

# Evaluating the American Community Survey Regional Office Internet Letter

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The views expressed are those of the authors and not those of the U.S. Census Bureau.



# Background

- American Community Survey (ACS) data collection phases – self-response and Computer-Assisted Personal Interviewing (CAPI)
- During CAPI, field representatives have several letters available to send to nonrespondent households to motivate them to respond.
- One letter is the Internet Letter
  - Provides an internet user ID and instructions on how to respond online
  - Used inconsistently among the regional offices
- In 2020, the ACS program decided to send the Internet Letter nationally to all mailable CAPI cases.




# Background

- Designed a new version of the Internet Letter
  - Part of a larger project to redesign all letters used during CAPI
  - New design less text dense and uses plain language
  - Unsure which address-side message and listed response options were best
- New version implemented in October 2020 without field testing
  - Confident new letter would be more effective than existing letter
- Created Regional Office Internet Letter Test to study variations in new letter design
  - Purpose: to determine which content options were most effective at increasing self-response and combating decreasing CAPI response rates



# Previous Letter

1  United States<sup>®</sup>  
Census  
Bureau

1 **U.S. Census Bureau**  
Los Angeles Regional Office  
Burbank, CA 91504

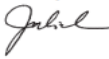
Dear Resident:

2 A U.S. Census Bureau representative will soon contact you in person to complete the American Community Survey. You can complete the survey online by going to <https://respond.census.gov/acs> and logging on with your user ID: The Census Bureau is conducting this survey under the authority of Title 13, Sections 141, 193, and 221, of the United States Code. The following is provided to give you an explanation of the importance of the survey and the uses of the results.

The American Community Survey contains questions about household characteristics including such topics as education, employment, and housing. It produces critical, up-to-date information that is used to meet the needs of communities across the United States. For example, results from this survey may be used to decide where new schools, hospitals, and fire stations are needed. Survey data are used by federal, state, and local governments to make decisions and to develop programs that will provide health care, education, and transportation services that affect you and your community. This survey information also helps communities plan for emergency situations that might affect you and your neighbors.

The U.S. Census Bureau is required by law to keep your information confidential. We are not permitted to publicly release your responses in a way that could identify this household. Per the Federal Cybersecurity Enhancement Act of 2015, your data are protected from cybersecurity risks through screening of the systems that transmit your data. By law, the Census Bureau can only use your responses to produce statistics.

A member of our staff will contact you in a few days. Your participation and cooperation are important to the success of the survey. Your response does make a difference! If you have any questions, call us at the phone number provided at the bottom of this letter. We will be pleased to help you. For more information about the American Community Survey, visit our website at <http://www.census.gov/acs>.


Sincerely,  
  
Julie Lam  
Regional Director

3 Office Phone Number: 1-800-992-3530, Option 1  
Control Number:

census.gov

1. Moved address
2. Reduced text, used plain language, and changed layout to resemble other ACS mailings
3. Moved office phone number, added Spanish text, and updated website

# New Letter


 United States<sup>®</sup>  
Census  
Bureau

1 **U.S. Census Bureau**  
Los Angeles Regional Office  
Burbank, CA 91504

Dear Resident:

A U.S. Census Bureau employee may have recently contacted you to help you complete the **American Community Survey**. If you have responded, thank you. If you have not responded, we will contact you soon.

**Please complete the survey today to avoid an in-person interview:**

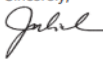
 Go to: **respond.census.gov/acs**  
Log in with your user ID:  
Enter the user ID letters and numbers exactly as you see them above.

2 **You are required by U.S. law to respond to this survey.** The Census Bureau is required by law to keep your information confidential.

If a Census Bureau employee visits you, he or she will present a photo ID that includes their name, a Department of Commerce watermark, and an expiration date. He or she will have a laptop and will contact you between 9 a.m. and 9 p.m. You may also be contacted by phone.

The information from this survey helps identify needs such as affordable housing, job training, and emergency planning. Your response makes a difference! Thank you for helping your community prepare for a better future.

If you have any questions call us at 1-800-992-3530, option 1. We are happy to help you.

Sincerely,  
  
Julie Lam  
Regional Director

3 **Por favor complete la Encuesta sobre la Comunidad Estadounidense.**

La encuesta está disponible en español.  
Por internet: Vaya a [respond.census.gov/acs](https://respond.census.gov/acs). Haga clic en "Para completar en español, oprima aquí."  
Por teléfono: Llame al 1-877-833-5625 para hablar en español con un empleado de la Oficina del Censo.

FOR OFFICE USE ONLY:  
Control #: \_\_\_\_\_ census.gov/acs



# Experimental Design

- Tested four experimental treatments using a fully factorial design
- Isolated change in address-side message and response option
- Tested variations of new letter **NOT** new vs. old letter

Treatment	Address-Side Message	Response Option
Treatment 1	Past Due	Internet Only
Treatment 2	Past Due	Internet + TQA <sup>†</sup>
Treatment 3	Required by Law	Internet Only
Treatment 4	Required by Law	Internet + TQA <sup>†</sup>

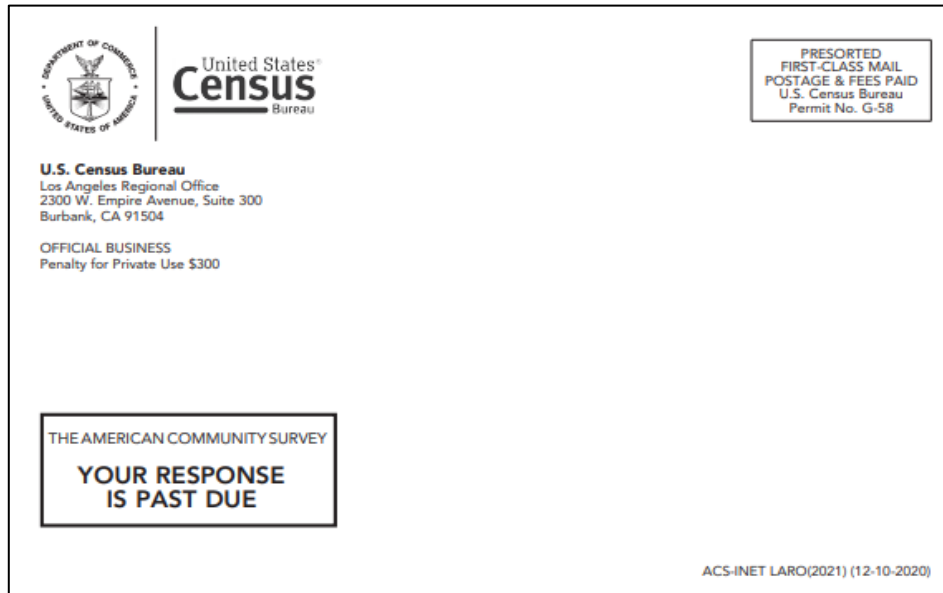
<sup>†</sup> Telephone Questionnaire Assistance



# Address-Side Message

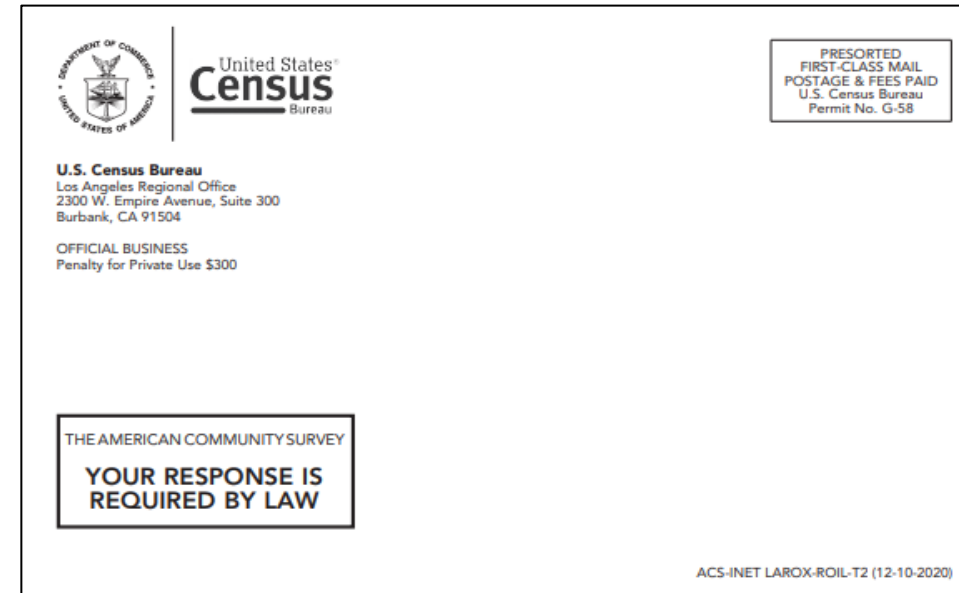
## Past Due

- References due date from fifth mailing



## Required by Law

- Messaging used on many of the other mailings



# Response Option

## Internet Only

- Internet response less expensive than TQA response
- Still have TQA number in body of letter

## Internet + TQA

- TQA response less expensive than CAPI response
- Current TQA operation may be affected by increased call volume



Go to: **respond.census.gov/acs**

Log in with your user ID:

Enter the user ID letters and numbers exactly as you see them above.

### ONLINE

Go to: [respond.census.gov/acs](https://respond.census.gov/acs)

Log in with your user ID:

**12345-12345**

Enter the user ID letters and numbers exactly as you see them above.

OR

### BY PHONE

Call 1-800-354-7271

Monday-Friday: 9 a.m. to 9 p.m.

Saturday: 9 a.m. to 7 p.m.

Sunday: 11 a.m. to 9 p.m.



# Results

Response Rates, Logistic Regression, Refusal Rates





# Response Rates by Mode

## Internet Only: Past Due vs. Required by Law (Treatment 1 vs. Treatment 3)

	Treatment 1	Treatment 3	Difference	Adjusted P-Value
Overall Response	74.2 (0.5)	74.7 (0.5)	-0.4 (0.6)	0.98
Self-Response	25.9 (0.4)	25.8 (0.5)	<0.1 (0.6)	0.98
Internet	22.8 (0.4)	23.3 (0.5)	-0.4 (0.6)	0.98
Mail	2.8 (0.2)	2.3 (0.2)	0.4 (0.3)	0.62
TQA	0.3 (0.1)	0.2 (<0.1)	<0.1 (0.1)	0.98
CAPI	48.4 (0.5)	48.8 (0.6)	-0.4 (0.7)	0.98

Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Field Letter Test.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. Asterisk (\*) indicates a statistically significant result. Significance was tested based on a two-tailed t-test at the  $\alpha=0.1$  level. P-values were adjusted using the Hochberg method.



# Response Rates by Mode

## Internet + TQA: Past Due vs. Required by Law (Treatment 2 vs. Treatment 4)

	Treatment 2	Treatment 4	Difference	Adjusted P-Value
Overall Response	75.3 (0.5)	75.2 (0.4)	0.2 (0.6)	0.98
Self-Response	27.0 (0.5)	27.2 (0.5)	-0.2 (0.7)	0.98
Internet	23.6 (0.5)	23.6 (0.5)	<0.1 (0.7)	0.98
Mail	2.7 (0.2)	3.1 (0.2)	-0.4 (0.2)	0.65
TQA	0.6 (0.1)	0.5 (0.1)	0.1 (0.1)	0.98
CAPI	48.4 (0.6)	48.0 (0.5)	0.4 (0.7)	0.98

Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Field Letter Test.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. Asterisk (\*) indicates a statistically significant result. Significance was tested based on a two-tailed t-test at the  $\alpha=0.1$  level. P-values were adjusted using the Hochberg method.



# Response Rates by Mode

## Past Due: Internet Only vs. Internet + TQA (Treatment 1 vs. Treatment 2)

	Treatment 1	Treatment 2	Difference	Adjusted P-Value
Overall Response	74.2 (0.5)	75.3 (0.5)	-1.1 (0.7)	0.45
Self-Response	25.9 (0.4)	27.0 (0.5)	-1.1 (0.7)	0.45
Internet	22.8 (0.4)	23.6 (0.5)	-0.8 (0.7)	0.70
Mail	2.8 (0.2)	2.7 (0.2)	<0.1 (0.2)	0.97
TQA	0.3 (0.1)	0.6 (0.1)	-0.3 (0.1)	0.01*
CAPI	48.4 (0.5)	48.4 (0.6)	<0.1 (0.7)	0.97

Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Field Letter Test.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. Asterisk (\*) indicates a statistically significant result. Significance was tested based on a two-tailed t-test at the  $\alpha=0.1$  level. P-values were adjusted using the Hochberg method.



# Response Rates by Mode

Required by Law: Internet Only vs. Internet + TQA  
(Treatment 3 vs. Treatment 4)

	Treatment 3	Treatment 4	Difference	Adjusted P-Value
Overall Response	74.7 (0.5)	75.2 (0.4)	-0.5 (0.7)	0.63
Self-Response	25.8 (0.5)	27.2 (0.5)	-1.4 (0.7)	0.18
Internet	23.3 (0.5)	23.6 (0.5)	-0.3 (0.7)	0.63
Mail	2.3 (0.2)	3.1 (0.2)	-0.8 (0.2)	<0.01*
TQA	0.2 (<0.1)	0.5 (0.1)	-0.2 (0.1)	0.07*
CAPI	48.8 (0.6)	48.0 (0.5)	0.9 (0.8)	0.63

Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Field Letter Test.

Note: Minor additive discrepancies are due to rounding. Standard errors are in parentheses. Asterisk (\*) indicates a statistically significant result. Significance was tested based on a two-tailed t-test at the  $\alpha=0.1$  level. P-values were adjusted using the Hochberg method.



# Logistic Regression

- Created logistic regression models to compare the main effects of address-side message and response option as well as their interaction effects on the response (overall and by mode).
- Main effect – address-side message
  - Not significant in any of the models
- Main effect – response option
  - Significant in self-response, TQA, and mail models
- Interaction effect
  - Significant in mail model



# Estimates from Logistic Regression Models

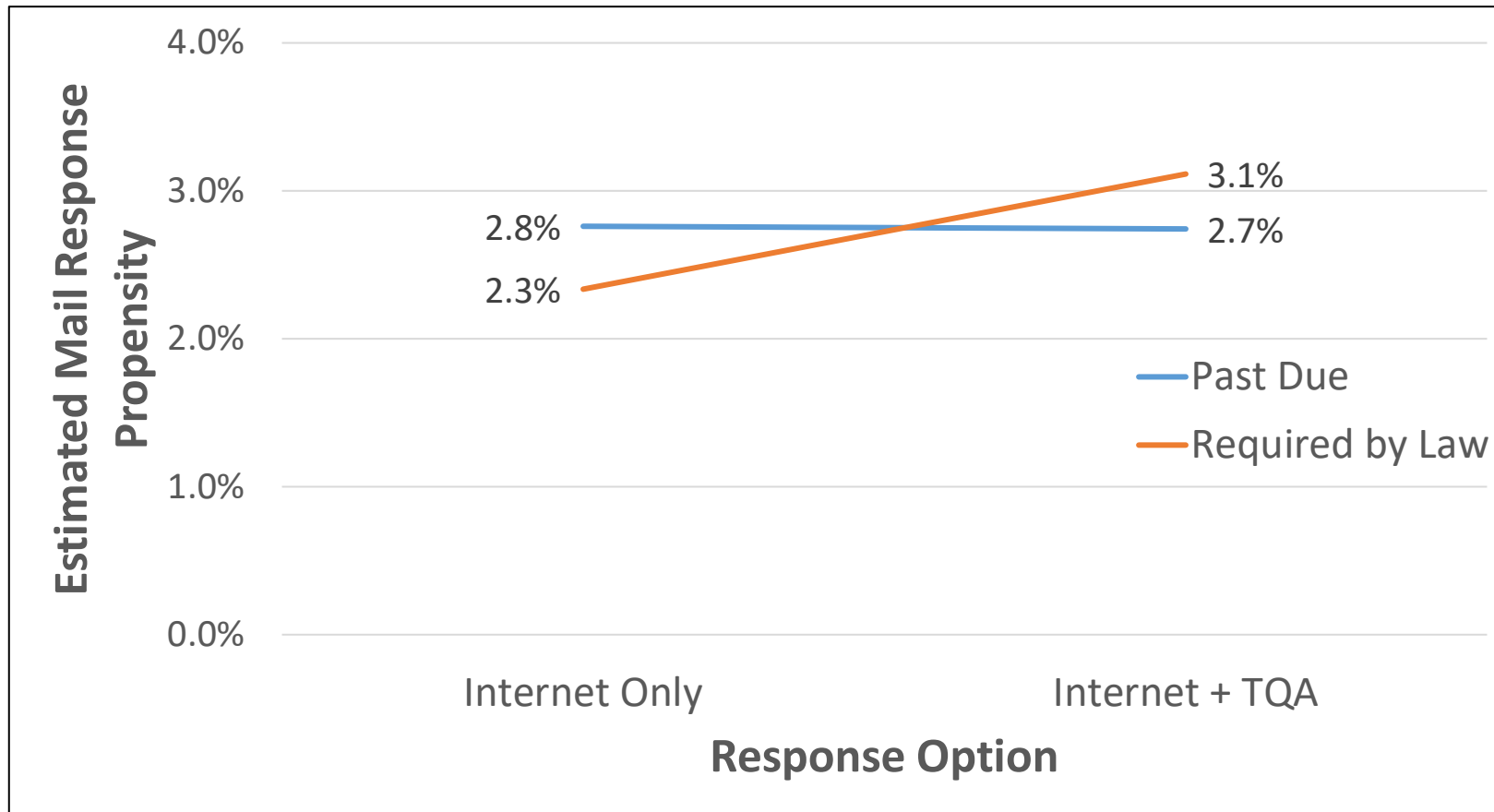
Parameter	Reference Group	Self-Response Model			TQA Model			Mail Model		
		Estimate	t Value	P-Value	Estimate	t Value	P-Value	Estimate	t Value	P-Value
Intercept		-1.0 (<0.1)	-74.4	<0.01*	-5.6 (0.1)	-60.9	<0.01*	-3.6 (<0.1)	-105.3	<0.01*
Address-Side Message	PD	<0.1 (<0.1)	0.2	0.83	-0.1 (0.1)	-1.1	0.27	<0.1 (<0.1)	-0.3	0.27
Response Option	IO	<0.1 (<0.1)	2.6	0.01*	0.4 (0.1)	3.9	<0.01*	0.1 (<0.1)	2.6	0.01*
Interaction Term	PD, IO	<0.1 (<0.1)	0.2	0.81	<0.1 (0.1)	-0.3	0.81	0.1 (<0.1)	2.5	0.01*

Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Field Letter Test.

Note: Standard errors are in parentheses. Asterisk (\*) indicates a statistically significant result. Significance was tested based on a two-tailed t-test at the  $\alpha=0.1$  level. PD = “Past Due” and IO = “Internet Only”.



# Estimated Response Propensity for Mail Response from Logistic Regression Model



Source: U.S. Census Bureau, American Community Survey, 2021 Regional Office Internet Field Letter Test.



# Refusal Rates

- Refusal rates ranged from 15.8%-16.5%
- None of the rates significantly different from each other





# Conclusion

- Address-side message had little effect on response during CAPI
  - Only effect was combined effect with response option for mail response
- Response option affected self-response during CAPI
  - TQA response rates higher for treatments with internet + TQA option
  - Logistic regression models indicated higher TQA, mail, and self-response for treatments with internet + TQA option
- Recommend adding TQA response option to Internet Letter



If you have any questions,  
please contact:

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