually better than we had anticipated when the sampling plan was drawn up; thus, the nonresponse sample available for analysis was substantially larger than expected.

The number of cases selected, weighted response rate (RR), and number of cases used for analysis are shown in Figure 3. The response rate was calculated using the response rate outlined in Marquette (undated) for production ACS CATI. Completes and partials were included in the numerator and all cases in the denominator were considered eligible. The final data file for analysis was created independently and some cases which were part of the response rate calculation were not used or were missing in the analysis file. A detailed explanation of the missing cases is available in the footnotes of Figure 3.

Figure 3: ABS sample size and response rates

Posponso groups	Control	Prominent	Prominent Not Prominent		Push
Response groups	Control	Choice	Choice	Push Regular	Accelerated
		Sample: 140	Sample: 140	Sample: 140	Sample: 140
Internet ¹	No sample	RR: 71.7%	RR: 83.4%	RR: 85.8%	RR: 87.2%
		Analysis: 105	Analysis: 115	Analysis:119	Analysis:118
	Sample: 140	Sample: 140	Sample: 140	Sample: 1 ³	Sample: 140
Mail ²	RR: 81.9%	RR: 90.8%	RR: 85.0%	RR: 100%	RR: 84.5%
	Analysis: 113	Analysis: 119	Analysis: 104	Analysis:0	Analysis:112
		Sample: 725	Sample: 725	Sample: 725	Sample: 725
NR ⁴	No sample	RR: 33.8%	RR: 38.4%	RR: 41.4%	RR: 40.3%
		Analysis:180	Analysis: 196	Analysis:191	Analysis:228

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

2.4 ABS Questionnaire Design

A slightly different ABS CATI survey was administered to each of the three response groups (i.e., Internet, mail and nonrespondents). Many of the questions were identical across the surveys and the same topics were covered with a few exceptions.

Staff from the Center for Survey Measurement (CSM) and ACS staff in the Decennial Statistical Studies Division (DSSD) designed the ABS questionnaire to collect feedback on the salience of the mailing materials and messages, knowledge of the mode choice, consideration of reporting by the Internet, and mode preference. The questionnaires also included questions about whether respondents tried to complete either the paper ACS form or the Internet survey unsuccessfully and where break-offs occurred. Internet usage was collected for everyone and demographics were collected for nonrespondents only.

Cognitive testing of the ABS was not conducted prior to the field period due to tight questionnaire development timing. Internet usage and demographic questions were modified slightly from the Census Barriers, Attitudes, and Motivators Survey (CBAMS) questions (Johnson, 2009). Some of the ACS demographic questions were lengthy and we did not want to use them in these telephone contacts. Many questions in the main questionnaire were taken from the Applied Behavior Analysis questionnaire of the 2000 ACS Internet Test (Nichols & Marquis, 2001). However, there were some new questions asked in the ABS which had not been fielded previously and were not pretested.

The ABS questions for the three response groups, including the screener questions used to identify the correct respondent, are listed in Appendices E-I.

¹ Two Internet cases were considered complete or partially complete cases for the response rate calculation, but were not used during analysis because they contained very few responses. There were 15 missing Internet cases when files were transferred for analysis. This issue was not resolved prior to writing this report.

² There were 32 missing mail cases in the Internet Test when files were transferred for analysis. This issue was not resolved prior to writing this report.

³ At the time of ABS sample selection, there was only one completed Push Regular mail respondent case that had gone through Census Bureau processing. This case completed the ABS, but was not included in the analysis because the results could not be generalized to that panel.

⁴ Approximately 26 percent of the cases in the nonrespondent group who answered the ABS were not used during data analysis because we determined that they were actually late responders.

The ABS contained many open questions to be field-coded by interviewers. Responding to open questions relies on respondent recall rather than recognition and it is considered more difficult than responding to closed questions (MacDougall, 1904; Cannell, Miller & Oksenberg, 1983; Haist & Shimamura, 1992). The development of pre-coded response choices helped reduce the amount of recoding needed. The goal of the open questions was to obtain salient themes recalled by respondents and nonrespondents without the influence of response choices read by an interviewer. Most of the questions and response choices were not pretested.

The ABS survey was approximately 10 minutes long and was only administered in English.

2.5 Analysis Methods

SAS (<u>www.sas.com</u>) was used to produce the statistics in this report. All results are weighted to reflect their probability of selection into the ABS. They were not weighted to either the ACS sample (to account for nonresponse) or to national levels. The author used the Taylor series expansion method found in SAS proc surveyfreq and proc surveymeans to compute standard errors that reflect the sample design. The standard errors for results discussed in the text are found in the tables provided.

All statistical analyses employed the Wald Chi-square test of Independence for the comparisons. Because so few comparisons were made, they were not adjusted for multiple comparisons.

3. LIMITATIONS

3.1 No Push Regular mail respondents were selected for the ABS.

The ABS sample selection occurred before a sufficient number of Push Regular mail respondents had returned the completed mail form. That treatment had received the paper questionnaire only 11 days prior to selecting the ABS sample (see Figure 2). At the time of the ABS sample selection, only one ACS mail respondent in the Push Regular strategy had returned his/her form and it had been checked in and keyed at the Census Bureau. This household was selected for the ABS and actually completed the ABS. But because there was only one response in that treatment for that response group, I removed it from the ABS analysis.

3.2 Nonresponse group for all four notification strategies is reduced for analysis in this report.

Early in the analysis, the author observed that many of 1,082 nonrespondents reported mailing in their ACS form. DSSD staff matched the entire ABS nonrespondent group to the ACS Internet Test data and found that in fact 287 of them had actually completed the ACS, albeit later than the cut off for the ABS nonresponse group selection. Some had responded before the ABS interview took place and some responded after the ABS interview occurred. Most responded using the paper form, but some used the Internet. All 287 late responders were removed from analysis, which left only 795 true nonrespondents for analysis. This limitation did not affect the analysis significantly as we exceeded our original sampling goal of 400 nonrespondents.

3.3 Low response rate for nonrespondent group

The ABS response rate for the nonrespondent group is low. It could be that the nonrespondents who did not complete the ABS were different from those who did.

3.4 Coding of responses

Every open question in the ABS had an "other" category. The author coded all the responses in the "other" categories with some help from a research assistant. There was no assessment of coding reliability.

3.5 ABS Questionnaire Responses

There was some inconsistency between the field-coded responses and the records of the ACS Internet Test mail-out. The author observed these errors primarily with regard to the mailing materials recall questions and the query on use of the paper form. For example, some people in the Not Prominent Choice strategy were field-coded as recalling having seen the Internet Instruction Card. That treatment group did not receive the card. As another example, some Internet responders in the Push strategies said they filled out the paper form, or used it as a guide, but according to the Internet Test records, they never received a paper form. Coding or recall errors such as these could have been caused by the questions, the codes provided to interviewers, or interviewer miskeying. These issues are discussed below in the results section.

Respondents and nonrespondents especially might have felt pressure to give socially desirable answers. For instance, a nonrespondent might not want to acknowledge that he/she did not complete the ACS or a respondent might report that he/she read the ACS letter that came in the materials.

The ABS respondents had to retrospectively describe past actions with the ACS materials that they might not have encoded at the time, or to which they might have paid scant attention.

4. RESULTS

This section organizes the research findings into five topics corresponding to the research questions outlined in Nichols (2011): 1) motivation for choosing one mode over the other and reasons for nonresponse; 2) communication of the mode choice; 3) interaction with the online ACS; 4) attitudes toward responding online; and 5) characteristics of Internet, mail and nonrespondents.

Most of the analyses are presented by response group by notification strategy, since the results may vary according to these dimensions. The attitudinal data and demographics are presented by response group only.

4.1 What is the respondent's motivation for responding to the ACS and what are the reasons for not responding to the ACS?

The first topic of analysis examines the reasons for the ACS respondent or nonrespondent behavior - response by paper, response by Internet, or nonresponse. The ABS attempted to answer whether mode choice was a reason for nonresponse. The ABS also attempted to determine if there are motivators that the Census Bureau can capitalize on to encourage a response over the Internet. To answer this question, this report seeks to identify motivating messages in the mailing materials. This section first reports on ACS respondents and then nonrespondents.

4.1.1 What are the reasons for choosing the Internet survey to answer the ACS?

The ABS contained two questions to determine why a respondent used the Internet as his/her reporting vehicle. First, the ABS interviewer asked the respondent if he/she knew there was a paper form, "We received your completed survey over the Internet. As far as you can recall, could you have chosen to respond using a paper questionnaire?" If the respondent knew that he/she could have completed a paper questionnaire, the ABS asked an open-ended question, "Why did you decide to use the Internet to complete the survey?"

Table 1 displays the percent of the 457 Internet respondents who did \underline{not} know there was a paper form, broken down by notification strategy. For these respondents, they used the Internet because they did not know they had a choice.

Table 1. Percent of 457 ACS Internet respondents who did <u>not</u> know they could have chosen to report by paper by notification strategy (standard error in parentheses)

(n=105) (n=115)		Notification Strategies				
()		Push Regular	Push Accelerated			
Did not know could 11.2% 9.7%	(n=	(n=119)	(n=118)			
	not know could 11.	26.2%	22.1%			
choose paper (3.2) (3.0)	ose paper (3.3	(4.1)	(3.8)			

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

There is a difference in the percent of respondents who knew about the paper form in the different notification strategies. Combining both Push strategies, approximately 24.1 percent (s.e. = 2.8) of the Internet respondents in the Push strategies reported that they did not know they could have chosen to report using a paper form, which is significantly higher than the 10.5 percent (s.e. = 2.1) of respondents in the Choice strategies who reported that they did not know they could complete a paper form using a Wald Chi-Square Test (F=15.3, p<.0001). The finding that proportionally more Push respondents did not know about the paper form compared to the Choice respondents is not surprising, since the initial and replacement mailing for the two Choice strategies contained a paper form, whereas only the replacement mailing of the two Push strategies contained the paper form. Over half of the Internet respondents in the Push strategies in the ABS never received the replacement mailing. Unless Push strategy respondents read the letter, they would not know about the availability of a paper form.

For the Internet respondents who reported knowing about the availability of the paper form, Table 2 provides the reasons these respondents decided to report via the Internet. The percent of Internet respondents in each notification strategy who reported the reason is presented. The percentages in the columns do not sum to 100 because only reasons provided by five percent or more of the respondents in a notification strategy are presented in the table, and the ABS respondents could have reported more than one reason. For example, a respondent could report that she used the Internet because it was easy and faster.

Table 2. Percent of ACS Internet respondents who reported these reasons for deciding to complete the ACS on the Internet by notification strategy (standard error in parentheses)

	Notification Strategies			
Reason for deciding to				Push
use the Internet to	Prominent Choice	Not Prominent Choice	Push Regular	Accelerated
complete the ACS	(n=93)	(n=104)	(n=88)	(n=92)
Easy	60.1%	69.1%	41.9%	46.8%
	(5.4)	(4.8)	(5.3)	(5.2)
Faster	29.4	33.7	21.6	25.8
	(5.0)	(5.0)	(4.4)	(4.6)
Convenient	30.8	18.3	23.8	20.5
	(5.2)	(4.0)	(4.6)	(4.2)
Prefer to do everything	6.3	12.6	13.8	11.9
on the Internet	(2.6)	(3.4)	(3.7)	(3.4)
No paper form	0	0	4.6	9.7
			(2.3)	(3.1)
Don't know or Item NR*	2.8	2.6	7.9	7.7
	(1.7)	(1.8)	(2.9)	(2.8)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

Proportionally more Internet respondents in the Choice strategies (averaged 63.3% with a standard error (s.e.) of 3.9) reported using the Internet because it was easy compared to the 44.4 percent (s.e., 3.7) of respondents in the Push strategies (Wald Chi-Square Test: F=12.4, p=.0005). Other than this difference, the other main reasons reported for choosing the Internet are similar across the notification strategies. The other main reasons are that the Internet is faster and convenient.

About 6 to 14 percent of Internet respondents across notification strategies reported that they prefer to do everything on the Internet. And about 5 to 10 percent of Push strategy respondents reported that there was no paper form and that was a reason why they chose the Internet.

Most Internet respondents could articulate a reason for choosing the Internet. The "do not know" rate was approximately 8 percent or lower across the notification strategies.

There were other responses given, but not by more than 5 percent of the respondents in any of the notification strategies. Some of those reasons included that they did not have to mail the form, it was a new experience, they did not have a return envelope, the Internet was secure, and that it saved money. In the two Push strategies, three respondents reported that they thought they had to use the Internet, and two said the Internet option came first.

^{*} Respondent could not report don't know and another reason.

4.1.2 What are the reasons for choosing the paper form to answer the ACS?

Parallel to the ABS for Internet respondents, the ABS interviewer asked mail respondents two questions about why they chose to report using the ACS paper form. First, the ABS interviewer asked the respondent if he/she knew there was an Internet survey: "We received a completed form in the mail from you. As far as you can recall, could you have chosen to respond over the Internet?" If the respondent knew he/she could have completed the survey over the Internet, the ABS interviewer asked an open-ended question, "Why did you decide to use the paper form to complete the survey instead of using the Internet?"

Table 3 displays the percent of the 335 mail respondents who did <u>not</u> know there was an Internet option, broken down by notification strategy.

Table 3. Percent of 335 ACS mail respondents who did <u>not</u> know they could have chosen to report via the Internet by notification strategy¹ (standard error in parentheses)

		Notification Strategies	
			Push
	Prominent Choice	Not Prominent Choice	Accelerated
	(n=119)	(n=104)	(n=112)
Did not know could	37.0%	47.1%	38.4%
choose Internet ²	(4.4)	(4.9)	(4.6)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

About 37 to 47 percent mail reporters used the paper form because they did not know about the Internet survey. The lack of knowledge of the mode choice was constant across notification strategy. Approximately half of the Not Prominent Choice mail reporters said they did not know about the Internet reporting option, which is not surprising since notification of that mode was buried in text on the cover of the questionnaire. On the other hand, around 37 percent of Prominent Choice and Push Accelerated mail reporters said they did not know about the Internet option. It is surprising that so many mail respondents in the Push strategy reported not knowing about the Internet option since no paper form was sent in the initial mailing package. It is possible that those mail reporters never opened the initial mailing envelope.

For the mail respondents who reported knowing about the availability of the Internet reporting option, Table 4 presents the reasons reported for choosing the paper form instead of the Internet. Again, respondents could provide more than one reason for using the paper form and only reasons mentioned by five percent or more of respondents are listed; thus, percentages in the columns may not sum to 100 percent.

¹No data are present for the Push Regular notification strategy since only one mail respondent completed the ABS. ²There were eight respondents whose response to the open-ended question indicated that they did not know about the Internet, which differed from their answer to the earlier question about whether they knew about the Internet. We included these eight respondents in the "Did not know could choose Internet" category.

Table 4. Percent of ACS mail respondents who reported these reasons for deciding to complete the ACS using the paper form instead of via Internet by notification strategy¹ (standard error in parentheses)

		Notification Strategies		
Reasons for completing			Push	
the ACS on the paper	Prominent Choice	Not Prominent Choice	Accelerated	
form	(n=75)	(n=55)	(n=69)	
Prefer paper/	49.3%	50.9%	26.1%	
convenient ²	(5.8)	(6.8)	(5.3)	
Computer issues ³	6.7	7.2	18.8	
	(2.9)	(3.5)	(4.7)	
No access to the Internet	21.3	12.7	34.8	
	(4.8)	(4.5)	(5.8)	
Inexperienced computer	6.7	9.1	7.2	
user	(2.9)	(3.9)	(3.1)	
Worried about Internet	4.0	1.8	7.2	
security	(2.3)	(1.8)	(3.1)	
Don't know or Item NR	9.3	18.2	4.3	
	(3.4)	(5.2)	(2.5)	

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

The reasons respondents chose to report by paper differs by notification strategy. In the Push Accelerated strategy, about 35 percent of the respondents chose paper because they said they did not have Internet access; about 26 percent reported choosing paper because it was convenient and about 19 percent reported "computer issues." These reports suggest that approximately half³ of the respondents in the Push Accelerated strategy, who knew about the Internet offer, used the paper form because they could not report via the Internet.

For the Choice strategies, the most frequently reported reason for choosing paper was that the paper option was convenient, followed by reported lack of Internet access. In fact, combining the two Choice strategies, 50 percent (s.e., 4.1) of the respondents chose the paper form because they preferred it or it was convenient compared with the Internet option. That is significantly higher than the 26 percent (s.e., 5.3) of respondents in the Push Accelerated panel who mentioned paper preference as the reason for their choice (Wald Chi-Square Test: F=11.9, p=.0007).

Less than 10 percent (s.e., 3.9) of the respondents in any of the notification strategies claimed that "computer inexperience" was a reason for choosing the paper form. Less than 8 percent (s.e., 3.1) of the respondents mentioned Internet security as a reason for choosing a paper form.

Approximately 18 percent of the respondents in the Not Prominent Choice treatment did not give a reason for choosing paper over the Internet.

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¹No data are present for the Push Regular notification strategy since only one mail respondent completed the ABS. ²Includes "paper was faster," "paper was easier," "paper was available in the mailing package," "can start and stop on the paper form easily," and "the household has multiple respondents, so paper is convenient." The Internet ABS contained separate response fields for some of these reasons. Not making the precoded response fields parallel between the mail ABS and the Internet ABS was an oversight in the design.

³Includes "problems with their computer," "problems with the ACS Website," and responses that suggested the respondent was tired of computer tasks (i.e., computer fatigue).

³ 53.6%=18.8% (computer issues)+34.8% (did not have access)

4.1.3 What are the reasons for not responding to the ACS?

To elicit information related to the second goal of the project, the ABS asked a series of questions to determine why some households never responded to the ACS. We never explicitly asked, "Why didn't you respond to the ACS?" Instead, the questions were designed to determine where in the response process nonrespondents stopped. For example, did everyone open the ACS envelope or did some not even attempt to open it? Did some consider answering over the Internet and try to log on, but encounter difficulty? Were some still working on the paper form at the time of the ABS interview? Finally, was there "mode paralysis?" For those who were aware of both mode options, did some have so much difficulty choosing between the two that they chose neither? Or did some put aside the ACS form and login information, only to forget about it? See Appendix G for the question text.

Table 5 summarizes the reasons why households did not respond to the ACS. The table provides the percent of the ACS nonrespondents in each notification strategy who reported the reason. Standard errors are in parentheses. The columns in the table do not necessarily add to 100 percent because only reasons provided by five percent or more of nonrespondents are listed in the table and multiple responses were allowed for some questions. Reasons denoted with an asterisk (*) are those where multiple responses were not allowed. For example, if the respondent reported not receiving the envelope, the interview concluded.

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⁴ In future research, I recommend asking such a question at the end of the series to obtain the overall reason for nonresponse.

Table 5. Percent of nonrespondents who reported these reasons for not responding to the April ACS by notification strategy (standard error in parentheses)

	,	Notification Strateg	ies	
				Push
Reasons why did not	Prominent Choice	Not Prominent Choice	Push Regular	Accelerated
respond to the ACS	(n=180)	(n=196)	(n=191)	(n=228)
Did not get the	27.2%	31.6%	39.3%	36.8%
envelope*	(3.3)	(3.3)	(3.5)	(3.2)
Received envelope but	20.6	14.8	16.8	20.6
did not open it*	(3.0)	(2.5)	(2.7)	(2.7)
Opened envelope, but	7.8	10.2	5.8	4.8
does not remember if	(2.0)	(2.2)	(1.7)	(1.4)
he/she could report by				
paper or by the Internet*				
Too busy	11.1	8.7	10.5	10.5
	(2.3)	(2.0)	(2.2)	(2.0)
Mailed paper form, but	8.9	9.7	4.7	6.6
no record was found at	(2.1)	(2.1)	(1.5)	(1.6)
the Census Bureau*				
Need data from another	6.1	6.1	4.2	4.8
person	(1.8)	(1.7)	(1.5)	(1.4)
Questions were too	6.1	5.6	4.2	1.3
sensitive	(1.8)	(1.6)	(1.5)	(0.8)
Computer issues ¹	4.4	2.6	3.7	5.7
	(1.5)	(1.1)	(1.4)	(1.5)
Don't know or Item NR ² *	3.9	2.0	4.2	3.9
	(1.4)	(1.0)	(1.5)	(1.3)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

The two primary reasons given for nonresponse involved receipt of the envelope containing ACS materials: many respondents claimed they that they either did not receive the envelope or that they received the envelope but did not open it. This finding held regardless of notification strategy. Over 46 percent (s.e., 3.6) of all ACS nonrespondents in this survey provided one of those two reasons. Recall that respondents were those who reported that they handle the mail in the household. ⁵

More of the Push strategy nonresponders said they did not receive the envelope compared to those in the Choice strategies. Combining both Push strategies, 37.9 percent (s.e., 2.4) reported that they did not receive the envelope, which is significantly higher than the 29.5 percent (s.e., 2.4) in the Choice strategies who reported that they did not receive the envelope (Wald Chi-Square Test: F=6.3, p=.01). All of the ACS nonrespondent cases discussed in Table 5 should have received all of the mailings, including both initial and the replacement mailing packages.

The thickness of the initial mailed packet was the only difference between the Push and Choice envelopes. The Push strategies' initial mailing envelope was thinner than the Choice strategies' initial mailing, since it contained the ACS questionnaire in addition to a letter. All replacement

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^{1"}Computer issues" include "inexperienced computer user," "computer is difficult," "no interest in computers," "no computer access," "lost login, User ID/login problems," and "rather use paper."

² Includes "don't know" to any of the questions in this series.

^{*}Multiple answers were not allowed for these categories.

⁵ It could be that even though we screened for mail handlers, some of the ABS respondents were not the household members who saw the mailings. This possibility should have affected all notification strategies equally.

mailing envelopes were of the same thickness. It could be that the thinner envelope for the Push strategies was not as noticeable as the thicker initial mailing for the Choice strategies, but it is interesting that the replacement mailing package also was not memorable.

Although not shown in Table 5, the ABS asked for the reasons nonrespondents never opened the envelope. Across the notification strategies, there were 145 nonrespondents who said they received the envelope but did not open it. The reasons they provided for not opening the envelope did not differ across strategies.

- "Too busy" was the answer recorded for 39.8 percent (s.e., 4.2) of those respondents.
- "Someone else in the household opened the envelope" was recorded for 10.5 percent (s.e., 2.6) of those respondents.
- Other answers included, "haven't gotten to it" (9.6 percent, s.e., 2.5) and "already completed the Census" (9.1 percent, s.e., 2.4).
- Less than six percent of 145 nonrespondents said that they "forgot about it;" "lost it;" "threw it out;" "were not familiar with the Census Bureau;" or that "the mailing did not have their name on it (was not personalized);" "looked like junk mail;" or that it "looked too big or looked like too much work."

Table 5 shows that 11 percent or less of nonrespondents across the notification strategies said that they opened the envelope but could not remember how they could respond to the survey (i.e., whether by a paper form or by the Internet, or by another way).

Around 8 to 11 percent of ACS nonrespondents in the study said that they remembered they could complete the survey by either the paper form or by the Internet, but they were too busy to do so. Some respondents elaborated more on why they were busy. Approximately 20 percent of that group said they were busy due to the health issues of either themselves or someone in their family (not shown in the table).

Approximately 4 to 10 percent said they actually did mail in a paper form. Upon review, there was no record of a form being received by the Census Bureau for these cases. Some respondents could have truly thought they mailed the ACS form back. Others might have said they mailed the form back to provide a socially desirable answer. Still, others could have been thinking of their census form which was mailed the year earlier. (As described earlier, some respondents said they did not open the envelope because they already responded to the decennial census.)

All told, about 75 percent of ACS nonrespondents in the study provided one of these five reasons for not responding to the ACS: "did not receive the envelope," "did not open the envelope," "did not know about the mode choice," "was too busy," or "did complete the ACS." With the exception of the mailing package thickness and the lack of prominence of the mode choice in one treatment group, none of the reasons pertained to the mode choice offered within the notification strategies.

Three other reasons were listed by more than 5 percent of the ACS nonrespondents in the study. Two of them, needing data from another person and the sensitivity of the ACS questions, relate to the design and content of the ACS. The ACS requires person-level information for everyone in the household. It is possible, especially in households containing unrelated individuals, that the original respondent did not know this information and would have had to

obtain it from another individual. Some respondents reported that some of the ACS questions, for example income, were sensitive. Neither data sensitivity nor needing data from another person were related to mode choice or the particulars of the experimental treatment mailings.

The last reason listed in Table 5 is "computer issues." "Computer issues" include "inexperienced computer user," "computer is difficult," "no interest in computers," "no computer access," "lost login, User ID/login problems," and "rather use paper." It could be that, when presented with the task of completing the questionnaire online or on paper, some potential respondents focused on the online form, realized they either did not want to complete the form online or could not do so, and then failed to complete the survey with the paper form. Table 5 shows that of all ACS nonrespondents, approximately 6 percent or less fell into this category. In total, 33 nonrespondents cited computer issues as a reason for not completing the Internet form. In 13 of the 33 cases, the nonrespondent reported not knowing about the paper form. Eight of the 13 were cases in one of the Push strategies. Thus, there appeared to be a small number of people for whom offering an Internet option and not emphasizing the paper form led to a nonresponse.

There were other reasons provided by the ACS nonrespondents, but never by more than 5 percent of them and so not reported in Table 5. Some of the other reasons for nonresponse were:

- that the survey might have been a scam,
- the survey was too long,
- the survey was redundant or that they had already complied (perhaps thinking of their Census form),
- they never got the form (three nonrespondents in the Push strategies only),
- they were still working on the form,
- they forgot about the survey,
- they said they mailed back a form, but actually they mailed back a blank form,
- they prefer the telephone,
- they said they submitted the Internet form but no record or only a blank survey was found at the Census Bureau,
- there were language issues,
- they were confused,
- they were worried about ID theft or Internet security, or
- they lost their PIN.

From these data we do not find explicit indications that "mode paralysis" was a reason for nonresponse. Difficulty making a choice was never explicitly mentioned by nonrespondents. There was a response choice of "haven't gotten to it" and "forgot" listed as precoded responses in the ABS, but those choices were not frequently reported by nonrespondents and they are not listed in Table 5. In fact, of the nine nonrespondents who reported forgetting about the survey, only four reported knowing about the mode choice. Finally, in another series of questions (not reported in the table) the interviewer asked nonrespondents whether they considered completing the survey online or considered completing the paper form. Only 3.5 percent (s.e., 0.7) of 795 nonrespondents over all the notification strategies reported that they considered completing the survey by both modes. That would be an upper bound on the percent where "mode paralysis" might have occurred. Based on these data, if "mode paralysis" did affect some potential respondents, it appears to have affected very few of them.

4.2 Was the mode choice message effectively communicated in the different notification strategies?

The second topic of analysis examines the mailing materials used in the four notification strategies. The mode choice was communicated on different pieces of material and with different emphasis in the four notification strategies.

The ABS attempted to determine whether the Census Bureau placed the mode choice messages on the most memorable pieces of material and secondly, whether respondents (and nonrespondents) saw the mode choice message.

4.2.1 Did respondents recall the mailing materials containing the mode choice message?

ABS respondents were asked an open question about the materials they remembered seeing in the ACS envelope, "What materials do you remember seeing in the envelope?" The purpose of asking this question was to see if the respondents recalled the mailing pieces which had the mode choice information.

Obviously, the ABS respondents had to remember the envelope prior to telling the interviewer what materials they remembered were contained in it. Some 87 percent (s.e., 1.9) of ACS mail respondents and 80 percent (s.e., 2.0) of Internet respondents did remember the envelope. However, as Table 5 previously showed, about 27 to 39 percent of ACS nonrespondents did not remember the envelope. Only ABS respondents who remembered the envelope are included the following analysis.

This analysis examines the free recall of each mailing piece, providing a conservative estimate of how memorable each piece was. Interviewers field-coded respondents' answers in these categories: Form or Questionnaire, Letter, Questionnaire Guide, Frequently Asked Questions (FAQ) Brochure, Return Envelope, Postcard⁶, Internet Instruction Card⁷ and Other (with a write-in field)⁸. The interviewer was instructed to code all of the items mentioned.

Table 6 displays the percent of respondents who remembered the envelope and who spontaneously recalled each mailing material piece. Results are summarized by response group and notification strategy combination. Standard errors are in parentheses. Only materials that were consistently reported by 10 percent or more of the respondents are listed in the table.

⁶ There was no postcard in the initial or replacement mailing envelopes; rather, the postcard was sent between the initial and replacement mailings to encourage an ACS response and one was sent to nonrespondents at the end of the ACS mailing cycle. The analysis presented below suggests that some interviewers or respondents may have confused the postcard with the Internet instruction card during the interviews.

⁷ None of the Not Prominent Choice mailings included an Internet Instruction Card.

⁸ Figure 1 in Section 2.1 shows the mailing materials sent in each package and whether the mode choice message was present on the material. In the initial mailing for the two Push strategies, no form, questionnaire guide, or return envelope were enclosed. Those items were only included in the replacement mailing that was sent to initial nonresponders. Thus, early Internet reporters in the two Push strategies should never have received a paper form.

Respondents could report multiple mailing pieces; thus, percentages within response groups and notification strategies do not necessarily add to 100 percent.

Table 6. Percent of ABS respondents who opened the envelope and who recalled each piece of mailing materials by response group (Internet, Mail and Nonrespondents (NR)) and notification strategy (standard error in parentheses)

			Notification S	trategies	
					Push
		Prominent Choice	Not Prominent Choice	Push Regular	Accelerated
		Internet n=88	Internet=97	Internet=91	Internet=90
Recalled	Response	Mail n=101	Mail n=91	Mail=0	Mail=98
Materials	groups	NR n=87	NR=101	NR=76	NR=88
Form	Internet	79.0%(4.6)	79.8 (4.5)	34.9 (5.0)	47.4 (5.3)
	Mail	89.1 (3.1)	87.9 (3.4)	No sample	80.6 (4.0)
	NR	67.8 (5.0)	85.1 (3.6)	65.8 (5.5)	70.5 (4.9)
Letter	Internet	33.3 (5.4)	34.9 (5.2)	41.0 (5.2)	35.7 (5.1)
	Mail	19.8 (4.0)	17.6 (4.0)	No sample	18.4 (3.9)
	NR	14.9 (3.8)	18.8 (3.9)	6.6 (2.9)	12.5 (3.5)
Internet Instruction	Internet	26.1 (4.9)	11.1 (3.4)	38.5 (5.1)	33.5 (5.0)
card	Mail	1.0 (1.0)	3.3 (1.9)	No sample	3.1 (1.7)
	NR	8.0 (2.9)	3.0 (1.7)	5.3 (2.6)	9.1 (3.1)
Return envelope	Internet	17.4 (4.3)	13.2 (3.8)	9.9 (3.2)	4.4 (2.1)
·	Mail	21.8 (4.1)	17.6 (4.0)	No sample	14.3 (3.6)
	NR	6.9 (2.7)	13.9 (3.5)	9.2 (3.3)	14.8 (3.8)
Question- naire Guide	Internet	17.4 (4.3)	16.6 (4.0)	5.5 (2.4)	8.8 (3.0)
	Mail	19.8 (4.0)	13.2 (3.6)	No sample	16.3 (3.8)
	NR	8.0 (2.9)	15.8 (3.7)	6.6 (2.9)	12.5 (3.5)
Don't know	Internet	6.5 (2.7)	0.7 (0.7)	8.7 (3.0)	4.4 (2.2)
	Mail	1.0 (1.0)	0	No sample	6.1 (2.4)
	NR	21.8 (4.5)	11.9 (3.2)	21.1 (4.7)	21.6 (4.4)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

In the Choice and Push notification strategies, the questionnaire or form was the item recalled by the most respondents, followed by the letter. The Internet Instruction card was recalled by many Internet respondents. The questionnaire, the Internet Instruction card (available in three panels), and the letter (for three panels) contained the mode reporting choice message.

For the Internet response groups, the form was spontaneously recalled by proportionally more respondents in the Choice strategies than in the Push strategies (Wald Chi-Square Test: F=57.4, p<.0001). The lower percent of Internet respondents who recalled the form in the Push strategies may have resulted from the fact that anyone who responded early via the Internet was never mailed the replacement package. For the Push strategy respondents who actually received the replacement mailing containing the paper form, the percent who recalled it was

61.9 percent (s.e., 10.9) for Push Regular and 72.6 percent (s.e., 7.9) for Push Accelerated strategies.

The letter was one of the primary means of communicating the mode choice for three of the strategies. The letter seemed to be particularly salient for Internet respondents, across all strategies. In fact, the percent of all Internet respondents (across the four treatments) who spontaneously recalled the letter was 36.4 percent (s.e., 2.7). That is significantly higher than the overall percent of all mail and nonrespondents, 15.7 percent of whom recalled the letter (s.e., 1.4) (Wald Chi-Square Test: F= 45.1, p<.0001.)

After respondents were asked to spontaneously recall the materials, interviewers explicitly asked respondents whether they had seen the letter, and, for those who saw it, if they read it. When the question was explicitly asked, over 80 percent of both mail and Internet response groups reported that they saw the letter and over 70 percent of both groups reported that they read it. Approximately 63 percent of the ACS nonrespondents reported seeing the letter and 50 percent reported reading the letter when explicitly asked.

The questionnaire guide and the return envelope were also salient mailing pieces for many respondents. In the Push strategies, the return envelope and the questionnaire guide were not present in the initial mailing; this explains why fewer Internet respondents mentioned those materials. These materials also did not contain the mode choice message in any of the notification strategies.

The FAQ brochure and the postcard were not listed in Table 6 because they were not recalled frequently by respondents. The FAQ brochure was recalled by less than 10 percent of respondents regardless of notification strategy and response group, with one exception. Nearly 12 percent (s.e., 3.7) of Internet respondents in the Prominent Choice strategy recalled the FAQ brochure. Fewer than ten percent of respondents recalled the postcard, except in the Push strategies for the Internet response group. For those two groups, the percent of respondents who recalled the postcard exceeded ten percent. This might reflect interviewer error. The respondents may have been describing the Internet Instruction card and the interviewer selected the postcard by mistake. There are other instances of measurement error in Table 6. For example, no one in the Not Prominent Choice strategy received an Internet instruction card, yet around 3 percent of mail respondents and 11 percent Internet respondents were coded as recalling one.

4.2.2 What messages in the letter were salient to respondents?

In three of the four strategies, the letter communicated the mode choice. The text for the paragraphs containing the mode message was different among the four strategies. The ABS asked an open question to determine what messages in the ACS letter were salient to the respondent or nonrespondent who reported reading the letter: "What do you remember about what the letter said?" The objective of this question was to determine whether the mode choice message was memorable, and if so, if it was recalled at different rates in different strategies.

Besides the mode choice message, the letter in the initial mailing for all strategies included other topics, such as informing respondents that the survey was required by law, the confidential nature of the survey, how the respondent was selected, and uses of the data. A phone number was listed if the respondent needed help and the letter was signed by the U.S. Census Bureau director. The text varied slightly in the replacement letter, but all the topics were covered again and were identical across notification strategies. Additionally, the replacement mailing letter emphasized the importance of the ACS and asked for the respondents help in completing it. The replacement letter also said that the household may be contacted in person or by phone if no response is received. See Appendix B and C for the letters.

Table 7 contains a summary of the three messages recalled the most often for each response group and notification strategy combination. The percent of respondents who said they read the letter and who recalled the message for each response group and notification strategy is listed in the row for each message. Standard errors are in parentheses. Percentages within response groups and notification strategies do not necessarily add to 100 since respondents could report multiple messages and only the top three messages reported by the most ABS respondents are listed.

Table 7. Percent of ABS respondents who read the letter and who recalled these messages in the letter by response group (Internet, Mail and Nonrespondents (NR)) and notification strategy (standard error in parentheses)

			Notification Str	ategies	
		Prominent Choice Internet=79	Not Prominent Choice Internet=81	Push Regular Internet=86	Push Accelerated Internet=97
	Response	Mail=90	Mail =72	Mail=0	Mail=69
Message	groups	NR=41	NR=52	NR=39	NR=43
	Internet	33.6% (5.6)	39.0 (5.7)	30.2 (5.0)	46.0 (5.1)
Mandatory	Mail	41.1 (5.2)	33.3 (5.6)	No sample	34.8 (5.8)
	NR	51.2 (7.9)	42.3 (6.9)	28.2 (7.3)	18.6 (6.0)
	Internet	27.1 (5.4)	25.7 (5.3)	16.2 (4.0)	19.6 (4.1)
Mode Choice	Mail	3.3 (1.9)	2.8 (2.0)	No sample	21.7 (5.0)
	NR	7.3 (4.1)	5.8 (3.3)	17.9 (6.2)	9.3 (4.5)
	Internet	16.4 (4.2)	18.2 (4.4)	8.2 (3.0)	10.3 (3.1)
Uses of data	Mail	17.8 (4.1)	15.3 (4.3)	No sample	18.8 (4.7)
	NR	24.4 (6.8)	7.7 (3.7)	10.3 (4.9)	14.0 (5.3)
	Internet	18.9 (4.7)	12.0 (3.8)	15.0 (3.9)	13.5 (3.5)
Don't know	Mail	31.1 (4.9)	26.4 (5.2)	No sample	24.6 (5.2)
	NR	14.6 (5.6)	32.7 (6.6)	28.2 (7.3)	27.9 (6.9)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

The message remembered by the most ABS respondents, regardless of notification strategy or response group was the required-by-law/mandatory message. The mandatory message was in the ACS letter, but it was also on the outside of the initial and replacement mailing envelopes, and on the postcard, so the respondent could have seen the message several times. Approximately 30 to 46 percent of Internet respondents recalled that message; about 33 to 41

percent of mail respondents and about 19 to 51 percent of ACS nonrespondents across the notification strategies. Proportionally more nonrespondents in the Choice strategies (46.2%, s.e., 5.2) recalled the mandatory message compared to the nonrespondents in the Push strategies (23.4%, s.e., 4.7) (Wald Chi-Square Test: F=10.5, p=.002). There is no ready explanation for these findings, since all the notification strategies received the same number of mailings containing the mandatory message.

The mode choice was the next most salient message for many response group/ notification strategy combinations. It was memorable for many who chose to report via the Internet regardless of notification strategy. There was no difference between the percent of Choice Internet respondents who spontaneously recalled that message (26.6%, s.e., 4.0) and the percent of Push Internet respondents who recalled it (18.0%, s.e., 2.9), (Wald Chi-Square Test: F=3.1, p=.08). However, the 21.7 percent of the Push Accelerated mail respondents who recalled the mode choice was significantly higher than the 3.1 percent of Choice mail respondents who recalled that message (Wald Chi-Square Test: F=12.9, p=.0004).

One of the larger differences in Table 7 is the proportion of Internet and mail respondents in the Choice strategies who recalled the mode choice message. Proportionally fewer mail respondents in the Choice strategies (3.1%, s.e., 1.4) recalled the mode choice message compared to the percent of Internet respondents in those same strategies (26.6%, s.e., 4.0) (Wald Chi-square Test: F=30.6, p<.0001). The salience of the mode message for mail respondents in the Choice strategies was not related to whether mail respondents had Internet access. That is, mail respondents in the Choice strategies who had Internet access were no more likely to spontaneously recall the mode choice message than the mail respondent who did not have Internet access (Wald Chi-square Test: F=0.05, p=0.82).

In Table 7, the "data uses" message appears to be a very salient for many ACS respondents and nonrespondents, even more so than other messages we think might motivate a response, like data confidentiality. In the second paragraph, the letters list the types of things the ACS data are used for, like building schools and hospitals. Perhaps one reason this message was mentioned frequently across all response groups was because an entire paragraph was devoted to it.

Many other messages were mentioned by respondents, but not by more than 7 percent of them. These messages are not included in the table. Approximately 7 percent (s.e., 0.9) of respondents (over all response groups and notification strategies) mentioned that their household was randomly selected. And 5 percent (s.e., 0.8) mentioned that the letter said the ACS was important to complete, or to fill it out. Many messages were not mentioned by more than approximately 4 percent of ABS respondents. Those messages included the phone number for help, that someone may call or visit, the confidentiality of the data, and an explanation of the ACS. Only 1.3 percent (s.e., 0.4) mentioned that the letter was signed by the director.

The percent of respondents who reported "don't know" to this question was high, ranging from 12 to 19 percent for Internet reporters, 25 to 31 percent for mail respondents and 15 to 33 percent for nonrespondents⁹. There was no discernible pattern for a "don't know" response by notification strategy.

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⁹ See Table 7 for the standard errors on the percentages.

4.2.3 Did respondents mention the "green" messages in the Push strategies?

The Push strategy's letters contained some "green" messages, informing respondents that completing the survey online conserves natural resources, saves taxpayers' money and allows for quicker data processing. These messages were not mentioned by many respondents spontaneously when asked what the letter said.

In the ABS, the interviewer asked Internet respondents, "Was there anything in the mailing materials that made you decide to use the Internet to complete the survey?" If there was, respondents were asked to describe what in the mailing materials motivated them. Only 34.3 percent (s.e., 1.0) of Internet responders in the Push strategies said that something in the materials motivated them to respond by the Internet. The motivator reported the most often by Push strategy respondents (at around 17%) was the lack of a paper form in the envelope, followed by "easier" at around 15 percent, and "prefer the Internet" at around 11 percent. Some respondents in the Push strategies did mention the messages of conserving natural resources and processing data, but of all the reasons expressed by respondents, those were mentioned about 11 percent of the time or less.

For the Choice strategies, 36.3 percent (s.e., 1.1) said that something in the materials made them decide to use the Internet to complete the survey. The two motivators most frequently reported by Choice Internet respondents were that the form looked too long (23%) and that an Internet option was offered (20%). The Choice strategies materials did not explicitly contain any green messages. However, conserving natural resources, saving money and processing data efficiently were mentioned around 6 percent of the time or less.

4.2.4 Did respondents recall the mode choice message?

The discussion in Section 4.2.2 suggests that the mode choice was a salient message given that many respondents spontaneously recalled it. In addition to determining if respondents would spontaneously recall the mode choice message, the ABS explicitly asked respondents whether they knew they had a choice.

The mode choice knowledge data were collected slightly differently by response group. For mail and Internet responders the information was collected by two questions: "What do you remember about what the letter said?" and "We received a completed (survey over the Internet/form in the mail from you). As far as you can recall, could you have chosen to respond (using a paper questionnaire/over the Internet)?" The second question was asked only if the respondent did not mention that he/she knew about the mode choice in the first question. In the analysis, the answers to those two questions are combined to determine whether the respondent knew about the mode choice.

For ACS nonrespondents, everyone who said they opened the envelope received the question, "There were several different ways to respond to the survey. As far as you recall, how could you have chosen to respond to the survey: by paper? by the Internet? or by another way?"

Table 8 shows the percent of ABS respondents who reported that they knew about both the paper and Internet response options by response group and by notification strategy. In this table I also present responses received from 113 respondents in the mail control group, who responded to an abbreviated ABS. As a reminder, the mail control group was not notified on any of the mailing materials of the Internet reporting option and they could not report via the Internet to the ACS.

Table 8. Percent of respondents who reported knowing about both Internet and paper reporting modes by response group and notification strategy (standard errors)

		Notification Strategies			
			Not Prominent		Push
		Prominent Choice	Choice	Push Regular	Accelerated
		Internet=105	Internet=115	Internet=119	Internet=118
Response	Control	Mail=119	Mail =104	Mail=0	Mail=112
groups	Mail=113	NR=180	NR=196	NR=191	NR=228
Internet	No sample	87.6% (3.3)	89.1% (3.1)	68.8% (4.3)	71.9% (4.2)
Mail	42.5% (4.7)	58.0 (4.5)	51.0 (4.9)	No sample	60.7 (4.6)
NR	No sample	10.6 (2.3)	5.6 (1.6)	15.2 (2.6)	11.4 (2.1)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

Approximately half of mail respondents in all the notification strategies reported that they could respond using the Internet. However, about 42 percent of the mail respondents in the control panel also reported that they could respond over the Internet. There was no mention of an Internet option in any of the control mailing materials. Respondents answering this question may have assumed that the Census Bureau offered an Internet response option because the ABS asked about it and because online options are readily available for common tasks such as shopping, banking and bill payment. Other government tasks such as tax filing can also be done online. There could have been mail respondents and nonrespondents in the notification strategies who also reported knowing about an Internet option for these same reasons. Likewise there could have been Internet respondents or nonrespondents who reported that there was a paper form, even though they really did not know about it.

With that said, these data should be viewed in conjunction with the spontaneous recall of mode choice found in Table 7. Some of the findings with these data match the results found with the spontaneous recall of mode choice. For example, across all notification strategies, it appears that a larger proportion of Internet respondents reported knowing about the mode choice compared with the proportion of mail and nonrespondents.

Some of the findings which were not significant with the spontaneous recall of mode choice are significant with these data. For example, collapsing across the two Choice strategies and the two Push strategies, these data show that Internet respondents in the Choice strategies were more likely to report knowing about both modes (i.e., the paper form) than Internet respondents in the Push strategies (Wald Chi-Square Test: F=11.3, p<.0001). ACS sample in the Choice treatments received the form in the initial mailing whereas the ACS sample in the Push treatments did not receive the form in the initial mailing. It makes sense that when the form is not included, the percent who know about the paper mode is lower.

Some of the findings with these data do not match the data in Table 7. For example, in the mail response group, there were no differences in mode choice knowledge between respondents in the Choice versus Push Accelerated strategy and there were differences with the spontaneous recall data. Additionally, in Table 8, nonrespondents were the least likely to know about the mode choice option, across all notification strategies.

4.3 How did Internet respondents, mail respondents and nonrespondents interact with the online form?

The next set of analyses look at results from the behavioral data collected in the ABS. The ABS asked questions about where Internet respondents completed the online form, whether they used the paper questionnaire as a guide as they completed the online form, and whether they had difficulty with the online ACS. The ABS also asked mail respondents and nonrespondents if they considered using the Internet form, if they tried to access the online survey and whether they had difficulty. This section first examines where Internet reporters completed the survey and whether they used the paper form as a guide, and then it examines any problems found with the Internet survey. Finally, the section turns to whether the mail respondents and nonrespondents in the Push strategies consider answering over the Internet more so than those in the Choice strategies.

4.3.1 Did Internet respondents complete the ACS at home, work, or some other place?

The ABS asked Internet respondents where they completed the ACS - at home, at work, or at another place. Table 9 contains the percent and standard error of Internet respondents who completed the ACS at each of those places.

Table 9. Where Internet responders completed the online ACS (n=453)

Place	Percent who completed	
	ACS there	
	(standard error)	
Home	87.1 (1.7)	
Work	8.6 (1.4)	
Library	0.8 (0.4)	
Other	3.3 (0.9)	
Refuse	0.2 (0.2)	

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

As Table 9 shows, the majority of ACS respondents completed the Internet survey from home. Only 13 percent completed it away from home, either at work, the library or someplace else. The other places mentioned include other relatives' homes, places with WiFi access, at school, and at the hospital.

4.3.2 Did Internet respondents use the paper form as a guide and did they fill out the paper form?

In the ABS, all Internet respondents who reported that they knew there was a paper form were asked, "Did you use the paper form as a guide while you filled out the survey on the Internet?" And they were asked if they completed the paper form since it has been suggested that this may be the case.

Of the 281 Internet respondents who received a paper form (i.e., those were respondents in the Not Prominent Choice and Prominent Choice strategies and those who received the replacement mailing package in the two Push strategies), approximately 14.7 percent (s.e., 2.4) reported using the form as a guide while they were completing the survey online. And 12 of those 281 respondents (about 3 percent, s.e., 0.9) completed the paper form, with 11 of the 12 completing the paper form before they went online to complete the ACS. There may be some error associated with these results because nine of the 162 Internet reporters in the two Push strategies, who did not receive the replacement mailing and hence did not receive a paper form, reported that they knew about the form and used it as a guide. There is the ability to download an example of the paper form from the ACS website. Perhaps these respondents did that.

4.3.3 Were there usability problems with the online ACS?

Horwitz, Tancreto, & Zelenak (forthcoming) fully documents user interface problems with the online ACS. The ABS collected only self-reports of usability problems with the online survey.

In the ABS, only two Internet respondents (out of 455) reported difficulty logging onto the online survey. One Internet respondent said that the Website would not come up right away and he/she had to try several times. Another respondent said he/she received an error message that too many people were trying to log on.

Twenty-two Internet respondents (5.2 percent, s.e. 1.1) said they had difficulty with the online survey itself. Six of the 22 had issues with the questions and survey items collected. For example, one respondent reported having difficulty with the electric and gas bill question. Another respondent said that the questions were not logical for the unemployed. These are not usability problems with the online application. Another six respondents had website problems, such as problems finding the correct website, and four said they had a slow Internet connection. Three respondents said their session timed out. Two people said it took too long and one person said there was no progress indicator.

These 22 respondents reported using either Internet Explorer or Google Chrome browsers with DSL, a Cable Modem or a broadband plan at their home to complete the ACS online survey. No one reported using dial-up, fiber-optic or satellite service.

4.3.4 Did mail respondents or nonrespondents in the Push strategies consider answering the ACS using the Internet survey more so than the mail and nonrespondents in the Choice strategies?

If the mail respondents and nonrespondents knew about the Internet option, the ABS interviewer asked, "Did you consider answering over the Internet?" The objective was to determine which notification strategies encouraged mail respondents and nonrespondents to consider the Internet mode.

Table 10 displays the percent and standard errors of mail respondents and nonrespondents who considered using the Internet to report. Results are collapsed across the two Push strategies (for nonrespondents) and the two Choice strategies (for mail and nonrespondents). ABS respondents and nonrespondents who reported knowing about the Internet mode choice are included in this analysis.

Table 10. Percent of ABS mail respondents and nonrespondents who considered answering by the Internet (standard errors)

/		
Response Group	Choice strategies	Push strategies
Mail	37.0%(4.9)	60.9% ¹ (7.3)
	(n=100)	(n=46)
Nonrespondents	53.3 (7.6)	39.3 (5.8)
	(n=45)	(n=72)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

Table 10 shows that a larger proportion of mail respondents in the Push Accelerated strategy considered answering the ACS over the Internet compared to the proportion of mail respondents in the Choice strategies (Wald Chi-square Test: F=7.4, p<0.007).

There is a much smaller difference between nonrespondents in the Choice and Push strategies, and the results go in the opposite direction. More Choice nonrespondents than Push nonrespondents considered answering the survey over the Internet; however this difference is not significant (Wald Chi-square Test: F=2.2, p=0.14).

4.3.5 Did mail respondents or nonrespondents try to access the Internet form or start the Internet form? If they did so, were there usability problems with the form or login task?

Horwitz et al., (forthcoming) provides a full evaluation of these questions.

Although some mail respondents and nonrespondents considered responding by Internet, very few of them tried to access the Internet form or start it.

Of 65 mail respondents who reported that they considered answering the ACS over the Internet, only 14 ($^{\sim}20\%$) reported logging into the online survey and 12 of those were from the Push Accelerated strategy. Six of the 14 had difficulty with the login and only one of the 14 actually started the survey.

¹Contains only Push Accelerated responses.

The six mail respondents who had difficulty with the login task had either DSL or Cable service at home. Two of the six did not know what website to get on. One reported that he/she could not bring up the questionnaire on the Web and two said that the system did not recognize the user ID. Still another mail respondent said the website would not let him/her go further.

Of the 113 nonrespondents who considered answering the ACS over the Internet, only 13 (~12%) reported that they logged into the online form. Census Bureau records showed that only five of the 13 actually got to the online survey. Of the eight who do not have a record of a successful login, five said that they had difficulty with the login procedure. Six of the 13 claimed they started the survey and three of them said they finished, but there was no record of a data submission. For two of the three who said they finished, there was no record of them ever accessing the online survey.

Of the 13 nonrespondents who reported logging in, four were from the Prominent Choice and eight were from the two Push strategies. Only one nonrespondent from the Not Prominent Choice strategy reported that he/she logged in.

4.4 What are the attitudes toward completing a form online?

This set of analyses examines results from the attitudinal data collected in the ABS. The ABS asked nonrespondents, respondents in the mail control panel, and mail respondents in the four notification strategies who did not know there was an online ACS reporting option, which mode they preferred for answering the ACS. Additionally, the ABS asked mail and Internet respondents who knew about both reporting modes whether they would answer the survey with the other mode if their current mode choice was not available. The section first shows the preference data and then provides the attitudes towards filling out a survey in another mode.

4.4.1 What is the mode preference for nonrespondents, mail control, and mail Internet Test respondents who did not realize there was an online survey option?

Three slightly different questions were asked to obtain the mode preference for nonrespondents, mail control respondents, and mail respondents in the notification strategies who did not know about the Internet reporting option.

The ABS asked nonrespondents who reported receiving the ACS envelope, "Some people were offered two options for responding to the survey-filling out the paper form or going to the Internet and filling out the survey there. Which of those two ways to answer the survey do you prefer?" The ABS asked nonrespondents who did not remember the ACS envelope but who reported that they would have completed a questionnaire had they received a request from the Census Bureau, a slightly different question, "If you had a choice of answering on the Internet or answering on paper, which would you prefer?"

The ABS asked mail control respondents and Internet Test mail respondents who did not know about the Internet mode, "The Census Bureau is considering offering the survey over the Internet, in addition to having the paper form. Which of those two ways to answer the survey do you prefer?"

Table 11 contains the percent of ABS respondents who prefer each of the mode choice combinations for each of the response groups shown. Results are collapsed across the four notification strategies for the nonrespondents and the mail respondents in the Internet Test (Mail IT).

Table 11. Stated mode preference to Census Bureau surveys among selected ABS respondents (standard errors)

Mode preference	Nonrespondents who remembered the ACS envelope (n=350)	Nonrespondents who did not remember the ACS envelope (n=431)	Mail Control responders (n=113)	Mail IT responders who did not know there was an online ACS survey (n=144)
Prefer paper	64.6 %(2.6)	57.3% (2.4)	56.6% (4.7)	75.7%(3.5)
Prefer the	20.9 (2.2)	30.2 (2.2)	33.6 (4.5)	13.9 (2.8)
Internet				
Prefer neither	8.5 (1.5)	6.0 (1.2)	1.8 (2.4)	2.1 (1.2)
mode				
Prefer both	4.2 (1.1)	4.2 (1.0)	6.2 (2.3)	4.2 (1.7)
modes about the				
same				
It depends	0.9 (0.5)	0.7 (0.4)	1.8 (1.2)	2.8 (1.4)
Don't	0.9 (0.5)	1.7 (0.6)	0	1.4 (1.0)
know/Refused				

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

Paper was the preferred mode for completing the survey, with approximately half or more of the respondents in each of the response groups indicating that as the preferred mode as shown in Table 11. The percent who prefer paper appears to vary across the response groups shown, with approximately 76 percent of the mail respondents in the Internet Test who were unaware of the Internet option preferring paper compared to about 57 percent of mail control respondents and about 57 percent of nonrespondents who did not remember the ACS envelope.

Likewise, the percent who prefer the Internet appears to vary across the response groups shown, with about 14 percent of mail respondents in the Internet Test groups (who said they did not know there was an Internet option) preferring the Internet to about 34 percent of the mail control group preferring the Internet.

4.4.2 Would respondents have completed the ACS if their first mode choice was not available?

For mail respondents and Internet respondents who said they knew about the other reporting mode, the ABS asked, "If the (paper form/Internet) was not an option, would you have completed (the survey on the Internet/a paper form)?" The objective of this question was to obtain an indicator of how response rates would be affected if there was only an online survey. Table 12 displays the percent of respondents who would not complete the survey in a different mode, broken down by notification strategy by response group.

Table 12. Percent of respondents who said they would <u>not</u> complete the ACS in the other mode if the mode they chose was not available by notification strategy (standard errors)

	Prominent Choice	Not Prominent Choice	Push Regular	Push Accelerated
Mail respondents who would <i>not</i> complete an Internet ACS	21.7 %(5.0) (n=69)	13.2% (4.7) (n=53)	No sample	31.3 %(5.7) (n=67)
Internet respondents who would not complete the ACS on a paper form	9.5 (3.1) (n=103)	6.9 (2.5) (n=115)	5.0 (2.0) (n=119)	1.7 (1.2) (n=118)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

As shown in Table 12, about 13 to 31 percent of mail respondents in the different notification strategies reported that they would not complete an online ACS form if the paper form was not available. Ten percent or less of Internet respondents report that they would not complete an ACS paper form if the online form was not available.

4.5 What are the characteristics of Internet respondents, mail respondents and nonrespondents?

The final set of analyses examines Internet penetration and usage and then turns to the demographics. The survey asked questions about Internet penetration and usage for all respondents as well as the demographics for the ACS nonrespondents. Demographics for mail and Internet responders were from their original ACS submissions.

4.5.1 What percent of mail respondents, Internet respondents and nonrespondents use the Internet, and therefore have Internet access?

In the ABS, interviewers asked if the ABS respondent used the Internet at home, at work, or at some other place. Table 13 shows the percent of ABS respondents who reported using the Internet at one or more of those places. The data are displayed by response group by notification strategy. Approximately 74 percent of the control mail respondents reported using the Internet. Pew Research Center measured Internet penetration at 78 percent of adults in May 2011 (http://www.pewinternet.org/Static-Pages/Trend-Data/Whos-Online.aspx). The control population of mail reporters is in line with their statistic.

Table 13. Percent of ABS respondents who reported using the Internet at home, at work, or at some other place by response group and notification strategy (standard errors)

		Notification Strategies			
	Control	Prominent Choice	Not Prominent	Push Regular	Push
Dosnonso	Mail=113	Internet=105	Choice	Internet=119	Accelerated
Response		Mail=119	Internet=115	NR=191	Internet=118
groups		NR=180	Mail =104		Mail=112
			NR=196		NR=228
Internet ¹	No sample	96.9% (1.6)	100 .0% (0)	97.4% (1.5)	97.5% (1.5)
Mail ²	74.3% (4.1)	68.9 (4.2)	79.8 (3.9)	No sample	58.0 (4.7)
NR ³	No sample	63.9 (3.6)	69.9 (3.3)	64.9 (3.5)	63.6 (3.2)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

By definition, everyone who reported by the Internet should have Internet access. Footnote 1 in Table 13 explains why most but not all respondents in the group reported using the Internet. Lower percentages of the mail and nonrespondent groups reported using the Internet. On average, Internet access for nonrespondents was less than 70 percent (s.e., 3.3) across all notification strategies.

The lowest penetration of Internet access for all response group/notification strategy combinations was 58 percent in the mail, Push Accelerated strategy. This lower percentage can be explained by the fact that more ACS respondents in the Push strategies responded by Internet than in the other notification strategies (Tancreto et al., 2012). The ABS data show that those in the Push Accelerated strategy who waited for and returned the paper form soon enough to be selected into the ABS were less likely to have Internet access than others in the Choice strategies who returned a paper form (Wald Chi-Square Test: F=8.3, p=.004). This finding suggests that the Push Accelerated strategy encouraged those who had Internet access to report with that mode. These data also support results found in Table 4 where approximately 11 percent of the mail respondents in the Push Accelerated strategy said they chose mail because they did not have Internet access.

Not shown in Table 13 is the place where the person had access to the internet. Home was reported as the primary place where people used the Internet, followed by work, and then some other place. Across all notification strategies, 96 percent of Internet reporters used the Internet at home, 64 percent used the Internet at work, and 39.3 percent used the Internet at some other place. For mail reporters 64 percent used the Internet at home and 33 percent used it at work, and 20 percent used it at another place. Nonrespondents appear similar to the mail reporters with 63 percent using the Internet at home, 33 percent at work and 18 percent at another place.

¹By definition, everyone should have had access to the Internet. However, a small number refused a question or were ABS breakoffs which resulted in less than 100 percent for some notification strategies.

²Less than one percent were ABS breakoffs, don't know or refusals. Those are included in the denominator.

³Approximately three percent were ABS breakoffs, don't know or refusals. Those are included in the denominator.

4.5.2 How much, and for what purposes, do the mail respondents, Internet respondents, and nonrespondents use the Internet?

The ABS sought to determine if completing or not completing the online survey was related to time spent on the Internet or other tasks performed on the Internet. To do this, the ABS asked a series of questions about Internet usage. If people used the Internet, the ABS asked how many hours per day they spent on the Internet and how often they performed particular tasks associated with the Internet. For these activity questions the response scale was very often, often, sometimes, rarely, or never.

Table 14 contains the answers to these Internet usage questions. Results are collapsed across the four notification strategies for each response group: Internet, mail respondents in the Internet Test (indicated by Mail IT), and nonrespondents. Results from the mail control response group are shown separately. Only respondents who reported that they used the Internet are included in this analysis.

Table 14. Internet usage (weighted mean of hours on the Internet per day and median frequency of Internet activities performed) by ABS response group¹

			Response Groups	
Internet usage	Internet	Mail-IT	Nonrespondents	Mail- Control
How much				
Average # hours	3.6 (0.3)	2.4 (0.2)	2.3 (0.1)	2.7 (0.3)
on Internet/day	(n=438)	(n=226)	(n=505)	(n=82)
(weighted mean)				
Activities				
accomplished				
(median)				
Visit news, maps,	Often	Sometimes	Often	Often
information on	(n=438)	(n=221)	(n=506)	(n=82)
the Web				
Visit social	Sometimes	Never	Rarely	Rarely
networking sites	(n=439)	(n=221)	(n=506)	(n=83)
Use for bill	Often	Sometimes	Sometimes	Often
paying or	(n=439)	(n=221)	(n=505)	(n=83)
financial				
transactions				
Use for emailing	Often	Often	Often	Often
	(n=438)	(n=221)	(n=506)	(n=83)
Other	Rarely	Never	Never	Rarely
communication	(n=438)	(n=221)	(n=506)	(n=83)
beside email				
Entertainment,	Sometimes	Rarely	Rarely	Rarely
like music or	(n=436)	(n=221)	(n=506)	(n=83)
videos				
Filling out	Rarely	Rarely	Never	Rarely
surveys	(n=436)	(n=221)	(n=508)	(n=83)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

The results of Internet daily usage by response group are consistent with expectations. That is, Internet responders reported on average the highest number of hours per day spent on the

¹The sample size for each of the response groups differs by question because answers of don't know or refusals are removed as well as any item nonresponse. Unweighted median values are shown for the task completion response data

Internet. The nonrespondents on average spent the same number of hours on the Internet as people in the control panel, and in the mail Internet Test panel. This finding suggests that infrequent Internet usage was not a reason for nonresponse among those who had Internet access.

Although no statistical testing was conducted with these data, the median answer for each activity showed that Internet respondents generally reported performing the Internet activities more often than the mail (IT) responders, except for email, which all response groups used often, and completing surveys, which no one did often. Using the Internet for entertainment, like music or videos and visiting or using social network sites, were activities where the median response for Internet respondents was sometimes, while all the other groups reported a median of rarely or never for those activities.

Based on these data we see that filling out surveys is something people rarely do on the Internet, with nonresponders answering that they never fill out a survey on the Internet. The median answer when asked about filling out surveys on the Internet was "rarely" for both Internet responders and mail responders in the Internet Test. This suggests that ACS Internet Test mail responders might well respond to some other surveys online, and but that filling out surveys online in general is a rare event.

4.5.3 What are the demographic characteristics of ABS Internet responders, mail responders and nonresponders?

The ABS collected demographic information for the nonresponders. Tancreto et al. (2012) examined whether there are demographic differences for Internet and mail responders. Because of its small sample, the ABS was not designed to examine those demographic differences or to compare these data to the larger Internet Test dataset. Instead Table 15 provides a snapshot of the demographics for the three response groups in the ABS. The demographics for the Internet and mail reporters come from the ACS Internet Test data collection itself. The demographic questions asked of nonrespondents in the ABS were slightly different from the ACS questions included in the Internet Test. The ABS demographic questions used CBAMS as a model for the demographic questions of tenure, race, Hispanic origin, and education instead of the sometimes longer questions used in the ACS.

Table 15. Demographic Characteristics of ABS Internet, Mail-IT, and Nonrespondents – (standard errors)

		Response Group	S
Characteristic	Internet	Mail -IT	Non-respondents
Age (mean years)	47.7 (0.7)	58.3 (1.0)	56.5 (0.6)
	(n=456)	(n=332)	(744)
Female (%)	45.4%(2.4)	58.0% (2.7)	61.0% (1.8)
	(n=457)	(n=333)	(n=771)
Race	(n=456)	(n=331)	(n=769)
White (%)	85.5 (1.7)	90.9 (1.6)	78.5 (1.5)
Black	5.3 (1.1)	4.8 (1.2)	10.5 (1.1)
AIAN	0.2 (0.2)	0.9 (0.5)	0.5 (0.3)
Asian	5.7 (1.2)	1.5 (0.7)	1.5 (0.4)
Hawaiian/OPI	0	1.5 (0.7)	0.3 (0.2)
Other	1.5 (0.6)	0.6 (0.4)	4.3 (0.7)
Multirace	1.7 (0.6)	1.2 (0.6)	2.1 (0.5)
Hispanic (%)	5.1 (1.1)	1.2 (1.1)	11.0 (1.1)
	(n=455)	(n=313)	(n=770)
Education	(n=457)	(n=320)	(n=770)
Less than HS (%)	2.6 (0.8)	6.9 (1.4)	11.6 (1.2)
HS graduate	12.5 (1.6)	28.4 (2.5)	29.9 (1.7)
More than HS	84.9 (1.7)	64.7 (2.7)	56.2 (1.8)
Hhld income	Not available ²	25K<50K	50K-75K
(median) ¹	inot avallable	(n=279)	(n=648)
Renter (%)	18.8 (1.9)	23.8 (2.4)	15.1 (1.3)
	(n=441)	(n=324)	(n=768)

Source: U.S. Census Bureau, Attitudes and Behavior Study, 2011 ACS Internet Test Follow up

From these data, the general finding is that nonrespondents were more frequently black and Hispanic, and had a higher proportion with less than a high school education than either the mail respondents in the Internet Test or the Internet respondents. Internet respondents in the ABS were male and with more than a high school education than either mail respondents or nonrespondents. Mail respondents in the ABS were white more than the other response groups.

5. SUMMARY

The factors that affected a respondent's mode choice decision varied across notification strategies and by the mode ultimately chosen.

Many of the Choice strategy Internet respondents used it because of the perceived advantages of the Internet: it was easy, convenient, and fast. Many Push strategy respondents used the Internet for those same reasons. However, about 24 percent of the Push strategy respondents used the Internet because they did not know of any other way to report, most likely because there was no paper form in the initial mailing package. Other Push strategy respondents actually reported that not having the paper form motivated them to use the Internet to report. The "green" messages in the Push strategies' letter concerning saving resources and faster

¹ The median for the weighted data was used. Income for nonrespondents was collected by a range question.

²The household income data for the Internet response group was inconsistent with the Mail response group income data format. This difference was not resolved prior to the due date of this report.

processing were not mentioned frequently by Internet respondents as motivating them to use the Internet.

Not knowing about the Internet reporting option was the reason why about 37 to 47 percent of mail respondents across the notification strategies reported using the paper form. Those respondents also overwhelmingly (at about 76 percent) reported preferring the paper form over the Internet, if it was offered. A notable finding is that many Push strategy mail respondents, who knew about the Internet option, considered the Internet option and literally could not report online because they did not have Internet access or because they had computer problems. This was not the case with the Choice mail respondents. The difference in the Internet access rates between Push and Choice mail respondents suggests that the Push Accelerated strategy did push people to use the Internet who might have very well completed the paper form if it was in the initial mail package. When asked, roughly 31 percent of the Push Accelerated mail respondents reported that they would not complete the ACS using the Internet, if that was the only mode offered. This suggests that there is a certain percent of compliant responders who cannot or would not report to an online ACS.

When asked to recall the mailing materials, respondents' answers indicate that the current placement of the mode choice message is reasonable, especially ones placed on the form and the letter. Those pieces were recalled most frequently by respondents and nonrespondents. It seems that the letter was important to Internet reporters as they recalled it often. For the Push strategies there was no form provided initially so the letter was the only thing to read. But, even in the Not Prominent Choice strategy, many Internet respondents recalled the letter spontaneously. In that strategy there was a form in the initial mailing and the letter did not mention the Internet option. This finding suggests that one characteristic of ACS Internet reporters was that they were letter readers. Another characteristic found in the ABS data is that Internet respondents use social media sites and online entertainment more often than mail or nonrespondents.

The ABS data showed that the mode choice was not communicated well enough so that all the sampled households in the Internet Test knew about it, even when asked explicitly about it. Internet respondents knew about the mode choice the most frequently, followed by mail respondents and then nonrespondents. This finding was consistent across notification strategy.

Knowing about both modes becomes critical when respondents cannot complete the survey online. The ABS found that 13 of the 795 nonrespondents could not complete the Internet survey and did not know about the availability of the paper form. Had these 13 nonrespondents known about the paper form, they might have responded.

ABS results do suggest that offering the Internet mode was not a primary reason for nonresponse. Less than 6 percent of nonrespondents cite computer issues (such as computer and Internet access) as a reason for not responding to an Internet option. Even fewer mentioned Internet security, Internet experience and even losing the pin as reasons for nonresponse. Very few nonrespondents attempted to access the online form and had difficulty. Instead the salience of the mail package and being busy were the main reasons reported for nonresponse.

Although a paper form was preferred to an Internet survey by respondents who did not know about the Internet survey or did not have the online survey available, an Internet reporting mode option is perhaps assumed by many, as 42.5 percent of mail control respondents, who had no notification of an Internet option, reported knowing that there was one.

The motivator for conducting an ABS was to determine if there was any indication of "mode paralysis." The April 2011 Internet Test did not find dampened response rates with the panels that offered multiple modes (Tancreto et al., 2012). However, it could be that offering an Internet option encouraged some to respond who might not have otherwise, replacing any nonresponse due to "mode paralysis."

The ABS data did not contain explicit evidence for "mode paralysis" in the notification strategies. None of the respondents commented that they could not decide between the two modes. Of the very few respondents who said they forgot about the survey, not even half of them reported knowing about the mode choice. Nonrespondents were the least likely of all ABS response groups to know about the mode choice, across all notification strategies. Insofar as the detailed questions employed here can address "mode paralysis," the ABS data suggest an upper bound for it as no more than about 4 percent of the nonrespondents who reported considering both reporting options.

6. FUTURE RESEARCH

These ABS data suggest a few research avenues for both communicating an ACS mode choice and converting nonrespondents into respondents.

The ABS data support placing the mode choice information on the form, letter, and Internet instruction card, especially the letter and form. If the form were included in a multi-mode data collection, research could concentrate on improving the Internet option notification on the form, since it is the most salient piece of mailing material.

The ABS results lend support to the design that does not place the form in the initial mailing. The ABS data show that the "no form" design, with a fallback paper option, appears to convert mail respondents into Internet respondents, without any obvious negative consequences on those who would have not responded in the first place.

Improving overall ACS response rates should center on testing different mailing envelopes and postcards, as almost half the nonrespondents reported not knowing about the mailings or not opening them. Creating a notification strategy that uses large pieces of mailing material that do not require opening could be an avenue for research. Placing notifications in addition to the mandatory message on the envelope might be another avenue for investigation.

Finally, more research into the messages on the materials might be useful to help improve response rates. It seems that a portion of nonrespondents did not understand the distinction between the decennial census and the ACS. They apparently assumed that they completed the ACS when they completed the census. In addition to the mandatory message, the "data uses" message also appears to be salient and perhaps a motivator for response.

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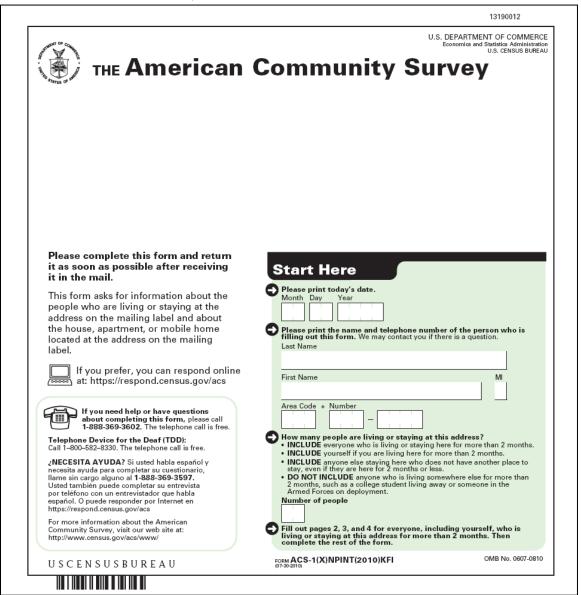
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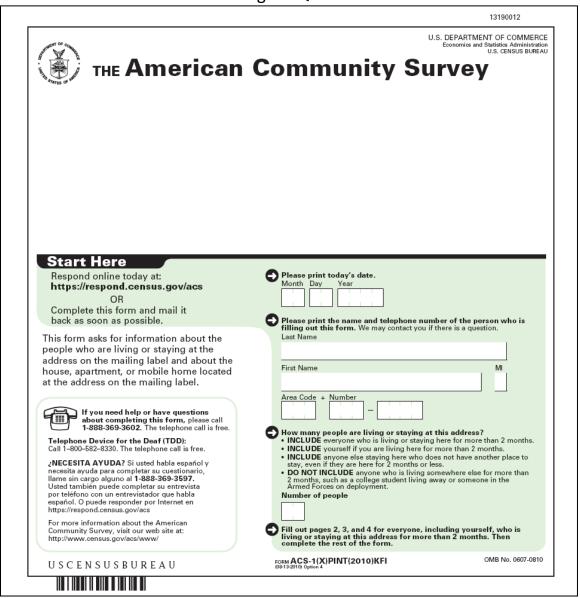
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Appendix A April 2011 ACS Internet Test Questionnaire Cover

Not Prominent Choice: Questionnaire Cover



Prominent Choice and Push strategies: Questionnaire Cover



Appendix B April 2011 ACS Internet Test Letter for the Initial Mailing Package

Not Prominent Choice: Letter in Initial Mailing Package



UNITED STATES DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Washington, DC 20233-0001 OFFICE OF THE DIRECTOR

Dear Resident:

The U.S. Census Bureau recently sent a letter to your household about the American Community Survey. Enclosed is a questionnaire and information about the survey. Please complete the survey and return it as soon as possible.

This survey collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The U.S. Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–888–369–3602).

Thank you.

Sincerely,

Robert M. Groves

Sobut M. Cross

Director

Enclosures

ACS-13(LX)NIO (7-2010)

USCENSUSBUREAU
Helping You Make Informed Decisions

Prominent Choice: Letter in Initial Mailing Package



UNITED STATES DEPARTMENT OF COMMERCE Economics and Statistics Administration
U.S. Census Bureau
Washington, DC 20233-0001
OFFICE OF THE DIRECTOR

Dear Resident:

The U.S. Census Bureau recently sent a letter to your household about the American Community Survey. There are two ways to complete this survey. Please choose ONLY one.

Option 1: Go to https://respond.census.gov/acs to complete the survey online. You will need information from the address label on the enclosed questionnaire to log in.

Option 2: Fill out and mail back the enclosed questionnaire.

This survey collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–888–369–3602).

Thank you.

Sincerely,

Robert M. Groves

Director

Enclosures

ACS-13(LX)PIO (7-2010)

USCENSUSBUREAU
Helping You Make Informed Decisions

Solut M. Cross

Push strategies: Letter in Initial Mailing Package



UNITED STATES DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau Washington, DC 20233-0001

OFFICE OF THE DIRECTOR

Dear Resident:

The U.S. Census Bureau recently sent a letter to your household about the American Community Survey. Using the enclosed instructions, please complete the survey online as soon as possible at:

https://respond.census.gov/acs

The Census Bureau is using the Internet to collect this information in an effort to conserve natural resources, save taxpayers' money, and process your data more efficiently. If you are unable to complete the survey online, there is no need to contact us. We will send you a paper questionnaire in a few weeks.

This survey collects critical up-to-date information used to meet the needs of communities across the United States. For example, results from this survey are used to decide where new schools, hospitals, and fire stations are needed. This information also helps communities plan for the kinds of emergency situations that might affect you and your neighbors, such as floods and other natural disasters.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

If you need help completing the survey, please call our toll-free number (1-888-369-3602).

Thank you.

Sincerely,

Robert M. Groves

Director

Enclosures

ACS-13(LX)PS (7-2010)

USCENSUSBUREAU
Helping You Make Informed Decisions

Solut M. Cross

Appendix C April 2011 ACS Internet Test Replacement Letter

Push Regular: Letter in the Replacement Mailing Package



UNITED STATES DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Washington, DC 20233-0001 OFFICE OF THE DIRECTOR

Dear Resident:

About three weeks ago, the U.S. Census Bureau sent instructions for completing the American Community Survey to your address. We asked you to help us with this very important survey by completing it online. But we have not received your response yet.

If you have already completed the survey, thank you very much. If you have not, please complete the survey soon using ONE of the following two options.

Option 1: Go to **https://respond.census.gov/acs** to complete the survey online. **Option 2:** Fill out and mail back the enclosed questionnaire.

This survey is so important that a Census Bureau representative may attempt to contact you by telephone or personal visit if we do not receive your response.

The information collected in this survey will help decide where new schools, hospitals, and fire stations are needed. The information also is used to develop programs to reduce traffic congestion, provide job training, and plan for the health care needs of the elderly.

The Census Bureau chose your address, not you personally, as part of a randomly selected sample. You are required by U.S. law to respond to this survey. The Census Bureau is required by U.S. law to keep your answers confidential. The enclosed brochure answers frequently asked questions about the survey.

If you need help completing the survey, please use the enclosed guide or call our toll-free number (1–888–369–3602).

Thank you.

Robert M. Groves

Director

Enclosures

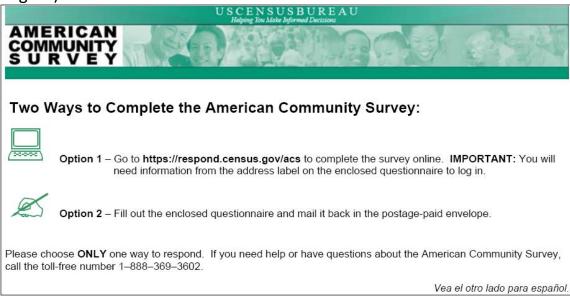
ACS-14(LX)PSR (9-2010)

 $U\ S\ C\ E\ N\ S\ U\ S\ B\ U\ R\ E\ A\ U$

Helping You Make Informed Decisions

Appendix D April 2011 ACS Internet Test Internet Instruction Card

Prominent Choice: Initial Mailing Package Instruction Card (Front Side – English)



Push strategies: Initial Mailing Package Instruction Card (Front Side – English)



Appendix E ABS Questions for Internet Respondents

ABS Questions	
<u>Assumptions:</u> Previous questions will provide the introduction of the interviewer, verification of the telephone number and address. Additionally, we will ask for the respondent by name and set a callback if not available. Most response options are not to respondents. Don't know and refuse are available response options for each question	
<u>Screener</u>	
May I speak to <name of="" respondent="">?</name>	
This call is about a Census Bureau survey you recently completed. First we'd like to th you for completing the survey online. Today, we'd like to collect some additional information.	ank
1. If you recall, you recently received a large envelope from the U.S. Census Burea The Census Bureau wants to improve its mailing materials. What materials do remember seeing in the envelope? (Mark all that apply) Form or Questionnaire Letter – (if marked, then go to Q2.a) Questionnaire Guide FAQ Brochure Return Envelope Postcard Internet Instruction Card Other – Record main ideas Don't remember the envelope	
2. If "Letter" NOT marked in Q1	
Did you see a letter about the survey?	
☐ Yes	
☐ No - Skip to 3	
2a. Did you read the letter [Fill if "letter" marked in Q1: that was in the large	
envelope]?	
☐ Yes	
☐ No - Skip to Q3	

2b.	What do you remember about what the letter said?
	☐ Could have chosen between the Internet and the paper form
	- If marked, skip to Q4a.
	☐ Mentioned Internet only
	☐ Mentioned paper form only - If marked, skip to Q4a.
	☐ Listed uses of the data
	☐ Randomly selected
	☐ Required by law - mandatory
	☐ Answers are kept confidential
	☐ It provided phone number for help
	☐ Signed by director
	☐ Someone may call or visit
	☐ Confusing
	☐ Other- <i>Record main ideas</i>
3.	We received your completed survey over the Internet. As far as you can recall,
	could you have chosen to respond using a paper questionnaire? (Mark all that
	apply.)
	Yes
	□ No - Skip to Q4b
4a.	Why did you decide to use the Internet to complete the survey? (Mark all that
	apply)
	☐ There was no paper form/ no other way to respond
	☐ Easy
	☐ I prefer the Internet/Do everything on the Internet (pay bills, shop, etc.)
	□ Secure
	☐ Convenient
	☐ Faster processing
	☐ Saves money ☐ Other - Record main ideas
4b.	
40.	If the Internet was not an option, would you have completed a paper form? — Yes
	- Maybe
	□ No □ Maybe

5. Was there anything in the mailing materials that made you decide to use the
Internet to complete the survey?
Yes, - Please describe what in the materials motivated you to use the
Internet.(Mark all that apply.)
Message about conserving natural resources
Message about saving money
Message about processing data efficiently
☐ Uses of the data
☐ Randomly selected
☐ Required by law
Answers are kept confidential
☐ Someone may call or visit
☐ Paper form looked too long
☐ Other -Record main ideas
□ No
6. Did you have any trouble with your User ID or PIN?
☐ Yes Can you tell me more about that? - Record main ideas
□ No.
7. Did you have any difficulty using the Internet to complete the survey?
Yes Can you tell me more about why answering the survey using the
Internet was difficult? (Mark all that apply.)
☐ Slow Internet connection
☐ Session timed-out
☐ Couldn't get back into the survey
☐ Power problems
☐ Other -Record main ideas
□ No
If acknowledged there was a paper form in Q1, Q2b, or Q3 then ask Q8, Q9 and Q10;
otherwise skip to end.
8. Did you use the paper form as a guide while you filled out the survey on the
Internet?
☐ Yes
□ No
9. Did you complete the paper form?
☐ Yes
☐ No – Skip to end
10. Was that before you started the survey on the Internet, while you were on the
Internet, or after you completed the survey on the Internet?
Before respondent started the survey on the Internet
While the respondent was on the Internet
☐ After the respondent completed the survey on the Internet
END - GO TO INTERNET USE

Appendix F ABS Questions for Mail Respondents

ABS Ques	stions				
Assumptions: Previous questions will provide the introduction of the interviewer, verification					
of the telephone number and address. Additionally, we will ask for the respondent by name					
and set a callback if not available. Most response options are not read to respondents. Don't					
know and	know and refuse are available response options for each question.				
Screener					
May I spe	eak to <name of="" respondent="">?</name>				
	is about a Census Bureau survey you recently completed. First we'd like to thank you				
for comp	leting the questionnaire. Today, we'd like to collect some additional information.				
1. If	f you recall, you recently received a large envelope from the U.S. Census Bureau.				
	The Census Bureau wants to improve its mailing materials. What materials do you				
	emember seeing in the envelope? (Mark all that apply)				
	Form or Questionnaire				
	☐ Letter - If marked, skip to Q2a.				
	☐ Questionnaire Guide				
	☐ FAQ Brochure				
	☐ Return Envelope				
	☐ Postcard				
	☐ Internet Instruction Card				
	Other – Record Main ideas				
	☐ Don't remember the envelope				
	f "Letter" NOT marked in Q1				
C	Did you see a letter about the survey?				
	☐ Yes				
	☐ No - Skip to Q3				
2a. 🖸	Oid you read the letter [Fill if "letter" marked in Q1: that was in the large envelope]?				
	Yes				
	☐ No - Skip to Q3				
2b. V	What do you remember about what the letter said?				
	☐ Could have chosen between the Internet and the paper form				
	- If marked, skip to Q4a.				
	☐ Mentioned Internet only- If marked, skip to Q4a.				
	☐ Mentioned paper form only				
	☐ Listed uses of the data				
	☐ Randomly selected				
	☐ Required by law - mandatory				
	☐ Answers are kept confidential				
	☐ It provided phone number for help				
	☐ Signed by director				
	☐ Someone may call or visit				
	☐ Confusing				
	Other- Record main ideas				

3.	We received a completed form in the mail from you. As far as you can recall, could
	you have chosen to respond over the Internet?
	Yes - If control panel skip to Q13; otherwise skip to Q4a.
	☐ No - Skip to Q13
4a.	Why did you decide to use the paper form to complete the survey instead of using
	the Internet?
	☐ No access to Internet
	☐ Lost/misplaced internet log-in instructions
	☐ Inexperienced computer user
	☐ Worried about security
	☐ Convenience of the paper / Prefer paper forms
	☐ Other – <i>Record main ideas</i>
4b.	If the paper form was not an option, would you have completed the survey on the
	Internet?
	□ Yes
	□ No.
	☐ Maybe
5.	Was there anything in the mailing materials that made you decide to use the paper
	form to complete the survey?
	☐ Yes - Please describe what in the mailing materials motivated you to use the
	paper. Record main ideas
	□ No
-	4a the respondent reports they do not have Internet access or they lost the log-in
	ctions, then skip to Internet Use; otherwise continue to Q6a.
6a.	Did you consider answering over the Internet?
	□ Yes
CI	□ No - Skip to Q6d
6b.	Did you try to log on?
	☐ Yes - Skip to Q7
C -	☐ No Why didn't you log onto the Internet? (Mark all that apply)
6c.	Why didn't volling onto the internet? Wark all that apply)
	☐ I am too busy
	☐ I am too busy ☐ Forgot to
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will)
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing
	☐ I am too busy ☐ Forgot to ☐ Haven't gotten to it (Respondent implies they will) ☐ The instruction card was too confusing ☐ Lost/misplaced the logon information
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems
	☐ I am too busy ☐ Forgot to ☐ Haven't gotten to it (Respondent implies they will) ☐ The instruction card was too confusing ☐ Lost/misplaced the logon information
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems □ Other Record main ideas
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems □ Other Record main ideas
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems □ Other Record main ideas
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems □ Other Record main ideas
	 □ I am too busy □ Forgot to □ Haven't gotten to it (Respondent implies they will) □ The instruction card was too confusing □ Lost/misplaced the logon information □ User id/PIN login problems □ Other Record main ideas

6d.	Why didn't you want to answer over the Internet? (Mark all that apply)
	☐ No access to Internet
	☐ Inexperienced computer user
	☐ Worried about security
	☐ Convenience of the paper
	☐ The instruction card was too confusing
	☐ The survey was too long to do on the Internet
	□ No interest in the computer
	☐ Other – Record main ideas
	- Other - Necora main lacas
	Skip to Internet Use
7.	Did you have any trouble with your User ID or PIN?
	☐ Yes - Can you tell me more about that? Record main ideas
	□ No
8.	Did you start to answer the questions on the Internet?
	☐ Yes
	☐ No - Why didn't you start to answer the questions on the Internet? Record main
	ideas and Skip to Internet Use
9.	Did you have any difficulty using the Internet to answer the survey?
	☐ Yes - Can you tell me more about why answering the survey using the Internet
	was difficult? (Mark all that apply.)
	☐ Slow Internet connection
	☐ Session timed-out
	Couldn't get back in to the survey
	☐ Power problems
	☐ Other -Record main ideas
	□ No
10.	Did you finish answering the survey on the Internet?
	☐ Yes
	☐ No - Why didn't you finish answering the survey on the Internet? -Record main
	ideas and Skip to Q12
11.	Did you submit the completed survey on the Internet?
	☐ Yes — About when did you submit the survey?
	☐ Last week
	☐ A few weeks ago
	☐ Last month
	☐ Sometime in March
	☐ Sometime in April
	☐ Sometime in May
	Other- Record main ideas
	□ No Why didn't you submit the survey on the Internet? Record main ideas

12.	Did you complete the paper form before or after you went to the Internet?	
	☐ Completed paper BEFORE Internet	
	☐ Completed paper AFTER Internet	
	☐ Respondent indicated they completed the paper and Internet at the same time.	
	Skip to Internet Use	
13.	The Census Bureau is considering offering the survey over the Internet, in addition to	
	having the paper form. Which of those two ways to answer the survey do you	
	prefer? (Mark only one)	
	Paper- Why do you prefer paper? Record main ideas	
	Internet – Why do you prefer Internet? Record main ideas	
	☐ Neither option	
	Prefer both options about the same	
	☐ It depends Please give some examples of when you would prefer to respond	
	over the Internet Record main ideas	
	Go to Internet Use	

Appendix G ABS Questions for Nonrespondents

•
ABS Questions
<u>Assumptions:</u> Previous questions will provide the introduction of the interviewer and
verification of the telephone number and address. Most response options are not read to
respondents. Don't know and refuse are available response options for each question.
<u>Screener</u>
Name to an advice a company of least 15 years and who wavelly boundles the specific and is
May I speak to someone at least 15 years old who usually handles the mail and is knowledgeable about the household at {read address} and the people in that household?
knowledgeable about the household at fread address; and the people in that household:
What is your name?
I'm calling from the U.S. Census Bureau about the American Community Survey that was
recently mailed to your address.
I am required by law to tell you that this survey is authorized by Title 13, Sections 141, 193,
and 221 of the United States Code. The average interview takes about 15 minutes. This
survey is mandatory and your cooperation is very important. All the information you provide
will remain completely confidential.
1. Do you remember receiving a large envelope from the Census Bureau in March or
April?
☐ Yes
lacksquare No (probe for someone who opens the mail and may have seen the envelope and
restart the interview)
(if nobody remembers it, skip to hypothetical questions, H1).
2. Did you open it?
☐ Yes - Skip to Q3
☐ No Go to Q2a
DK Skip to hypothetical questions, H2
2a. Why didn't you open it? (Mark all that apply)
☐ Already completed the Census
☐ I am too busy
☐ Forgot to
☐ Haven't gotten to it (Respondent implies they will)
☐ Looked too big/too much work
☐ Threw it away
☐ Didn't look official/Looked like junk mail
□ Not familiar with Census Bureau
☐ It wasn't addressed to me (said "Resident")
Other - Record main ideas
Skip to hypothetical questions, H2
1 11

3.	The Census Bureau wants to improve its mailing materials. What materials do you
	remember seeing in the envelope? (Mark all that apply)
	☐ Form or Questionnaire
	☐ Letter – (if marked, then go to Q4.a)
	☐ Questionnaire Guide
	☐ FAQ Brochure
	☐ Return Envelope
	□ Postcard
	☐ Internet Instruction Card
	U Other – Record main ideas
	Utiler – Record main ideas
4.	If "Letter" NOT marked in Q3
	Did you see a letter about the survey?
	☐ Yes
	☐ No - Skip to Q5a if "Form or Questionnaire" marked in Q 3, Otherwise go to Q5.
4a.	Did you read the letter [Fill if "letter" marked in Q3: that was in the large envelope]??
	☐ Yes
	☐ No - Skip to Q5a if "Form or Questionnaire" marked in Q3, Otherwise go to Q5.
4b.	What do you remember about what the letter said? (Mark all that apply)
	Could have chosen between the Internet and the paper form
	☐ Mentioned Internet only
	☐ Mentioned paper form only
	☐ Listed uses of the data
	☐ Randomly selected
	☐ Required by law - mandatory
	☐ Answers are kept confidential
	☐ It provided phone number for help
	☐ Signed by director
	☐ Someone may call or visit
	□ Confusing
	☐ Other- Record main ideas
	a other-necora main acus
5.	If "Form or Questionnaire" not marked in Q3
	Did you see a questionnaire or form to fill out?
	, Yes
	□ No - Skip to 6
5a.	Also ask if "Form or Questionnaire" marked in Q3
	What do you remember about the questionnaire or form? - Record main ideas
	- -

6.	There were several different ways to respond to the survey. As far as you recall, how could you have chosen to respond to the survey: by paper? over the Internet? or by
	another way? Paper – Mail/Send it in
	☐ Internet (if marked then go to Q7a)
	Other- Record main ideas
	□ Don't Remember
	Don't Kemember
Interne	t Check
If "Inter	rnet" is marked in Q6, then ask this series beginning with 7a; otherwise Skip to Paper
Check	
7a. Did	you consider answering over the Internet?
	☐ Yes
	□ No - Skip to 7d
7b. Di	d you try to log on?
	☐ Yes - Skip to 7e
	□ No
7c W	ny not? (Mark all that apply) If necessary: Any other reasons?
70.	□ I am too busy
	☐ Forgot about it
	☐ Haven't gotten to it (Respondent implies they will)
	☐ The instruction card was too confusing
	□ Lost/misplaced the logon information
	User ID/PIN login problems
	Other – Record main ideas
	Other – Necora mannaeas
	Skip to Paper Check
7d. Wh	ny didn't you want to answer over the Internet? (Mark all that apply)
	☐ No access to Internet
	☐ Inexperienced computer user
	☐ Worried about security
	☐ Convenience of the paper
	☐ The instruction card was too confusing
	☐ The survey was too long to do on the Internet
	☐ No interest in the computer
	☐ Other – Record main ideas
	Skip to Paper Check
7e.	Did you have any trouble with your User ID or PIN?
	☐ Yes Can you tell me more about that? Record main ideas
	□ No

7f.	Did you start to answer the questions on the Internet?
	☐ Yes
	□ No Why didn't you start to answer the questions on the Internet? Record main
	ideas and Skip to Paper Check
7g.	Did you finish answering the survey on the Internet?
	☐ Yes
	☐ No Why didn't you finish answering the questions on the Internet? Record
	main ideas and Skip to Paper Check
7h.	Did you submit the completed survey on the Internet?
	Yes – About when did you submit the survey?
	☐ Last week
	☐ A few weeks ago
	☐ Last month
	Sometime in March
	☐ Sometime in April
	☐ Sometime in May
	Other- Record response
	☐ No Why didn't you submit the survey on the Internet? Record main ideas
Damar	Charle If "Danay" is manuford in OC them and this source having muith One otherwise Chin to
Check	Check : If "Paper" is marked in Q6, then ask this series beginning with 8a; otherwise Skip to
CHECK	Other
8a.	Did you consider answering the survey on the paper form?
	☐ Yes
	☐ No Why didn't you consider answering the survey on the paper form? Record
	main ideas and Skip to Check Other
	,
8b.	Did you start to answer the questions on the paper form?
	☐ Yes
	□ No Why didn't you start to answer the questions on the paper form? Record
	main ideas and Skip to Check Other
8c.	Did you finish answering the survey on the paper form?
	☐ Yes
	☐ No Why didn't you finish answering the questions on the paper form? Record
	main ideas and Skip to Check Other

8d. Did you mail in the completed survey?
☐ Yes – About when did you mail the survey?
☐ Last week
☐ A few weeks ago
☐ Last month
☐ Sometime in March
☐ Sometime in April
☐ Sometime in May
☐ Other- Record response
☐ No Why didn't you mail in the completed survey? Record main ideas
Check Other: If "Paper" and "Internet" are marked in Q6, then Skip to Internet Use Questions
and then go to the Demographic Questions. Otherwise, ask Q9.
9. Some people were offered two options for responding to the survey - filling out the
paper form or going to the Internet and filling out the survey there. Which of those
two ways to answer the survey do you prefer? (Mark only one)
Paper- Why do you prefer paper? Record main ideas
Internet— Why do you prefer the Internet? Record main ideas
☐ Neither option
Prefer both options about the same
☐ It depends - Please give some examples of when you would prefer to respond over
the Internet -Record main ideas
Go to Internet Use then go to Demographic Questions
HYPOTHETICAL QUESTIONS
H1. If you had received a large envelope from the Census Bureau, do you think you would
have opened it? Yes
□ No Why wouldn't you have opened the envelope?
H2. If you had opened it and found a questionnaire to fill out, do you think you would
have completed it?
☐ Yes
No Why wouldn't you have completed the questionnaire if you found one in
the envelope?
the envelope:
H3. If you had a choice of answering on the Internet or answering on paper, which would
you prefer?
☐ Paper— Why do you prefer paper? (Record main ideas)
☐ Internet— Why do you prefer the Internet? Record main ideas
☐ Neither option
☐ Prefer both options about the same
☐ It depends Please give some examples of when you would prefer to respond over
the Internet -Record main ideas
Go to Internet Use then go to Demographic Questions

Appendix H ABS Questions for Internet Use – For everyone in the ABS

ABS Questions	
The	next questions are about your Internet use.
1.	Do you use the Internet at home?
	[] Yes
	[] No
2a.	Do you use the Internet at work?
	[] Yes
	[] No
2b.	Besides at home or at work, do you use the Internet at some other place?
	[] Yes
	[] No – (If Q1=No and Q2a=No and not an Internet responder then go to closing)
2	If laterant recognish heard on input flow Where did you consulate the course.
3.	If Internet responder, based on input flag: Where did you complete the survey?
	☐ Home
	□ Work
	☐ Library
	☐ Other -Record main idea
ıf 'N	la" to 01, 03a and 03b than go to and
	Io" to Q1, Q2a and Q2b then go to end. e, if No to Q1 and "Yes" to Q2a or Q2b, skip to question 6.
LISC	i, if No to Q1 and Tes to Q2a of Q2b, skip to question o.
4.	What kind of Internet access do you have at home? Do you have dial-up service; DSL
	service; cable modem service; fiber-optic service; mobile broadband plan for a computer
	or cell phone; satellite service; or some other service?
	☐ Dial-up service
	☐ DSL service
	☐ Cable modem service
	☐ Fiber-optic service
	☐ Mobile broadband plan for a computer or cell phone
	☐ Satellite service
	☐ Some Other service, <i>Record main idea</i>
5.	What Internet browser do you typically use at home?
	☐ Windows Internet Explorer (IE),Version
	windows internet explorer (ie),version
	☐ Mozilla Firefox,Version ☐ Chrome,Version
	Mozilla Firefox,VersionChrome,Version
	 ☐ Mozilla Firefox,Version ☐ Chrome,Version ☐ Safari,Version
	Mozilla Firefox,VersionChrome,Version

6. On a	n average day, about how many hours do you use the Internet, either at home, work
	mewhere else? (If necessary, Please include time you use the Internet on your phone
	a regular computer.)
	Less than one hour Would you please describe how often you use the Internet?
For exam	ple, once a week, once a month?
	1 hour
	☐ 2 hours
	■ 3 hours
	■ 4 hours
	□ 5 hours
	☐ 6 hours
	☐ 7 hours
	■ 8 hours
	□ 9 hours
	More than 10 hours
7. F	or the following activities or types of websites, please indicate how often you use or
	isit them. Please answer very often, often, sometimes, rarely, or never?
a. H	low often do you use or visit news, map directions, job hunting, reviews or other
iı	nformation or research gathering Internet sites?
	☐ Very often
	□Often
	□ Sometimes
	□Rarely
	□Never
b. ⊢	How often do you use or visit the Internet for Facebook, MySpace, Twitter, blogging,
0	or other social networking? (Is it very often, often, sometimes, rarely, or never?)
	☐ Very often
	□Often
	□ Sometimes
	□Rarely
	□Never
c. ⊢	How often do you use or visit the Internet for Paying bills, shopping or other financial
t	ransactions? (Is it very often, often, sometimes, rarely, or never?)
	☐ Very often
	□Often
	□ Sometimes
	☐ Rarely
	□Never
d. ⊢	How often do you use or visit the Internet for Emailing? (Is it very often, often,
S	ometimes, rarely, or never?)
	☐ Very often
	□Often
	□ Sometimes
	☐ Rarely
	□Never

e.	How often do you use or visit the Internet for Instant messaging, telephone calls, Skype, or other means of communication besides email? (Is it very often, often,	
	sometimes, rarely, or never?)	
	□Very often	
	□ Often	
	Sometimes	
	Rarely	
	□Never	
f.	How often do you use or visit the Internet for Viewing videos, downloading music or	
	podcasts, or other forms of entertainment? (Is it very often, often, sometimes, rarely,	
	or never?)	
	□ Very often	
	□Often	
	□Sometimes	
	□Rarely	
	□Never	
g.	How often do you use or visit the Internet for Filling out surveys? (Is it very often,	
	often, sometimes, rarely, or never?)	
	□ Very often	
	□Often	
	□ Sometimes	
	□ Rarely	
	□Never	
	IG If nonrespondent, go to demographic questions	
Thank you for your time. / Thank you very much for your participation in this important		
survey		
Your co	ooperation has made it possible for us to collect better data in the American	
	Community Survey. You've been very helpful.	

Appendix I Demographic Questions for Nonrespondents

Now I am going to ask you some questions regarding your demographic information.
1. Including yourself, how many people live in your household?
2. ♦ Ask or verify. Are you male or female?
☐ Male
☐ Female
3. What is your age?
years old - If only 1 person in the household (from Q1) SKIP to question 5. Otherwise go to question 4.
98 DON'T KNOW - Go to 3a
99 REFUSED - Go to 3a
33 KEI OSED GO to Su
3a. In which of these age categories do you belong?
READ LIST.
D. Leve there 40 are result.
Less than 18 years old
☐ 18-24 ☐ 25-24
□ 25-34 □ 25-44
□ 35-44 □ 45-54
□ 45-54 □ 55-64
□ 55-64
☐ 65 or older
If only 1 person in the household (from Q1) SKIP to question 5.
4. Are there any children in school who are under 18 living at home with you?
☐ Yes
□ No
5 Mb 1 to the 1th but and a constant of the 1 to 1 t
5. What is the highest grade or year of regular school you completed? READ LIST IF NECESSARY.
Less than high school graduation
☐ High school graduate
☐ Some college
☐ College graduate
□ Postgraduate
6. Are you of Hispanic, Latino or Spanish origin?
Yes
□ No

7. I'm going to read a list of race categories. You may choose one or more races.	
(Fill if Q6 = 'yes': For this survey, Hispanic origin is not a race.)	
Are you White; Black, African American, or Negro; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; or Some other race?	,
♦ Enter all that apply, separate with commas.	
□ White	
Black, African American, or Negro	
American Indian or Alaska Native	
□ Asian	
□ Native Hawaiian or Other Pacific Islander	
□ Some other race	
Now I'm going to ask about the place where you live	
8. Do you rent or own your house, apartment, or mobile home?	
of 20 you rent of our your mouse, apartment, or mount name.	
☐ Rent	
☐ Own	
□ OTHER	
8b. Which best describes this building? Is it a mobile home, single family house, building	
with two or more apartments, boat, RV, or van?	
☐ Mobile home	
☐ Single family house (attached or detached)	
Building with 2 or more units or apartments.	
☐ Boat, RV, van, etc	
9. For last year - 2010 - what was the total income of your household BEFORE TAXES?	
♦ Read all answer categories if necessary.	
D Loca than \$25,000	
☐ Less than \$25,000	
□ \$25,000 to less than \$50,000	
□\$50,000 to less than \$75,000	
□\$75,000 or more	