

# Citizenship Question Nonresponse

A Demographic Profile of People Who Do Not Answer  
the American Community Survey Citizenship Question

WILLIAM P. O'HARE

September 2018

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## Acknowledgements & Disclosures

This report was authored solely by William P. O'Hare and published by the Georgetown Center on Poverty and Inequality as part of its 2020 Census work.

William P. O'Hare is an independent research professional with more than 35 years of experience in statistical analysis of social and demographic data in various applied settings.

The author would like to acknowledge Cara Brumfield and Indivar Dutta-Gupta of the Georgetown Center for Poverty and Inequality, who edited the report.

The author would like to thank several reviewers including Arturo Vargas, Terri Ann Lowenthal, Rob Santos, and Terry Ao Minnis for helpful comments. The author would also like to thank the staff at the Population Reference Bureau for comments on an earlier version of this paper.

In addition, the author is grateful to The Leadership Conference Education Fund for its support of this work.

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## Executive Summary

**W**hen Secretary of Commerce Wilbur L. Ross Jr. issued a statement on March 26, 2018, requiring the Census Bureau to add a question on citizenship to the 2020 Census questionnaire, it stirred up a storm of controversy. Much of the discussion was about the impact the decision would have on response rates in the 2020 Census. The citizenship question planned for the 2020 Census is the same as the one currently asked in the American Community Survey (ACS). The context of the ACS and the decennial census are quite different, but analysis of the ACS citizenship question can shed light on potential responses to the citizenship question in the 2020 Census. Completing the decennial questionnaire is mandatory for everyone in the United States and participating in the ACS is mandatory for everyone who is randomly selected to receive it each year. This paper provides a descriptive analysis of the nonresponse rates to the citizenship question in the U.S. Census Bureau's ACS.

In 2016, the nonresponse rate for the citizenship question on the ACS was **6 PERCENT.**

This analysis shows that the nonresponse rate for the citizenship question on the ACS is much higher than the nonresponse rates for any of the other questions that will be on the 2020 Census questionnaire. In the 2016 ACS, the nonresponse rate for the citizenship question was 6.0 percent and no other question that will be on the 2020 Census questionnaire had a nonresponse rate higher than 1.8 percent.

In addition, the nonresponse rates for the citizenship question have increased since 2010 while the nonresponse rates for other questions that will be on the 2020 Census have remained stable. The biggest increase in the nonresponse rates for the citizenship

question occurred between 2012 and 2013 and can be tied to changes in methodology. However, those methodological changes did not increase the nonresponse rates of other questions planned for the 2020 Census. This suggests that methodology may have a greater impact on responses to the citizenship question than on other questions that will be asked in the 2020 Census.

There are large differences in nonresponse rates to the citizenship question across states and cities. For example, the nonresponse rate in Arizona (9.0 percent) is almost four times that of Vermont (2.6 percent). There are 11 cities that have nonresponse rates to the ACS citizenship question of 3 percent or less and 43 cities where the nonresponse rates are 10 percent or more.

Nonresponse rates also differ by demographic group. The higher nonresponse rates for some groups may indicate that the ACS question on citizenship is more sensitive to those groups. Demographic groups with the highest nonresponse rates include:

- Racial and ethnic minorities,
- Foreign-born people, and
- Residents of central cities of metropolitan areas.

There are also large differences in nonresponse rates to the citizenship question by mode of data collection. The nonresponse rates are higher on self-response questionnaires (mail and internet) than in personal interviews. The nonresponse rate is 8.0 percent for the internet mode of data collection, 6.7 percent for the mail mode, and 3.8 percent for personal interviews. This is important because the Census Bureau is promoting internet self-response as their primary method of response in the 2020 Census.

The data presented in this report support the conclusions of other researchers who warn that inclusion of a question on citizenship on the 2020 Census is likely to increase the costs and compromise the accuracy of the 2020 Census by increasing nonresponse.



# Introduction

**O**n March 26, 2018, Secretary of Commerce Wilbur L. Ross, Jr. issued a memorandum explaining and summarizing his decision to add a question on citizenship to the 2020 Census questionnaire.<sup>1</sup> In his memorandum, Secretary Ross also requested the use of administrative records from other federal agencies for capturing data on citizenship in the 2020 Census.<sup>2</sup>

Our constitution requires that the decennial census count every person in the United States. Secretary Ross' decision raises concerns about the extent to which the addition of the citizenship question would depress response rates in the 2020 Census and how it might differentially affect some groups' willingness to respond to the question—or

The citizenship question is

**untested  
in the census.**

participate in the census at all. Typically, the Census Bureau would thoroughly test a question before adding it to the census. That was not done for the question on citizenship. The proposal to add the citizenship question is currently moving through the regulatory process. The addition of the question is being challenged in the courts.

This paper focuses on the differential nonresponse rates to the citizenship question on the Census Bureau's American Community Survey (ACS), the same question that will be used on the 2020 Census questionnaire. Like the decennial questionnaire, response to the ACS is mandatory, though only a random sample of households are surveyed each year for the ACS. Analysis of nonresponse rates to the citizenship question, along with similar analysis of nonresponse rates to other questions that will be on the 2020 Census, provides an understanding of how the sensitivity to the citizenship question compares to the sensitivity to other planned questions. Differential nonresponse rates across demographic groups are also examined.






## Data Sources

There are two closely related sources of data used here. First, Figures 1 and 2 use ACS and 2010 Census nonresponse rates taken from the Census Bureau's website.<sup>3,4</sup> Second, the Census Bureau makes available a sample of ACS respondents' records through a Public-Use Microdata Sample (PUMS) file which can be used to estimate nonresponse rates for geographic areas and demographic groups. All personal identifying information is removed from the records in the PUMS file. The PUMS file is the data source for all the figures in this report other than Figures 1 and 2. The 2016 ACS PUMS file from the Census Bureau contains records for almost 3.2 million people. For this study, the PUMS files were processed using the IPUMS (Integrated Public-Use Microdata Sample) system at the University of Minnesota.<sup>5</sup>

The data source for this study is the same one used by Dr. John Abowd (Chief Scientist and Associate Director for Research and Methodology at the Census Bureau)<sup>6,7</sup> and Dr. Steven Camarota (Director of Research for the Center for Immigration Studies)<sup>8</sup> in their analyses of the impact of the citizenship question. Abowd and Camarota also use the metric this analysis relies on the most (nonresponse rates). The current analysis builds on the results of both authors cited above by providing more details about nonresponse to the ACS citizenship question. The data reported here are consistent with the data reported in their studies.

## The American Community Survey Asks about Citizenship

### Is this person a citizen of the United States?

- Yes, born in the United States
- Yes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas
- Yes, born abroad of U.S. citizen parent or parents
- Yes, U.S. citizen by naturalization – *Print year of naturalization* 
- 
- No, not a U.S. citizen

If someone does not respond to an ACS question, the Census Bureau imputes or allocates a value for that person. For example, if someone did not check a response for the question on race, the Census Bureau would make an educated guess about the person’s race based on information about the person, household, and neighborhood.<sup>9</sup> The Census Bureau provides allocation rates or nonresponse rates for all the questions in the ACS that will be used in the 2020 Census.<sup>10</sup>

In this paper, the percent of a group that does not respond to a question is

called a nonresponse rate. Abowd also refers to the allocation rates as nonresponse rates.<sup>11</sup> According to Abowd, “When item nonresponse occurs, the ACS edit, and imputation modules are used to allocate an answer to replace the missing data item.”<sup>12</sup>

Sampling errors are errors in statistical estimates that result from looking at a subset of a population rather than the entire population. Since the ACS estimates are based on a sample (subset) of the population, there are sampling errors associated with the estimates. Standard errors are measures of the accuracy of the estimates. Standard errors for the estimates shown in the body of the report are provided in Appendix A. However, given the very large size of the ACS sample, standard errors for most estimates shown in this paper are quite small and consequently most differences in response rates are meaningful (i.e. statistically significant).

Appendix B shows that national estimates from PUMS files are virtually identical to those from the full ACS sample. This suggests that the results of the analysis of the PUMS data is very close to what one would get if one could use the entire ACS sample for an analysis.

The tabulations shown here focus on several kinds of differentials. First, the nonresponse rate for the question on citizenship is compared to the nonresponse rates for other questions that will be on the 2020 Census. This analysis includes an examination of the changes in nonresponse rates from 2010 to 2016. Second, nonresponse rates across different geographic areas are examined. Third, the nonresponse rates for key demographic groups and response modes are compared.



# Findings

## Trends Over Time

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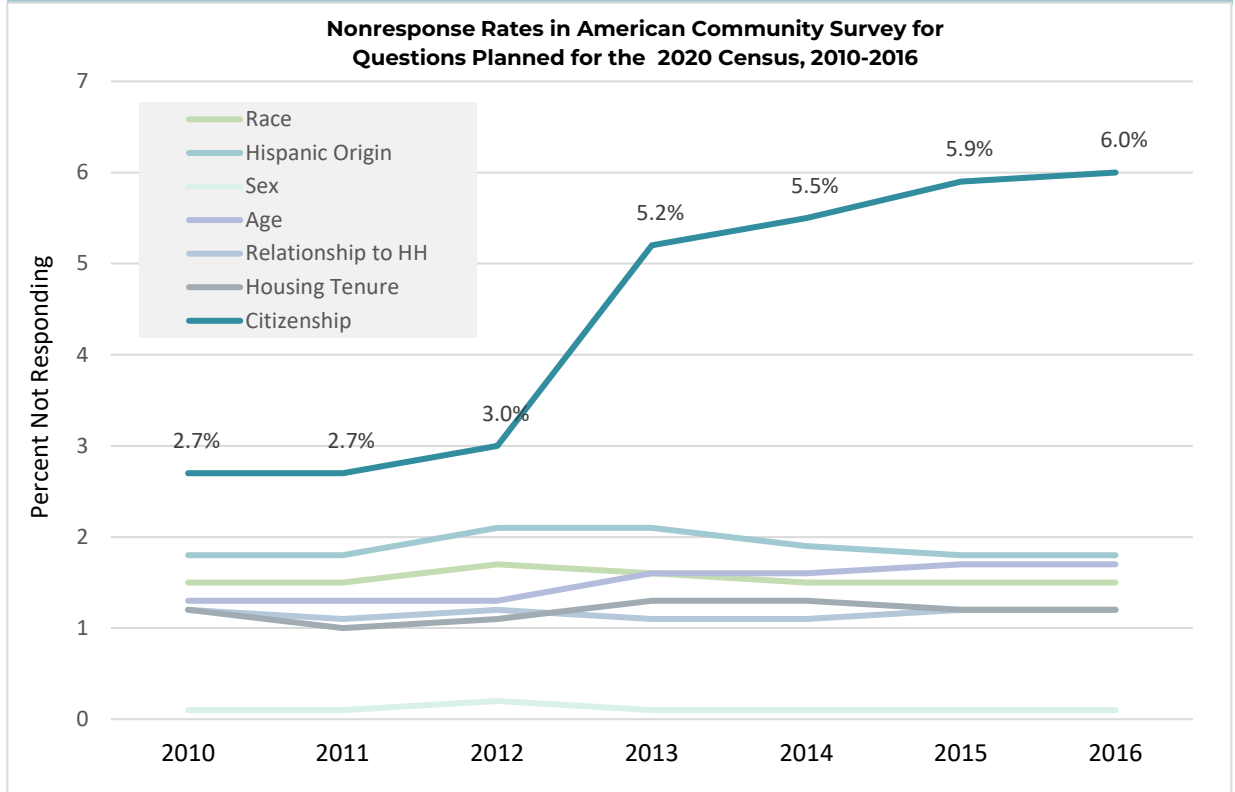
The nonresponse rates for the citizenship question are much higher than for any other question in every year from 2010 to 2016. In 2016, the nonresponse rate for citizenship is 6.0 percent and no other question had a nonresponse rate higher than 1.8 percent. This finding is consistent with the research reported by Abowd, who concluded, “Whether the response is by mail-in questionnaire or ISR [Internet Self-Response] instrument, item nonresponse rates for the citizenship question are much greater than the comparable rates for other demographic variables like sex, birthdate/age, and race/ethnicity ... .”<sup>13</sup>

Second, the nonresponse rates for the citizenship question have increased since 2010 while the nonresponse rates for the other questions have remained relatively stable. The nonresponse rate for the citizenship question was 2.7 percent in 2010 but it had increased to 6.0 percent in 2016 (see Figure 1.) The only other question for which there was an increase in the nonresponse rate from 2010 to 2016 was the age question—the nonresponse rate went from 1.3 percent in 2010 to 1.7 percent in 2016.

Most of the increase in the nonresponse rates for the citizenship question since 2010 occurred between 2012 and 2013 and the increase can be tied to methodological changes that took place then. For budgetary reasons, the Census Bureau reduced its use of the Failed Edit Follow-Up (FEFU) operation in the 2013 and subsequent ACS surveys.<sup>14</sup> The FEFU operation involves a follow-up phone interview with internet and mail respondents whose responses indicate a discrepancy and those who indicated a household size of more than six people. (The mail form allows data for only five people.) Addresses identified as vacant are also sent to FEFU.<sup>15</sup> This change resulted in

less follow-up and increased blank responses. In 2013, the Census Bureau also implemented an internet response option for the ACS.

**Figure 1. Nonresponse Rates for the Citizenship Question Have Increased Since 2010 while the Nonresponse Rates for Other Questions Have Remained Relatively Stable**



Source: American Community Survey Item Allocation Rates. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates>.

It is noteworthy that the methodological changes in the ACS between 2012 and 2013 had an impact on the nonresponse rates for the citizenship question but had very little impact on other questions. Between 2012 and 2013, the nonresponse rate for the citizenship question increased by 2.2 percentage points (from 3.0 to 5.2 percent). No other measure changed by more than 0.3 percentage points (age changed from a 1.3 percent to a 1.6 percent nonresponse rate). This suggests that the citizenship question may be more sensitive to methodological changes (such as level of follow up) or changes to data collection methods (such as the addition of an internet response option) than other questions.

There was a slight increase in nonresponse rates to the citizenship question from 2013 to 2016 (from 5.2 percent to 6 percent), which suggests that sensitivity to the topic may have grown in recent years.

Third, note that Table 1 (see Appendix A) contains the item nonresponse rates from the 2010 Census for all the questions except the citizenship question, which was not included in the 2010 Census. In every case, the item nonresponse rates in the 2010 Census are higher than the item nonresponse rates for the same question in the 2010 to 2016 ACS. Consequently, the nonresponse rates reported here from the ACS are likely to underestimate of the nonresponse rates one would expect for the same questions in the 2020 decennial Census.

The self-response modes of data collection in the ACS (i.e. sending back a completed paper questionnaire or completing an internet response) will be similar to data collection in the 2020 Census, but personal interviews for people who fail to self-respond are different in the ACS and the Decennial Census. The lower nonresponse rates in the ACS compared to the 2010 Census may reflect the use of highly trained interviewers in the ACS compared to the temporary workforce with limited training used for personal interviews in the decennial census. Information on differences by data collection mode are provided later in this paper. A focus on self-response rates may provide a better indication of how the nonresponse rates from the ACS are likely to reflect the nonresponse rates one can expect in the 2020 Census.

The overall nonresponse rate for the citizenship question on the 2016 ACS is 6 percent but this figure masks important differences across demographic groups and geographic areas. Those differences are explored below. Given the consistency of the ACS nonresponse data over the past several years, the remainder of this paper focuses on 2016 data.

## Geographic Variation

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One of the most important attributes of the decennial census is the comparable subnational data it provides. Differences in nonresponse rates across geographic areas are particularly important because census data are used to determine political representation and allocation of federal funding to states and localities. The data provided in this section indicate that there are large differences in the nonresponse rates for the ACS citizenship question in different parts of the nation.

Figure 2 shows that Arizona has the highest nonresponse rate at 9 percent. That is nearly four times the nonresponse rate for Vermont, which has the lowest nonresponse rate at 2.6 percent. Most of the states with high nonresponse rates have relatively large immigrant populations while states with low nonresponse rates have relatively small immigrant populations.

**Figure 2. Arizona’s Citizenship Question Nonresponse Rate is Nearly Four Times That of Vermont**

**States Ranked by Nonresponse Rate for the Citizenship Question in the 2016 American Community Survey**

Rank	State	Rate	Rank	State	Rate
1	Vermont	2.6	27	South Carolina	5.6
2	West Virginia	3.7	28	Montana	5.6
3	Maine	3.8	29	Texas	5.6
4	Wyoming	4.0	30	Rhode Island	5.7
5	South Dakota	4.3	31	Washington	5.7
6	Arkansas	4.5	32	Nebraska	5.7
7	Ohio	4.6	33	North Carolina	5.8
8	Delaware	4.6	34	Pennsylvania	5.8
9	Mississippi	4.7	35	Oklahoma	5.8
10	New Mexico	4.7	36	Connecticut	5.9
11	Wisconsin	4.8	37	North Dakota	5.9
12	Michigan	4.9	38	New Jersey	6.0
13	Tennessee	4.9	39	Alabama	6.0
14	Minnesota	5.0	40	Virginia	6.2
15	Kentucky	5.0	41	Nevada	6.3
16	Missouri	5.0	42	Massachusetts	6.3
17	New Hampshire	5.0	43	Alaska	6.6
18	Utah	5.1	44	Florida	6.7
19	Iowa	5.2	45	Maryland	6.8
20	Georgia	5.3	46	District of Columbia	6.9
21	Oregon	5.3	47	Hawaii	6.9
22	Kansas	5.4	48	Colorado	7.3
23	Indiana	5.4	49	New York	7.3
24	Illinois	5.4	50	California	7.7
25	Louisiana	5.5	51	Arizona	9.0
26	Idaho	5.5		U.S.	6.0

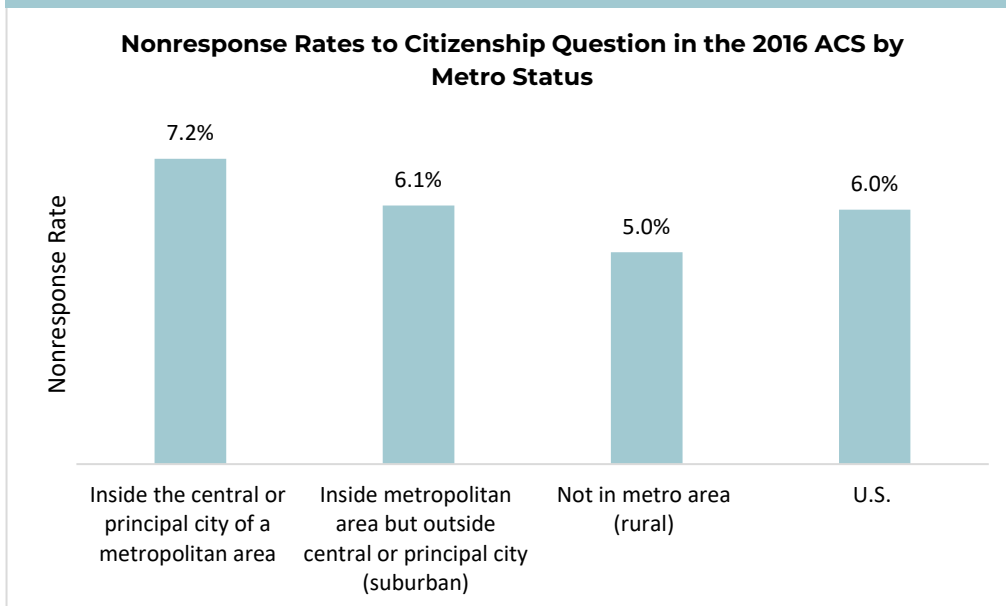
Source: American Community Survey Item Allocation Rates. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates>. Ranking based on unrounded data.

Another geographic distinction used by the Census Bureau is related to areas inside and outside official Metropolitan Statistical Areas. The area within Metropolitan Statistical Areas is divided between the major city or cities at the core of the metropolitan area (called central or principal cities) and the balance of the metropolitan area (outside of the central or principal cities—often referred to as suburbs). Areas outside of Metropolitan Statistical Areas are often referred to as nonmetro or “rural.”<sup>16</sup> These distinctions collectively are often referred to as metropolitan (metro) status.

Figure 3 shows the nonresponse rates to the citizenship status question on the 2016 ACS by metro status. Nonresponse rates are highest in the central city or principal cities of metro areas (7.2 percent) and lowest outside metro areas (5.0 percent).

The Census Bureau makes nonresponse rates to the 2016 ACS citizenship question available through the American Factfinder program for places with a total population of 65,000 or more. Most of these places are large cities, but a few are Census Designated Places (settled concentrations of population that are identifiable by name but are not legally incorporated defined by the Census Bureau for statistical purposes), or other types of official areas. Of the 599 places reported by U.S. Census Bureau, there are 11 places where the nonresponse rates are 3 percent or less, and 43 places where the nonresponse rates are 10 percent or more.<sup>17</sup> Sixteen of these 43 places with high nonresponse rates to the citizenship question are in California.

**Figure 3. Citizenship Question Nonresponse Rates are Highest in the Central City or Principal Cities of Metro Areas**



Source: Author’s analysis of U.S. Census Bureau’s 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

A large number of respondents were not included in this table because revealing their geographic location might compromise their confidentiality.

## Variation by Race/Hispanic Origin, Place of Birth, and Data Collection Mode

In this section, nonresponse rate differences based on race/Hispanic origin, place of birth, and data collection mode are provided. First, each variable is shown separately, then the results are shown for all three factors at once.

### RACE AND HISPANIC ORIGIN

Starting in the 2000 Census, people have been given the option to select more than one race in the census questionnaire and race is often reported two different ways in Census Bureau reports.<sup>18</sup> See the image below, which shows the race question on the 2010 Census form. One category is the number of people who only select one race (referred to as race alone) and a second category is all the people in the first category plus those who select more than one race (referred to as race alone or in combination).

#### The Census Form Allows Respondents to Select Multiple Races

6. What is this person's race? Mark  one or more boxes.

White

Black, African Am., or Negro

American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ↴

Asian Indian     Japanese     Native Hawaiian

Chinese     Korean     Guamanian or Chamorro

Filipino     Vietnamese     Samoan

Other Asian — *Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.* ↴

Other Pacific Islander — *Print race, for example, Fijian, Tongan, and so on.* ↴

Some other race — *Print race.* ↴

The race categories used in Figure 4 are “race alone or in combination.” In other words, the Black group includes anyone who marked Black, including those who marked another race as well. In federal data collections, race and Hispanic origin are treated as separate concepts. In the racial categories used in this study, those who identify as Hispanic are included in a race category if they marked that category. Anyone who marked Hispanic is also included in the Hispanic category no matter what race(s) they may have selected.

This categorization scheme means many people are included in more than one category, but this is the most inclusive categorization scheme, and

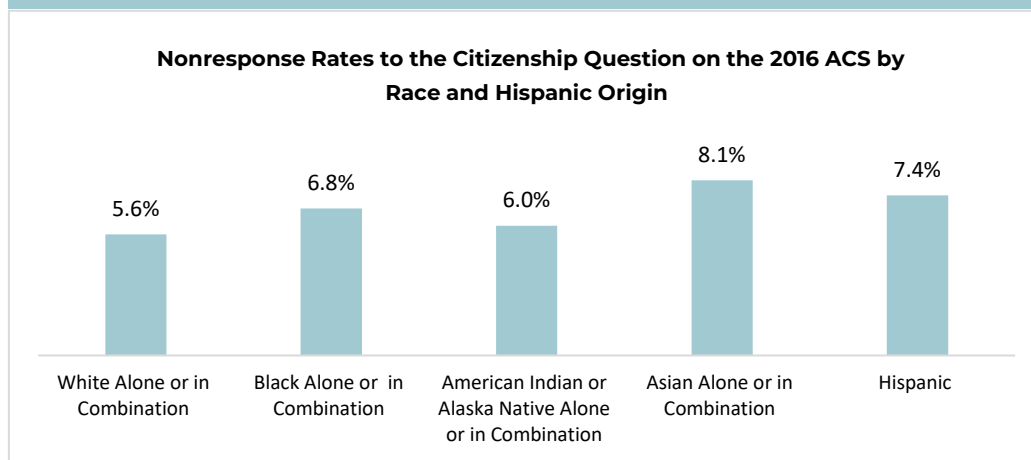
the one recommended by the U.S. Office of Management and Budget.<sup>19</sup> Data for Native Hawaiians and Pacific Islanders are not shown in Figure 4 because the sample size for this group is too small to produce reliable estimates.

The nonresponse rates for White alone or in combination (5.6 percent) is lower than any other group in Figure 4. Asians alone or in combination have the highest nonresponse rate (8.1 percent) followed by Hispanics (7.4 percent). The high nonresponse rates for Asians alone or in combination and Hispanics is not too surprising since about two-thirds of Asian Americans are immigrants and 35 percent of Hispanics living in the U.S. are immigrants according to the 2016 ACS. The high



nonresponse rate for Asians may also be related to the fact that the ACS material is not available in all the various Asian languages spoken in the U.S.

**Figure 4. Asian Americans and Latinos Have the Highest Nonresponse Rates to the Citizenship Question in the ACS**



Source: Author's analysis of Census Bureau's 2016 ACS PUMS file on the IPUMS system at the University of Minnesota.

The results in Figure 4 are consistent with the ACS analysis by Abowd who also found that nonresponse rates for the citizenship question were higher for racial and ethnic minorities than for non-Hispanic Whites.<sup>20,21</sup> Specifically, Abowd found that non-Hispanic Non-Whites and Hispanics had higher nonresponse rates to the ACS citizenship question than non-Hispanic Whites in self-response modes. Abowd did not look at non-Hispanic Asian alone or non-Hispanic American Indians or Alaskan Natives alone.

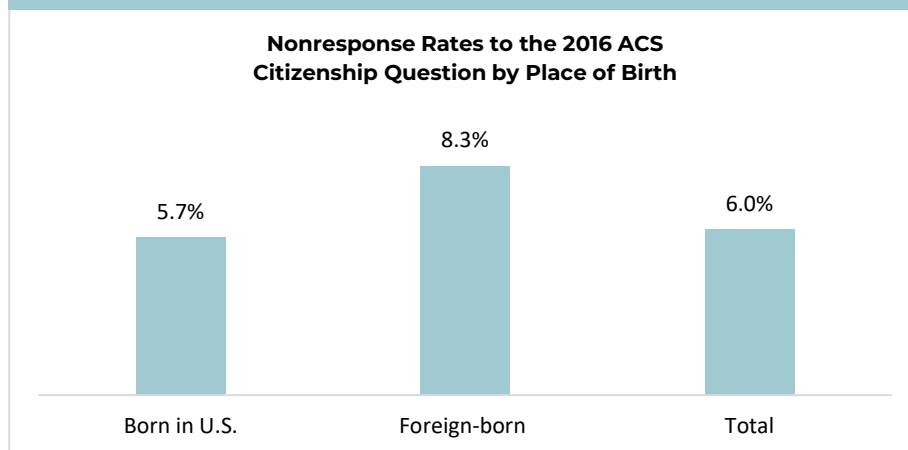
Nonresponse rates are one measure of how respondents view a topic. Another measure is break off rates. Break off rates reflect the percent of respondents who stopped responding to the survey when they came to a specific question. Abowd showed that Hispanics have a higher breakoff rates than non-Hispanic racial and ethnic minorities and non-Hispanic Whites for questions related to citizenship.<sup>22, 23</sup> The questions on the ACS that Abowd indicates are related to the question on citizenship are place of birth and year of entry into the United States. Considering all three questions (citizenship, place of birth, and year of entry into the United States), Hispanics had a break off rate of 1.6 percent compared to 1.2 percent for non-Hispanic people of color and 0.5 percent for non-Hispanic Whites.<sup>24, 25</sup>

## PLACE OF BIRTH

Nonresponse rates to the citizenship question on the 2016 ACS vary by whether someone was born in the U.S. or born outside the U.S. The nonresponse rate for the foreign-born population (8.3 percent) is much higher than the rate for the population born in the U.S. (5.7 percent). This is unsurprising considering that people born in the U.S. are automatically citizens.

It is important to note that about 95 percent of the people who did not respond to the citizenship question also did not respond to the question on place of birth. Thus, the data on place of birth for those who did not respond to the citizenship question is based largely on the Census Bureau's imputation of place of birth. The imputation process could have led to some errors in place of birth, so analysis involving values from this variable should be viewed cautiously.

**Figure 5. The Citizenship Question Nonresponse Rate for the Foreign-Born Population is Much Higher than the Rate for the U.S.-Born Population**



Source: Authors analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

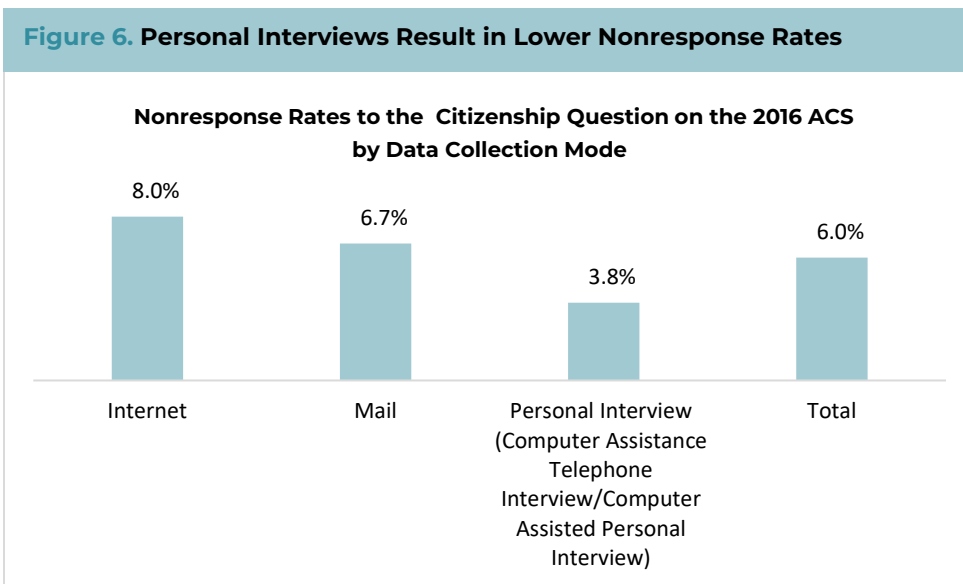
## MODE OF DATA COLLECTION

There are three modes of data collection used in the ACS. One is mail response, where a respondent mails back a completed ACS questionnaire. Another is internet self-response, where the respondent completes the ACS questionnaire online. The third mode of data collection used in the ACS is a personal interview referred to as either a Computer-Assisted Telephone Interview (CATI) or Computer Assisted Personal Interview (CAPI). The Census Bureau stopped using CATI in the fall of 2017.

Current plans call for four modes of data collection for the 2020 Census.<sup>26</sup> One mode is a mail response very similar to the ACS. The second mode is an internet response very similar to the ACS. The third mode is a personal interview for households that fail to self-respond. However, as stated earlier, personal interviews in the 2020 Census will be conducted by one of about 500,000 temporary census enumerators with limited training rather than the highly trained professional ACS interviewers. The fourth mode

of data collection planned for the 2020 Census is a telephone response.<sup>27</sup> This mode is not used in the ACS.

The data show that the nonresponse rates for self-response modes (mail and internet) are much higher than the nonresponse rates for respondents who responded to a Census Bureau interviewer. The nonresponse rate is 8 percent for internet response, 6.7 percent for mail responses, and only 3.8 percent for personal interview response.



Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota

## INTERACTION OF RACE/HISPANIC ORIGIN, PLACE OF BIRTH, AND RESPONSE MODE

There is a powerful interaction between race/ethnicity, birthplace, and data collection mode. The differences between race/ethnicity groups and foreign-born/U.S.-born are much more pronounced in each response mode, especially the self-response modes (mail and internet). Figure 7 shows the nonresponse rates to the citizenship question by race/Hispanic Origin, mode of response, and place of birth.

Data for American Indians and Alaskan Natives are not shown in Figure 7 for two reasons. First, the sample of individuals who are foreign-born American Indians or Alaskan Natives is so small the estimates are not reliable. Second, at the Census Bureau's Spring 2018 National Advisory Committee meeting, it was revealed that some American Indians would not respond that they were a U.S citizen because they identify as citizens of their tribes.

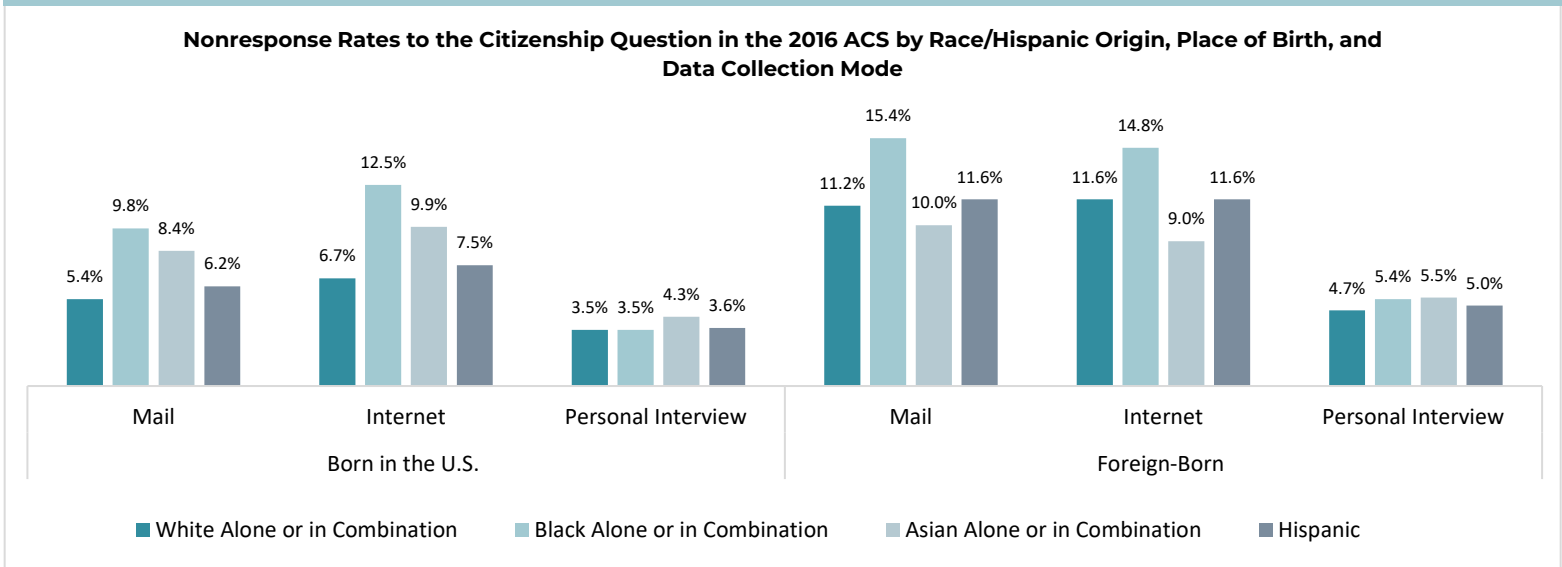
The nonresponse rates for groups in Figure 7 vary a lot. U.S.-born Blacks and Whites have a personal interview nonresponse rate of just 3.5 percent. In comparison, the internet response mode nonresponse rate for foreign-born Blacks is 15.4 percent.

Three patterns are clear in Figure 7. First, the nonresponse rates for the foreign-born population are almost always higher than for the U.S. born population in the same race/origin and mode group. Second, the nonresponse rates for the self-response modes (mail and internet) are always higher than for personal interview mode. Mode effects are important because the Census Bureau is trying to maximize self-response in the 2020 Census. Data in this paper indicate that if self-response modes are maximized in the 2020 Census, it could result in higher nonresponse rates, particularly for racial and ethnic minorities.

Third, the nonresponse rates for all groups other than the White alone or in combination are usually higher than the rates for White alone or in combination. The differences between White alone or in combination and all other groups are larger in self-response modes than in personal interviews. Only two groups have lower nonresponse rates in self-response modes (mail and internet) than White alone or in combination: Asian alone or in combination and Hispanic.

It is also worth noting that the nonresponse follow-up in the ACS only involves a sample of nonresponders. In the 2020 Census, census enumerators will follow up with all nonresponders. Recall that unlike the decennial census, the ACS does not need to get responses for 100 percent of the households.

**Figure 7. Respondents Who Are Interviewed Have Lower Nonresponse Rates**



Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.



# United States Census 2020

## Summary and Conclusions

There are several key points that are supported by the data presented in this paper. Respondents treat the question about citizenship differently than the other questions that will be on the 2020 Census. Nonresponse rates for the citizenship question in the ACS are much higher than the nonresponse rates for other questions that will be included in the 2020 Census.

The nonresponse rates in the 2010 Census for six demographic and housing measures are higher than the nonresponse rates for those measures in the 2010 to 2016 ACS. Consequently, most of the nonresponse rates shown in this paper (from the ACS) probably underestimate the nonresponse rates that will be experienced in the 2020 decennial census.

The methodological changes in the ACS between 2012 and 2013 had a substantial impact on nonresponse rates for the citizenship question, but not for other key demographic measures such as age, sex, or race. This suggests that the citizenship question may be more sensitive to methodological changes than the other questions that will be on the 2020 Census.

The nonresponse rates for the citizenship question vary widely across states and cities.

There are substantial differences in nonresponse rates to the citizenship question across demographic group. Nonresponse rates are much higher for:

- Racial and ethnic minorities
- Foreign-born people, and
- Those using the self-response modes of data collection.

The data in this paper support Abowd's conclusion with respect to the implications of adding a question on citizenship status to the 2020 Census questionnaire: "Not only will this likely lead to more incorrect enumerations, but it is also expected to increase

the number of persons who cannot be linked to administrative data ... .”<sup>28</sup> In a different memo, Dr. Abowd goes on to say, “Those refusing to self-respond due to the citizenship question are particularly likely to refuse to respond in NRFU as well, resulting in a proxy response.”<sup>29</sup>

The data presented in this study also support the conclusions of six former directors of the Census Bureau who stated, “In summary, we believe that adding a citizenship question to the 2020 census will considerably increase the risks to the 2020 enumeration.”<sup>30</sup> The data presented here also support the conclusions of the American Statistical Association,<sup>31</sup> the American Sociological Association,<sup>32</sup> the Population Association of America,<sup>33</sup> the American Association of Public Opinion Research,<sup>34</sup> and the Consortium of Social Science Associations,<sup>35</sup> all of which are on record as opposing the addition of the citizenship question to the 2020 Census. The prestigious National Academy of Sciences Committee on National Statistics Task Force on the 2020 Census warns, “According to the Census Bureau’s own analysis, addition of the citizenship question could adversely affect the quality and the cost of the 2020 Census.”<sup>36</sup>

After intensive research on citizenship data, a recent paper issued by the Census Bureau concludes, “The evidence in this paper also suggests that adding a citizenship question to the 2020 Census would lead to lower self-response rates in households potentially containing noncitizens, resulting in higher field work costs and a lower-quality population count.”<sup>37</sup>

# Appendix A1.

**Table 1. Differential Nonresponse Rates on Questions Planned for the 2020 Census: 2010 Census and 2010 to 2016 American Community Survey**

Item	2010 Census	Percent Nonresponse						
		American Community Survey						
		2010	2011	2012	2013	2014	2015	2016
Race	3.3	1.5	1.5	1.7	1.6	1.5	1.5	1.5
Hispanic origin	3.9	1.8	1.8	2.1	2.1	1.9	1.8	1.8
Sex	1.5	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Age	3.5	1.3	1.3	1.3	1.6	1.6	1.7	1.7
Relationship to Householder	1.5	1.2	1.1	1.2	1.1	1.1	1.2	1.2
Housing Tenure	4.5	1.2	1.0	1.1	1.3	1.3	1.2	1.2
Citizenship	Not Available	2.7	2.7	3.0	5.2	5.5	5.9	6.0

Source: American Community Survey Item Allocation Rates. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates>.

Source: 2010 Census rates are from U.S. Census Bureau, 2010 Census Item Nonresponse and Imputation Assessment Report. Available at [https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010\\_cpex\\_173.pdf](https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010_cpex_173.pdf).

**Table 2. States Ranked by Nonresponse Rate for the Citizenship Status Question in the 2016 American Community Survey**

Rank	State	Nonresponse Rates	Rank	State	Nonresponse Rates
1	Vermont	2.6	27	South Carolina	5.6
2	West Virginia	3.7	28	Montana	5.6
3	Maine	3.8	29	Texas	5.6
4	Wyoming	4.0	30	Rhode Island	5.7
5	South Dakota	4.3	31	Washington	5.7
6	Arkansas	4.5	32	Nebraska	5.7
7	Ohio	4.6	33	North Carolina	5.8
8	Delaware	4.6	34	Pennsylvania	5.8
9	Mississippi	4.7	35	Oklahoma	5.8
10	New Mexico	4.7	36	Connecticut	5.9
11	Wisconsin	4.8	37	North Dakota	5.9
12	Michigan	4.9	38	New Jersey	6.0
13	Tennessee	4.9	39	Alabama	6.0
14	Minnesota	5.0	40	Virginia	6.2
15	Kentucky	5.0	41	Nevada	6.3
16	Missouri	5.0	42	Massachusetts	6.3
17	New Hampshire	5.0	43	Alaska	6.6
18	Utah	5.1	44	Florida	6.7
19	Iowa	5.2	45	Maryland	6.8
20	Georgia	5.3	46	District of Columbia	6.9
21	Oregon	5.3	47	Hawaii	6.9
22	Kansas	5.4	48	Colorado	7.3
23	Indiana	5.4	49	New York	7.3
24	Illinois	5.4	50	California	7.7
25	Louisiana	5.5	51	Arizona	9.0
26	Idaho	5.5		U.S.	6.0

Source: American Community Survey Item Allocation Rates. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates>.

Ranking based on unrounded data.



<b>Table 3. Nonresponse Rates to Citizenship Status Question in the 2016 ACS by Metropolitan Status</b>	
	Nonresponse Rate
Inside the central or principal city of a metropolitan area	7.2
Inside metropolitan area but outside central or principal city (suburbs)	6.1
Not in metro area (Rural Areas)	5.0
U.S.	6.0

Source: Authors analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota  
 A large number of respondents were not included in this table because revealing their geographic location might compromise their confidentiality

<b>Table 4. Nonresponse Rates to the Citizenship Question on the 2016 ACS by Race and Hispanic Origin</b>	
	Non-Response Rate
White Alone or in Combination	5.6
Black Alone or in Combination	6.8
American Indian or Alaska Native Alone or in Combination	6.0
Asian Alone or in Combination	8.1
Hispanic	7.4

Source: Author's analysis of Census Bureau's 2016 ACS PUMS file on the IPUMS system at the University of Minnesota

<b>Table 5. Nonresponse Rates to the 2016 ACS Citizenship Status Question by Place of Birth</b>	
Place of Birth	Nonresponse Rate
Born in U.S.	5.7
Foreign born	8.3
Total	6.0

Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

**Table 6. Nonresponse Rates to the Citizenship Status Question on the 2016 ACS by Data Collection Mode**

Data Collection Mode	Nonreponse Rate
Internet	8.0
Mail	6.7
Personal Interview (Computer Assistance Telephone Interview/Computer Assisted Personal Interview)	3.8
Total	6.0

Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

**Table 7. Nonresponse Rates to the Citizenship Question in the 2016 ACS by Race/Hispanic Origin, Place of Birth, and Data Collection Mode**

	Born in the U.S.			Foreign-Born		
	Mail	Internet	Personal Interview	Mail	Internet	Personal Interview
White Alone or in Combination	5.4	6.7	3.5	11.2	11.6	4.7
Black Alone or in Combination	9.8	12.5	3.5	15.4	14.8	5.4
Asian Alone or in Combination	8.4	9.9	4.3	10.0	9.0	5.5
Hispanic	6.2	7.5	3.6	11.6	11.6	5.0

Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

# Appendix A2. Standard Errors

There are no standard errors provided for the data in Table 1, which are from the Census Bureau website. There are no standard errors provided for the data in Table 2 which are from the Census Bureau website, but Table A2 below shows estimates and standard errors for states from the ACS PUMS file.

**Table A2. Standard Errors for State Estimates of Nonresponse Rate for the Citizenship Status Question in the 2016 American Community Survey**

Rank	State	Nonresponse Rates	Standard Error	Rank	State	Nonresponse Rates	Standard Error
1	Arizona	9.0	0.11	27	Louisiana	5.5	0.11
2	California	7.7	0.04	28	Illinois	5.4	0.06
3	New York	7.3	0.06	29	Indiana	5.4	0.09
4	Colorado	7.3	0.11	30	Kansas	5.4	0.13
5	Hawaii	6.9	0.21	31	Oregon	5.3	0.11
6	District of Columbia	6.9	0.31	32	Georgia	5.3	0.07
7	Maryland	6.8	0.1	33	Iowa	5.2	0.12
8	Florida	6.7	0.06	34	Utah	5.1	0.13
9	Alaska	6.6	0.3	35	New Hampshire	5.0	0.19
10	Massachusetts	6.3	0.09	36	Missouri	5.0	0.09
11	Nevada	6.3	0.15	37	Kentucky	5.0	0.1
12	Virginia	6.2	0.08	38	Minnesota	5.0	0.09
13	Alabama	6.0	0.11	39	Tennessee	4.9	0.08
14	New Jersey	6.0	0.08	40	Michigan	4.9	0.07
15	North Dakota	5.9	0.27	41	Wisconsin	4.8	0.09
16	Pennsylvania	5.9	0.07	42	New Mexico	4.7	0.15
17	Connecticut	5.9	0.12	43	Mississippi	4.7	0.12
18	Oklahoma	5.8	0.12	44	Delaware	4.6	0.22
19	North Carolina	5.8	0.07	45	Ohio	4.6	0.06
20	Nebraska	5.7	0.17	46	Arkansas	4.5	0.12
21	Washington	5.7	0.09	47	South Dakota	4.3	0.22
22	Rhode Island	5.7	0.23	48	Wyoming	4.0	0.26
23	Texas	5.6	0.05	49	Maine	3.8	0.17
24	Montana	5.6	0.23	50	West Virginia	3.7	0.14
25	South Carolina	5.6	0.1	51	Vermont	2.6	0.2
26	Idaho	5.5	0.18		<b>Total</b>	6.0	0.01

<b>Table A3. Standard Errors for Nonresponse Rates to Citizenship Question in 2016 ACS by Metropolitan Status</b>	
	Standard Errors
Inside the central or principal city of a metropolitan area	0.05
Inside metropolitan area but outside central or principal city (suburbs)	0.03
Not in metro area (Rural)	0.04
Total	0.00
Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota. A large number of respondents were not included in this table because revealing their geographic location might compromise their confidentiality.	

<b>Table A4. Nonresponse Rates to the Citizenship Question on the 2016 ACS by Race and Hispanic Origin</b>	
	Standard Error of Nonresponse Rates
Non-Hispanic White Alone	0.02
Non-Hispanic Black Alone	0.04
Non-Hispanic Asian Alone	0.07
Hispanic	0.04
Source: Analysis of Census Bureau's 2016 ACS PUMS file on the IPUMS system at the University of Minnesota.	

<b>Table A5. Standard Errors for Nonresponse Rates to the 2016 ACS Citizenship Status Question by Place of Birth</b>	
Place of Birth	Standard Errors
Born in U.S.	0.01
Foreign born	0.04
Total	0.0
Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.	

**Table A6. Nonresponse Rates to the Citizenship Status Question on the 2016 ACS by Data Collection Mode**

	Standard Errors
Internet	0.02
Mail	0.03
Personal Interview (Computer Assistance Telephone Interview/Computer Assisted Personal Interview)	0.02
Total	0.01

Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

**Table A7. Standard Errors for Estimates of Nonresponse Rates to the Citizenship Question in the 2016 ACS by Race/Hispanic Origin, Place of Birth, and Data Collection Mode in the 2016 ACS**

	Born in the U.S.			Foreign-Born		
	Mail	Internet	Personal Interview	Mail	Internet	Personal Interview
White Alone or in Combination	0.03	0.02	0.03	0.20	0.11	0.17
Black Alone or in Combination	0.12	0.12	0.06	0.48	0.34	0.21
Asian Alone or in Combination	0.32	0.17	0.21	0.02	0.11	0.16
Hispanic	0.12	0.1	0.05	0.22	0.18	0.08

Source: Author's analysis of U.S. Census Bureau's 2016 American Community Survey PUMS file on IPUMS system at the University of Minnesota.

**Table A8. Comparison of Nonresponse Rates from PUMS Versus Census Bureau Website**

Item	Percent Nonresponse						
	American Community Survey PUMS						
	2016	2015	2014	2013	2012	2011	2010
Race	1.5	1.5	1.5	1.6	1.7	1.5	1.5
Hispanic Origin	1.8	1.8	2	2.1	2.1	1.8	1.8
Sex	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Age	1.7	1.6	1.6	1.6	1.3	1.3	1.3
Relationship	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Tenure							
Citizenship	6.0	6	5.5	5.2	3	2.6	2.7

Item	Percent Nonresponse						
	American Community Survey from Census Bureau website						
	2016	2015	2014	2013	2012	2011	2010
Race	1.5	1.5	1.5	1.6	1.7	1.5	1.5
Hispanic origin	1.8	1.8	1.9	2.1	2.1	1.8	1.8
Sex	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Age	1.7	1.7	1.6	1.6	1.3	1.3	1.3
Relationship	1.2	1.2	1.1	1.1	1.2	1.1	1.2
Tenure	1.2	1.2	1.3	1.3	1.1	1	1.2
Citizenship	6.0	5.9	5.5	5.2	3	2.7	2.7

Source: American Community Survey Item Allocation Rates. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates>.  
Source: 2010 Census rates from U.S. Census Bureau, 2010 Census Item Nonresponse and Imputation Assessment Report. Available at [https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010\\_cpex\\_173.pdf](https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010_cpex_173.pdf).

Differences	2016	2015	2014	2013	2012	2011	2010
Race	0	0	0	0	0	0	0
Hispanic origin	0	0	0.1	0	0	0	0
Sex	0	0	0	0	0	0	0
Age	0	-0.1	0	0	0	0	0
Relationship	0	-0.1	0	0	-0.1	0	-0.1
Tenure							
Citizenship	0	0.1	0	0	0	-0.1	0

# Appendix B.

Comparison of Nonresponse Rates from PUMS versus Census Bureau website							
Item	Percent Nonresponse						
	American Community Survey PUMS						
	2016	2015	2014	2013	2012	2011	2010
Race	1.5	1.5	1.5	1.6	1.7	1.5	1.5
Hispanic Origin	1.8	1.8	2	2.1	2.1	1.8	1.8
Sex	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Age	1.7	1.6	1.6	1.6	1.3	1.3	1.3
Relationship	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Tenure	NA	NA	NA	NA	NA	NA	NA
Citizenship	6	6	5.5	5.2	3	2.6	2.7

Item	Percent Nonresponse						
	American Community Survey from Census Bureau website						
	2016	2015	2014	2013	2012	2011	2010
Race	1.5	1.5	1.5	1.6	1.7	1.5	1.5
Hispanic origin	1.8	1.8	1.9	2.1	2.1	1.8	1.8
Sex	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Age	1.7	1.7	1.6	1.6	1.3	1.3	1.3
Relationship	1.2	1.2	1.1	1.1	1.2	1.1	1.2
Tenure	1.2	1.2	1.3	1.3	1.1	1	1.2
Citizenship	6	5.9	5.5	5.2	3	2.7	2.7

Source: American Community Survey Item Allocation Rates. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates>.

Source: 2010 Census rates from U.S. Census Bureau, 2010 Census Item Nonresponse and Imputation Assessment Report at [https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010\\_cpex\\_173.pdf](https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010_cpex_173.pdf).

Differences	2016	2015	2014	2013	2012	2011	2010
Race	0	0	0	0	0	0	0
Hispanic origin	0	0	0.1	0	0	0	0
Sex	0	0	0	0	0	0	0
Age	0	-0.1	0	0	0	0	0
Relationship	0	-0.1	0	0	-0.1	0	-0.1
Tenure							
Citizenship	0	0.1	0	0	0	-0.1	0

# Endnotes

- <sup>1</sup> Ross, Wilbur. "Reinstatement of a Citizenship status Question on the 2020 Decennial Census Questionnaire." Memorandum from Secretary of Commerce Wilber Ross to Undersecretary of Commerce Karen Dunn Kelley, May 26, 2018.
- <sup>2</sup> Ross, Wilbur. "Reinstatement of a Citizenship status Question on the 2020 Decennial Census Questionnaire." Memorandum from Secretary of Commerce Wilber Ross to Undersecretary of Commerce Karen Dunn Kelley, May 26, 2018.
- <sup>3</sup> "Item Allocation Rates 2012 through 2016 for United States." Census Bureau. Available at <https://www.census.gov/acs/www/methodology/sample-size-and-data-quality/item-allocation-rates/>.
- <sup>4</sup> "2010 Decennial Census: Item Nonresponse and Imputation Assessment Report." Census Bureau, 24 January 2012. Available at [https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010\\_cpex\\_173.pdf](https://www.census.gov/content/dam/Census/library/publications/2012/dec/2010_cpex_173.pdf).
- <sup>5</sup> IPUMS. Available at <https://www.ipums.org>.
- <sup>6</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>7</sup> Abowd, John. "Preliminary analysis of Alternative D (Combined Alternatives B and C). Memorandum for Wilbur L. Ross, Jr., 1 March 2018.
- <sup>8</sup> Camarota, Steven. "Would a Citizenship Question on the 2020 Census Reduce Response Rates?" Testimony Prepared for the House Judiciary Committee Subcommittee on the Constitution and Civil Justice, 8 June 2018.
- <sup>9</sup> "American Community Survey Design and Methodology." U.S. Census Bureau, 30 January 2014. Available at [https://www2.census.gov/programs-surveys/acs/methodology/design\\_and\\_methodology/acs\\_design\\_methodology\\_ch15\\_2014.pdf](https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_ch15_2014.pdf).
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- <sup>11</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>12</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>13</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>14</sup> Clark, Sandra. "Evaluation of the Effect on Item Nonresponse of Changes to the Failed Edit Follow-Up Operation, 2014 American Community Survey Research and Evaluation Report Memorandum Series #ACS14-RER-26." U.S. Census Bureau, 9 September 2014.
- <sup>15</sup> "American Community Survey Design and Methodology." U.S. Census Bureau, 30 January 2014. Available at [https://www2.census.gov/programs-surveys/acs/methodology/design\\_and\\_methodology/acs\\_design\\_methodology\\_ch15\\_2014.pdf](https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_ch15_2014.pdf).
- <sup>16</sup> To be sure, over half of people living in areas classified by the Census Bureau as rural also live in a county that is part of one of the nation's 383 metropolitan areas. See: Alan Berube. "Political rhetoric exaggerates economic divisions between rural and urban America." Brookings, 3 August 2016. Available at <https://www.brookings.edu/blog/the-avenue/2016/08/03/political-rhetoric-exaggerates-economic-divisions-between-rural-and-urban-america>.
- <sup>17</sup> U.S. Census Bureau American Factfinder, Table B99051, downloaded on August 17, 2018 at [https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?\\_afpt=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table).
- <sup>18</sup> "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, Statistical Policy Directive 15, Federal Register Notice." U.S. Office of Management and Budget, 30 October 1997. Available at [http://www.Whitehouse.gov/omb/fedreg\\_1997standards](http://www.Whitehouse.gov/omb/fedreg_1997standards).
- <sup>19</sup> "Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement" U.S. Office of Management and Budget, 2001.
- <sup>20</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.



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- <sup>21</sup> Abowd, John. "Preliminary analysis of Alternative D (Combined Alternatives B and C)." Memorandum for Wilbur L. Ross, Jr., 1 March 2018.
- <sup>22</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>23</sup> Abowd, John. "Preliminary analysis of Alternative D (Combined Alternatives B and C)." Memorandum for Wilbur L. Ross, Jr., 1 March 2018.
- <sup>24</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>25</sup> Abowd, John. "Preliminary analysis of Alternative D (Combined Alternatives B and C)." Memorandum for Wilbur L. Ross, Jr., 1 March 2018.
- <sup>26</sup> "2020 Census Operational Plan: A New Design for the 21<sup>st</sup> Century, Version 3.0." U.S. Census Bureau. Available at <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan3.pdf>.
- <sup>27</sup> "2020 Census Operational Plan: A New Design for the 21<sup>st</sup> Century, Version 3.0." U.S. Census Bureau. Available at <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan3.pdf>.
- <sup>28</sup> Abowd, John. "Preliminary analysis of Alternative D (Combined Alternatives B and C)." Memorandum for Wilbur L. Ross, Jr., 1 March 2018.
- <sup>29</sup> Abowd, John. "Technical Review of the Department of Justice Request to Add Citizenship Status Question to the 2020 Census," Memorandum for Wilbur L. Ross Jr., 19 January 2018.
- <sup>30</sup> Barabba, Vincent. Letter from Vincent P. Barabba and Six Former Directors of the U.S. Census Bureau to Wilbur Ross, Jr., Secretary of Commerce. 26 January 2018. Available at <https://goo.gl/L3694b>.
- <sup>31</sup> "ASA Statement Regarding Decision to Add Citizenship Question to Decennial Census." American Statistical Association, 2018. Available at <https://www.amstat.org/asa/files/pdfs/POL-CitizenshipQuestion.pdf>.
- <sup>32</sup> "ASA Fights Against Adding Citizenship Question to Census." American Sociological Association, 2018. Available at <HTTP://WWW.ASANET.ORG/CENSUS-CITIZENSHIP-QUESTION>.
- <sup>33</sup> "PAA Statement on Citizenship Question Added to 2020 Census." Population Association of America, 2018. Available at <http://www.populationassociation.org/2018/03/27/paa-statement-on-citizenship-question-for-2020-census/>.
- <sup>34</sup> "AAPOR Statement Regarding 2020 Census." American Association of Public Opinion Researchers, 2018. Available at <https://www.aapor.org/Publications-Media/Public-Statements/AAPOR-Statement-Regarding-2020-Census.aspx>
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- <sup>36</sup> "Letter to Jennifer Jessup, Department to Commerce, Committee on National Statistics; Task Force on the 2020 Census." The National Academies of Sciences, Engineering and Medicine, 7 August 2018.
- <sup>37</sup> Brown, J. David, Heggeness, Misty L., Dorinski, Suzanne, M., Warren, Lawrence, and Yi, Moises, "Understanding the Quality of Alternative Citizenship Data Sources for the 2020 Census." 6 August 2018.