Improvements to the American Community Survey Internet Data Collection Instrument

R. Chase Sawyer, U.S. Census Bureau

Introduction

In 2014, the American Community Survey (ACS) conducted research to determine if improvements could be made to the internet data collection instrument that could increase response rate and quality, as well as reduce respondent burden. The test had the desired outcomes and the changes were implemented in 2016 ACS production.

Instrument Changes

The changes implemented during the 2016 data year include:

- The addition of security questions for PIN reset capability.
- Highlighted response fields for unfolding questions.
 - These are questions that provide a write-in field when a certain response triggers the need for more information. These appear on the same screen as the original question.
- Removal of transition screen and new language for "Pick Next Person" screen.
- Increasing the height of the ancestry response field. \bullet

Methodology and Data

To see if the changes had the expected results, we analyzed data before and after each change was implemented. The change to the ancestry question occurred in late December of 2015. To analyze the effect, we reviewed data from the September 2015 and January 2016 Panel. The rest of the changes mentioned above occurred in late June of 2016, so we analyzed data from the March and July 2016 panels. The datasets used include:

ACS Paradata

- ACS Coded Ancestry Variables
- ACS Control File

Conclusions

The research found that the changes to the ACS Internet instrument:

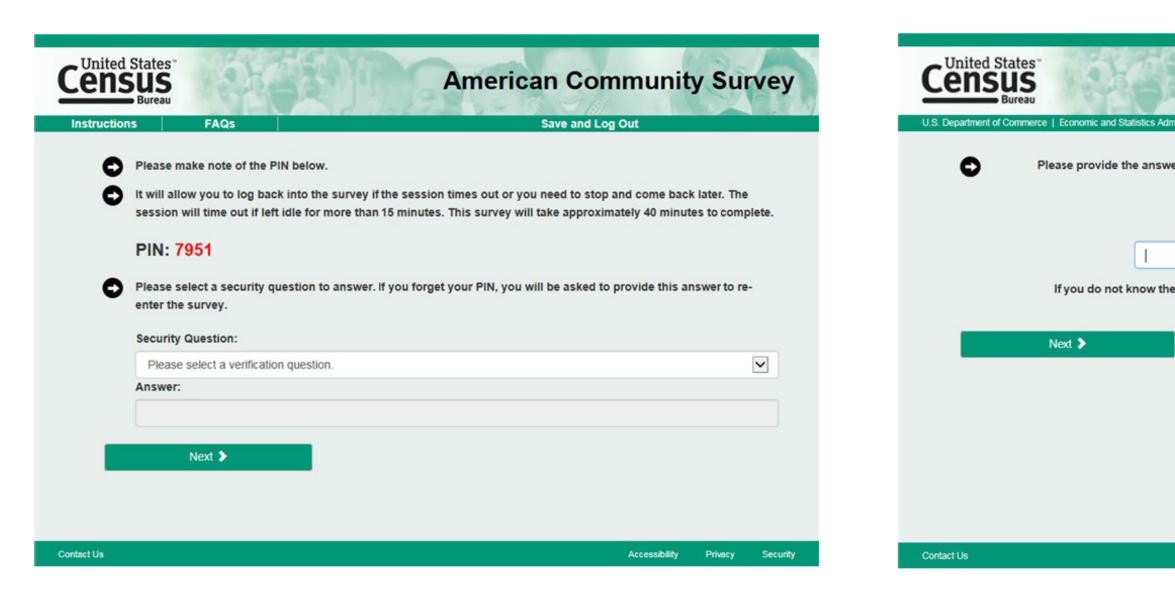
- Increased the number of times respondents reentered the instrument.
- Decreased the number of errors received on unfolding questions.
- Decreased the number of breakoffs on transition screens.
- Increased the number of times multiple ancestries were reported.

For more information about the American Community Survey and ongoing research, visit www.census.gov/acs.



Pin Reset Capability

PIN Screen with Verification Question



Using the July 2016 panel, we found that 95.0% of respondents utilized the security questions. Below, we analyzed how many respondents had multiple logins and how many respondents returned and completed the survey after leaving the survey incomplete on the first login.

Multiple Logins After PIN Implementation

Measure	JIIIS AIter Fin Implementation		Di	fference	S.E.
Multiple Logins	63.4%	66.0	% Multiple Logins	2.6%	0.5%
Completed Survey	44.1%	46.6%	Completed Survey	2.5%	0.5%
	March 2016 Panel	July 2016 Panel			

Transition Screens

Pre-Implementation

Census American Com	munity Survey	Census Bureau American Com	nmunity Survey
Instructions FAQs Save & Lot The information you provided for John E Doe has been saved. At the end of the survey you will be able to review or change your answers. Click Next to continue with the survey. < < Previews Next >>	Basic Info Basic Info Housing Questions Person Info John E Doe Jane P Doe Jim E Doe	Instructions FAQs Save & L The next questions are about each person in the household. Select a name to begin answering questions about that person. If you cannot answer now for any person on the list, click Save & Logout. Join E Doe Jane P Doe Jane P Doe Jane P Doe Vext >>	ogout Where You Are Basic Info Housing Questions Person Info John E Doe Jane P Doe Jim E Doe
	Contact Us Accessibility Privacy Security		Conta Accessibility Privacy Se

When analyzing breakoffs, we first looked at the number of households that broke off during the transition and what percentage of breakoffs happened on these screens. We then looked at how complete the interview was at the time of all breakoffs.

Screen Breakoff Rates

Universe								
Households			:	8.0%	1.5%			
Breakoffs	21.0%						12.4%	
		March 2016	i Panel			July 20	016 Panel	
Screen Breakoff Rates by Breakoff Type								
Breakoff Type								
Sufficent Partial		9.7%				7.8%	,)	
Insufficent Partial			4.7%		4	.5%		
Overall Breakoff	14.3%						12.4%	
		March 2016) Panel			July 20	016 Panel	

Note: All the results presented were found to be significant using a one-tailed t-test at an alpha of 0.1.

Verification Screen For a Forgotten PIN

American Co	ommunit	y Sui	vey
nistration			
r to the following security question to reset your PI	N and return to you	ur survey.	
In what city were you born?			
(Not case-sensitive) Answer:			
answer to your security question, please call 1-800			
	Accessibility	Privacy	Security

Screen Name Hispanic 1.1% 0.4% Origin 1.4% Race 2.6% 1.9% Year Built Place of Birth 14.0% 8.0% 0.2% 0.1% Citizenship **Current Grade** 0.9% Level Educational 1.2% 0.6% Attainment Health 0.3% Insurance March 2016 Panel July 2016 Panel Error Message Render Rate per Screen Among All Visits to the Screen Screen Name Hispanic 16.0% Origin 9.9% Race 12.7% Year Built 9.0% Place of Birth 6.2% 3.4%

Citizenship **Current Grade** Level Educational Attainment Health Insurance March 2016 Panel

Post-Implementation

structions FAQs Save and Log C	Dut
 The next questions are about each person in the household. Select a name to begin answering questions about that person. Please answer as many questions as you can. You will be able to review or change your answers at the end of the survey. John Q Doe Jane Q Doe James Q Doe 	Where You Are Basic Info Housing Questions Person Info - John Q Doe - Jame Q Doe - James Q Doe

	Difference	S.E
Households	1.5%	0.1%
Breakoffs	8.7%	0.5%
Sufficent	Difference	S.E.
Sufficent Partial	Difference 1.8%	S.E 0.1%

Pre-Implementation

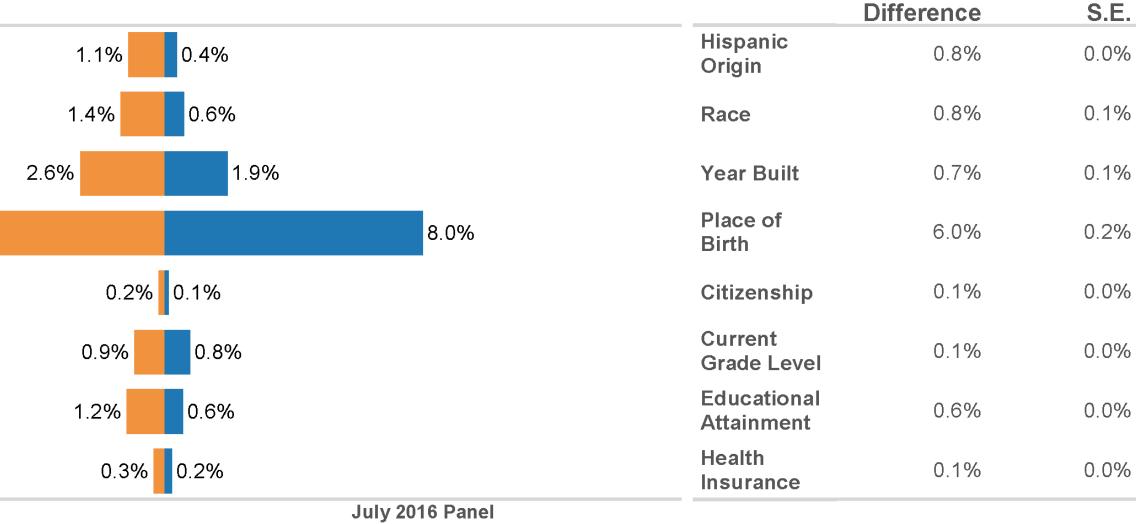
Bureau	rican Community Survey		Where You A
Mat is John E Doe's ancestry or ethnic origin? (Help) (For example: Italian, Jamaican, African Am., Cambodian, Cape Verdean, Norwegian, Dominican, French Canadian, Hatian, Korean, Lebanese, Polish, Nigerian, Mexican, Taiwanese, Ukrainian, and so on.) (Save & Logout Where You Are Basic Info Housing Questions Person Info John E Doe Jane P Doe Jim E Doe	What is John Q Doe's ancestry or ethnic origin? (Help) (For example: Italian, Jamaican, African Am., Cambodian, Cape Verdean, Norwegiar Dominican, French Canadian, Haitian, Korean, Lebanese, Polish, Nigerian, Mexican, Taiwanese, Ukrainian, and so on.) Previous Next >	

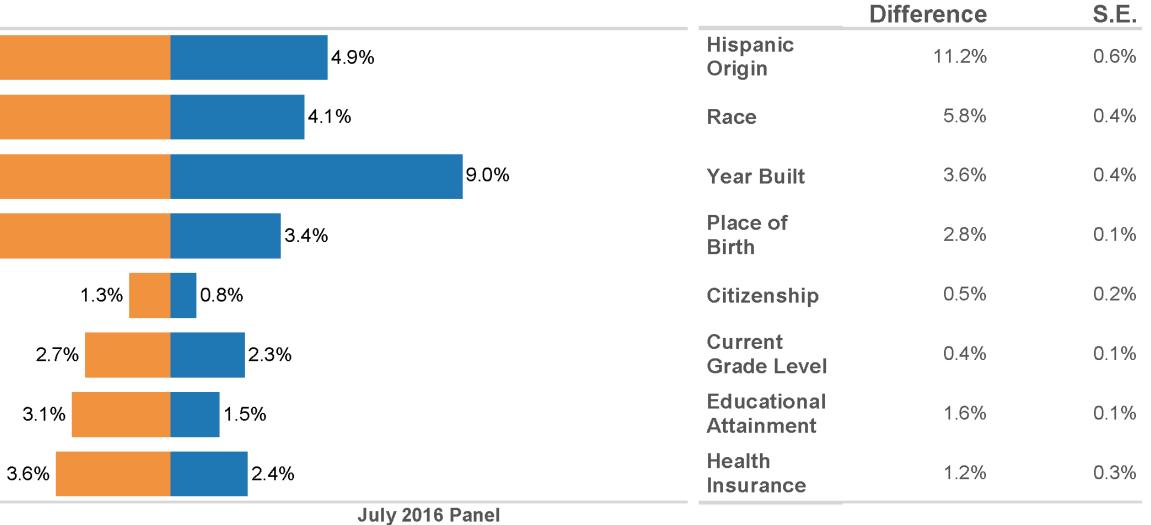
Percent with Multiple Ancestry Responses Doto Conturo Mode

Data Capture Mode						Difference	S.E.
Internet	35.1%			40.9%	Internet	5.8%	0.3%
Mail	30.1%			31.2%	Mail	1.1%	0.4%
Difference (Internet - Mail)		5.0%	9.7%		Difference (Internet - Mail)	4.7%	0.5%
	September 2015 Par	nel	January	2016 Panel			

Error Rates for Unfolding Questions

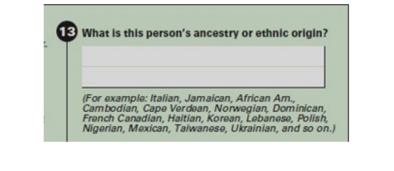






Ancestry Field Size





Post-Implementation

This poster is released to inform interested parties of ongoing research and to encourage discussion. Any views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.