# Navigation and comprehension of administrative records information on census.gov

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Center for Survey Measurement
Census Bureau
FedCASIC Conference
April 12, 2017



### What are administrative records?

- Administrative records are data that have been collected from other sources (e.g., federal, state and local governments) used to run programs.
- Why are administrative data useful?
  - Reuses already existing data
  - Reduces cost (not having to collect that same data again)
- Important to educate general public about admin records and address privacy and confidentiality concerns.

### Background

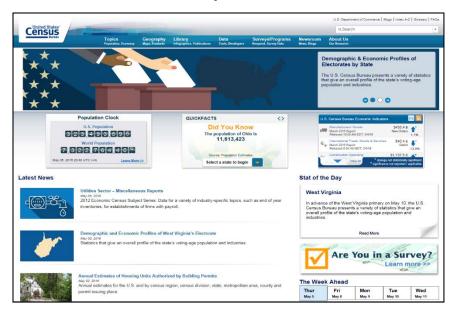
- The U.S. Census Bureau has been using administrative data and making efforts to communicate with respondents.
- Purpose of communication:
  - How government uses administrative data?
  - What efforts are taken to safeguard privacy
- Approach to effective communication:
  - Comprehendible
  - Findable

### Purpose of this study

 To evaluate via usability testing the navigation and comprehension of the message about administrative records presented at census.gov.

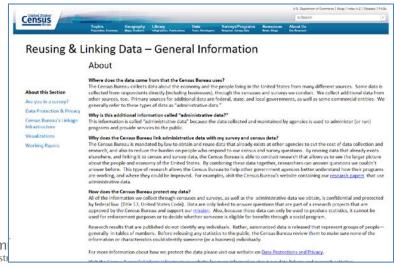
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  - 1. Navigation- what access points are users more likely to use?



### Purpose of this study

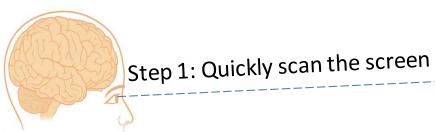
- To evaluate via usability testing the navigation and comprehension of the message about administrative records presented at census.gov.
  - 1. Navigation- what access points are users more likely to use?
  - 2. Comprehension- how well understood is the message about reusing and linking administrative data?



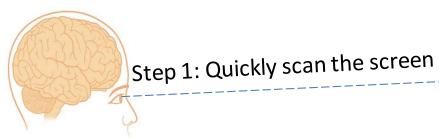


U.S. Department of Com Economics and Statistics Administr U.S. CENSUS BUREAU

Keystroke level modeling (Kieras, 2001)

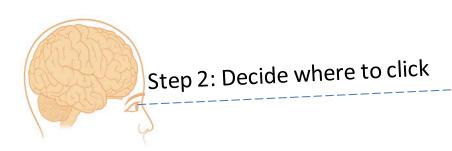






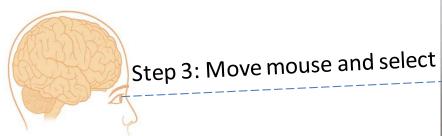


Process required	Behavioral act required	Est. time
Visual	Scan the screen	45 secs





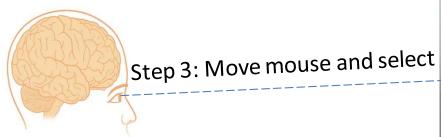
Process required	Behavioral act required	Est. time
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Cognitive	Routine thinking (decision)	1.2 secs







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Visual	Scan the screen	45 secs		
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Motor	Point with mouse/click	1.3 sec		
Total time act : 21 minute				

Total time est.: ~1 minute

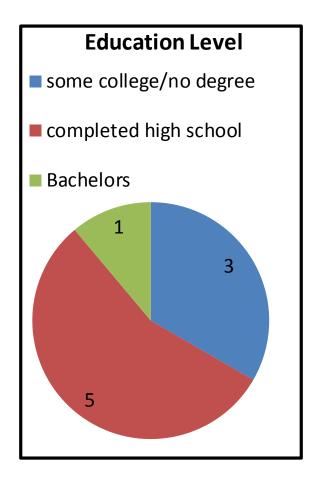
### Methods



### **Participants**

- Nine participants (Mage= 42.9) completed usability testing on site at Census Bureau.
- Gender
  - 4 female (Mage = 39.7; missing one)
  - 5 male (Mage = 44.8)
- Race
  - 9 African-American

### **Education level**



### Internet experience

Respondents listed the top 3 activities performed on the internet.

Category	Frequency
1) Information/research/school ("class work," "look up information," "research"	7
2) Online shopping ("shope")	4
3) News ("read news")	3
4) Watch videos ("Youtube")	2
5) Email ("email")	2
6) Pay bills ("pay bills")	2
7) Search for employment ("applying for employment")	2
8) Social media ("twitter")	2
9) Other ("music")	2

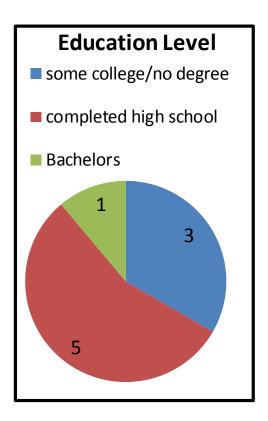
Average years on internet: 13.44 (SD=4.3)Internet usage per day: 4.88 hrs (SD=4)

\*one respondent didn't fill in a third activity



### Internet experience

Despite lower education levels, participants were internet savvy.



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### **Procedure**

- Informed consent
- Demographic and internet experience questionnaire
- Practice think aloud protocol
- Formal test session- letter

### Procedure (cont.)

- Four tasks
  - 1. Navigate to/find the general information page
  - 2. Read and summarize page
  - 3. Types of information collected from other agencies
  - 4. Type of research being done with administrative data

### Letter

SIPP-105(L1)(2016)(CA)



FROM THE DIRECTOR U.S. CENSUS BUREAU

Dear Resident:

Thank you for helping the U.S. Census Bureau collect data for the Survey of Income and Program Participation last year. The Census Bureau is again conducting this vitally important survey, and we need your help to ensure accurate data collection. Within a few days, a Census Bureau Field Representative will contact your household regarding this survey. I want you to know that your household's participation in this survey is extremely valuable and greatly appreciately.

This survey produces data that helps shape government program decisions affecting millions of people in the United States. For example, policymakers use the survey's results to evaluate the future needs of the Social Security system, changes to and the effectiveness of programs like the Supplemental Nutrition Assistance Program, and the impact of changes to health insurance and the cost of medical care. In order to provide accurate information to your elected representatives and support improving such significant programs, the Census Bureau needs your help to collect accurate data.

Your household's participation is essential to ensure the completeness and accuracy of this study's data. Your address has been specifically chosen to represent thousands of other households just like yours. Although there are no penalties for failure to answer any question in this voluntary study, each unanswered question substantially lessens the accuracy of the results.

We conduct this study under the authority of Title 13, United States Code, Sections 141 and 182. Section 9 of Title 13 requires that we hold all information about you and your household in strictest confidence. Every Census Bureau employee, from the Director to every Field Representative, has taken an oath to uphold this confidentiality. If an employee discloses any information that identifies you or your household, he or she is subject to a prison term, a fine, or both.

Additional information is explained on the back of this letter. Learn more at our Web site: <www.census.gov/sipp/>.

Thank you for your participation. I am grateful for your help.

UM "#";

John H. Thompson Director

For more information, contact:

REGIONAL DIRECTOR US CENSUS BUREAU 15350 SHERMAN WAY STE 400 VAN NUYS CA 91406-4203 Why does the Census Bureau collect this information?

Although we conduct a census every ten years, some information needs to be updated more often. This survey provides current data about a variety of important issues, such as changes people have experienced in their jobs, health insurance coverage, medical expenditures, the well-being of children and adults, childcare and child support status, retirement and pension planning, participation in government programs, and other information. Since the country changes rapidly, up-to-date facts are necessary in order to create effective programs. Policymakers in government and private organizations need current economic information to make informed decisions about programs that will affect people of all income levels. Your voluntary participation is essential to ensure that this survey's results are complete and accurate.

#### How do I know the Census Bureau will protect my information?

The law authorizes the Census Bureau to collect information for this survey (Title 13, United States Code (U.S.C.), Sections 141 and 182). Section 9 of this law requires us to keep all information about you and your household strictly confidential. The Census Bureau will use this information only for statistical purposes. Everyone who has access to your responses is subject to a prison term, a fine up to \$250,000, or both, if any information is revealed that identifies you or your household.

#### How will the Census Bureau use the information that I provide?

Because Title 13 guarantees the confidentiality of your information, the Census Bureau will combine the information you provide with that of others to produce statistics. To be efficient, the Census Bureau attempts to obtain information you may have given to other agencies if you have participated in other government programs. We do so because it helps to ensure your data are complete, and it reduces the number of questions you are asked on this survey. The same confidentiality laws that protect your survey answers also protect any additional information we collect (Title 13, U.S.C., Section 9). If you wish to request that your information representative at the time of the interview.

#### How much time will the survey take?

We estimate that it will take about 60 minutes per person to collect the information. This includes time for reviewing the instructions and completing and retriewing your answers. You may send comments regarding time estimates or any other aspect of this data collection process, including suggestions for reducing this burden, to Paperwork Reduction Project 0607-0977, U.S. Census Bureau, 4600 Silver Hill Road, Room 8H590, Washington, DC 20233. You may also e-mail comments to DEMO.Paperwork@census.gov; use "Demo Survey Comments 0607-0977" as the subject.

The U.S. Office of Management and Budget (OMB) approved this survey and gave it OMB approval number 0607-0977; the expiration date is 12/31/2016. Displaying this number shows that the Census Bureau is authorized to conduct this survey. If this number were not displayed, we could not request your participation. Please use this number in any correspondence concerning this survey.



census.gov

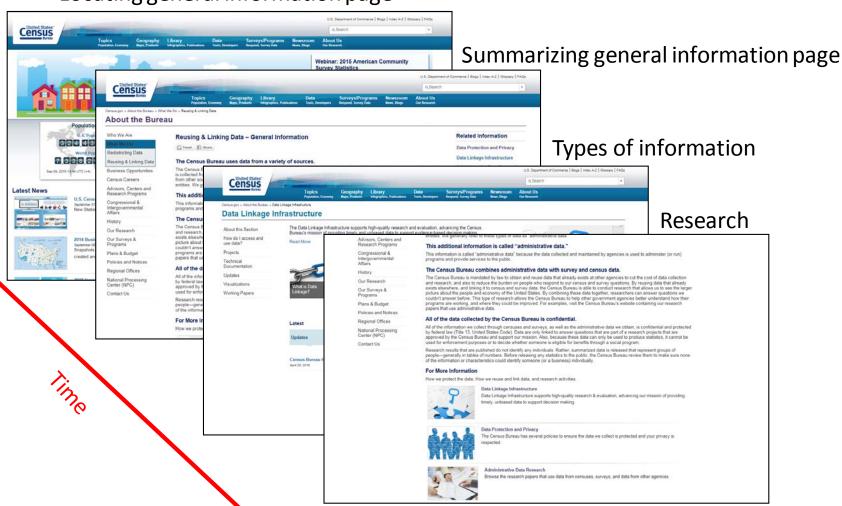
# Paragraph 3

#### How will the Census Bureau use the information that I provide?

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### User tasks

#### Locating general information page











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#### Utilities Sector - Miscellaneous Reports

2012 Economic Census Subject Series: Data for a variety of industry-specific topics, such as end of year inventories, for establishments of firms with payroll.



#### Demographic and Economic Profiles of West Virginia's Electorate

May 03, 2016

Statistics that give an overall profile of the state's voting-age population and industries.



#### Annual Estimates of Housing Units Authorized by Building Permits

Annual estimates for the U.S. and by census region, census division, state, metropolitan area, county and permit-issuing place.

#### Stat of the Day

#### West Virginia

In advance of the West Virginia primary on May 10, the U.S. Census Bureau presents a variety of statistics that give an overall profile of the state's voting-age population and industries.

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#### The Week Ahead

Thur	Fri	Mon	Tue	Wed
May 5	May 6	May 9	May 10	May 11

### Expected user journey via access point 1



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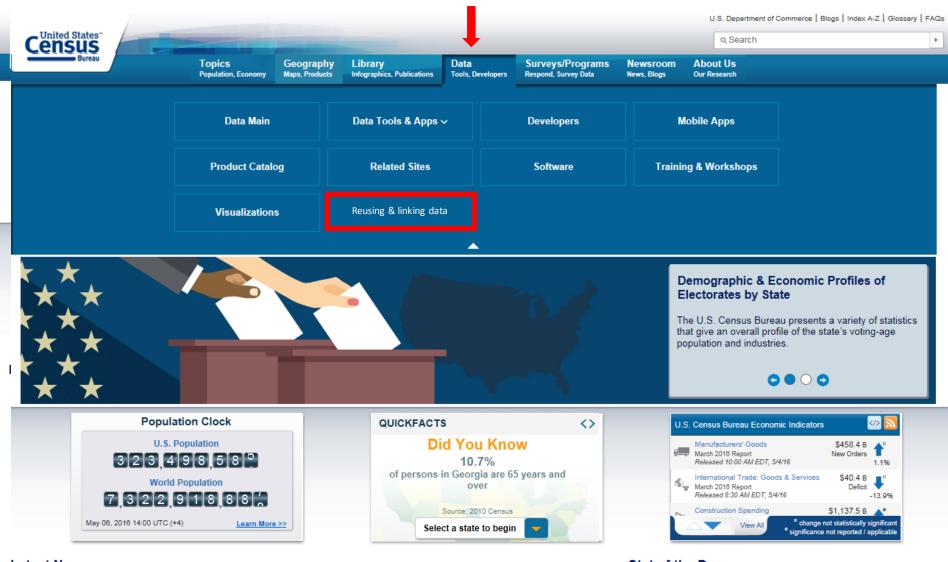
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### Expected user journey via access point 1



#### Latest News



#### Utilities Sector - Miscellaneous Reports

2012 Economic Census Subject Series: Data for a variety of industry-specific topics, such as end of year

#### Stat of the Day

Births Per 1,000 Women May 5 May 6 May 9 May 11 May 10

### Expected user journey via access point 1



#### Reusing & Linking Data – General Information

#### About this Section

Are you in a survey?

**Data Protection & Privacy** 

Census Bureau's Linkage Infrastructure

Visualizations

**Working Papers** 

#### **About**

#### Where does the data come from that the Census Bureau uses?

The Census Bureau collects data about the economy and the people living in the United States from many different sources. Some data is collected from respondents directly (including businesses), through the censuses and surveys we conduct. We collect additional data from other sources, too. Primary sources for additional data are federal, state, and local governments, as well as some commercial entities. We generally refer to these types of data as "administrative data."

#### Why is this additional information called "administrative data?"

This information is called "administrative data" because the data collected and maintained by agencies is used to administer (or run) programs and provide services to the public.

#### Why does the Census Bureau link administrative data with my survey and census data?

The Census Bureau is mandated by law to obtain and reuse data that already exists at other agencies to cut the cost of data collection and research, and also to reduce the burden on people who respond to our census and survey questions. By reusing data that already exists elsewhere, and linking it to census and survey data, the Census Bureau is able to conduct research that allows us to see the larger picture about the people and economy of the United States. By combining these data together, researchers can answer questions we couldn't answer before. This type of research allows the Census Bureau to help other government agencies better understand how their programs are working, and where they could be improved. For examples, visit the Census Bureau's website containing our research papers that use administrative data.

#### How does the Census Bureau protect my data?

All of the information we collect through censuses and surveys, as well as the administrative data we obtain, is confidential and protected by federal law (Title 13, United States Code). Data are only linked to answer questions that are part of a research projects that are approved by the Census Bureau and support our <u>mission</u>. Also, because these data can only be used to produce statistics, it cannot be used for enforcement purposes or to decide whether someone is eligible for benefits through a social program.

Research results that are published do not identify any individuals. Rather, summarized data is released that represent groups of people—generally in tables of numbers. Before releasing any statistics to the public, the Census Bureau review them to make sure none of the information or characteristics could identify someone (or a business) individually.

For more information about how we protect the data please visit our website on <u>Data Protections and Privacy</u>.

Visit the <u>Census Bureau's Linkage Infrastructure</u> website for more information about our data linkage and research activities.

# Ideal navigation path

Access Point: Headings	# of steps to general info page
1- Data, tools & developers	
2- Surveys/Programs	
3- About Us	3
4- FAQ's	
5- Are you in a survey?	

### Results



### Types of results

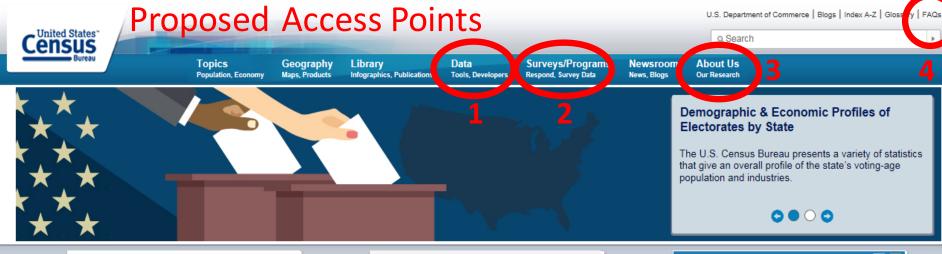
Initial attempts (quantitative)

Overall navigation (quantitative)

Comprehension of general information page (qualitative)

Satisfaction questionnaire (quantitative)

# Task 1: Locating information-Initial attempts









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#### Utilities Sector - Miscellaneous Reports

2012 Economic Census Subject Series: Data for a variety of industry-specific topics, such as end of year inventories, for establishments of firms with payroll.



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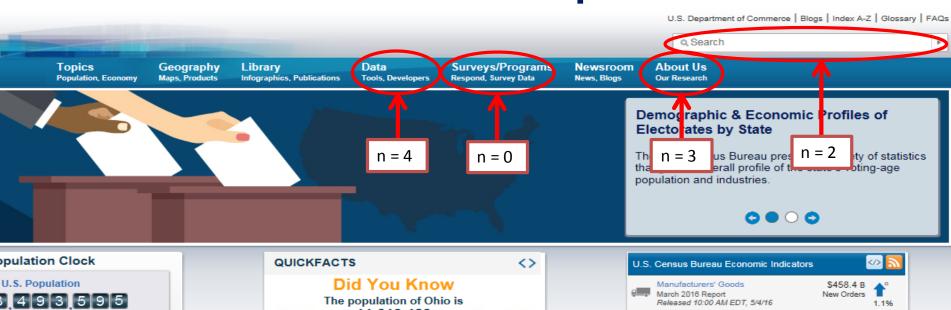
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### **Initial attempts**









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#### Stat of the Day



### **Initial attempts**

- Only 2 of 5 available access points were used as a first attempt.
- The search bar was utilized as a method of navigation which was unplanned.

Access Point: Headings	# of steps to general info page
1- Data, tools & developers	
2- Surveys/Programs	
3- About Us	3
4- FAQ's	
5- Are you in a survey?	
6- Search bar	



### Search bar- results

- Two respondents employed the search box as their first attempt.
- Three additional respondents attempted the search box after having failed in their initial attempts.
- Failures result because Rs don't know what to search for. Importantly, no respondent thought to search keywords like reusing or linking data.
  - "information from other agencies" (R1)
  - "who do you get your information from" (R6)
  - "how do you collect the data on the individuals" (R7)
  - other agencies who work with census" (R9)

### Paragraph 3

#### How will the Census Bureau use the information that I provide?

Because Title 13 guarantees the confidentiality of your information, the Census Bureau will combine the information you provide with that of others to produce statistics. To be efficient, the Census Bureau attempts to obtain information you may have given to other agencies if you have participated in other government programs. We do so because it helps to ensure your data are complete, and it reduces the number of questions you are asked on this survey. The same confidentiality laws that protect your survey answers also protect any additional information we collect (Title 13, U.S.C., Section 9). If you wish to request that your information not be combined with information from other agencies, we ask that you notify the field representative at the time of the interview.

# Task 1: Locating information-Overall navigation efforts

# Overall navigation results

R#	Success?	Time	# Steps	Notes
Successful without help				
2	Υ	2:38	4	Access point- Data: tools and dev
4	Υ	2:00	3	Access point-About Us
	2	2:19	3.5	

# Overall navigation results

R #	Success ?		Time	# Steps	Notes				
Successful without help									
2	Υ		2:38	4					
4	Υ		2:00	3					
Successful with hint "Reusing and linking data"									
8	Υ		2:50	8	Data: tools and dev				
9	Υ		3:57	7	Data: tools and dev				
	2		3:24	8					

# Overall navigation results

R#	Success?	Time	# Steps	Notes					
Successful without help									
2	Υ	2:38	4						
4	Υ	2:00	3						
Successful with hint "Reusing and linking data"									
8	Υ	2:50	8						
9	Υ	3:57	7						
Test administrator assist/failure									
1	N	5:33	11	Search bar					
6	N	2:18	2	Search bar					
7	N	3:02	2	Search bar					
3	N	3:25	9	TA assist					
5	N	2:51	3	TA assist					
<u>.</u>	5	n/a	5.4						



# Overall navigation results

- 2 of 9 were successful (22% success rate)
  - time 2:19, steps 3.5
- 2 of the remaining 7 were successful with hint "link name is reusing and linking data."
  - time 3:24, steps 8
- 5 were unsuccessful and required a TA assist
  - 3 employed search bar and were pushed out of developer website
  - 2 failed



### Recommendations

Data: Tools and developers is the most successful access point- keep data in terminology "It's the only other link that has data in it. That's how I search things, by keywords." (R8)

If you want to guide people for that reason, Move Are you in a survey to the top.



Topics Population, Economy Geography Maps, Products

Library Infographics, Publications Data Tools, Developers Surveys/Programs Respond, Survey Data

Newsroom News, Blogs

**About Us** Our Research

o. Search



#### Demographic & Economic Profiles of **Electorates by State**

The U.S. Census Bureau presents a variety of statistics that give an overall profile of the state's voting-age population and industries.











#### **Latest News**



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2012 Economic Census Subject Series: Data for a variety of industry-specific topics, such as end of year inventories, for establishments of firms with payroll.

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- If you want to guide people for that reason, Move Are you in a survey to the top.
- Rs use the search bar to search: implement a reusing and linking data search result.

### Task 2: Summarizing general information

### Reusing & Linking Data – General Information

#### **About**

#### About this Section

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# Task 2: Summarize Gen info page

- 8 of 9 seemed to have a general understanding of the general information page.
- Identified three main key points:
  - Identified the purpose for reusing and linking data "...you don't have to answer so many questions or keep conducting research. By combining the data together, research can answer questions that they couldn't before..."
  - Why reusing and linking data exists
     "They are not supposed to waste money, time and effort."
  - Particularly noted confidentiality
    - "The data is kept in the strictest confidence."
    - "...it's against the law for them not to."

# Task 2: Summarize Gen info page

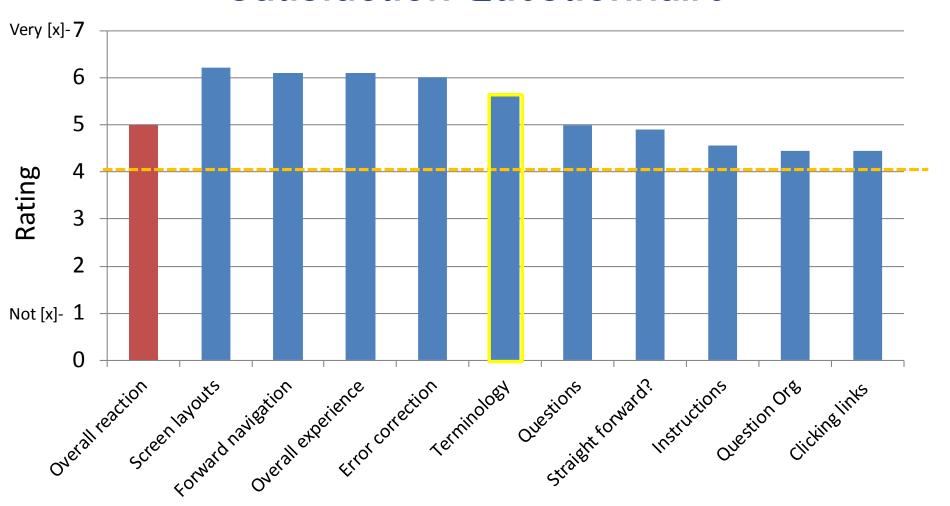
- What is administrative data?
  - Collections or records of a particular company" (R2)
  - "Someone [being] pretty much in control of your data and has access to it." (R3)
  - "Principal data" (R8), "Personal demographics" (R4
  - Can be collected from places like "your credit [or] your insurance." (R7)
- Keywords named instead of reusing and linking data:
  - Share data
  - Data from other agencies
  - Combining
  - Recyclable/repeated data cycle/repetitive data cycle

### Recommendations

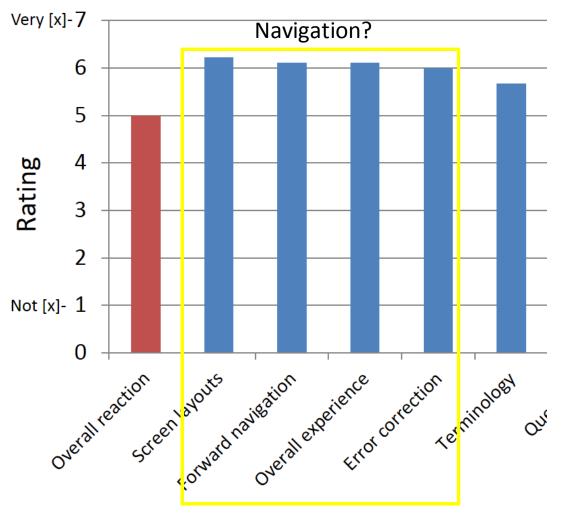
- "Reusing" and "linking" were not intuitive. Suggestions were "sharing," "combining," "data from other agencies."
- Add sources and types of administrative records and how they are combined with Census.
- Communication should continue to emphasize confidentiality protections and time saving as these were perceived positively.

### Satisfaction questionnaire

### **Satisfaction Questionnaire**



# Future research: Is subjective perception consistent with actual experience?



- Mismatch between subjective and actual experience
  - (86% rating vs 22% success rate)
- Navigation in general as opposed to navigation from Point A – B.
- Further research required to improve satisfaction surveys.

### **Summary**

Respondents understood the message from Census Bureau about what administrative records are, but had a difficult time locating the page without test administrator assistance.

• Recommendation to use 'combining data' implemented!

# Thank you! Questions?

