

Census Bureau Responses to the CSAC-Scientific Advisory Committee Recommendations from Fall 2015 Meeting

1. Census Bureau Presentations and Discussion

We understand that different presentations require different amounts of time. We strongly suggest that there be a strict time limit on each Census presentation, taking into account the amount of time needed for a given presentation and that the time limit be enforced. Without such a strict limit on each presentation there will be insufficient time for designated discussants or committee questions and discussion or something else in the schedule will be cut short and suffer. We think it is especially important that there be time for general committee questions and discussions, since this is one of the best ways in which CSAC can help the Census Bureau. Dissemination of relevant reports or presentation decks in advance, when possible, preferably by the Friday preceding the CSAC meeting, would help discussants and CSAC members provide constructive feedback.

Census Response

We thank the committee for this recommendation. Census will limit the presentations to 15 minutes. All materials will be provided and set in advance.

2. Briefing and Discussion of Plans for Census 2020

We suggest that a significant portion of time at every CSAC meeting over the next several years be devoted to Census 2020. This is due to the enormity of the effort, the pressures that the Bureau is under to deliver a great product at a reasonable price, and the new technologies that are being used.

Specifically we suggest that the Spring 2016 CSAC meeting devote time to the following Census 2020 topics:

- a. **Reengineering Address Canvassing.** What are the pre-tests specifically showing? What is the gold standard? How can CSAC help the Bureau toward achieving its goal of creating an accurate MAF at a much lower cost in comparison to the days of walking every block?
- b. **Utilizing Administrative Records.** What did we specifically learn from the 2015 test(s)? What other tests are planned or ongoing to assess the use of such records...in which contexts and for what purposes? Are we missing potential major improvements in operations / cost savings?
- c. **Optimizing Self Response.** What experiments are being conducted in each test site? Are we doing all that can be done to consider geographic and population heterogeneity in each experiment? What are we specifically learning from each of the experiments? How can what is being learned be best used in 2020?

Census Response:

We are happy to devote as much time as the Committee requests to address the specific questions regarding Reengineering Address Canvassing, Utilizing Administrative Records, and Optimizing Self-Response. In addition, over the next several years, we will continue to provide the Committee with 2020 Census updates to ensure that we retain the active dialogue and discourse that has been so helpful.

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3. Experiment with a Video Presentation

We suggest that the Census Bureau consider preparing one presentation for the next CSAC meeting as a video, which CSAC members would be expected to view before the meeting. Then the meeting on that topic would be devoted to a designated discussant, questions from the committee and discussion with the Census Bureau presenter.

Census Response

The Census Bureau thanks the committee for this recommendation. We will test the video presentation idea and evaluate.

4. Duration of CSAC Meeting

We think that Working Groups might meet on Wednesday afternoon or at lunch on Thursday. Due to some members coming from the West Coast, we do not recommend Wednesday afternoon being devoted to a meeting of all CSAC members. We suggest that the Census Bureau consider extending the meeting on Friday until 3:00 to provide more time for presentations and discussion.

Census Response

The Census Bureau will extend the meeting time on Friday and evaluate the extension based on attendance.

5. Big Data

CSAC would like to commend the Census Bureau's initiatives on Big Data. It has the opportunity to lead research in official statistics and Big Data, both nationally and internationally. The CSAC Working Group and the MIT workshops are different ways to inform the Census Bureau's initiatives, and the early appointment of a Director of the Bureau's new center is crucial for these initiatives to go to the next level. CSAC suggests that they include both computability and uncertainty quantification of point estimates.

A potential spin-off became apparent during discussion of the Retail Big Data Project, whose primary focus was to "try to produce subnational geographic area estimates more frequently than once every five years (from the Economic Census)." The discussion included input from Deputy Director Nancy Potok asking for advice on how to combine data of mixed spatial and temporal granularities. CSAC will look for ways to provide that advice, and we note the general importance of the problem, whether the data are "Big" or not.

CSAC notes the difficulty of using Big Data to augment Census Bureau surveys. It seems that typically businesses use Big Data in a more exploratory fashion to see what it could tell us rather than to try to get it to answer a specific research question. If the Census were to take this approach, they might need to consider how their work in this regard would fit into the ecosystem of Big Data analyzers. Perhaps a larger discussion is needed here, about cataloguing Big Data scope and quality and determining where the Census Bureau can add high value to analyses already taking place.

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We suggest that the planned Big Data Center be called the Big Data Center or some version of that. We understand that people differ in their understanding of what Big Data means, but it seems that the proposed names of the Center are even vaguer and more prone to misinterpretation. We think that overall, there is a reasonable common understanding of what Big Data means.

Census Response

We thank the committee for its support and advice on our Big Data initiatives. We are especially encouraged by our fruitful interactions with the CSAC's Working Group on Big Data. The following are our responses to the committee's recommendations from the September 2015 CSAC meeting.

- *"...the early appointment of a Director of the Bureau's new center is crucial for these initiatives to go to the next level."* We absolutely agree, and have been actively recruiting accomplished academics to serve as Chief under an IPA.
- *"CSAC suggests that they (big data initiatives) include both computability and uncertainty quantification of point estimates."* We agree. As an official statistical agency, the Bureau needs to be able to give users the best possible measures of precision and reliability for all estimates.
- *"The discussion included input from Deputy Director Nancy Potok asking for advice on how to combine data of mixed spatial and temporal granularities. CSAC will look for ways to provide that advice, and we note the general importance of the problem, whether the data are 'Big' or not."* The Bureau has already had follow up conversations with members of the Working Group on this topic. We anticipate this will be a major focus of many Big Data initiatives at the Bureau. Several Bureau staff will be attending a Missouri National Science Foundation-Census Bureau Research Network (NCRN) workshop on this topic next spring.
- *"...use Big Data in a more exploratory fashion to see what it could tell us rather than to try to get it to answer a specific research question. ... Perhaps a larger discussion is needed here."* The Bureau definitely views new "Big Data" sources as augmenting the data assets the Bureau already collects and processes to produce estimates. For the short and medium term, we definitely see our efforts as incremental as we try to utilize to data sources to augment existing programs and to prototype new measurement opportunities. Much work is needed to describe the measurement characteristics of these new sources of data.
- *"We suggest that the planned Big Data Center be called the Big Data Center or some version of that."* We have changed the name to the Center for Big Data Research and Applications. This naming convention matches that of R&M's Center for Administrative Records Research and Applications.

6. Census Business Builder Demo

On the Business Builder application, we would suggest that the *time* that the data represents always appear in the legend on the map next to the data type. For example "Population, 2000". Although users don't care what survey the Census uses to acquire the data, they do care what year it represents.

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Also in the report that the Business Builder application produces, the graph that shows change over time, is excellent. It would be ideal if the application also calculated the significance of differences; too often these differences are not significant due to large margins of error. Hence, CSAC recommends that when measuring change over time, the statistical significance be calculated and represented on the relevant graphic. This was shown in the product: <http://www.datacenterresearch.org/data-resources/who-lives-in-new-orleans-now/>.

Census Response

We thank the committee for its recommendation. Currently, the data vintage is displayed in the tool tips and the source statements. Since all of the Census data in the tool are from 2012 (except ESRI's Consumer Spending data), this does not pose an issue. In the December 2015/January 2016 update, we will add data with differing vintages from each source and we plan to show the vintage on the Legend (as requested), the Data Panel, Variables Menus and in the Report.

We made a choice, supported by Census leadership, to only link to the Margins of Error. The feeling was having the Margins of Error next to the values only served to confuse the average user. The Margins of Error will be made available via links in the Report.

7. ACS

CSAC again requests that a CSAC Working Group on the ACS be formed. It also would be useful to have a presentation about what the Census Bureau is doing or planning to promote participation in the ACS.

Census Response

The Decennial Directorate and the Advisory Committee Branch are in coordination to establish the CSAC Working Group on the ACS. The guidelines for the working group have been drafted and are currently going through review. We hope to have the working group formulated by January 2016. In addition, we will address our plans to promote participation in the ACS during the CSAC's Spring meeting.

8. Census Funding

It would be useful if CSAC were informed when there are major congressional actions related to Census Bureau funding.

Census Response

The Census Bureau will share publically available information on Census budget.

9. Testing of Software

When the Census Bureau is trying out new software, such as test versions related to Non-Response Follow-Up, it might be useful to have some CSAC members test out the software and provide the Census Bureau with input.

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Census Response

The Field and Decennial directorates fully concur that it would be useful to have CSAC members test the new software and provide input. After consulting with the Decennial Census Management Division's (DCMD) Automation Coordination Branch, we have determined that this can be accomplished using the following method: When CSAC members are going to be in-house at the Census Bureau and would like to test the latest software, they should contact their Census Bureau advisory committee liaison with the request. The liaison will make arrangements with the appropriate decennial branch to schedule use of the smartphones for a day to test the software. The decennial branch will ensure that the smartphones are loaded with the latest version of the COMPASS application. The advisory committee liaison will arrange the logistics of the handoff with the CSAC members. However, CSAC members must remain on the premises with the smartphones as they perform their testing. Subsequently, CSAC members can provide their liaison with any input they record from the testing for Census Bureau review.