

Conjoint analysis of survey invitation messages: A new method to understand what moves people to respond

Casey Eggleston, Jennifer Hunter Childs,
and Elizabeth Nichols
U.S. Census Bureau

Presented at FedCASIC
May 4, 2016

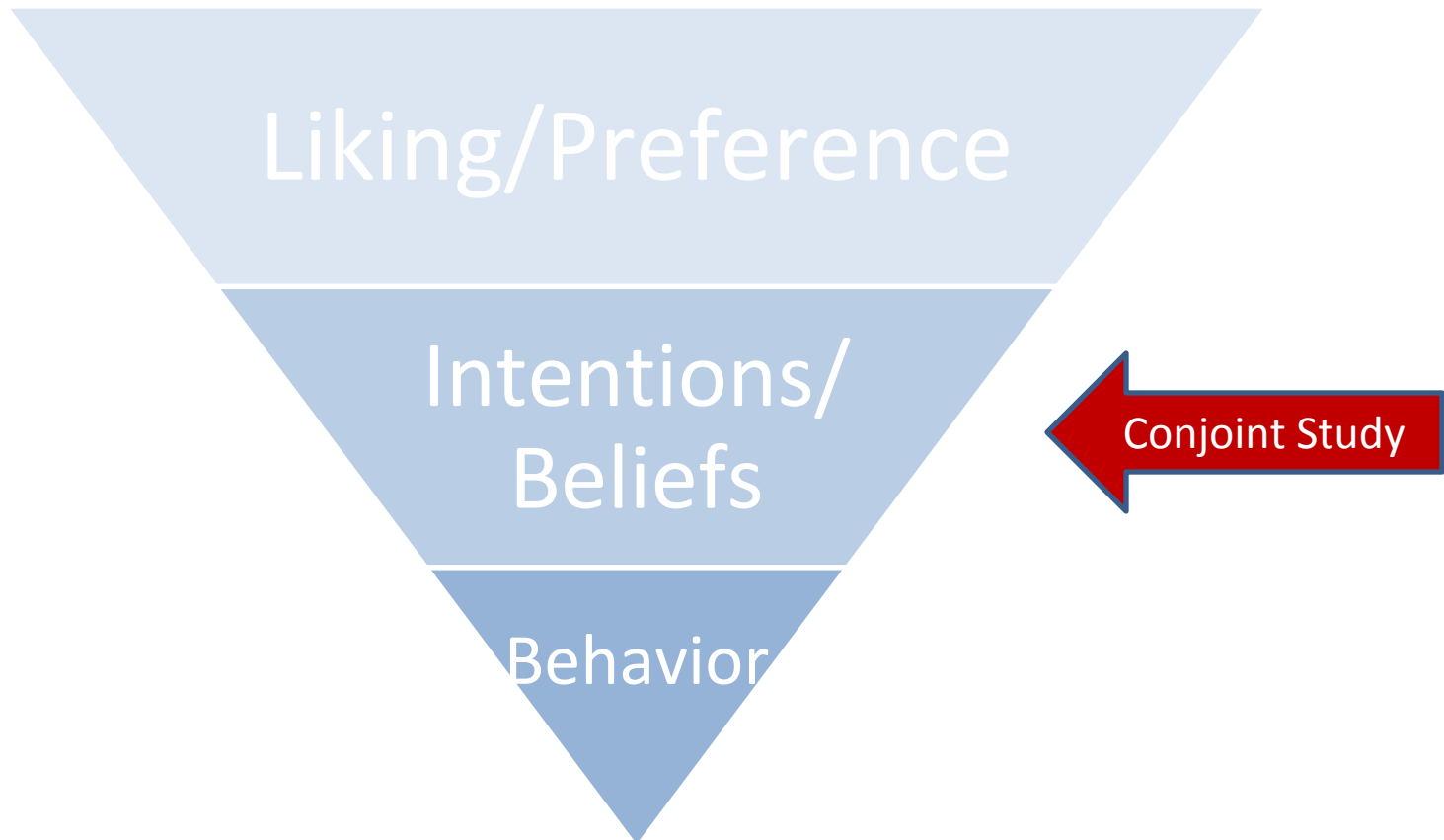
**Disclaimer: This presentation is released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views expressed are those of the author(s) and not necessarily those of the U.S. Census Bureau.*

Background

- Census Bureau plans to save millions of dollars on the 2020 Census by optimizing self-response
- One way to improve self-response is to design clear and compelling invitation materials
- The Census Bureau is taking a multi-faceted approach to evaluating respondent messaging

Background

At least three levels of evaluation for respondent reactions to messaging:



Background

- Current study looks at the impact of different elements of survey invitations on response intentions using Choice-Based Conjoint (CBC) Analysis
- Four elements:
 1. The use of the data
 2. What is required (by law)
 3. What happens if you don't respond
 4. Confidentiality protection



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

August 24, 2015

Dear Resident:

The U.S. Census Bureau is conducting the 2015 National Content Test. Your response to this brief survey is important and will help in our efforts to develop new methods that will make the next census easier, more convenient, and less costly for taxpayers. Results from the next census will be used to help each community get its fair share of federal funding for many programs that you and your neighbors need.

Data use

Using the enclosed instruction card, please complete the survey online by **September 1**, at:

<https://survey.census.gov/censustest>

Respond on time to avoid a personal visit from a Census Bureau interviewer. Help us conserve natural resources, process data more efficiently, and save taxpayer money by responding online. If you are unable to complete the survey online, or need assistance, you may call our toll-free number 1-866-226-2836.

You are required by U.S. law to respond to this survey. Your answers will only be used for statistical purposes, and no other purpose. The back of this letter contains more information about protecting your data.

Thank you.

Sincerely,

John H. Thompson
Director

Enclosure

Mensaje importante: Para completar la Prueba Nacional del Contenido del Cuestionario del 2015, por favor, visite **<https://survey.census.gov/censustest>** o llame sin cargos al 1-888-262-5931.

census.gov

Your Answers Are Confidential

The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household. The Census Bureau chose your address, not you personally, as part of a randomly selected sample.

We are conducting this survey under the authority of Title 13, United States Code, Sections 141 and 193. Federal law protects your privacy and keeps your answers confidential (Title 13, United States Code, Sections 9 and 214).

For more information about this survey, visit www.census.gov/2015censustests.

For more information about how we protect your information, please visit our website at www.census.gov and click on "Data Protection & Privacy Policy" at the bottom of the homepage.

The U.S. Census Bureau estimates that, for the average household, this survey will take about 10 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0985, U.S. Census Bureau, DMD-3H174, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <2020.census.paperwork@census.gov>; use "Paperwork Project 0607-0985" as the subject.

You are not required to respond to this collection of information if it does not display a valid approval number from the Office of Management and Budget (OMB). The eight-digit OMB number is 0607-0985.



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

August 24, 2015

Dear Resident:

The U.S. Census Bureau is conducting the 2015 National Content Test. Your response to this brief survey is important and will help in our efforts to develop new methods that will make the next census easier, more convenient, and less costly for taxpayers. Results from the next census will be used to help each community get its fair share of federal funding for many programs that you and your neighbors need.

Using the enclosed instruction card, please complete the survey online **by September 1**, at:

<https://survey.census.gov/censustest>

Respond on time to avoid a personal visit from a Census Bureau interviewer. Help us conserve natural resources, process data more efficiently, and save taxpayer money by responding online. If you are unable to complete the survey online, or need assistance, you may call our toll-free number 1-866-226-2836.

You are required by U.S. law to respond to this survey. Your answers will only be used for statistical purposes, and no other purpose. The back of this letter contains more information about protecting your data.

Thank you.

Sincerely,

John H. Thompson
Director

Enclosure

Mensaje importante: Para completar la Prueba Nacional del Contenido del Cuestionario del 2015, por favor, visite **<https://survey.census.gov/censustest>** o llame sin cargos al 1-888-262-5931.

census.gov

Your Answers Are Confidential

The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household. The Census Bureau chose your address, not you personally, as part of a randomly selected sample.

We are conducting this survey under the authority of Title 13, United States Code, Sections 141 and 193. Federal law protects your privacy and keeps your answers confidential (Title 13, United States Code, Sections 9 and 214).

For more information about this survey, visit www.census.gov/2015censustests.

For more information about how we protect your information, please visit our website at www.census.gov and click on "Data Protection & Privacy Policy" at the bottom of the homepage.

What is required

The U.S. Census Bureau estimates that, for the average household, this survey will take about 10 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0985, U.S. Census Bureau, DMD-3H174, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <2020.census.paperwork@census.gov>; use "Paperwork Project 0607-0985" as the subject.

You are not required to respond to this collection of information if it does not display a valid approval number from the Office of Management and Budget (OMB). The eight-digit OMB number is 0607-0985.



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

August 24, 2015

Dear Resident:

The U.S. Census Bureau is conducting the 2015 National Content Test. Your response to this brief survey is important and will help in our efforts to develop new methods that will make the next census easier, more convenient, and less costly for taxpayers. Results from the next census will be used to help each community get its fair share of federal funding for many programs that you and your neighbors need.

Using the enclosed instruction card, please complete the survey online **by September 1**, at:

<https://survey.census.gov/censustest>

Respond on time to avoid a personal visit from a Census Bureau interviewer. Help us conserve natural resources, process data more efficiently, and ~~save taxpayer money by responding online.~~ If you are unable to complete the survey online, or need assistance, you may call our toll-free number 1-866-226-2836.

You are required by U.S. law to respond to this survey. Your answers will only be used for statistical purposes, and no other purpose. The back of this letter contains more information about protecting your data.

Thank you.

Sincerely,

John H. Thompson
Director

Enclosure

Mensaje importante: Para completar la Prueba Nacional del Contenido del Cuestionario del 2015, por favor, visite **<https://survey.census.gov/censustest>** o llame sin cargos al 1-888-262-5931.

census.gov

Your Answers Are Confidential

The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household. The Census Bureau chose your address, not you personally, as part of a randomly selected sample.

We are conducting this survey under the authority of Title 13, United States Code, Sections 141 and 193. Federal law protects your privacy and keeps your answers confidential (Title 13, United States Code, Sections 9 and 214).

For more information about this survey, visit www.census.gov/2015censustests.

For more information about how we protect your information, please visit our website at www.census.gov and click on "Data Protection & Privacy Policy" at the bottom of the homepage.

If you don't respond

The U.S. Census Bureau estimates that, for the average household, this survey will take about 10 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0985, U.S. Census Bureau, DMD-3H174, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <2020.census.paperwork@census.gov>; use "Paperwork Project 0607-0985" as the subject.

You are not required to respond to this collection of information if it does not display a valid approval number from the Office of Management and Budget (OMB). The eight-digit OMB number is 0607-0985.



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

August 24, 2015

Dear Resident:

The U.S. Census Bureau is conducting the 2015 National Content Test. Your response to this brief survey is important and will help in our efforts to develop new methods that will make the next census easier, more convenient, and less costly for taxpayers. Results from the next census will be used to help each community get its fair share of federal funding for many programs that you and your neighbors need.

Using the enclosed instruction card, please complete the survey online **by September 1**, at:

<https://survey.census.gov/censustest>

Respond on time to avoid a personal visit from a Census Bureau interviewer. Help us conserve natural resources, process data more efficiently, and save taxpayer money by responding online. If you are unable to complete the survey online, or need assistance, you may call our toll-free number 1-866-226-2836.

You are required by U.S. law to respond to this survey. Your answers will only be used for statistical purposes, and no other purpose. The back of this letter contains more information about protecting your data.

Thank you.

Sincerely,

John H. Thompson
Director

Enclosure

Mensaje importante: Para completar la Prueba Nacional del Contenido del Cuestionario del 2015, por favor, visite **<https://survey.census.gov/censustest>** o llame sin cargos al 1-888-262-5931.

census.gov

Confidentiality protection

Your Answers Are Confidential

The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household. The Census Bureau chose your address, not you personally, as part of a randomly selected sample.

We are conducting this survey under the authority of Title 13, United States Code, Sections 141 and 193. Federal law protects your privacy and keeps your answers confidential (Title 13, United States Code, Sections 9 and 214).

For more information about this survey, visit www.census.gov/2015censustests.

For more information about how we protect your information, please visit our website at www.census.gov and click on "Data Protection & Privacy Policy" at the bottom of the homepage.

The U.S. Census Bureau estimates that, for the average household, this survey will take about 10 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-0985, U.S. Census Bureau, DMD-3H174, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to <2020.census.paperwork@census.gov>; use "Paperwork Project 0607-0985" as the subject.

You are not required to respond to this collection of information if it does not display a valid approval number from the Office of Management and Budget (OMB). The eight-digit OMB number is 0607-0985.

Objectives

1. Determine which elements of a survey invitation are perceived by respondents to be most important to their response decision
2. Compare several versions of each invitation element (for potential use in communications for the 2020 Census)

Methodology

Methodology

- **Choice-Based Conjoint (CBC) Analysis**—emulates real-world decision-making, presenting elements in packages (not one at a time).
 - Current study tested 4 elements of survey invitations, with 3 census-specific messages for each element
- **Utility and Importance Scores**—values given to element based on respondent choices

	Attribute	Level 1	Level 2	Level 3
1	Use of Data	Calculate the number of people eligible for Social Security and Medicare benefits	Monitor compliance with anti-discrimination laws, such as the Voting Rights Act and the Civil Rights Act	Help allocate funds to your state, community, and school district for services, including education, health care, and new business development
2	What Is Required	You are required by law to respond to the census	The census is required by law (Title 13 U.S. Code Sections 141 and 193)	Collection of the information is Mandatory and is collected under Title 13 U.S. Code Sections 141 and 193
3	What Happens If You Do Not Respond	The Census Bureau may use other government records to complete the census for you	A Census Bureau interviewer may visit you to complete the census	A Census Bureau interviewer may visit you to complete the census or we may use other government records to complete the census for you
4	Confidentiality Protection	The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that	The Census Bureau is required by U.S. law to keep your answers confidential. Your answers will only be used for statistical purposes, and no other purpose	The Census Bureau is required by U.S. law (Title 13, Section 193) to keep your answers confidential

Methodology

- **Sample:** \approx 6,000 email addresses from a volunteer, non-probability panel
- **Field period:** October 22 – November 6, 2015
- **Contact attempts:** A survey invitation email and up to 2 reminder emails
- **Response rate:** \approx 7% (439 usable responses)

Methodology

Each question in the survey presented a choice between two distinct combinations of the conjoint elements

US Census Opinion Study

Below are two different ways that the Census Bureau could describe the census. Comparing the two descriptions, which one would you be more likely to respond to?

(12 of 12)

Use of Data	Calculate the number of people eligible for Social Security and Medicare benefits
What Is Required	The census is required by law (Title 13 U.S. Code Sections 141 and 193).
What Happens If You Do Not Respond	A Census Bureau interviewer may visit you to complete the census or we may use other government records to complete the census for you.
Confidentiality Protection	The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household
	<input type="radio"/>

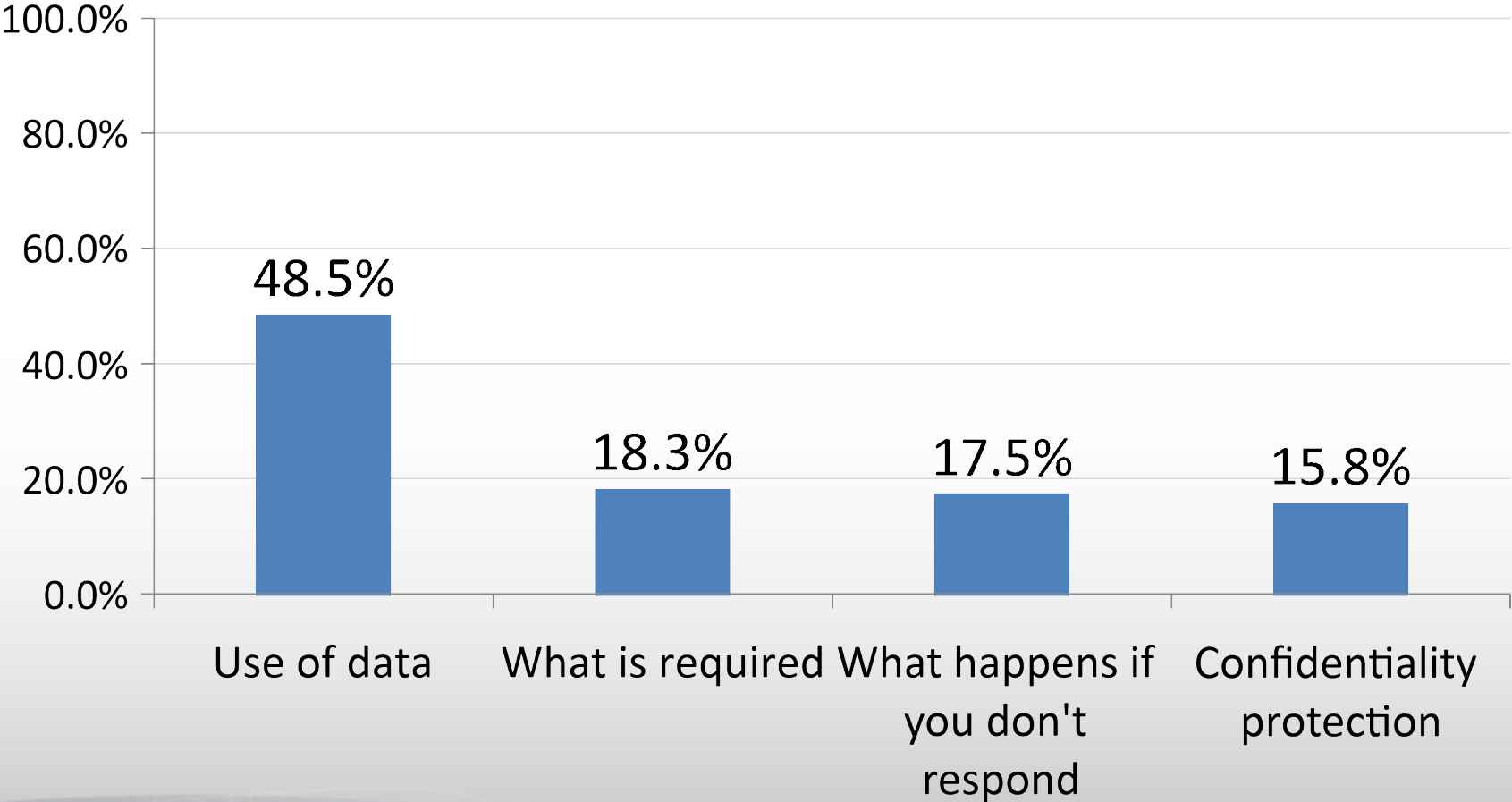
Monitor compliance with anti-discrimination laws such as Voting Rights Act and Civil Rights Act
You are required by law to respond to the census.
The Census Bureau may use other government records to complete the census for you.
The Census Bureau is required by U.S. law (Title 13, Section 193) to keep your answers confidential.
<input checked="" type="radio"/>

Methodology

- Each participant in the study answered 12 of these conjoint questions (not all possible combinations)
- Analysis of responses produces two key values
 - **Utility scores** for each tested feature (that is, for each of the specific messages)
 - Overall **importance scores** (for each of the 4 survey invitation elements)
- Can also look for patterns related to respondent characteristics

Results

Importance Scores



Utility Scores

Help allocate funds to your state, community, and school district for services, including education, health care, and new business development	1.76
A Census Bureau interviewer may visit you to complete the census	0.25
The Census Bureau is required by U.S. law to keep your answers confidential. Your answers will only be used for statistical purposes, and no other purpose	0.20
The census is required by law (Title 13 U.S. Code Sections 141 and 193)	0.16
The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household	0.12
A Census Bureau interviewer may visit you to complete the census or we may use other government records to complete the census for you	0.10
Collection of the information is Mandatory and is collected under Title 13 U.S. Code Sections 141 and 193	0.00
You are required by law to respond to the census	-0.17
The Census Bureau is required by U.S. law (Title 13, Section 193) to keep your answers confidential	-0.32
The Census Bureau may use other government records to complete the census for you	-0.35
Calculate the number of people eligible for Social Security and Medicare benefits	-0.66
Monitor compliance with anti-discrimination laws, such as the Voting Rights Act and the Civil Rights Act	-1.10

Respondent Demographics

All	N=439	Percent
Male	165	38%
Female	274	62%
Under 35	61	14%
35-44	70	16%
45-54	96	22%
55-64	122	28%
65 or Older	90	21%
Hispanic	56	13%
Not Hispanic	383	87%
White	331	75%
Black or African American	71	16%
All Others	37	8%
No College	29	7%
Some college	91	21%
College Graduate	319	73%
Employed	276	63%
Not Employed	163	37%

Demographic Differences

Overall, demographic differences in preferences were minor and usually only a matter of degree rather than direction

	Attribute	Level 1	Level 2	Level 3
1	Use of Data	Calculate the number of people eligible for Social Security and Medicare benefits	Monitor compliance with anti-discrimination laws, such as the Voting Rights Act and the *Black respondents selected more than White respondents	Help allocate funds to your state, community, and school district for services, including education, health care, and new business development

	Attribute	Level 1	Level 2	Level 3
2	What Is Required	You are required by law to respond to the census	The census is required by law (Title 13 U.S. Code Sections 141 and 193)	Collection of the information is Mandatory and is collected under Title 13 U.S. Code Sections 141 and 193
			*Students selected more than non-students	

	Attribute	Level 1	Level 2	Level 3
3	If You Don't Respond	A Census Bureau interviewer may visit you to complete the census	A Census Bureau interviewer may visit you to complete the census or we may use other government records to complete the census for you	The Census Bureau may use other government records to complete the
			*Non-students selected less than students	

	Attribute	Level 1	Level 2	Level 3
4	Confidentiality Protection	<p>The Census Bureau is required by U.S. law to keep your answers confidential. This means that the Census Bureau cannot give out information that identifies you or your household</p>	<p>The Census Bureau is required by U.S. law to keep your answers confidential. Your answers will only be used for statistical purposes, and no other purpose</p>	<p>The Census Bureau is required by U.S. law (Title 13, Section 193) to keep your answers confidential</p>

*Non-Hispanic respondents selected more than Hispanic respondents

Conclusions

Conclusions

1. Conjoint analysis = additional tool for evaluating competing survey elements
2. Most important motivating element = Data use
3. Most motivating data use message = Allocation of funds to state, community, and school districts
4. Minimal demographic differences

Future Research

- Conjoint Limitations
 - Self-report and hypothetical behavior
 - Small sample makes it difficult to detect group differences
 - Non-probability sample of motivated responders
- CSM plans to follow up with split-panel experiments, testing key elements suggested by the conjoint analysis
 - E.g., August 2016 study is planned to test the effect of varying data use statements in the survey invitation on web response to a Census survey

Questions or comments?

Contact me at:

casey.m.eggleston@census.gov