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| From: | PatrickJ. Cantwell/Signed/ <br> Division Chief, Decennial Statistical Studies Division |
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| Subject: | 2013 American Community Survey Questionnaire Design Test Final <br> Report |

Attached is the final American Community Survey Research and Evaluation report "2013 American Community Survey Questionnaire Design Test." This report summarizes the results of the Questionnaire Design Test (QDT) focused on two of the four experimental forms tested in QDT. The analysis of the other forms can be found in separate reports by Jamie Lewis Thomas in SEHSD and Stephanie Baumgardner in ACSO.

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## 2013 American Community Survey Questionnaire Design Test

FINAL REPORT

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## TABLE OF CONTENTS

TABLE OF CONTENTS ..... i
EXECUTIVE SUMMARY ..... iv

1. BACKGROUND ..... 1
2. METHODOLOGY ..... 2
2.1 Test Overview ..... 2
2.2 Experimental Treatments. ..... 2
2.3 Sample Design ..... 3
2.4 Research Questions ..... 4
2.5 Analysis Design ..... 4
2.5.1 Self-response Rate Analysis. ..... 4
2.5.2 Item Missing Data Rate Analysis ..... 6
2.5.3 Response Distribution Analysis. ..... 7
3. ASSUMPTIONS AND LIMITATIONS ..... 7
3.1 Assumptions ..... 7
3.2 Limitations ..... 7
4. RESULTS ..... 7
4.1 Does changing the questionnaire format impact the self-administered response rates? ..... 7
4.2 Does changing the questionnaire format impact item missing data rates of questions most affected by the new format? ..... 8
4.3 Does changing the questionnaire format impact response distributions of questions most affected by the new format? ..... 13
5. SUMMARY ..... 14
6. NEXT STEPS ..... 14
Acknowledgments ..... 14
References ..... 14
Appendix: Response Distributions for Selected Questions by Questionnaire Type, for Households that Responded by Mail (through August 29, 2013) ..... 16
Attachment A: Example Questionnaire for Control Treatment ..... A1
Front Cover ..... A1
Roster/Person Questions ..... A2
Housing Section ..... A5
Detailed Person Section ..... A8
Back Cover ..... A12
Attachment B: Example Questionnaire for the 36-page Treatment ..... B1
Front Cover ..... B1
Roster/Person Questions ..... B2
Housing Section ..... B5
Detailed Person Section. ..... B8
Back Cover ..... B13
Attachment C: Example Questionnaire for the 44-page Treatment ..... C1
Front Cover ..... C1
Roster/Person Questions ..... C2
Housing Section ..... C5
Detailed Person Section. ..... C9
Back Cover ..... C16

## LIST OF TABLES

Table 1. One-month Self-administered Response Rates and Mail Response Rates (excluding Undeliverable as Addressed) by Experimental Treatment (through July 31, 2013) ..... 8
Table 2. Two-month Self-administered Response Rates and Mail Response Rates (excluding Undeliverable as Addressed) by Experimental Treatment (through August 29, 2013) ..... 8
Table 3. Item Missing Data Rates for Mail Questionnaires for Selected Questions by Experimental Treatment (for Households that Responded by Mail by August 29; standard errorsin parentheses).10
Table 4. Overall Item Missing Data Rates for Selected Questions by Experimental Treatment (for Households that Responded by Internet or Mail by August 29; standard errors in parentheses) ..... 12
Table 5. Distribution of Mail Responses for Recoded Age Calculated from Age/DOB (Question P4) ..... 16
Table 6. Distribution of Mail Responses for Hispanic Origin (Question P5) ..... 16
Table 7. Distribution of Mail Responses for Race (Question P6) ..... 17
Table 8. Distribution of Mail Responses for Utilities Costs (Questions H14a - H14d) ..... 18
Table 9. Distribution of Mail Responses for Mortgage (Questions H22a - H22d) ..... 20
Table 10. Distribution of Mail Responses for Field of Degree (Question P12) ..... 21
Table 11. Distribution of Mail Responses for Ancestry (Question P13) ..... 21
Table 12. Distribution of Mail Responses for Work Last Week/Any Work Last Week (Questions P29a and P29b) ..... 22
Table 13. Distribution of Mail Responses for Layoff from Job/Temporarily Absent from Job/Informed of Recall to Work (Questions P35a - P35c) ..... 22
Table 14. Distribution of Mail Responses for Industry (Based on Industry Codes Derived from Questions P42 and P43) ..... 23
Table 15. Distribution of Mail Responses for Occupation (Based on Occupation Codes Derived from Questions P45 and P46) ..... 23

## EXECUTIVE SUMMARY

## Objective

During the 2010 American Community Survey (ACS) Content Test, the Census Bureau determined that the ACS paper questionnaire did not contain enough space to accommodate proposed content changes. Thus, we needed to test alternative questionnaire designs to accommodate future content needs on the ACS questionnaire.

In the 2013 Questionnaire Design Test, we studied the effect of a longer (36-page) questionnaire against our current 28-page form. We also studied whether changing the size of the form to a standard size ( $8.5^{\prime \prime} \times 11^{\prime \prime}$ ) booklet of 44 pages affected response, compared to both the current 28-page and 36-page booklet forms, which are both 10.25 " x 10.5" booklets.

## Methodology

We implemented an experimental test with the July 2013 ACS panel data collection, running for approximately two months. Sampled households in each treatment received the standard ACS mailings. The only mailing piece that differed by treatment was the second mailing package, which included the modified paper questionnaires for this test. The test did not include Failed Edit Follow-up, ComputerAssisted Telephone Interviewing or Computer-Assisted Personal Interviewing.

We designed this test to determine which questionnaire format achieved the same or better selfadministered response rates (mail response alone and Internet and mail response combined) as compared to the Control. Additionally, we examined item missing data rates and response distributions for selected questions which differed in appearance or location among the mail questionnaires to identify differences between the experimental treatments and the Control.

## Research Questions and Results

- Does changing the questionnaire format impact self-administered response rates?

We conclude that the length or format of the tested mail questionnaires did not impact response rates since there were no significant differences in mail or overall self-administered response rates between the three treatments after both one and two months of data collection.

- Does changing the questionnaire format impact item missing data rates of questions most affected by the newformat?

Changes to the questionnaire format did not have a consistent impact on item missing data rates for either the 36-page treatment or the 44-page treatment when compared to the 28-page form.

For each item included in the analysis, we made two comparisons. First, we compared the 36page and the 44-page treatments to each other. Next, the treatment with the lower item missing data rate was compared to the Control. For mail responses, the 44-page questionnaire did have significantly lower item missing data rates than the 36-page for several questions.

There also were a few questions where the 36 -page treatment had significantly lower item missing data rates compared to the Control. However, there were no consistent patterns in the results, so we cannot conclude that one questionnaire performed better than another questionnaire.

- Does changing the questionnaire format impact response distributions of questions most affected by the newformat?

On an item-by-item basis, we did find some significant differences when comparing the response distributions between the two experimental treatments and the Control. However, we found no clear patternsto indicate that the response distributions were consistently impacted by the changes tothe questionnaire format.

## 1. BACKGROUND

During the 2010 American Community Survey (ACS) Content Test, the Census Bureau determined that the ACS paper questionnaire did not contain enough space to accommodate proposed content changes. Thus, we tested alternative questionnaire designs to accommodate future content needs on the ACS questionnaire.

In the 2013 Questionnaire Design Test (QDT), we studied the effect of a longer (36-page) questionnaire against our current 28-page form. Heberlein and Baumgartner (1978) compiled many questionnaire studies and compared those studies for their effects on response rates. One aspect they looked at was the length of the questionnaire: number of pages, number of questions, and time to complete. After comparing 98 studies, they found that the number of pages was not significantly related to the response rate. A more recent study tested a 28 -page questionnaire versus a 32 -page questionnaire (Koloski et al., 2001) and showed there was no significant difference between the two response rates. However, a study by Champion and Sear (1969) which tested three, six, and nine page surveys, found that the longer questionnaires (six and nine pages) actually had higher response rates than the shorter three-page questionnaire, which seems counter-intuitive. However, that study kept the same number of questions for each survey (as we did for the QDT), while changing the format for each questionnaire, which resulted in the longer questionnaires having more space between questions.

In the QDT, we also studied whether changing the size of the questionnaire from the current 28-page and experimental 36 -page booklets ( $10.25^{\prime \prime} \times 10.5^{\prime \prime}$ ) to a standard size ( $8.5^{\prime \prime} \times 11^{\prime \prime}$ ) booklet affected response. Two studies (Childers and Ferrell, 1979; Johnson et al., 1993) focused on response rates based on different page sizes for questionnaires using an $8.5^{\prime \prime} \times 11^{\prime \prime}$ against a different non-standard size ( $8.5^{\prime \prime} \times 14^{\prime \prime}$ and $8.5^{\prime \prime} \times 5.5^{\prime \prime}$ ). In both cases, the standard size survey $8.5^{\prime \prime} \times 11^{\prime \prime}$ had significantly higher response rates than the non-standard size. Dillmanet al. (2009) states that pages should be "taller than they are wide" (pg. 185) since that is the conventional format people are used to handling.

The QDT was designed primarily to help the Census Bureau decide which questionnaire format performed best on response and data quality measures. The QDT also included two additional research objectives. The first was to make the ACS questionnaire more compatible with Optical Character Recognition (OCR) software by altering the response box formats for numeric write-in fields to allow automated capture rather than keying. Currently, the ACS does not use the OCR technology available at the National Processing Center (NPC). This test looked at the quality of OCR by comparing responses obtained from keying versus OCR as a method of capture. Second, this test included one variation in the relationship and marital status questions per the Office of Management and Budget (OMB) initiative to ensure these questions provide improved measurement of coupled households (whether married or unmarried, opposite-sex or same-sex, as well as registered domestic partnerships). The results from these two additional research objectives are covered under two separate ACS Research and Evaluation (R\&E) reports entitled "Evaluation of the Use of Optical Character Recognition (OCR) to Capture American Community Survey Numeric Write-ins in the 2013 Questionnaire Design Test" and "Testing Alternative Relationship and Marital Status Questions in the 2013 ACS Questionnaire Design Test."

## 2. METHODOLOGY

### 2.1 Test Overview

The initial stages of the test consisted of questionnaire design and cognitive laboratory pretesting. The cognitive testing used older respondents with low education levels since these are known characteristics associated with responding by paper rather than the Internet (Tancreto et al., 2012). Most cognitive testing respondents had neutral reactions when completing the various forms and thought the questionnaires were equally easy to complete (Terry, 2013).

We implemented the experimental field test portion of the 2013 QDT for two months with the July 2013 ACS sample panel. Sampled households in each treatment received the standard ACS mailings:

- Pre-notice letter
- Initial mailing with an invitation to respond via Internet (no paper questionnaire)
- Reminder postcard
- Second mailing package which includes a paper questionnaire and an invitation to respond via Internet
- Second reminder postcard
- Additional reminder postcard for nonrespondents without phone numbers

The only mailing piece that differed by treatment wasthe second mailing package, which included the modified paper questionnaires for this test. The test did not include Failed Edit Follow-up (FEFU), Computer-Assisted Telephone Interviewing (CATI) or Computer-Assisted Personal Interviewing (CAPI). We designed this test to determine which questionnaire format achieved the same or better selfadministered response rates (mail response alone and Internet and mail response combined) as compared to the Control. Additionally, we examined whether either of the test questionnaire formats performed better than the Control for item missing data rates and response distributions for selected questions on the forms. We analyzed only those questions with a substantial layout change on one or more treatments that could affect response behavior. Our primary focus was on the item missing data rates for mail responses, since there were no design changes to the Internet instrument.

### 2.2 Experimental Treatments

For this analysis, there were three treatment groups. We did not modify any of the 2013 ACS content for the treatments covered in this report. All questionnaires included a test URL different from the production URL for the Internet option in order to keep the test data separate from production data. Otherwise, the Internet instrument was identical to the production instrument.

## Treatment 1: 28-Page Questionnaire (Control Treatment)

This treatment served as the control for all treatments. This questionnaire was identical to the 2013 ACS production questionnaire with 28 pages and page dimensions of 10.25 " $\times 10.5^{\prime \prime}$ except for minor testspecific differences (unrelated to questionnaire design) that were made to all questionnaires in the test ${ }^{1}$. See Attachment A for a copy of the questionnaire.

## Treatment 2: 36-Page Questionnaire

For this treatment, the mail questionnaire was 36 pages with the current ACS page dimensions of

[^0]$10.25^{\prime \prime} \times 10.5^{\prime \prime}$. Like the questionnaires in the production ACS and the Control treatment, we folded the questionnaire for mailing and mailed it in an $11.5^{\prime \prime} \times 6^{\prime \prime}$ envelope. The layouts of the basic demographic and housing sections were identical to those sections on the 28 -page Control questionnaire. The detailed demographics section contained an extra page for each of the five person sections on the form, increasing the number of pages to five per person. We distributed the same detailed person questions across the five pages, allowing for more spacing between questions on all pages, as compared to the Control questionnaire. Since the booklet format requires us to add pages in increments of four, the increase in the number of pages for the detailed person questions resulted in a total of eight additional pages. Therefore, at the end of the questionnaire, we had three blank pages with a note indicating that the pages were left blank intentionally. See Attachment B for a copy of the questionnaire.

## Treatment 3: 44-page (8.5" x 11") Questionnaire

For this treatment, the mail questionnaire was 44 pages with standard letter paper dimensions of $8.5^{\prime \prime} \times 11^{\prime \prime}$. The questionnaire was mailed flat in a 9 " $\times 115 / 8^{\prime \prime}$ envelope since it could not be folded without damaging the form. We reformatted all sections of the form to accommodate the smaller page dimensions but the content remained the same as the 28 -page Control and the 36 -page questionnaire. The basic demographic section at the front of the questionnaire remained at two columns per page, with each column approximately one inch narrower than the Control form. The housing and detailed persons sections decreased from three columns per page to two, with each column approximately half an inch wider than in the Control. The changes in the width of the columns, as compared to the Control, resulted in many questions having word wrapping that differs from the Control and the 36-page questionnaires. The housing section increased from three pages to four, and the detailed person section increased from five pagesto seven pages per person. See Attachment C for a copy of the questionnaire.

### 2.3 Sample Design

Each of the two experimental treatments and the Control had a sample of 10,000 mailable addresses resulting in 30,000 total mailable sample addresses selected for our analysis. We used a nearest neighbor sampling approach for random allocation among the treatments. ${ }^{2}$ Sample sizes were designed to measure a 2.23 percentage point difference in the overall self-response rates among the treatments, at the $\alpha=0.10$ level, controlling for three comparisons.

The QDT was the first Methods Panel test to select a separate control sample instead of using the corresponding ACS production monthly panel for the Control. We required a test specific URL for our Internet application to keep our test data separate from production data. We were concerned that response rates, specifically Internet response rates, may be depressed in the QDT treatment groups because the ACS home page or an Internet search engine would misdirect respondents to the production application. If we had used the ACS production panel as the Control for the QDT (as we have in past Methods Panel tests), the Control group would have had the advantage of being able to log in to the production instrument more conveniently than logging into the test instrument. We tried to reduce the effects of respondents being misdirected to the production instrument by rendering a login error and simultaneously, and somewhat transparently, redirecting them to the correct QDT login page. A comparison of response between the Control and ACS production confirmed that the overall selfresponse rate (as of July, $2013^{3}$ ) was significantly higher for production cases. The difference in overall self-response rates between production and the Control was 1.1 percent (SE 0.5 percent). While there was no significant difference in the mail response rates, the Internet response rates for ACS Production was 1.1 percentage points higher (SE 0.5 percent) than our Control, supporting our hypothesis that the

[^1]advantages in the ease of finding and logging into the production URL would result in higher Internet response for production respondents.

### 2.4 Research Questions

In advance of the test, we identified a series of research questions to help assess the success of the various treatments. We list the research questions here, and provide answers to these questions in Section 4 of this report.

- Does changing the questionnaire format impact self-administered response rates?
- Does changing the questionnaire format impact item missing data rates of questions most affected by the new format?
- Does changing the questionnaire format impact response distributions of questions most affected by the new format?


### 2.5 Analysis Design

The test followed a typical one-month ACS mailing strategy to collect self-response data. The initial mailing with an invitation to respond via Internet (no paper questionnaire) was sent on June 24, 2013. The paper questionnaires were included in the second package mailed on July 11, 2013. Data collection ran for two months, ending on August 29 (49 days after the mailing of the paper questionnaire). This allowed sufficient time for the receipt of mail responses, the primary focus of QDT. There were no CATI or CAPI nonresponse follow-up operations for any of the treatments. We calculated estimates after one month and two months of data collection. Since our analysis concentrated on the mail response rates, the primary comparisons for this test are based on the two-month estimates. The one-month estimates are also of interest to assess the response rates we might expect prior to the start of CATI in a normal ACS production environment.

The analyses of self-response rates and item missing data rates used t-tests for the comparisons, where adjustments were made for multiple comparisons. To analyze self-response rates, we used the Bonferroni-Holm Multiple Comparison Procedure ${ }^{4}$, which is a modification of the simple Bonferroni procedure. To analyze item missing data rates we used the simple Bonferroni procedure since we only had two comparisons. We used Rao-Scott chi-square tests to analyze the item response distributions. All results were weighted to reflect the probability of selection into the sample.

### 2.5.1 Self-response Rate Analysis

We analyzed combined self-response rates reflecting responses across all self-response modes (Internet, mail and Telephone Questionnaire Assistance (TQA) ${ }^{5}$ ). We also analyzed response rates separately for the mail (including TQA ${ }^{6}$ ) and Internet modes. We focused on the differences in response rates for the mail mode between treatments because the paper questionnaire was the only difference in the mailing pieces. However, it is not enough to look at the impact on mail response rates only. We also assessed the potential impact of the paper questionnaire on overall response. The questionnaires people received may have influenced them to respond by Internet rather than paper, or they may have been

[^2]discouraged from responding at all, and thus the paper questionnaire would have affected overall response.

To analyze combined self-response, we calculated the overall self-administered response rate for each treatment as the percent of mailable and deliverable ${ }^{7}$ addresses with a non-blank ${ }^{8}$ mail or TQA response or a complete or sufficient partial ${ }^{9}$ Internet response, as follows:

| Overall Self- |
| :--- |
| administered |
| Response Rate |$\quad=$| \# of mailable and deliverable sample addresses that |
| :---: |
| provided a non-blank return by mail or TQA, or a complete |
| or sufficient partial response by Internet |

Total \# of mailable and deliverable sample addresses $\quad * 100$

This rate is different from most response rates that ACS publishes since the lack of a CAPI mode means that we cannot identify vacant and nonexistent housing units for removal from the rate's denominator. ${ }^{10}$

In addition to the overall self-response, we analyzed response by mail and Internet separately, using similar definitions. If a household responded by both mail and Internet, it was counted as a mail response only.

To analyze response by mail, we calculated the Mail Response Rate as:

| Mail Response |
| :--- |
| Rate |$=\frac{\text { provided a non-blank return by mail or TQA }}{\text { Total \# of mailable and deliverable sample addresses }} * 100$

To analyze response by Internet, we calculated the Internet Response Rate as:
\# of mailable and deliverable sample addresses that
$\begin{aligned} & \text { Internet } \\ & \text { Response Rate }\end{aligned}=\frac{\text { provided a complete or sufficient partial return by Internet }}{\text { Total \# of mailable and deliverable sample addresses }} * 100$

We made the following three comparisons:

- 36-page compared to 44 -page
- 36-page compared to Control
- 44-page compared to Control

To test for significant differences between the treatments, we used t-tests with adjustments for multiple comparisons using the Bonferroni-Holm Multiple Comparison Procedure to keep the experiment-wise error rate to $\alpha=0.10$. For each comparison, the better treatment is the one with the significantly higher

[^3]self- response rate. If both test treatments are significantly better than the Control, the winning test treatment is the one with the higher self-administered response rate.

### 2.5.2 Item Missing Data Rate Analysis

For this analysis, we included only those questions with a substantial layout change on one or more treatments that could possibly affect response behavior. Staff in the Decennial Statistical Studies Division (DSSD) and the American Community Survey Office (ACSO) worked together with subject matter experts in the Population Division (POP) and Social, Economic and Housing Statistics Division (SEHSD) to determine the specific ACS questions to evaluate. We should note that we had no hypothesis for any of the questions that the format changes would actually result in differential missing data.

The focus of our analysis was the Mail Item Missing Data Rate, which includes only mailable and deliverable addresses that provided a nonblank return by mail. The rate was computed as follows:

Mail Item
$\begin{aligned} & \text { Missing Data } \\ & \text { Rate }\end{aligned}=\frac{\# \text { of missing responses to question, for mail mode }}{\# \text { of households or people in question's universe, for mail }}$ mode $\quad * 100$
We also calculated an Overall Item Missing Data Rate, using mailable and deliverable addresses that provided a nonblank return ${ }^{11}$ by mail or Internet ${ }^{12}$, asfollows:


We analyzed overall item missing data rates to assess the potential impact that changes to the form design could have on the ACS estimates. Note, however, that production ACS includes the results of CATI and CAPI, which are not reflected in the QDT estimates.

We applied the Content Reinterview Survey (CRS) (Murphy, 2012) analysis universe definitions since those definitions were discussed in detail for the CRS with the POP and SEHSD subject matter experts. If the responses necessary to make universe determinations were missing, we excluded the person or household from the calculation of the item missing data rate.

For each of these questions, we made the following comparisons for the item missing data rates:

- 36-page to 44 -page
- Winning test treatment compared to Control

Our analysis identified those items with significant differences in item missing data rates between treatments. The better treatment for a given item was the one with the lower item missing data rate. Ideally, we would have liked to compare both experimental treatments to the Control. However, we did not have sufficient statistical power to make three comparisons. Therefore, we picked a winner between the 36 -page and the 44 -page to compare to the Control on an item-by-item basis. The winner

[^4]between the 36-page and 44-page is the treatment with the lower item nonresponse rate, even if the difference is not significant.

### 2.5.3 Response Distribution Analysis

For this analysis, we studied the same questions chosen for the analysis of item missing data rates. We estimated response distributions for the selected questions and performed Rao-Scott chi-square tests to determine if the response distributions differed between treatments. Our focus was on the response distributions for mail responses. We made the following comparisons:

- 36-page to Control
- 44-page to Control


## 3. ASSUMPTIONS AND LIMITATIONS

### 3.1 Assumptions

Because this is a test of mail questionnaire design, we selected the returned mail questionnaire when there was both a mail and an Internet response for an address. There were 63 duplicate (mail and Internet) responses for the 36 -page treatment, 62 for the 44 -page, and 83 for the Control.

### 3.2 Limitations

We computed item missing data rates using pre-edited data, so the rates do not reflect final ACS item allocation rates. Since we did not check for responses such as "don't know" or "refuse", the item missing data rates could be slightly underestimated for items that require an open-ended write-in response (Ancestry, Field of Degree, Industry and Occupation). During the normal editing process, such responses would have been identified and subjected to imputation as nonresponses.

If the responses necessary to determine if a household or person belongs in the universe for a given question are missing, the person or household was excluded from the calculation of the item missing data rate. Therefore, when a respondent break-offs, specifically on the Internet, it may limit the universe available for certain items, which may result in underestimates of the overall item missing data rates.

The 44-page questionnaire was mailed unfolded in a $9^{\prime \prime} \times 115 / 8^{\prime \prime}$ envelope whereas questionnaires for the other treatments were folded and mailed in $11.5^{\prime \prime} \times 6$ " envelopes. The resulting differences in the envelope size and shape may have influenced response.

## 4. RESULTS

In the following sections, we analyze the data to answer the research questions in Section 2.4.

### 4.1 Does changing the questionnaire format impact the self-administered response rates?

Changes to the questionnaire did not affect self-response, our key measure, for mail responses or the overall response rate with mail and Internet responses combined.

Tables 1 and 2 show the one- and two-month response rates, respectively. There are no significant differences between any of the response rates for the three treatments after both one and two months of data collection. Self-response rates were not impacted by the length of the paper questionnaire or the size of the outbound mailing package under the current ACS mailing strategy. This finding is important, since previous literature has been unclear regarding the impact of length and size of questionnaires.

Table 1. One-month Self-administered Response Rates and Mail Response Rates (excluding Undeliverable as Addressed) by Experimental Treatment (through July31, 2013)

|  | Experimental Treatment |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 36-page | 44-page <br> $(8.5 \times 11)$ | Control <br> (28-page) | 36-page - <br> 44-page | 36-page- <br> Control | 44-page- <br> Control |
| Overall Response Rate | 44.8 | 44.7 | 45.2 | 0.1 | -0.4 | -0.4 |
| (SE) | $(0.5)$ | $(0.5)$ | $(0.5)$ | $(0.6)$ | $(0.7)$ | $(0.7)$ |
| Mail Response Rate | 17.9 | 17.9 | 18.4 | 0.0 | -0.5 | -0.5 |
| (SE) | $(0.3)$ | $(0.3)$ | $(0.5)$ | $(0.5)$ | $(0.5)$ | $(0.6)$ |
| INT Response Rate | 26.9 | 26.8 | 26.8 | 0.0 | 0.1 | 0.0 |
| (SE) | $(0.5)$ | $(0.5)$ | $(0.5)$ | $(0.7)$ | $(0.7)$ | $(0.7)$ |

Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 2. Two-month Self-administered Res ponse Rates and Mail Response Rates (excluding Undeliverable as Addressed) by Experimental Treatment (through August 29, 2013)

|  | Experimental Treatment |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 36-page | 44-page <br> $(8.5 \times 11)$ | Control <br> $(28-$-page $)$ | 36-page - <br> 44-page | 36-page- <br> Control | 44-page- <br> Control |
| Overall Response Rate | 52.0 | 51.8 | 52.1 | 0.1 | -0.2 | -0.3 |
| (SE) | $(0.5)$ | $(0.5)$ | $(0.5)$ | $(0.6)$ | $(0.7)$ | $(0.7)$ |
| Mail Response Rate | 23.3 | 23.3 | 23.7 | 0.0 | -0.4 | -0.4 |
| (SE) | $(0.4)$ | $(0.4)$ | $(0.5)$ | $(0.5)$ | $(0.6)$ | $(0.7)$ |
| INT Response Rate | 28.6 | 28.5 | 28.4 | 0.1 | 0.2 | 0.1 |
| (SE) | $(0.5)$ | $(0.5)$ | $(0.5)$ | $(0.7)$ | $(0.7)$ | $(0.8)$ |

Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

### 4.2 Does changing the questionnaire format impact item missing data rates of questions most affected by the new format?

For this question, we focused on the mail item missing data rates, which include only mailable and deliverable addresses that provided a nonblank return by mail. We also analyzed item missing data rates over all responses, mail and Internet combined. We wanted to determine if any significant differences in the mail item missing data rates also appeared when looking at the overall missing data rates. As noted in Section 2.5.2, the analysis included those questions where there were substantial format changes that could possibly affect response behavior.

Table 3 on page 10 contains the mail item missing data rates at the end of two months of data collection; significant differences are in bold print with footnotes to indicate the winning treatment, i.e., the treatment with the lower item missing data rate. For the basic demographic questions, the results in Table 3 show no significant differences for any of the comparisons. Looking at the comparisons
between the 36-page and 44-page questionnaires, there are a few items in the detailed person section (Ancestry, Worked Last Week, and Combined Work) and one item in the housing section (Monthly Gas Costs), where the item missing data rates are lower for the 44-page questionnaire; and there are no questions where the 36 -page form has lower item missing data rates. We offer the following specific observations:

- The mail item missing data rates for Combined Work and Work Last Week are lower for the 44page form compared to the 36 -page form. These two items are closely related. Work Last Week corresponds to question P29a alone (Work Last Week). Combined Work also takes into account the response to Question P29b (Any Work Last Week). Those questions appear at the top of the first column on the 44-page form, whereas on the 36 -page form they appear at the top of the last (third column).
- Looking at Ancestry we see the largest significant difference (4.3 percent with a SE of 1.4 percent) in mail item missing data rates between the experimental treatments, with the 44 -page form having the lower missing data rate.

We can offer some conjecture as to what might have happened. While item nonresponse is relatively high for Ancestry in general, we hypothesize that respondents may have been confused by the skip instruction for the Field of Degree (FOD) question which immediately precedes Ancestry. Those who did not need to answer FOD (those without an undergraduate degree) may have skipped over both questions in error. We think this happened more frequently on the 36 -page form. We explored the data further and looked at the response pattern where there was no response for Ancestry, but there was a response for the language question after ancestry. For people without a Bachelor's degree (who should skip FOD), the 36page form had higher item missing data rates for ancestry. We did not find similar differences among people with a Bachelor's degree. Part of the problem may be that both FOD and Ancestry are write-in questions. Due to the proximity of the write-in spaces, we conjecture that people may not have perceived them as separate write-ins. This could be more problematic on the 36 -page form. The narrower columns may make the write-in spaces appear closer together. The difference in column width also affected the word-wrapping of the skip instruction. On the 36 -page form the word "SKIP" appears at the beginning of a line, making it more prominent upon a quick read of the instruction.

Next, for each item analyzed, we compared the experimental treatment with the lower mail item missing data rate, whether significant or not, to the Control. Although the 44-page form had lower missing data rates than the 36 -page form for some items, it was never significantly lower than the Control. We conjecture that the size and number of columns per page on the 44-page compared to the 36-page may have impacted response, but we cannot explain why those differences do not appear in the comparison between the 44-page and the Control, since the Control has the same page size/layout as the 36 -page form. We did, however, find that the 36 -page questionnaire had significantly lower missing data rates than the Control for a few questions, including FOD. Respondents may have been influenced by the change in layout involving FOD. FOD appears at the top of the third column on the 36page questionnaire; whereas, on the Control form, it appears at the bottom of the second column. There are also two housing questions where the 36-page form had lower missing data ratesthan the Control. Since the housing section is identical between the 36 -page and Control form, we have no conjecture as to what may be causing those differences.

In summary, although our analysis of mail item missing data rates showed a few differences on an item-by-item basis, it did not reveal any substantive problems associated with the different treatments.

Table 3. Item Missing Data Rates for Mail Questionnaires for Sel ected Questions by Experimental Treatment (for Households that Responded by Mailby August 29; standard errors in parentheses)

|  | 36-page | 44-page | $\begin{gathered} \text { 36-page - } \\ \text { 44-page } \end{gathered}$ | Winner | 28-page <br> (Control) | WinnerControl |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Basic Demographic Questions |  |  |  |  |  |  |
| Age/DOB (used RAGE) | $\begin{gathered} 1.4 \\ (0.2) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.9 \\ (0.3) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-0.5 \\ & (0.3) \\ & \hline \end{aligned}$ | $\begin{gathered} 1.4 \\ (0.2) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.1 \\ (0.2) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.3 \\ (0.3) \\ \hline \end{gathered}$ |
| Hispanic Origin | $\begin{gathered} \hline 7.5 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 7.1 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.4 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 7.1 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} 6.9 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.2 \\ (0.7) \\ \hline \end{gathered}$ |
| Race | $\begin{gathered} \hline 3.6 \\ (0.4) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 3.4 \\ (0.4) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.2 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{aligned} & 3.4 \\ & (0.4 \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 3.0 \\ (0.4) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.4 \\ (0.5) \\ \hline \end{gathered}$ |
| Housing Questions |  |  |  |  |  |  |
| Monthly Electric Costs | $\begin{gathered} \hline 6.7 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.3 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.4 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.3 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.8 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-0.5 \\ & (0.8) \\ & \hline \end{aligned}$ |
| Monthly Gas Costs | $\begin{aligned} & 14.5 \\ & (0.8) \end{aligned}$ | $\begin{aligned} & 12.0 \\ & (0.7) \end{aligned}$ | $\begin{aligned} & \hline 2.5^{1} \\ & (1.1) \end{aligned}$ | $\begin{aligned} & \hline 12.0 \\ & (0.7) \\ & \hline \end{aligned}$ | $\begin{aligned} & 12.7 \\ & (0.8) \end{aligned}$ | $\begin{aligned} & \hline-0.7 \\ & (1.0) \end{aligned}$ |
| Annual Water and Sewer Costs | $\begin{gathered} \hline 9.6 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 8.0 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.6 \\ (1.0) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 8.0 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 9.6 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-1.6 \\ & (1.0) \\ & \hline \end{aligned}$ |
| Annual Other Fuel Costs | $\begin{aligned} & 18.2 \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{aligned} & 17.2 \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 1.1 \\ (1.4) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 17.2 \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{aligned} & 18.3 \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline-1.1 \\ & (1.2) \\ & \hline \end{aligned}$ |
| Mortgage Status | $\begin{gathered} \hline 5.3 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 6.1 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-0.8 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 5.3 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 3.6 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.7 \\ (0.9) \\ \hline \end{gathered}$ |
| Mortgage Payments | $\begin{gathered} \hline 4.7 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 3.7 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.9 \\ (1.1) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 3.7 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 5.6 \\ (0.9) \\ \hline \end{gathered}$ | $\begin{gathered} \hline-1.9 \\ (1.2) \\ \hline \end{gathered}$ |
| Real Estate Taxes Included | $\begin{gathered} \hline 1.2 \\ (0.4) \end{gathered}$ | $\begin{gathered} \hline 2.3 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-1.1 \\ & (0.7) \end{aligned}$ | $\begin{gathered} 1.2 \\ (0.4) \end{gathered}$ | $\begin{gathered} 3.1 \\ (0.7) \end{gathered}$ | $\begin{gathered} \hline-1.9^{2} \\ (0.8) \end{gathered}$ |
| Homeowner's Insurance Included | $\begin{gathered} \hline 1.5 \\ (0.5) \end{gathered}$ | $\begin{gathered} \hline 3.0 \\ (0.7) \end{gathered}$ | $\begin{aligned} & \hline-1.4 \\ & (0.9) \end{aligned}$ | $\begin{gathered} \hline 1.5 \\ (0.5) \end{gathered}$ | $\begin{gathered} \hline 3.4 \\ (0.8) \end{gathered}$ | $\begin{gathered} \hline-1.9^{2} \\ (0.9) \end{gathered}$ |
| Detailed Person Questions |  |  |  |  |  |  |
| Field of Degree | $\begin{gathered} 4.2 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} 4.5 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} -0.3 \\ (1.2) \\ \hline \end{gathered}$ | $\begin{gathered} 4.2 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} 6.6 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \mathbf{- 2 . 5} \\ (1.2) \\ \hline \end{gathered}$ |
| Ancestry | $\begin{aligned} & \hline 25.7 \\ & (1.0) \end{aligned}$ | $\begin{aligned} & \hline 21.4 \\ & (1.0) \end{aligned}$ | $\begin{aligned} & \hline 4.3^{1} \\ & (1.4) \end{aligned}$ | $\begin{aligned} & \hline 21.4 \\ & (1.0) \end{aligned}$ | $\begin{aligned} & 19.8 \\ & (0.8) \end{aligned}$ | $\begin{gathered} \hline 1.6 \\ (1.3) \end{gathered}$ |
| Worked Last Week | $\begin{gathered} \hline 9.4 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 7.1 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \mathbf{2 . 2} \mathbf{2}^{2} \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 7.1 \\ (0.6) \end{gathered}$ | $\begin{gathered} \hline 8.8 \\ (0.6) \end{gathered}$ | $\begin{aligned} & \hline-1.7 \\ & (0.9) \end{aligned}$ |
| Any Work Last Week | $\begin{gathered} \hline 4.4 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 4.7 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-0.3 \\ & (0.6) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 4.4 \\ & (0.5 \end{aligned}$ | $\begin{gathered} \hline 4.0 \\ (0.5) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.4 \\ (0.7) \\ \hline \end{gathered}$ |
| Combined Work ${ }^{3}$ | $\begin{gathered} \hline 8.8 \\ (0.6) \end{gathered}$ | $\begin{gathered} \hline 6.7 \\ (0.6) \end{gathered}$ | $\begin{aligned} & 2 . \mathbf{0}^{1} \\ & (0.9) \end{aligned}$ | $\begin{gathered} \hline 6.7 \\ (0.6) \end{gathered}$ | $\begin{gathered} \hline 8.4 \\ (0.6) \end{gathered}$ | $\begin{aligned} & \hline-1.7 \\ & (0.9) \end{aligned}$ |
| Layoff from Job | $\begin{aligned} & 12.6 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{aligned} & 10.8 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 1.8 \\ (1.0) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline 10.8 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 10.6 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 0.2 \\ (1.1) \\ \hline \end{gathered}$ |
| Temporarily Absent | $\begin{gathered} \hline 6.3 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 7.6 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{aligned} & \hline-1.3 \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 6.3 \\ (0.7) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 5.6 \\ (0.6) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.8 \\ (0.9) \\ \hline \end{gathered}$ |
| Recall to Work | $\begin{aligned} & 18.8 \\ & (5.2) \\ & \hline \end{aligned}$ | $\begin{aligned} & 14.3 \\ & (5.4) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 4.5 \\ (6.8) \\ \hline \end{gathered}$ | $\begin{aligned} & 14.3 \\ & (5.4) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 6.3 \\ (2.8) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 8.0 \\ (6.3) \\ \hline \end{gathered}$ |
| Industry | $\begin{aligned} & \hline 10.4 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{aligned} & 11.9 \\ & (0.9) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline-1.6 \\ & (1.2) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 10.4 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{aligned} & 12.1 \\ & (0.7) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline-1.8 \\ & (1.1) \\ & \hline \end{aligned}$ |
| Occupation | $\begin{aligned} & \hline 10.1 \\ & (0.8) \\ & \hline \end{aligned}$ | $\begin{gathered} \hline 9.7 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 0.4 \\ (1.1) \\ \hline \end{gathered}$ | $\begin{gathered} \hline 9.7 \\ (0.8) \\ \hline \end{gathered}$ | $\begin{aligned} & 11.6 \\ & (0.7) \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline-1.9 \\ & (1.0) \\ & \hline \end{aligned}$ |

Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013
${ }^{1} 44$-page significantly lower than 36-page
${ }^{2} 36$-page significantly lower than Control
${ }^{3}$ Worked Last Week and Any Work Last Week form the Combined Work variable. If both were missing, then Combined Work was counted as missing.

Table 4 on page 12 shows overall item missing data rates at the end of two months of data collection; significant differences are in bold print and are footnoted to indicate the winning treatment, i.e., the treatment with the lower item missing data rate. Here we see that only one question, Monthly Gas Costs, showed a significant difference between treatments for the mail missing data rate and still had a significant difference for the overall missing data rate. While there are other variables with significant differences in overall missing data rates between treatments, those findings are attributable to variations in Internet response only and not to differences in the paper questionnaires, since we did not find similar results in the mail response analysis. We have no explanation for the variations in Internet response among treatments, other than random variation from the sample.

Table 4. Overall Item Missing Data Rates for Sel ected Questions by Experimental Treatment (for Households that Res ponded by Internet or Mail by August 29; standard errors in parentheses) ${ }^{1}$
$\left.\begin{array}{lccc:ccc}\hline & 36 \text {-page } & \text { 44-page } & \begin{array}{c}\text { 36-page } \\ \text { 44-page }\end{array} & \text { Winner } & 28 \text {-page } \\ \text { (Control) }\end{array} \quad \begin{array}{c}\text { Winner- } \\ \text { Control }\end{array}\right]$

Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013
${ }^{1}$ Internet responses for the person questions were limited to the first five persons on the roster.
${ }_{3}^{2} 44$-page significantly lower than 36-page
${ }^{3} 36$-page significantly lower than Control
${ }^{4} 44$-page significantly lower than Control
${ }^{5}$ Control significantly lower than 36-page
${ }^{6}$ Worked Last Week and Any Work Last Week form the Combined Work variable. If both were missing, then Combined Work was counted as missing.

### 4.3 Does changing the questionnaire format impact response distributions of questions most affected by the new format?

In addition to analyzing item missing data rates, we analyzed mail only response distributions for each of the selected questions. We compared both the 36 -page questionnaire and the 44 -page questionnaire to the Control. To analyze Industry and Occupation, however, we only compared the 44-page questionnaire to the Control, since there were no differences in the layout of the questions between the 36 -page and the Control.

For a response to be included in the distribution analysis, it had to be in the universe for the question. We used the same universe definitions as those used to analyze item missing data rates. Missing data were excluded from the distribution analysis. For each question, we defined mutually exclusive response categories. These categories are shown in Tables 5-15 in the Appendix.

For Hispanic Origin (see Table 6 in the Appendix), each person was placed into one of six mutually exclusive Hispanic Origin categories, based on responses to the question as a whole, i.e., all of the checkboxes as well as the Hispanic origin(s) corresponding to the coded write-in response, if present. If the first check box was marked (indicating the person was non-Hispanic) and other checkboxes were marked (indicating the person was Hispanic), we dropped the person from the analysis. To analyze Race (see Table 7 in the Appendix), we formed seven mutually exclusive categories based on the checkboxes marked and the race or races that correspond to the coded write-ins. Coded write-ins also were used to categorize responses for Field of Degree (see Table 10 in the Appendix) based on the first Field of Degree code and Ancestry (see Table 11 in the Appendix) based on the first ancestry code. To analyze Industry (see Table 14 in the Appendix) and Occupation (see Table 15 in the Appendix), we used the industry codes (coded from responses to questions P42 and P43) and occupation codes (coded from responses to questions P45 and P46), respectively.

In our analysis of mail responses, we identified a few questions where there were significant differences in response distributions between the experimental treatments compared to the Control, based on RaoScott chi-square tests, at the 10 percent significance level. Tables 5-15 in the Appendix show the results of all the testing.

For the 36 -page treatment compared to the Control, we found significance for Monthly Gas Costs (see Table 8 in the Appendix) and Mortgage Payment Amount (see Table 9 in the Appendix). As noted earlier, the layout of the housing questions for the 36 -page treatment and the Control are the same, so this difference cannot be due to different layouts. We have no hypothesis as to why these differences appeared.

For the 44-page treatment compared to the Control, we found significance for Mortgage Payment Amount (see Table 9 in the Appendix), Field of Degree (see Table 10 in the Appendix), and Layoff from a Job (see Table 13 in the Appendix). The factors driving these differences may be related to the size of the form or the form layout. There are substantial differences in the forms for Field of Degree. Field of Degree appears at the top of the page, in the first column (of two) on the 44-page form. It is on a separate page than the other schooling questions. On the Control form it appearsat the bottom of the page, in the middle column (of three). Layoff from a Job appearsat the top of the Control form, in the first column. For the 44-page form, it is the last question on the page. It is unclear, however, how these differences would have affected the distribution of responses among those people who answered the questions.

## 5. SUMMARY

The length or format of the questionnaires as well as the size of the mailing envelope did not affect selfresponse, our key measure, for mail responses or mail and Internet responses combined. We hypothesize that the mandatory nature of the survey influenced people to respond regardless of the length and format of the questionnaire they received.

Changes to the questionnaire format did not have a consistent impact on item missing data rates for either the 36 -page treatment or the 44 -page treatment when compared to the current 28 -page form. Focusing on mail responses, we did find some significant differences in our analysis of item missing data rates. There were a few questions where item missing data rates were lower for the 44-page questionnaire compared with the 36-page questionnaire. We also found a small number of questions where there were significant differences in our analysis of response distributions, mainly in comparisons where the 44 -page treatment differed from the Control. Our results, however, were too weak and inconsistent to choose the 44-page treatment as the better treatment, overall.

In summary, our results do not conclusively point to one treatment as superior to any other.

## 6. NEXT STEPS

An alternative questionnaire design may eventually be needed to accommodate new questions on the current ACS questionnaire, specifically in the detailed person section. However, as this test was being conducted, the Census Bureau was directed to initiate a thorough review of content in the ACS, with the aim of ensuring that only necessary burden is placed on ACS respondents. This effort may make it less likely that the survey will need additional room on the questionnaire for new questions, making a format change unnecessary.

We tested two new questionnaire formats and both emerged as reasonable alternatives to the 28 -page form. Future decisions should reflect cost considerations. The cost analysis performed by the ASCO has shown that the 44-page questionnaire is the more expensive choice due to additional mailing costs for the larger size envelope with no mitigating gain in terms of increased self-response (Roberts, forthcoming).

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## Appendix: Response Distributions for Selected Questions by Questionnaire Type, for Households that Responded by Mail (through August 29, 2013)

In the following tables, sample weights were used in the estimates of the response distributions and their standard errors (SEs).

Each table provides the Rao-Scott chi-square statistic for the comparison between the 44-page treatment and the Control ( $\mathrm{X}^{2}{ }_{44}$ ) and the 36-page treatment and the Control ( $\mathrm{X}^{2}{ }_{36}$ ). Significant differences are indicated at the bottom of each table, when applicable.

Table 5. Distribution of Mail Responses for Recoded Age Calculated from Age/DOB (Question P4)

|  | 36-page Estimate | SE <br> (\%) | 44-page Estimate | $\begin{aligned} & \text { SE } \\ & (\%) \end{aligned}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | $\begin{aligned} & \text { SE } \\ & \text { (\%) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recoded Age |  |  |  |  |  |  |
| 0-4 years old | 3.1 | 0.4 | 3.4 | 0.3 | 4.1 | 0.3 |
| 5-14 years old | 9.0 | 0.5 | 8.4 | 0.6 | 9.1 | 0.5 |
| 15-24 years old | 9.5 | 0.5 | 9.4 | 0.6 | 9.8 | 0.5 |
| 25-34 years old | 9.0 | 0.5 | 8.6 | 0.5 | 9.3 | 0.5 |
| 35-44 years old | 8.9 | 0.5 | 8.6 | 0.5 | 9.2 | 0.5 |
| 45-54 years old | 13.8 | 0.8 | 14.7 | 0.5 | 13.9 | 0.5 |
| 55-64 years old | 17.6 | 0.8 | 18.1 | 0.7 | 16.4 | 0.7 |
| 65-74 years old | 14.6 | 0.7 | 13.9 | 0.6 | 14.3 | 0.5 |
| 75-84 years old | 10.6 | 0.6 | 10.5 | 0.6 | 10.0 | 0.6 |
| 85+ years old | 4.0 | 0.4 | 4.3 | 0.3 | 3.8 | 0.3 |
| Total | 100.0 |  | 100.0 |  | 100.0 | 0.3 |
| $\chi^{2}{ }_{36}=6.9$ with 9 degrees of freedom, $\mathrm{p}=0.65$ |  |  |  |  |  |  |
| $\chi^{2} 44=9.3$ with 9 degrees of freedom, $p=0.41$ |  |  |  |  |  |  |

Table 6. Distribution of Mail Responses for Hispanic Origin (Question P5)

|  | 36-page <br> Estimate <br> (\%) | SE <br> (\%) | 44-page <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \end{array}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | SE <br> (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hispanic Origin |  |  |  |  |  |  |
| Not Hispanic | 88.0 | 0.9 | 90.7 | 0.9 | 90.1 | 0.8 |
| Mexican Alone | 6.7 | 0.8 | 5.9 | 0.8 | 5.2 | 0.6 |
| Puerto Rican Alone | 1.5 | 0.3 | 1.2 | 0.3 | 0.9 | 0.2 |
| Cuban Alone | 0.3 | 0.1 | 0.3 | 0.1 | 0.6 | 0.2 |
| Other Hispanic Alone | 3.2 | 0.5 | 1.7 | 0.3 | 2.7 | 0.4 |
| Multiple | 0.3 | 0.1 | 0.2 | 0.1 | 0.4 | 0.1 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2} 36=8.2$ with 5 degrees of freedom, $p=0.14$
$\chi^{2}{ }_{44}=8.3$ with 5 degrees of freedom, $p=0.14$
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 7. Distribution of Mail Responses for Race (Question P6)

|  | 36-page Estimate (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \\ \hline \end{array}$ | 44-page <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \\ \hline \end{array}$ | 28-page (Control) Estimate (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Race |  |  |  |  |  |  |
| White Alone | 82.3 | 0.9 | 81.1 | 1.0 | 81.9 | 1.0 |
| Black or African American Alone | 9.2 | 0.7 | 10.2 | 0.7 | 9.0 | 0.6 |
| American Indian or Alaska Native Alone | e 0.5 | 0.1 | 0.4 | 0.1 | 0.5 | 0.1 |
| Asian Alone | 3.1 | 0.4 | 4.1 | 0.5 | 4.6 | 0.6 |
| Native Hawaiian or Other Pacific Islander Alone | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 |
| Some Other Race Alone | 1.9 | 0.4 | 0.7 | 0.3 | 1.4 | 0.3 |
| Multiple Races | 2.9 | 0.4 | 3.3 | 0.4 | 2.4 | 0.3 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2}{ }_{36}=10.5$ with 6 degrees of freedom, $p=0.11$
$\chi_{44}^{2}=9.4$ with 6 degrees of freedom, $p=0.15$
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 8. Distribution of Mail Responses for Utilities Costs (Questions H14a - H14d)

|  | 36-page Estimate (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \end{array}$ | 44-page Estimate (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H14a: Monthly Electricity Costs |  |  |  |  |  |  |
| Less than \$25 | 2.9 | 0.4 | 2.5 | 0.3 | 2.6 | 0.4 |
| \$25 to 49 | 11.9 | 0.7 | 9.6 | 0.6 | 10.2 | 0.7 |
| \$50 to 74 | 14.1 | 0.9 | 13.6 | 0.7 | 14.3 | 0.9 |
| \$75 to 99 | 13.1 | 0.8 | 13.6 | 0.8 | 14.2 | 0.9 |
| \$100 to 149 | 21.0 | 1.0 | 22.5 | 0.9 | 23.2 | 1.0 |
| \$150 to 199 | 13.3 | 0.9 | 14.5 | 0.8 | 15.2 | 0.8 |
| \$200 or More | 18.8 | 1.0 | 18.3 | 0.8 | 15.7 | 0.8 |
| Included in Rent or Condominium Fee | - 4.2 | 0.5 | 4.6 | 0.5 | 3.8 | 0.5 |
| No Charge or Electricity Not Used | 0.8 | 0.2 | 0.8 | 0.2 | 0.8 | 0.3 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi_{\chi^{2}}^{2}=12.3$ with 8 degrees of freedom, $p=0.14$
$\chi^{2}{ }_{44}=6.4$ with 8 degrees of freedom, $p=0.60$

| H14b: Monthly Gas Costs |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Less than $\$ 25$ | 19.6 | 1.1 | 19.0 | 1.1 | 19.6 | 0.9 |
| $\$ 25$ to 49 | 20.6 | 1.1 | 20.0 | 0.9 | 19.0 | 1.1 |
| $\$ 50$ to 74 | 9.7 | 0.7 | 9.4 | 0.6 | 9.8 | 0.7 |
| $\$ 75$ to 99 | 3.8 | 0.4 | 5.0 | 0.4 | 6.2 | 0.6 |
| $\$ 100$ to 149 | 5.2 | 0.5 | 4.5 | 0.5 | 4.0 | 0.5 |
| $\$ 150$ to 199 | 1.7 | 0.3 | 1.7 | 0.3 | 1.1 | 0.2 |
| $\$ 200$ or More | 3.2 | 0.4 | 3.3 | 0.5 | 2.7 | 0.4 |
| Included in Rent or Condominium Fee | 6.0 | 0.6 | 5.3 | 0.5 | 6.0 | 0.5 |
| Included in Electricity Payment | 3.6 | 0.5 | 3.2 | 0.5 | 3.7 | 0.5 |
| No Charge or Gas Not Used | 26.6 | 1.1 | 28.5 | 1.2 | 28.0 | 1.0 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2}{ }_{36}=17.9$ with 7 degrees of freedom, $p=0.04 ;$ significant at the 10 percent level
$\chi^{2}{ }_{44}=8.7$ with 7 degrees of freedom, $p=0.46$
Continued on next page

Table 8, continued. Distribution of Mail Responses for Utilities Costs (Questions H14a - H14d)

|  | 36-page <br> Estimate <br> (\%) | $\begin{aligned} & \text { SE } \\ & \text { (\%) } \end{aligned}$ | 44-page <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H14c: Annual Water and Sewer Costs |  |  |  |  |  |  |
| Less than \$120 | 19.5 | 1.1 | 18.4 | 1.0 | 17.5 | 0.9 |
| \$120 to 299 | 9.6 | 0.6 | 9.5 | 0.8 | 9.4 | 0.7 |
| \$300 to 599 | 15.7 | 0.8 | 14.8 | 0.8 | 16.6 | 0.9 |
| \$600 to 899 | 12.3 | 0.7 | 11.3 | 0.7 | 12.7 | 0.8 |
| \$900 to 1,199 | 3.9 | 0.4 | 5.7 | 0.5 | 5.4 | 0.5 |
| \$1,200 to 1,799 | 4.9 | 0.5 | 4.5 | 0.5 | 5.1 | 0.5 |
| \$1,800 or more | 2.2 | 0.4 | 2.2 | 0.4 | 2.1 | 0.4 |
| Included in Rent or Condominium Fee | 17.2 | 0.9 | 17.1 | 1.0 | 15.7 | 1.0 |
| No Charge | 14.6 | 0.9 | 16.5 | 1.0 | 15.5 | 0.9 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |
| $\chi_{2}{ }^{26}=9.0$ with 8 degrees of freedom, $p=0.34$ <br> $\chi_{44}=6.3$ with 8 degrees of freedom, $p=0.62$ |  |  |  |  |  |  |
| H14d: Annual Other Fuels Costs |  |  |  |  |  |  |
| Less than \$300 | 14.8 | 0.8 | 14.0 | 0.7 | 13.7 | 0.9 |
| \$300 to 599 | 2.2 | 0.4 | 2.2 | 0.4 | 1.8 | 0.3 |
| \$600 to 899 | 1.7 | 0.3 | 2.2 | 0.4 | 1.4 | 0.3 |
| \$900 to 1,199 | 1.2 | 0.3 | 1.8 | 0.3 | 2.4 | 0.4 |
| \$1,200 to 1,799 | 2.6 | 0.4 | 3.1 | 0.4 | 2.4 | 0.3 |
| \$1,800 or more | 4.4 | 0.5 | 3.4 | 0.4 | 4.5 | 0.5 |
| Included in Rent or Condominium Fee | 5.2 | 0.5 | 5.5 | 0.6 | 5.2 | 0.5 |
| No Charge | 67.9 | 1.2 | 67.7 | 1.0 | 68.6 | 1.2 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi_{26}^{2}=8.9$ with 9 degrees of freedom, $p=0.26$
$\chi_{44}=10.7$ with 9 degrees of freedom, $p=0.15$
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 9. Distribution of Mail Responses for Mortgage (Questions H22a-H22d)

| 36-page |  |  |  | 28-page |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Estimate | SE | Estimate | SE | (Control) |  |
| $(\%)$ | $(\%)$ | $(\%)$ | $(\%)$ | Estimate | SE |
| $(\%)$ | $(\%)$ |  |  |  |  |

H22a: Do you or any member of this household have a mortgage, deed of trust, contract to purchase, or similar debt on THIS property?

| Yes, Mortgage, Deed of Trust or <br> Similar Debt | 48.0 | 1.3 | 47.5 | 1.4 | 47.2 | 1.4 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Yes, Contract to Purchase | 0.9 | 0.3 | 1.2 | 0.3 | 0.8 | 0.3 |
| No | 51.1 | 1.3 | 51.4 | 1.4 | 52.0 | 1.4 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi_{26}^{2}=0.3$ with 2 degrees of freedom, $p=0.85$
$\chi_{44}^{2}=0.9$ with 2 degrees of freedom, $p=0.65$
H22b: How much is the regular monthly mortgage payment on this property?

| less than $\$ 500$ | 17.5 | 1.4 | 14.9 | 1.5 | 11.7 | 1.3 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| $\$ 500$ to 599 | 6.5 | 1.1 | 6.3 | 1.0 | 9.3 | 1.2 |
| $\$ 600$ to 699 | 8.4 | 1.2 | 7.4 | 1.2 | 7.8 | 1.2 |
| $\$ 700$ to | 8.0 | 1.1 | 8.6 | 1.1 | 6.8 | 1.0 |
| $\$ 800$ to 999 | 11.9 | 1.3 | 14.1 | 1.6 | 12.2 | 1.2 |
| $\$ 1,000$ to 1,249 | 15.5 | 1.7 | 14.6 | 1.3 | 15.5 | 1.6 |
| $\$ 1,250$ to 1,499 | 7.0 | 1.1 | 8.3 | 1.0 | 12.0 | 1.4 |
| $\$ 1,500$ to 1,999 | 12.6 | 1.3 | 11.8 | 1.3 | 10.8 | 1.2 |
| $\$ 2,000$ or more | 10.3 | 1.3 | 11.2 | 1.3 | 12.7 | 1.2 |
| No regular payment required | 2.4 | 0.6 | 2.8 | 0.7 | 1.4 | 0.5 |

Total
$\chi^{2}{ }_{36}=21.3$ with 9 degrees of freedom, $\mathrm{p}=0.01$; significant at the 10 percent level
$\chi^{2}{ }_{44}=15.7$ with 9 degrees of freedom, $p=0.07$; significant at the 10 percent level
H22c: Does the regular monthly mortgage payment include payments for real estate taxes on THIS property?

| Yes, Taxes Included in Mortgage <br> Payment | 61.0 | 2.1 | 63.8 | 2.1 | 65.0 | 2.0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| No, Taxes Paid Separately or Taxes not <br> required | 39.0 | 2.1 | 36.3 | 2.1 | 35.0 | 2.0 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{\prime}{ }_{36}=1.8$ with 1 degree of freedom, $p=0.19$
$\chi^{2}{ }_{44}=0.2$ with 1 degree of freedom, $p=0.66$

H22d: Does the regular monthly mortgage payment include payments for fire, hazard, or flood

| insurance on THIS property? | 52.6 | 2.2 | 51.6 | 2.0 | 53.5 | 1.9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Yes, Insurance Included in Mortgage <br> Payment |  |  |  |  |  |  |
| No, Insurance PaidSeparately or No <br> Insurance | 47.4 | 2.2 | 48.4 | 2.0 | 46.5 | 1.9 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |
| $\chi_{336}^{2}=0.1$ with 1 degree of freedom, $\mathrm{p}=0.77$ |  |  |  |  |  |  |
| $\chi_{44}^{2}=0.5$ with 1 degree of freedom, $\mathrm{p}=0.48$ |  |  |  |  |  |  |

Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 10. Distribution of Mail Res ponses for Field of Degree (Question P12)

|  | 36-page Estimate (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \end{array}$ | 44-page <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \end{array}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Field of Degree |  |  |  |  |  |  |
| Computers, Mathematics, and Statistics | s 2.5 | 0.6 | 2.9 | 0.8 | 2.2 | 0.6 |
| Biological, Agricultural, and |  |  |  |  |  |  |
| Environmental Sciences | 7.0 | 1.2 | 5.1 | 1.0 | 6.9 | 1.0 |
| Physical and Related Sciences | 3.7 | 0.8 | 3.4 | 0.7 | 3.3 | 0.7 |
| Psychology | 4.4 | 0.9 | 5.3 | 1.1 | 6.4 | 1.0 |
| Social Sciences | 9.5 | 1.3 | 9.1 | 1.1 | 7.4 | 1.1 |
| Engineering | 7.4 | 1.1 | 8.1 | 1.1 | 6.4 | 1.1 |
| Multidisciplinary Studies | 0.9 | 0.4 | 0.5 | 0.3 | 1.0 | 0.4 |
| Science and Engineering Related | 8.6 | 1.5 | 8.7 | 1.1 | 7.7 | 1.1 |
| Business | 20.2 | 1.9 | 20.1 | 1.6 | 15.7 | 1.4 |
| Education | 14.6 | 1.5 | 16.1 | 1.6 | 16.5 | 1.3 |
| Literature and Languages | 4.8 | 1.0 | 5.5 | 1.0 | 5.9 | 1.0 |
| Liberal Arts and History | 4.9 | 1.1 | 3.3 | 0.9 | 7.4 | 1.1 |
| Visual and Performing Arts | 3.5 | 0.7 | 4.5 | 0.9 | 5.7 | 1.0 |
| Communications | 3.3 | 0.7 | 3.6 | 0.8 | 2.6 | 0.7 |
| Other Bachelor Degree Field | 4.6 | 0.8 | 3.8 | 0.7 | 5.0 | 1.0 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi_{26}=14.6$ with 14 degrees of freedom, $p=0.40$
$\chi_{44}^{2}=21.8$ with 14 degrees of freedom, $p=0.08$; significant at the 10 percent level
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 11. Distribution of Mail Responses for Ancestry (Question P13)

|  | 36-page Estimate (\%) | $\begin{gathered} \text { SE } \\ \text { (\%) } \end{gathered}$ | 44-page Estimate | $\begin{gathered} \text { SE } \\ (\%) \end{gathered}$ | 28-page (Control) Estimate | $\begin{gathered} \text { SE } \\ (\%) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ancestry |  |  |  |  |  |  |
| African American | 7.3 | 0.8 | 8.7 | 0.8 | 8.0 | 0.7 |
| American | 12.5 | 0.9 | 12.5 | 0.8 | 12.4 | 1.0 |
| American Indian | 1.6 | 0.3 | 1.5 | 0.3 | 1.6 | 0.3 |
| English | 8.0 | 0.7 | 8.7 | 0.7 | 7.4 | 0.5 |
| French | 2.0 | 0.3 | 2.2 | 0.3 | 2.2 | 0.3 |
| German | 13.0 | 0.8 | 13.6 | 0.9 | 13.5 | 0.8 |
| Irish | 8.3 | 0.7 | 8.0 | 0.6 | 8.5 | 0.6 |
| Italian | 4.9 | 0.5 | 5.7 | 0.6 | 5.1 | 0.6 |
| Mexican | 6.31 | 0.8 | 5.9 | 0.8 | 4.5 | 0.6 |
| Polish | 3.8 | 0.5 | 3.5 | 0.5 | 3.0 | 0.4 |
| Other ancestry groups | 32.3 | 1.2 | 29.7 | 1.2 | 33.9 | 1.3 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{\prime}{ }^{2}=8.5$ with 10 degrees of freedom, $\mathrm{p}=0.58$
$\chi^{2}{ }_{44}=10.0$ with 10 degrees of freedom, $p=0.44$
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 12. Distribution of Mail Responses for Work Last Week/Any Work Last Week (Questions P 29a and P29b)

|  | 36-page Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ | 44-page Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ \text { (\%) } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P29a: LAST WEEK, did this person work for pay at a job (or business)? |  |  |  |  |  |  |
| Yes | 44.6 | 1.2 | 44.7 | 1.0 | 45.4 | 0.9 |
| No | 55.4 | 1.2 | 55.3 | 1.0 | 54.6 | 0.9 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |
| $\chi_{36}^{2}=0.4$ with 1 degree of freedom, $p=0.52$ <br> $\chi^{2}{ }_{44}=0.2$ with 1 degree of freedom, $p=0.62$ |  |  |  |  |  |  |
| P29b: LAST WEEK, did this person do ANY work for pay, even for as little as one hour? |  |  |  |  |  |  |
| Yes | 0.7 | 0.2 | 0.8 | 0.2 | 0.9 | 0.2 |
| No | 99.3 | 0.2 | 99.2 | 0.2 | 99.1 | 0.2 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2}{ }_{36}=0.6$ with 1 degree of freedom, $p=0.42$
$\chi^{2}{ }_{44}=0.1$ with 1 degree of freedom, $p=0.75$

Source: U.S. Census Bureau, 2013 Amercian Community Survey Questionnaire Design Test, July to August 2013

Table 13. Distribution of Mail Res ponses for La yoff from Job/Temporarily Absent from Job/ Informed of Recall to Work (Questions P35a-P35c)

|  | 36-page Estimate (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ | 44-page <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ | 28-page <br> (Control) <br> Estimate <br> (\%) | $\begin{array}{r} \text { SE } \\ (\%) \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P35a: LAST WEEK, was this person on layoff from a job? |  |  |  |  |  |  |
| Yes | 3.1 | 0.5 | 1.8 | 0.3 | 3.0 | 0.5 |
| No | 97.0 | 0.5 | 98.2 | 0.3 | 97.0 | 0.5 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2}{ }_{36}=0.02$ with 1 degree of freedom, $p=0.90$
$\chi^{2}{ }_{44}=5.7$ with 1 degree of freedom, $p=0.02$; significant at the 10 percent level
P35b: LAST WEEK, was this person temporarily absent from a job or business?

| P35b: LAST | 2.6 | 0.4 | 2.9 | 0.5 | 2.8 | 0.4 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Yos | 97.4 | 0.4 | 97.1 | 0.5 | 97.2 | 0.4 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2}{ }_{36}=0.1$ with 1 degree of freedom, $p=0.76$
$\chi^{2}{ }_{44}=0.1$ with 1 degree of freedom, $p=0.79$
P35c: Has this person been informed that he or she will be recalled to work within the next 6 months OR been given a date to return to work?

| Yes | 20.5 | 7.3 | 33.3 | 9.0 | 22.2 | 6.6 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| No | 79.5 | 7.3 | 66.7 | 9.0 | 77.8 | 6.6 |
| Total | 100.0 |  | 100.0 |  | 100.0 |  |

$\chi^{2}{ }_{36}=0.03$ with 1 degree of freedom, $p=0.87$
$\chi^{2}{ }_{44}=1.1$ with 1 degree of freedom, $p=0.30$
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

Table 14. Distribution of Mail Res ponses for Industry (Based on Industry Codes Derived from Questions P42 and P43)

|  | 44-page Estimate (\%) | SE <br> (\%) | 28-page <br> (Control) <br> Estimate <br> (\%) | $\begin{gathered} \text { SE } \\ \text { (\%) } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Industry |  |  |  |  |
| Agriculture, Forestry, Fishing and Hunting, and Mining, and Construction | 8.2 | 0.7 | 7.6 | 0.7 |
| Manufacturing | 11.6 | 0.8 | 11.0 | 0.7 |
| Retail Trade | 12.7 | 0.8 | 13.7 | 0.9 |
| Transportation and Warehousing, and Utilities, and Wholesale Trade | 8.2 | 0.6 | 8.3 | 0.6 |
| Finance and Insurance, and Real Estate, and Rental and Leasing, and Information | 8.9 | 0.6 | 7.6 | 0.7 |
| Professional, Scientific, and Management, and Administrative, and Waste Management Services | 8.8 | 0.7 | 9.1 | 0.6 |
| Educational Services, and Health Care and Social Assistance | 22.8 | 1.0 | 23.1 | 0.9 |
| Arts, Entertainment, and Recreation, and Accommodation and Food services, and Other Services, Except Public Administration | 14.2 | 0.8 | 13.5 | 0.9 |
| Public Administration | 4.3 | 0.6 | 5.3 | 0.6 |
| Military | 0.4 | 0.1 | 0.7 | 0.2 |
| Total | 100.0 |  | 100.0 |  |
| $\chi^{2}{ }_{44}=6.8$ with 9 degrees of freedom, $p=0.66$ |  |  |  |  |

Table 15. Distribution of Mail Responses for Occupation (Based on Occupation Codes Derived from Questions P45 and P46)

|  | 44-page <br> Estimate | SE | 28-page <br> (Control) <br> Estimate | SE |
| :---: | :---: | :---: | :---: | :---: |
|  | (\%) | (\%) | (\%) | (\%) |
| Occupation |  |  |  |  |
| Management, business and financial occupations | 13.7 | 0.9 | 11.9 | 0.8 |
| Computer, engineering, and science occupations | 3.8 | 0.4 | 3.9 | 0.5 |
| Education, legal, community service, arts, and media occupations | 11.0 | 0.7 | 10.2 | 0.8 |
| Healthcare practitioners and technical occupations | 5.7 | 0.6 | 6.1 | 0.5 |
| Service occupations | 18.7 | 1.0 | 19.5 | 1.0 |
| Sales and office occupations | 25.5 | 1.0 | 26.7 | 1.1 |
| Natural resources, construction, and maintenance occupations | 7.9 | 0.7 | 7.8 | 0.6 |
| Production, transportation, and material moving occupations | 13.4 | 0.9 | 13.5 | 0.8 |
| Military occupations | 0.2 | 0.1 | 0.3 | 0.1 |
| Total | 100.0 |  | 100.0 |  |

$\chi^{\chi_{44}}=4.0$ with 8 degrees of freedom, $p=0.86$
Source: U.S. Census Bureau, 2013 American Community Survey Questionnaire Design Test, July to August 2013

## Attachment A: Example Questionnaire for Control Treatment

ACS-1(X)QD28 - Control Treatment Questionnaire

FRONT COVER
J.S. DEPARTMENT OF COMMERCE Economics and statistics Administration U.S. CENSUS BUREAU

## the American Community Survey

## Start Here

Respond online today at:
https://respond.census.gov/qdt OR
Complete this form and mail it back as soon as possible.

This form asks for information about the people who are living or staying at the address on the mailing label and about the house, apartment, or mobile home located at the address on the mailing label.


If you need help or have questions about completing this form, please call 1-888-595-1327. The telephone call is free.

Telephone Device for the Deaf (TDD): Call 1-800-582-8330. The telephone call is free.
¿NECESITA AYUDA? Si usted habla español y hecesita ayuda para completar su cuestionario,
llame sin cargo alguno al 1-888-369-3615. Usted tambien puede completar su entrevista por teléfono con un entrevistador que habla espanol. O puede responder por Internet en: https://respond.census.goviqdt
For more information about the American Community Survey, visit our web site at: http://www.census.gov/acs/www/
Please print today's date.
 filling out this form. We may contact you if there is a question.
Last Name

$\rightarrow$ How many people are living or staying at this address?

- INCLUDE everyone who is living or staying here for more than 2 months.
- INCLUDE yourself if you are living here for more than 2 months.
- INCLUDE anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
- DO NOT INCLUDE anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.
Number of people
$\square$
Fill out pages 2, 3, and 4 for everyone, including yourself, who is living or staying at this address for more than 2 months. Then complete the rest of the form.


## ACS-1(X)QD28

## ROSTER/PERSON QUESTIONS



ACS-1(X)QD28
ROSTER/PERSON QUESTIONS (CONT'D)


## ACS-1(X)QD28

ROSTER/PERSON QUESTIONS (CONT'D)



## ACS-1(X)QD28

## HOUSING SECTION



## ACS-1(X)QD28 HOUSING SECTION (CONT’D)

## Housing (continued)

```
12. How many automobiles, vans, and trucks
of one-ton capacity or less are kept at
of one-ton capacity or less are ke
household?
```

```None
\(\square 1\)
```

```
\(\square 3\)
```

```6 or more
Which FUEL is used MOST for heating this house, apartment, or mobile home?
\(\square\) Gas: from underground pipes serving the neighborhood
```

```Gas: bottled, tank, or LP
```

```Electricity
```

```Fuel oil, kerosene, etc.
```

```Coal or coke
```

```Wood
```

```Solar energy
```

```Other fuel
```

```No fuel used
```

(14)
a. LAST MONTH, what was the cost of electricity for this house, apartment, or mobile home?
Last month's cost - Dollars


ORIncluded in rent or condominium fee
No charge or electricity not used
b. LAST MONTH, what was the cost of gas for this house, apartment, of gas for this ho
or mobile home?
Last month's cost - Dollars


ORIncluded in rent or condominium fee Included in electricity payment entered aboveNo charge or gas not used
c. IN THE PAST 12 MONTHS, what was the cost of water and sewer for this house, apartment, or mobile home? If you have lived here less than 12 months, estimate the cost
Past 12 months' cost - Dollars


ORIncluded in rent or condominium feeNo charge
d. IN THE PAST 12 MONTHS, what was the cost of oil, coal, kerosene, wood, etc. for this house, apartment, or mobile for this house, apartment, or mobile
home? If you have lived here less than 12 home? If you have lived he
months, estimate the cost
Past 12 months' cost - Dollars


ORIncluded in rent or condominium feeNo charge or these fuels not used

```
15 IN THE PAST }12\mathrm{ MONTHS, did you or any member of this household receive benefits from the Food Stamp Program or SNAP (the Supplemental Nutrition Assistance Program)? Do NOT include WIC, the School Lunch Program, or assistance from food banks.
```

```Yes
```

```No
Is this house, apartment, or mobile home part of a condominium?
```

```Yes \(\rightarrow\) What is the monthly condominium fee? For renters, answer only if you pay the condominium fee in addition to your rent; otherwise, mark the -None" box.
Monthly amount - Dollars
```



```
OR
```

```None
```

```No
Is this house, apartment, or mobile home Mark (X) ONE box
```

```Owned by you or someone in this household with a mortgage or loan? Include home equity loans.
```

```Owned by you or someone in this household free and clear (without a household ree and
```

```Rented?
```

```Occupied without payment of rent? \(\rightarrow\) SKIP to \(\mathbf{C}\) on the next page
```


## ACS-1(X)QD28 <br> HOUSING SECTION (CONT’D)

## Housing (continued)

3 Answer questions 18 a and b if this house,
apartment, or mobile home is RENTED.
Otherwise, SKIP to question 19.|
a. What is the monthly rent for this house, apartment, or mobile home?
Monthly amount - Dollars

b. Does the monthly rent include any meals?No
C. Answer questions 19-23 if you or any member of this household OWNS or IS BUYNG this house, apartment or mobile home Otherwise, SKIP to $\mathbf{E}$.

About how much do you think this house and lot, apartment, or mobile home (and lot, if owned) would sell for if it were for sale?
Amount - Dollars


What are the annual real estate taxes on THIS property?
Annual amount - Dollars


ORNone

What is the annual payment for fire, hazard, and flood insurance on THIS property?
Annual amount - Dollars


ORNone

## 22 a. Do you or any member of this household have a mortgage, deed of trust, contract to purchase, or similar debt on THIS property?

Yes, mortgage, deed of trust, or similar debtYes, contract to purchaseNo $\rightarrow$ SKIP to question 23 a
b. How much is the regular monthly mortgage payment on THIS property? mortgage payment on THIS property?
Include payment only on FIRSI mortgage Includepayment only on
or contract to purchase.
Monthly amount - Dollars


ORNo regular payment required $\rightarrow$ SKIP to question $23 a$
c. Does the regular monthly mortgage payment include payments for real estate taxes on THIS property?Yes, taxes included in mortgage paymentNo, taxes paid separately or taxes not required
d. Does the regular monthly mortgage payment include payments for fire, hazard, or flood insurance on THIS hazard, or
property?Yes, insurance included in mortgage paymentNo, insurance paid separately or no insurance
Yes, home equity loanYes, second mortgage and home equity loanNo $\rightarrow$ SKIP to D
b. How much is the regular monthly payment on all second or junior mortgages and all home equity loans on THIS property?
Monthly amount - Dollars


ORNo regular payment required

## Answer question 24 if this is a MOBULE HOME. Otherwise, SKIP to $\mathbf{E}$. <br> 24 What are the total annual costs for personal property taxes, site rent, registration fees, and license fees on THIS mobile home and its site? Exclude real estate taxes.

Annual costs - Dollars


E Answer questions about PERSON 1 on the next page if you listed at lesst one person on page 2. Otherwise SKIP to page 28 for the mailing instructions.

## ACS-1(X)QD28

## DETAILED PERSON SECTION




## ACS-1(X)QD28

DETAILED PERSON SECTION (CONT’D)



## ACS-1(X)QD28

DETAILED PERSON SECTION (CONT’D)

## Person 1 (continued)


(
$J$ Answer question 32 if you marked 'Car, truck, orvan' in question 31. Otherwise, SKIP to question 33.

32 How many people, including this person, usually rode to work in the car, truck, or van LAST WEEK
Person(s)

33 What time did this person usually leave home to go to work LAST WEEK?
Hour Minute


34 How many minutes did it usually take this person to get from home to work LAST WEEK? Minutes


K Answer questions $35-38$ if this person did NOT work last week. Otherwise, SKIP to question $39 a$.
a. LAST WEEK, was this person on layoff from a job?
$\square$ Yes $\rightarrow$ SKIP to question 35c
b. LAST WEEK, was this person TEMPORARILY absent from a job or business?
$\square$ Yes, on vacation, temporary illness maternity leave, other familyipersonal maternity leave, other amily yersonnal
reasons, bad weather, etc. $\rightarrow S K i P$ to reasons,
question 38No $\rightarrow$ SKIP to question 36
c. Has this person been informed that he or she will be recalled to work within the next will be recalled to work within the next
6 months OR been given a date to return to work?Yes $\rightarrow$ SKIP to question 37No



## ACS-1(X)QD28

DETAILED PERSON SECTION (CONT'D)

## Person 1 (continued)

L. Answer questions 41-46 if this person worked in the past 5 years. Otherwise, SKIP to question 47.

## 41 - 46 CURRENT OR MOST REFENT JOB ACTIVIIY. Doscribe dearly whis porson's chiaf job activity or businozx lass wook. If this person had more than ono job dowribe tho ono at which this person worked the most hours. If this person had no job orbusingss lass wook, giv information for hishariass job or businassa <br> Was this person-

$\square$ an employee of a PRIVATE FOR-PFORT company or business, or of an individual, for company or business, or of an in
wages, salary, or commissions?an employee of a PRIVATE NOT-FOR-PROFTT, tax-exempt, or charitable organization?a local GOVERNMENT employee (city, county, etc.)?a state GOVERNMENT employee?a Federal GOVERNMENT employee?SELF-EMPLOYED in Own NOT INCORPORATED business, professional practice, or farm?SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm?working WTHOUT PAY in family business or farm?
For whom did this person work?
If now on active duty in
the Armed Forces, mark ( $X$ ) this box $\rightarrow$
and print the braich of the Aimed Forces.
and primt the branch of the Ammed Forces.
Name of company, business, or other employer

What kind of business or industry was this? Doscribo the activity y t the location whero amployed (For axample: hoapital, nowspapar publishing , mail order houss, auto engine mornuffecturing bank

## Is this mainly-Mark ( $X$ ) ONE box.

manufacturing?wholessle trade?
retail trade?other fagriculture, construction, service, governifient, etc.??


What kind of work was this person doing? (For ex amplec ra gistonod nurse, personmal managar, supervisor of order dapartment socratary. accourtant

6 What were this person's most important activities or duties? (Forexamplespationt care, dirvecting hiring policies, suparvising ordar claris, typing and filing, noconciling financial records)
$\qquad$

## INCOME IN THE PAST 12 MONTHS

Mark ( $X$ ) the "Yes" box for each type of income this person received and give your best esfimate of the NOTE The "pas dung the PAST 12 MONTHS. (NOTE- The "past 12 months" is the period from
todsy's date one year sqo up through todsy.) today's date one year ago up through todsy.)
Mark (X) the "No" box to show types of income NOT received.

If net income was a loss, mark the "Loss" box to the right of the dollar amount.

For income received jointy, report the sppropriate share for each person - or if that's not possible, report the whole amount for only one person and mark the "No" bcx for the other person.
a Wages, salary commissions, bonuses, or tips from air jobs. Rep or smourr behone

deductions for taxes, bonds, dues, or other fiems.| Yes $\rightarrow$ | $s$ |  |
| :--- | :--- | :--- |
|  |  |  |No

TOTAL AMOUNT for past
12 months
b. Self-employment income from own nonfarm businesses or farm businesses, including
proprietorships and partnerships. Report proprietorships and partnerships.

c. Interest, dividends, net rental income, royalty income, or income from estates and trusts. Report even small amounts credted to an sccourt.Yes

No $\rightarrow$| $s$ |  |
| :--- | :--- | :--- |
| $\substack{\text { TOTAL AMOUNT for past } \\ 12 \text { months }}$ |  |

d. Social Security or Railroad Retirement.

e. Supplemental Security Income (SSI).

f. Any public assistance or welfare payments from the state or local welfare office.

g. Retirement, survivor, or disability pensions. Do NOT inciude Social Seaunity.$\mathrm{Y}_{\mathrm{Ne}} \rightarrow$


No
h. Any other sources of income received regularly such as Veterans' (VA) payments, unemployment compensation, child support or alimony. DoNOT inciude fump sum paymerts such as money from an imheritance or the ssie of a home.


What was this person's total income during the PAST 12 MONFES? Add artrias in quostions 47 a
 the dolliar amourt.


Continue with the questions for Person 2 on the next page. If no one is listed as person 2 on page 2, skip to page 28 for mailing instructions.

## ACS-1(X)QD28

## BACK COVER

## Mailing <br> Instructions

Please make sure you have...

- listed all names and answered the questions on pages 2, 3, and 4
- answered all Housing questions
- answered all Person questions for each person.


## Then...

- put the completed questionnaire into the postage-paid return envelope. If the envelope has been misplaced, please mail the questionnaire to:


## U.S. Census Bureau

P.O. Box 5240

Jeffersonville, IN 47199-5240

- make sure the barcode above your address shows in the window of the return envelope.
Thank you for participating in the American Community Survey.


## For Census Bureau Use



EDIT CLEAK



JIC3


The Cansus Burcau estimatos that, for the average household, this form will take 40 minutes to complete, including the time for reviewing the instructions and answars. Sand commants ragarding this burdon eastimate or any othar aspact of this collaction of informstion, including suggostions for roducing this burdon, io: 4900 Silver Hill Road AMSD 3K138, W Bhingon, 20233. You muy e-mail comments to

Paporwork |  |
| :---: | :---: |
| Mans |
| census.gov, uss "Paperwork Projoct | $0007.0936^{\circ}$ as the subioct Please DO NOT RETURN your questionnaire to this address. Use the enclosed proaddrossod onvolope to roturn your complatod queationnaire.

Respondents are not requirad to respond to any information collection unless it displays a valid approval number from the Office of Managoment and Budget This 8-digit number appears in the bottom right on the front cover of this form.

## Attachment B: Example Questionnaire for the 36-page Treatment

ACS-1(X)QD36-36-page Questionnaire

FRONT COVER

## the American Community Survey

## Start Here

Respond online today at: https://respond.census.gov/qdt OR
Complete this form and mail it back as soon as possible.

This form asks for information about the people who are living or staying at the address on the mailing label and about the house, apartment, or mobile home located at the address on the mailing label.

If you need help or have questions about completing this form, please call 1-888-595-1327. The telephone call is free.
Telephone Device for the Deaf (TDD): Call 1-800-582-8330. The telephone call is free.
NECESITA AYUDA? Si usted habla espaniol y necesita ayuda para completar su cuestionario, llame sin cargo alguno al 1-888-369-3615. Usted tambien puede completar su entrevista por teléfono con un entrevistador que habla espantol. O puede responder por Internet en: https://respond.census.goviqdt
For more information about the American Community Survey, visit our web site at: http://www.census.gov/acs/www/


Please print the name and telephone number of the person who is filling out this form. We may contact you if there is a question. Last Name


How many people are living or staying at this address?

- INCLUDE everyone who is living or staying here for more than 2 months.
- INCLUDE yourself if you are living here for more than 2 months.
- INCLUDE anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
- DO NOT INCLUDE anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the 2 months, such as a college st
Number of people
$\square$
Fill out pages 2, 3, and 4 for everyone, including yourself, who is living of staying at this address for more than 2 months. Then living or staying at this addres
complete the rest of the form.

$\qquad$


## ACS-1(X)QD36

## ROSTER/PERSON QUESTIONS



## ACS-1(X)QD36 <br> ROSTER/PERSON QUESTIONS (CONT’D)



## ACS-1(X)QD36

ROSTER/PERSON QUESTIONS (CONT'D)


## ACS-1(X)QD36

## HOUSING SECTION



## ACS-1(X)QD36

HOUSING SECTION (CONT’D)

## Housing (continued)

12 How many automobiles, vans, and trucks of one-ton capacity or less are kept at home for use by members of this household?
$\qquad$1
24
56 or more

13 Which FUEL is used MOST for heating this house, apartment, or mobile home?Gas: from underground pipes serving the neighborhoodGas: bottled, tank, or LPElectricityFuel oil, kerosene, etc.Coal or cokeSolar energy
Other fuelNo fuel used

## 14 a. LAST MONTH, what was the cost of electricity for this house, apartment, or mobile home? Last month's cost - Dollars <br>  <br> OR

Included in rent or condominium fee No charge or electricity not usedb. LAST MONTH, what was the cost of gas for this house, apartment, or mobile home?
Last month's cost - Dollars


## OR

Included in rent or condominium fee Included in electricity payment entered aboveNo charge or gas not usedc. IN THE PAST 12 MONTHS, what was the cost of water and sewer for this house, apartment, or mobile home? If you have lived here less than 12 months, estimate the cost
Past 12 months' cost - Dollars


## OR

Included in rent or condominium fee No charged. IN THE PAST 12 MONTHS, what was the cost of oil, coal, kerosene, wood, etc. for this house, apartment, or mobile home? If you have lived here less than 12 months, estimate the cost
Past 12 months' cost - Dollars


## OR

Included in rent or condominium feeNo charge or these fuels not used15 IN THE PAST 12 MONTHS, did you or any member of this household receive any member of this househomp Program benefits from the Food Stamp Program
or SNAP (the Supplemental Nutrition or SNAP (the Supplemental Nutrition Assistance Program)? Do NOT inc assistance from food banks.

## Yes No

16 Is this house, apartment, or mobile home part of a condominium?Yes $\rightarrow$ What is the monthly condominium fee? For renters, answer only if you pay the condominium fee in addition to your rent; otherwise, mark the "None" box.
Monthly amount - Dollars


OR
$\square$ NoneNo

Is this house, apartment, or mobile home Mark (X) ONE box.Owned by you or someone in this household with a mortgage or loan? Include home equity loans.Owned by you or someone in this household free and clear (without a mortgage or loan)?Rented?Occupied without payment of rent? $\rightarrow$ SKIP to $\mathbf{C}$ on the next page

## ACS-1(X)QD36

HOUSING SECTION (CONT’D)

## Housing (continued)

B Answer questions 18 a and bif this house, apartment, or mobile home is RENTED. Otherwise, SKIP to question 19.

a. What is the monthly rent for this house, apartment, or mobile home? Monthly amount - Dollars

b. Does the monthly rent include any meals?Yes No

C Answer questions 19-23 if you or any member of this household OWNS or IS BUYMG this house, apartment or mobile home Otherwise, SKIP to E.

About how much do you think this house and lot, apartment, or mobile house (and lot, if owned) would sell for if it were for sale?

Amount - Dollars


What are the annual real estate taxes on THIS property?
Annual amount - Dollars


ORNone

What is the annual payment for fire, hazard, and flood insurance on THIS property?
Annual amount - Dollars


## OR

None22 a. Do you or any member of this household have a mortgage, deed of househoid have a mortgage, deed of
trust, contract to purchase, or similar trust, contract to purcha
debt on THIS property?Yes, mortgage, deed of trust, or similar debtYes, contract to purchase
No $\rightarrow$ SKIP to question 23a
b. How much is the regular monthly mortgage payment on THIS property? Includepayment only on FIRST mortgage or contract to purchase.
Monthly amount - Dollars


OR
$\square$ No regular payment required $\rightarrow$ SKIP to question $23 a$
c. Does the regular monthly mortgage payment include payments for real estate taxes on THIS property?Yes, taxes included in mortgage paymentNo, taxes paid separately or taxes not required
d. Does the regular monthly mortgage payment include payments for fire, hazard, or flood insurance on THIS property?Yes, insurance included in mortgage paymentNo, insurance paid separately or no insurance


## ACS-1(X)QD36

## DETAILED PERSON SECTION



## ACS-1(X)QD36

DETAILED PERSON SECTION (CONT'D)


## ACS-1(X)QD36

DETAILED PERSON SECTION (CONT’D)


10 |||||IIIIIIIIIIIIIII

## ACS-1(X)QD36

DETAILED PERSON SECTION (CONT'D)


## ACS-1(X)QD36

DETAILED PERSON SECTION (CONT'D)


12 ||||||||||||||||||||||||||||

## ACS-1(X)QD36

## BACK COVER

## Mailing <br> Instructions

$\rightarrow$ Please make sure you have...

- listed all names and answered the questions on pages 2, 3, and 4
- answered all Housing questions
- answered all Person questions for each person.


## $\rightarrow$ Then...

- put the completed questionnaire into the postage-paid return envelope. If the envelope has been misplaced, please mail the questionnaire to:
U.S. Census Bureau
P.O. Box 5240

Jeffersonville, IN 47199-5240

- make sure the barcode above your address shows in the window of the return envelope.

Thank you for participating in the American Community Survey.

## For Census Bureau Use


EDIT CLERK
$\square$



The Cansus Burcau estimatos that, for the avaroge household, this form will take 40 minutes to complete, including the time for reviewing the instructions and answars. Sand comments rogording this burden estimate or any other aspact of this collection of information, including suggestions for roducing this burdon, to: Paporwork Projoct 0607-0906, U.S. Consus Burasu, 4600 Silver Hill Road, AMSD - 3K138, Washington, D.C. 0233. You may e-mail comments to

Paparworkiß census.gov, use "Paperwork Projoct $0007-0936^{\circ}$ as the subjoct. Ploase DO NOT RETURN your questionnaire to this addrass. Use the enclosed proaddrossed anvolope to return your complated questionnaire.

Respondonts are not requirad to respond to any Respondonts are not requirad to respond to any
information colloction unloss it displays a valid approval number from the Office of Management and Budgot This 8-digit number appears in the bottom right on th front cover of this form.

## Attachment C: Example Questionnaire for the 44-page Treatment

FRONT COVER


## ACS-1(X)QD85

## ROSTER/PERSON QUESTIONS



## ACS-1(X)QD85

ROSTER/PERSON QUESTIONS (CONT'D)


ACS-1(X)QD85 ROSTER/PERSON QUESTIONS (CONT'D)


## ACS-1(X)QD85

## HOUSING SECTION

## Housing

Please answer the following questlons about the house, apartment, or moblle home at the address on the malling label.

1
Which best describes this bullding? inctude all aparmments, flats, etc., even if vacart.A moblle homeA one-familly house detached from any other housemore housesA bullding with 2 apartmentsA bullding with 3 or 4 apartmentsA bullding with 5 to 9 apartmentsA bullding with 10 to 19 apartmentsA bullding with 20 to 49 apartmentsA bullding with 50 or more apartmentsBoat, RV , van, etc.

About when was this bullding first bullt?$\square 2000$ or later - Specity year
1990 to 19991980 to 19891970 to 19791980 to 19691950 to 19591940 to 19491939 or eariler


When did PERSON 1 (Ilsted on page 2) move Into this house, apartment, or mobile home?
Month Year
$\square$

A
Answer questions $4-6$ if thls is a HOUSE OR $A$ MOBME HOME; वthermse, SKIP to question 7a.

How many acres is thls house or moblle home on?
$\square$ Less than 1 acre $\rightarrow$ SKIP to question 61 to 9.9 acres10 or more acres

IN THE PAST 12 MONTHS, what were the actual sales of all agricultural products from thls property?
None$\$ 1$ to $\$ 999$
\$1,000 to $\$ 2,499$\$2,500 to \$4,999$\$ 5,000$ to $\$ 9,999$$\$ 10,000$ or more

6 Is there a business (such as a store or barber shop) or a medical office on this property?
$\square \mathrm{No}$
a. How many separate rooms are in this house, apartment, or moblle home? Roorns must be separated by buili-in anchways or walls that extend out atleast 6 inches and go from foor to celling.

- INCLUDE bedrooms, kitchens, etc.
- EXCluDE bathroorns, porches, balconies, foyers, halls, or urrinished basements.
Number of rooms
$\square$
b. How many of these rooms are bedrooms? Count as bedrooms those rooms you would /lst if th/s house, apartment, or moblle home were for sale or rent. If this is an emiciency/studio apariment, prift " 0 :
Nurnber of bodrooms



## ACS-1(X)QD85 <br> HOUSING SECTION (CONT’D)

## Housing (continued)

Does thls house, apartment, or moblle home have -
a. hot and cold running water?
b. a flush tollet?
c. a bathtub or shower?
d. a sink with a faucet?
e. a stove or range?
f. a refrigerator?
g. telephone service from which you can both make and recelve calls? inctude cell phones.
9
At thls house, apartment, or moblle homedo you or any member of thls household own or use any of the following computers?

- EXCLUDE GPS devices, digtal muslc players, and devices with only ilmied computing capabwties, for example: househoid appllances.


At this house, apartment, or moblle home do you or any member of thls household access the Intemet?
$\square$ Yes, with a subscription to an internet service $\square$ Yes, without a subscription to an Internet service $\rightarrow$ SKIP to question 12No Internet access at thls house, apartment, or mobile home $\rightarrow$ SKIP to question 12

At thls house, apartment, or moblle home do you or any member of thls household subscribe to the Internet using - Yes No
a. Dial-up service?
b. DSL service?
c. Cable modem service?
d. Fiber-optic service?
e. Mobile broadband plan for a computer or a cell phone?
f. Satellite internet service?
g. Some other service?

Specity servicez


Which FUEL Is used MOST for heating thls house, apartment, or moblle home?
$\square$ Gas: from underground plpes serving the nelghborhoodGas: bottled, tank, or LP
$\square$ ElectricltyFuel oll, kerosene, etc.Coal or cokeWoodSolar energyNo fuel used

14 a. LAST MONTH, what was the cost of electricity for thls house, apartment, or moblle home?
Last month's cost - Donars


ORIncluded in rent or condominlum fee No charge or electricity not used
b. LAST MONTH, what was the cost of gas for thls house, apartment, or moblle home?
Last month's cost - Dollars


## OR

Included in rent or condominlum fee $\square$ Included in electricity payment entered aboveNo charge or gas not used
## ACS-1(X)QD85

HOUSING SECTION (CONT'D)

## Housing (continued)

C. IN THE PAST 12 MONTHS, what was the cost of water and sewer for this house, apartment, or moblle home? If you have ilved here less than 12 months, estimate the cost

Past 12 months' cost - Dollars


ORIncluded in rent or condominlum fee $\square$ No charge
d. IN THE PAST 12 MONTHS, what was the cost of oll, coal, kerosene, wood, etc., for thls house, apartment, or moblle home? If you have IVved here less than 12 months, estrmate the cost Past 12 months' cost - Dollars


ORIncluded in rent or condominlum fee $\square$ No charge or these fuels not used

IN THE PAST 12 MONTHS, dld you or any member of this household recelve benefits from the Food Stamp Program or SNAP (the Supplemental Nutrltion Asslstance Program)? Do NOT inctude WiC, the School Lunch Program, or assistance from tood banks.

## $\square$ Yes

Is thls house, apartment, or moblle home part of a condominlum?Yes $\rightarrow$ What is the monthly condomintum fee? For renters, answer only if you pay the condominturn fee in addition to your rent; otherwse, mark the "None" box.
Monthly amount - Dollars


ORNone
No

17Is thls house, apartment, or moblle home Mark ( X) ONE box.
$\square$ Owned by you or someone in this household with a mortgage or loan? include home equilty loans.Owned by you or someone in this household free and clear (without a mortgage or loan)?Rented?Occupled without payment of rent? $\rightarrow$ SKIP to $\mathbf{C}$
B Answer questions 183 and $b$ if this house apartment or moblle home is RENTED. Othemilse, SKIP to question 19.
a. What is the monthly rent for thls house, apartment, or moblle home? Monthly amount - DoNars

b. Does the monthly rent include any meals?YesNo
C. Answer questions $19-23$ If you or any member of this household OWNS or IS BUYWVG this house, apartment or moblle home.
Otherwise, SKIP to $\mathbf{E}$ on the next page.

About how much do you think this house and lot, apartment, or mobile home (and lot, If owned) would sell for If it were for sale?
Amount - Dollars


What are the annual real estate taxes on THIS property?
Annual amount - Dollars


OR
21
What is the annual payment for fire, hazard, and flood Insurance on THis property?
Annual amount - Dollars


ORNone

## ACS-1(X)QD85

HOUSING SECTION (CONT’D)


## ACS-1(X)QD85

## DETAILED PERSON SECTION

## Person 1

Please copy the name of Person 1 from page 2, Please copy the name of Person 1 from page
then continue answering questlons below. Last Name


First Name


Where was thls person born?In the United States - Print name of state.Outside the United States - Print name of foreign country, or Puerto Rilco, Guam, etc.

Is this person a citizen of the United States?Yes, bom In the United States $\rightarrow$ SKIP to question 103Yes, born In Puerto Rico, Guam, the U.S. Virgin Islands, or Northem MarianasYes, born abroad of U.S. citizen parent or parentsYes, U.S. citizen by naturalization - Print year of naturalization 7
No, not a U.S. citizen

When did thls person come to live in the United States? Print numbers in boxes.

a. At any time IN THE LAST 3 MONTHS, has thls person attended school or college? inctude oniy nusery or preschod, kinderga inn, elementary to a high school dipioma or a college degree.No, has not attended in the last 3 months $\rightarrow$ SKIP to question 11 $\square$ Yes, public school, pubilc collegeYes, private school, private college, home school
b. What grade or level was thls person attending? Mark (X) ONE box.
$\square$ Nursery school, preschool $\square$ Kindergarten
$\square$ Grade 1 through 12 - Specily grade 1-127

$\square$ College undergraduate years (freshman to senlor)
$\square$ Graduate or professlonal school beyond a bachelor's degree flor example. MA or PhD program, or medical or law school)

What is the highest degree or level of school this person has COMPLETED? Mark ( $X$ ) ONE box. If currenty enrolied, mark the previous grade or highest degree neceived.

## NO SCHOOLING COMPLETED

$\square$ No schooling completed NURSERY OR PRESCHOOL THROUGH GRADE 12
$\square$ Grade 1 through 11 - Specity grade 1-117

## $\square$ 12th grade-NO DIPLOMA

HIGH SCHOOL GRADUATE
$\square$ Regular high school diplomaGED or alternative credential

## COLLEGE OR SOME COLLEGE

Some college credit, but less than 1 year of college credit1 or more years of college credit, no degreeAssoclate's degree (for example: $\mathbf{A 4}, \mathrm{AS}$ )
Bachelor's degree (for example: BA, BS)
AFIER BACHELOR'S DEGREE
$\square$ Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)Professlonal degree beyond a bachelor's degree (for example: $M D, D D S, D V M, \angle L B, J D$ )
$\square$ Doctorate degree for example: PhD, EdD

## ACS-1(X)QD85

DETAILED PERSON SECTION (CONT'D)


## ACS-1(X)QD85

DETAILED PERSON SECTION (CONT’D)

## Person 1 (continued)



## ACS-1(X)QD85

DETAILED PERSON SECTION (CONT'D)

## Person 1 (continued)


b. Is thls grandparent currently responslble for most of the basle needs of any grandchlldiren under the age of 18 who llve In this house or apartment?
$\square$ Yes
$\square$ No $\rightarrow$ SKIP to question 26
c. How long has this grandparent been responslble for these grandchlidren? /f the grandpanent/s flanclally respons/ble for more than one grandehlid, answer the question for the grandchllld for whom the grandparent has been responsible for the longest perlod of $\begin{aligned} & \mathrm{I} m \mathrm{me} \text {. }\end{aligned}$
$\square$ Less than 6 months6 to 11 months
$\square 1$ or 2 years

5 or more years

26 Has this person ever served on active dury In the U.S. Armed Forces, Reserves, or Natlonal Guard? Mark (X) ONE box.Never served in the military $\rightarrow$ SKIP to question 29a
$\square$ Only on active duty for training in the Reserves or Natlonal Guard $\rightarrow$ SKIP to question 28aNow on active dutyOn active duty in the past, but not now

When did this person serve on actlve duty in the U.S. Armed Forces? Mark ( $X$ ) a box for EACH period in which this person served, even if fust for part of the perlod.September 2001 or later
August 1990 to August 2001 (Includling Perslan Gulf War)May 1975 to July 1990vietnam era (August 1964 to April 1975) $\square$ February 1955 to July 1964Korean War (July 1950 to January 1955)January 1947 to June 1950Worid War II (December 1941 to December 1946)November 1941 or earller

Does this person have a VA service-connected dlsabillty rating?
$\square$ Yes (such as $0 \%, 10 \%, 20 \%, \ldots, 100 \%$ ) $\square$ No $\rightarrow$ SKIP to question 29 a
b. What Is this person's service-connected disabillty rating?0 percent10 or 20 percent30 or 40 percent50 or 60 percent70 percent or hilgher

## ACS-1(X)QD85

DETAILED PERSON SECTION (CONT'D)

## Person 1 (continued)



## ACS-1(X)QD85

DETAILED PERSON SECTION (CONT'D)

## Person 1 (continued)

During the LAST 4 WEEKS, has thls person been ACTIVELY looking for work?
$\square$ YesNo $\rightarrow$ SKIP to quesป̃on 38

LAST WEEK, could thls person have started a job If offered one, or returned to work If recalled?Yes, could have gone to workNo, because of own temporary IllinessNo, because of all other reasons (in school, etc.)

When did thls person last work, even for a few days?Within the past 12 months1 to 5 years ago $\rightarrow$ SKIP to $\mathbf{L}$
Over 5 years ago or never worked $\rightarrow$ SKIP to question 47
a. During the PAST 12 MONTHS ( 52 weeks), dld this person work 50 or more weeks? Count pald time off as work.
$\square$ Yes $\rightarrow$ SKIP to question 40
b. How many weeks DID this person work, even for a few hours, Including paldvacation, pald sick leave, and military service?50 to 52 weeks 48 to 49 weeks 40 to 47 weeks27 to 39 weeks14 to 26 weeks13 weeks or less

During the PAST 12 MONTHS, In the WEEKS WORKED, how many hours dld thls person usually work each WEEK?
Usual hours worked each WEEK
$\square$

Answer questlons $41-46$ If this person worked In the past 5 years. Otherwise, SKIP to question 47.

41-46 CURRENT OR MOST RECENT JOB ACTIVITY. Describe cleanly this person's chief job activity or busl ness last week. If tuls person had activity or business last week. If uils person had
more than one fob, des cribe the one at which this more than one job, des cribe the one at which this
person worked the most hours. If this person had person worked the most hours. If this person ha
no job or business last week, glve intormation for hls/her last fob or bushess.

Was thls person -
Mark (X) ONE box.
$\square$ an employee of a PRIVATE FOR-PROFIT company or business, of of an Indlvidual, for wages, salary, or commlssions?an employee of a PRIVATE NOT-FOR-PROFIT, tax-exempt, or charitable organization?a local GOVERNMENT employee (clty, county, etc.)?state GOVERNMENT employee?a Federal GOVERNMENT employee?SELFEMPLOYED in own NOT INCORPORATED business, professional practice, or farm?
$\square$ SELFEMPLOYED in own INCORPORATED business, professional practice, or farm?
$\square$ working WITHOUT PAY in famlly business or farm?

## For whom did thls person work?

If now on active duty in
the Anmed Forces, mark $(X)$ this box $\rightarrow$ and print the branch of the Ammed Forces.
Name of company, business, or other employer

What kind of business or Industry was thls? Describe the actuvity at the location where employed. order house auto engine manuper pubishingo onder house, auto engine manufacturing, bank)

## Is this malnly - Mark $(X)$ ONE box.

manufacturing?wholesale trade? $\square$ retall trade?other (agriculture, construction, service, government, etc.]?
## ACS-1(X)QD85

DETAILED PERSON SECTION (CONT'D)

## Person 1 (continued)

What kind of work was thls person dolng?
(For example: raglsterad nurse, personnel manager. supervisor of order department, secratary, accountinnt)

What were this person's most Important activitles or duties? (For example: patient care, directing hifing policles, supervising onder clerks, typing and fing. reconclling in inanclal reconds)

## INCOME IN THE PAST 12 MONTHS

Mark ( $X$ ) the "Yes" box for each type of Income thls person raceived, and give your best estmate of the TOTAL AMOUNT during the PAST 12 MONTHS NOTE: The "past 12 months" is the perlod from today's date one year ago up through today.)

Mark ( $X$ ) the "No" box to show types of Income NOT raceived.

If net income was a loss, mark the "Loss" box to the right of the dollar amourt.
For income recelved jointly, report the appropnate share for each person - or, if that's not possible, report the whole amount for only one person and mark the "No" box for the other person.
a. Wages, salary, commissions, bonuses, or tips from all jobs. Report amount before deductions for taxes, bonds, đues, or other items.

b. Self-employment Income from own nonfarm businesses or farm businesses, Including proprletorshlps and partnershlps. Report proprietorships and partnerships.

c. Interest, dividends, net rental Income, royalty Income, or Income from estates and trusts. Report even small amounts credlited to an account
$\square$ Yes $\rightarrow$
No

d. Soclal Securlty or Rallroad Retirement.Yes $\rightarrow$ $\square$ No

e. Supplemental Securlty Income (SSI).Yes $\rightarrow$No

$$
\begin{aligned}
& \text { TOTAL AMOUNT for past } \\
& 12 \text { months }
\end{aligned}
$$

f. Any public assistance or welfare payments from the state or local welfare office.

g. Retirement, survivor, or dlsability penslons. Do NOT inctude Soclal'Securlty.

h. Any other sources of income recelved regularly such as Veterans' (VA) payments, unemployment compensation, chlld support or allmony. Do NOT include furmp sum payments such as money from an inherltance or the sale of a home.


What was thls person's total Income during the PAST 12 MONTHS? Add entrles in questions $47 a$ to 47 h ; subtract any losses. If netIncome was a loss, enter the amount and mark ( $X$ ) the "Loss" box next to the dowar amount


Continue with the questlons for Person 2 on the next page. If no one Is Ilsted as Person 2 on page 2, SIIIP to page 44 for malling instructions.

## ACS-1(X)QD85

## BACK COVER

## Mailing <br> Instructions

Please make sure you have...

- listed all names and answered the questions on pages 2, 3, and 4
- answered all Housing questions
- answered all Person questions for each person.
$\rightarrow$ Then...
- put the completed questionnaire into the postage-paid return envelope. If the envelope has been misplaced, please mail the questionnaire to:
U.S. Census Bureau
P.O. Box 5240

Jeffersonville, IN 47199-5240

- make sure the barcode above your address shows in the window of the return envelope.
Thank you for participating in the American Community Survey.


## For Census Bureau Use



The Census Bursau astimatas that, for the avorage houschold, this form will take 40 minutes to complote, including the time for ruvirwing the instructions and answors. Sand comments rogarding this burden answors. Sand comments rogarding this burden
ostimate or any other aspoct of this collection of information, including suggostions for roducing this burdon, to: Paporwork Projoct 0607-0836, U.S. Consu burdon, to: Paporwork Projact 0607-0936, U.S. Washington, D.C. 20233. You may e-mail oomments to Paperwork ${ }^{\text {in }}$ consus.gov; use "Paperwork Projoct $0507-0936^{\circ}$ as the subjact. Plosse DO NOT RETURN your questionnaire to this addrass. Use the enclosed proeddrassod anvelope to return your complated questionnaire.

Respondents are not roquired to raspond to any information collaction unless it dispisys a valid approval number from the Office of Management and Budget. This 8 -digit number appears in the bottom right on the front cover of this form.

Form ACS-1(X)ODes (02-05-2013)


[^0]:    ${ }^{1}$ All QDT questionnaires had test-specific URLs, OMB form numbers and approval information, as well as a test-specific contact phone number for Telephone Questionnaire Assistance.

[^1]:    ${ }^{2}$ Samples of 10,000 addresses were also selected for the other two experimental treatments for a total of 50,000 addresses in the QDT. The random allocation was done among the four experimental treatments and the Control.
    ${ }^{3}$ We can only compare through the end of July since CATI started on August 1 for ACS production. CATI calls serve as reminders for respondents to complete their ACS survey, thus affecting the self-response rates. The QDT did not have CATI.

[^2]:    ${ }^{4}$ A simple Bonferroni adjustment keeps the experiment-wise error rate at $\alpha=0.10$ by dividing the acceptable $\alpha$-level by the number of comparisons. The Bonferroni-Holm Multiple Comparison procedure is a more powerful modification of the simple Bonferroni procedure which also keeps the experiment-wise error rate at $\alpha=0.10$ (Westfall et al., 1999).
    ${ }^{5}$ TQA allows respondents to call a toll-free number to receive help completing the survey. Respondents can eithercomplete the mail or Internet form or complete it over the phone with a TQA interviewer.
    ${ }^{6}$ TQA responses were included as mail responses, as they are in ACS production.

[^3]:    ${ }^{7}$ Unless a response was received, we removed any address where the initial or second mailing was returned by the Postal Service as Undeliverable As Addressed from the universe of mailable and deliverable households.
    ${ }^{8}$ A blank form is one in which there are no data defined persons and no usable telephone number provided by the respondent. To qualify as a data defined person, enough data must be provided for the person to meetcertain minimum requirements established for the ACS.
    ${ }^{9}$ A sufficient partial interview is one in which the respondent reached the pick next person screen for households with two or more persons OR the place of birth screen for households with only one person, but did not reach the presummary screen.
    ${ }^{10}$ This will cause the response rate to be lowerthan if we were able to identify vacant and nonexistent units.

[^4]:    ${ }^{11}$ Because this is a test of mail questionnaire design, we used the mail return data if there were both mailand Internet responses for an address.
    ${ }^{12}$ We did not get data from TQA responses for this analysis, so we exclude them from the item missing data rates.

