

Administrative Data in the 2020 Census

CONSIDERATIONS FOR CIVIL RIGHTS GROUPS

JAE JUNE LEE, CARA BRUMFIELD, &
 IRMA SANDOVAL

KEY TAKEAWAYS

- The term “administrative data” (AD) refers to datasets collected by government agencies and commercial entities typically as a byproduct of nonstatistical activities, such as delivering mail.
- The Census Bureau has long used AD that contain information about individuals, housing units, or businesses, including to aid in data quality analysis, build and update address lists, and produce population estimates.
- The 2020 Census marked a key milestone in the use of AD. The recent census improved existing uses and introduced new uses of AD to supplement key components of data collection, data processing, and quality control efforts.
- AD will likely play an increasing role in the federal statistical system, in part due to the growing cost of surveys and declining survey response rates. However, uses of AD must be rigorously evaluated and potential impacts on data equity carefully considered as a civil rights issue.

Since its inception at the turn of the 20th century, the Census Bureau has pioneered cutting-edge technologies and methods to advance its mission as the nation’s premier source of data.¹ As the nation’s data needs evolve, so too do the bureau’s operations and methods.² “Administrative data” (AD) will undoubtedly play a growing role in how the bureau produces census data and other data products.³ Though AD are often collected for non-statistical purposes,⁴ the bureau has used AD containing information on individual persons, housing units, and businesses to address key challenges in conducting the decennial census and surveys such as the American Community Survey (ACS).⁵ These challenges include declining participation rates,⁶ mounting fiscal pressures,⁷ and increasing demands for timely and more granular data.⁸

The bureau has long recognized the utility of AD. Over the past several decades, the bureau’s research on and usage of AD have shown notable benefits.⁹ For example, the bureau has used AD to estimate the nation’s population independent of the decennial census, to maintain address lists for living quarters, and to improve the efficiency and quality of statistical operations. Indeed, long-standing federal law—U.S. Code Title 13, Section 6—requires the agency to acquire and maximize the use of AD,¹⁰ in order to minimize respondent burden, while remaining consistent with the bureau’s mission to produce high-quality data.

The use of AD must also be viewed as a civil rights issue. While the use of AD are often evaluated in terms of operational efficiency and cost-effectiveness, accuracy and fairness must also be considered. When and how AD are used, as well as which AD sources are used, impact the overall quality of data and gaps in data quality between subpopulations. Well-designed uses can improve the quality and availability of data on people of color, people with low incomes, and others the bureau finds difficult to capture accurately in the census and surveys. Inappropriate uses of AD may amplify existing racial and class biases and inequities or create new ones in federal datasets, resulting in concrete harms such as the misallocation of political power and federal funds.¹¹

WHAT ARE ADMINISTRATIVE DATA?

Administrative data (AD) generally refer to non-survey datasets collected by government agencies and commercial entities.¹² AD are information that are typically produced for nonstatistical purposes—usually as a byproduct of administering a service.¹³ For example, the U.S. Postal Service (USPS) holds AD with address information on living quarters in the U.S. as a result of delivering mail to millions of addresses every year.¹⁴ In this brief, we use the term “administrative data” to broadly refer to information from the three sources that the Census Bureau primarily uses when conducting the census.

- **Administrative records.** Traditionally, AD from federal, state, and local government agencies are referred to as “administrative records.”

Administrative records used for the 2020 Census included datasets from federal agencies—such as the Social Security Administration, Indian Health Service, and the Department of Housing and Urban Development—and federal-state and state programs—such as the Alaska Permanent Fund, Supplemental Nutrition Assistance Program, and Temporary Assistance for Needy Families.¹⁵

- **Commercial and third-party data.** Data from commercial entities are often referred to as third-party data. Commercial sources included the Veteran Service Group of Illinois, which maintains information on households such as length of residence,¹⁶ and Black Knight, a provider of software, data, and analytics with information on mortgages and home equity lending.¹⁷
- **Census Bureau data and paradata.** The Census Bureau’s own data collected from prior censuses and surveys can serve as useful AD.¹⁸ For example, the bureau relied on unpublished datasets from the 2010 Census to fill in missing responses to 2020 Census questions (see discussion on imputation).¹⁹ The bureau also relies on records collected about

past census and survey operations. These records are often referred to as “paradata.”²⁰ For example, for the 2020 Census, the bureau relied on contact history information it had collected from conducting the American Community Survey (ACS) to help determine the best time to contact a household.²¹

ADMINISTRATIVE DATA INFORMED KEY PROCESSES & DATA IN THE 2020 CENSUS

The 2020 Census marked an important milestone in the use of AD. While the recent census was not the first to benefit from AD, the 2020 Census was arguably the first census to utilize AD as a key aspect of its design.²² Notably, the 2020 Census was the first to rely on AD to count people living in housing units who had not otherwise responded to the census.²³

Many uses of AD can be traced to prior censuses. For example, uses of AD in the 2020 Census for counting people living in Group Quarters (such as college dorms or military installations) improved on similar uses starting with the 1990 Census.²⁴ The use of AD in key geographic

Figure 1. Summary of Administrative Data Uses in the 2020 Census

Phase	Use of Administrative Data
Pre-Data Collection	<ul style="list-style-type: none"> ■ Update address lists ■ Strengthen advertising and contact strategies
Data Collection	<ul style="list-style-type: none"> ■ Improve data quality assurance processes ■ Reduce burdens for field and follow-up activities, including by enumerating some nonresponding households ■ Enumerate people in Group Quarters facilities
Data Post-Processing	<ul style="list-style-type: none"> ■ Inform statistical procedures for imputing the status of unresolved records and any missing information about the number and characteristics of people living in a household
Post-Publication	<ul style="list-style-type: none"> ■ Use in the Count Question Resolution program which affords tribal, state, and local governments the opportunity to request limited types of corrections to their enumeration in the 2020 Census
Census Evaluation	<ul style="list-style-type: none"> ■ Help provide an independent measure of census accuracy

Note: AD uses noted in this figure reflect both new and continued applications for the decennial census.

Sources: Georgetown Center on Poverty & Inequality, 2021. “Intended Administrative Data Use in the 2020 Census.” U.S. Census Bureau, 1 May 2020. Available at <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/administrative-data-use-2020-census.pdf>; Mule, Thomas.

“Administrative Records and the 2020 Census.” U.S. Census Bureau, 1 April 2020. Available at https://www.census.gov/newsroom/blogs/random-samplings/2021/04/administrative_recor.html.

mapping operations in the census can be traced to the 1980 Census and prototypes developed in the late 1960s and in the 1970s.²⁵ The bureau used AD for developing independent estimates of the nation's population count starting with the 1960 Census.²⁶

PRE-DATA COLLECTION

In the lead-up to the 2020 Census, AD played an important role in preparing for data collection operations in two notable ways: updating address lists of living quarters in the US and strengthening the bureau's advertising and contact strategies.

- **Update address lists.** Building on past censuses,²⁷ the bureau used AD to improve the official inventory (known as the Master Address File or MAF)²⁸ of residential addresses for the 2020 Census. An accurate MAF helps the bureau know where to deliver census questionnaires and—if it does not receive a response from a housing unit it believes exists and is occupied—decide how census workers should follow up.²⁹ The MAF is regularly updated using multiple sources,³⁰ including AD provided by the USPS. In the lead-up to the census, the bureau also allowed Tribal, state, and local governments to update the bureau's address lists through the Local Update of Census Addresses (LUCA) operation³¹ and, when a correction was warranted, to submit eligible AD as supporting evidence.³²
- **Strengthen advertising and contact strategies.** AD also helped improve the bureau's contact strategies.³³ The bureau used AD to help determine which areas would receive³⁴ letters inviting households to self-respond online, paper questionnaires, or both. AD also informed advertising, media, and messaging strategies.³⁵

DATA COLLECTION

As the bureau began data collection, it relied on AD in several ways. The bureau used AD to strengthen data quality assurance processes,³⁶ reduce workloads for field and follow-up activities, and to help enumerate people living in group facilities.³⁷ It is important to note that the COVID-19 pandemic introduced unexpected challenges for completing the 2020 Census, causing the bureau to adjust operational plans for when and how to use AD.

- **Improve data quality assurance processes.** The bureau relied on AD in conjunction with other information to help flag potentially suspicious or false responses³⁸ that required further analysis or

in-person follow-up. The bureau also integrated AD into other aspects of response processing operations. For example, AD acted as an additional quality check in the bureau's Paper Data Capture System, a process that involves digitizing (or electronically capturing) information from a completed paper form.³⁹ The bureau used ADs to help verify whether hand-written responses were accurately captured in the digitization process.⁴⁰

- **Reduce burdens for field and follow-up activities.** Field and in-person follow-up operations are among the most expensive parts of the census.⁴¹ For the 2020 Census, an important goal for the bureau was to use AD to reduce workloads for field staff and achieve cost savings.⁴² The bureau used AD—especially AD from the USPS—to identify vacant housing units before the start of the Nonresponse Followup (NRFU), or door-knocking, operation, although census enumerators made at least one in-person visit to these homes to verify occupancy status.⁴³
- **Enumerate people in Group Quarters facilities.** For people living in Group Quarters,⁴⁴ the bureau relied on AD as one of the primary means of enumeration. The bureau provided an option for facility administrators to electronically transfer relevant AD in place of in-person enumeration or the distribution of individual census forms to residents.⁴⁵ For example, many colleges and universities electronically transferred data files to the bureau to enumerate students living in college- and university-run housing.⁴⁶ (Due to concerns about violating the Family Educational Rights and Privacy Act, many college and university administrators did not provide the bureau with all of the requested demographic information on students.)⁴⁷
- **Enumerating some nonresponding households.** For the first time, the bureau used AD to count some nonresponding households.⁴⁸ After one unsuccessful in-person visit to households who did not self-respond, the bureau “resolved” or “enumerated” those households using high-quality administrative records when available.⁴⁹ Usually, the bureau only used AD to count people in nonresponding households if two or more AD sources corroborated the information.⁵⁰ However, due to the COVID-19 pandemic and extreme weather events, the bureau made adjustments to how it utilized ADs to count people. These included using information from a

single source of AD (i.e., without corroboration from another source) to include a household in the census count as a preferred alternative to relying on information from a neighbor or on imputation, a statistical method for estimating values for missing data.⁵¹

DATA POST-PROCESSING

After data collection was complete, the bureau used AD to inform its methods to impute missing information.⁵² The bureau uses imputation as a last resort and usually after having encouraged households to self-respond, followed-up with the household in-person, checked for high-quality AD, and asked a neighbor or landlord for information about the household.⁵³ The bureau has used imputation methods in some form dating back to the 1960 Census. Each census from the 1970 Census to the 2010 Census had an imputation rate of less than half of 1 percent of the total population.⁵⁴

- **Inform count imputation.** Despite best efforts during data collection, the bureau may not have sufficient or consistent information about an address—including whether an address is occupied and, if so, how many people live there.⁵⁵ At this stage, the bureau uses AD⁵⁶ to help sort all resolved and unresolved addresses into one of several mutually exclusive groups (called “imputation cells”).⁵⁷ Addresses in each imputation cell are then sorted by geography.⁵⁸ These steps allow the bureau to impute the missing status and population count of an address using information from the “nearest neighbor” (a nearby address in the same imputation cell) who responded to the census.⁵⁹ AD sources for count imputation include USPS, the Internal Revenue Service (IRS), and the Indian Health Service (IHS), as well as the 2010 Census. The count imputation rate for the 2010 Census was 0.4 percent⁶⁰ and, for the 2020 Census, 0.93 percent of the total population.⁶¹
- **Inform characteristic imputation.** Once count imputation is performed, the bureau then relies on AD to help address missing, invalid, or inconsistent information about the characteristics of a respondent, such as their sex, age, and tenure status (rent or own the housing unit).⁶² For example, if information about a respondent’s sex is missing, the bureau may impute it based on the person’s first name, the person’s 2010 Census response, or information from the Social Security Administration (SSA), where available. While the specific sources of AD vary based on the characteristic that is imputed,

AD sources for characteristic imputation included the SSA, Department of Housing and Urban Development (HUD), and Black Knight, as well as the 2010 Census.⁶³ The bureau does not use federal tax information for characteristic imputation.⁶⁴ Characteristic imputation rates by key demographic and housing characteristics are not yet available, but are expected to be published in 2022.⁶⁵

Box 1. Types of Characteristic Imputation

To impute missing information about a person’s characteristics, the Census Bureau may rely on different methods and sources of information which may include AD. There are primarily three types of characteristic imputation.

- **Assignment** refers to when the bureau can impute missing responses using (a) other responses the person have provided in their census form or (b) information about the person from a previous census response or AD.⁶⁶
- **Allocation** refers to when the bureau can impute missing information using responses provided by another person (a) in the same household or (b) in a similar nearby household.⁶⁷
- **Substitution** is used when all of the information is missing for every person in a household and only a population count is available. In this case, the bureau imputes the information using (a) AD on people associated with the housing unit or (b) responses provided by a similar nearby household.⁶⁸

USES AT OTHER STAGES

Once major counting operations are completed, the Census Bureau continues to utilize AD.

- **Use in the Count Question Resolution program.**⁶⁹ In the post-publication phase, the CQR program allows Tribal, state, and local governments to request review and correction of their housing unit counts.⁷⁰ The bureau will consider challenges due to processing or geographic error using AD to establish the correct location of housing units.⁷¹ The CQR program can also fix coverage errors, such as undercounts, but only if the errors are a result of processing mistakes affecting housing units or group facilities.⁷² (The bureau, however, will not accept CQR challenges that seek to include housing units and associated population counts that the bureau missed entirely in the enumeration.⁷³)

- **Help provide an independent measure of census accuracy.** AD also help evaluate the accuracy of a census. Using information from records on births, deaths, and net migration, the bureau produces an independent estimate of the nation’s population count, called Demographic Analysis (DA).⁷⁴ DA estimates provide a valid comparison point for evaluating census accuracy in important but limited ways.⁷⁵

ADMINISTRATIVE DATA QUALITY, PURPOSE, & INCLUSIVENESS AFFECT FAIRNESS & CIVIL RIGHTS

Despite best efforts, the census, the American Community Survey (ACS), and other data products published by the bureau have their flaws. Among the chief concerns is that the data are less accurate for certain population groups relative to others. For example, the bureau has persistently undercounted people of color while overcounting white people in the census.⁷⁶ These “differential undercounts” are particularly damaging to the fairness of the census.⁷⁷ While AD will be an increasingly critical piece of future statistical undertaking, the full consequences of their impact on existing dynamics of equity and fairness in the federal statistical system are not yet clear.

Box 2. Guiding Considerations in the Use of AD

It is important to note that there is no single source of administrative data that captures the entire U.S. population and its characteristics. As a result, the bureau must identify and acquire relevant AD from a variety of sources. AD sources will vary in the type and quality of information they contain and may only be suitable for specific purposes in census and survey operations.

Therefore, in acquiring and utilizing any administrative dataset, the bureau examines several factors.⁷⁸ Who is included in the dataset? What information is collected about them, and how accurate and reliable is the information? To what degree is there alignment between the AD dataset and the bureau’s concepts and definitions, such as race and ethnicity categories, usual residence, and when the data were collected? How will the bureau acquire the dataset and what are the laws and data sharing agreements governing their use?

POTENTIAL IMPLICATIONS FOR DATA EQUITY & FAIRNESS

The bureau must evaluate plans for when and how AD are used, as well as which AD are used, in terms of operational efficiency and cost-effectiveness, as well as overall statistical quality. However, it also must consider data equity and fairness. In other words, will the use of AD reduce or exacerbate existing gaps in the quality and availability of data between population groups? A variety of factors must be considered, including the quality and availability of AD sources, as well as their intended use in the census or survey.

A major concern is that AD tend to be either incomplete or absent for many of the same subpopulations who already are marginalized in federal statistics, such as decennial census data.⁷⁹ While studies show that a vast majority of the U.S. population can be identified in AD,⁸⁰ subpopulations who have fewer routine interactions with programs and services (such as with nutrition assistance programs or taxpayer services) provided by governments and other institutions may, in particular, be absent in AD.⁸¹ Moreover, even if a dataset includes information on a group of people, the data may not necessarily contain the full range of information needed by the bureau.⁸² While characteristics such as name, address, and date of birth are often available in government and commercial AD, it is less often the case that AD include and, if so, accurately document information on characteristics such as race, ethnicity, and household relationships.⁸³

Additionally, even when high-quality AD exist for certain undercounted population groups, the bureau may face challenges in acquiring these datasets for use in the census and surveys. Legal and policy challenges may prevent the Census Bureau from uniformly acquiring information from state and local AD sources.⁸⁴ This is notable since state and local sources may have better coverage of populations otherwise absent from or underrepresented in federal sources, such as people experiencing homelessness, young children, and people with undocumented immigration status.⁸⁵

Appropriate and carefully reviewed uses of AD also could improve data equity. For example, many people—notably young children of color—are undercounted in the census due to being left off of a household’s census form. When evaluated for quality and coverage, AD could be used to help flag and potentially enumerate people who are omitted from otherwise completed census forms.⁸⁶ Even when AD are not used to directly enumerate historically

undercounted communities, efficiencies gained through the use of AD could allow the bureau to devote greater time and resources to addressing differential undercounts in the census and surveys relying on sampling the population. Review and input from affected communities is critical, along with careful research and evaluation to ensure that AD are used to advance equity rather than reinforcing existing dynamics of data inequity and exclusion.⁸⁷

CONFIDENTIALITY CONCERNS

The use of AD raises questions about confidentiality, government surveillance and profiling, control over personal information, and harms from the use of inaccurate data. These issues should be taken seriously and given equal weight with other considerations that relate to data quality, cost, and operational efficiency.

There currently is no single database that combines all of the information from AD on the population. Instead, the bureau receives and links AD from available sources using identifiers such as Social Security numbers, names, and addresses. Strict federal laws and data-sharing agreements limit the type of information the bureau can receive, the purposes for which the information can be used, and the manner in which respondent confidentiality is protected.⁸⁸ Once the bureau receives any AD, that information is protected under Title 13 confidentiality restrictions, so the bureau cannot publish or share that data in any identifiable form.⁸⁹ Ongoing technical advances also present opportunities for enhancing confidentiality when linking data together.⁹⁰

Nonetheless, the collection and linkage of AD may contribute to mistrust in government and hinder future data collection efforts. For example, there may be a concern that the bureau may develop a national register of persons that could potentially be abused for nonstatistical purposes such as law enforcement or determining eligibility for government programs.⁹¹ Such perceptions may discourage people from participating in government programs and services, as well as in the census and surveys. Thought should also be given to when and how people ought to be asked to consent to the use and sharing of personal information and whether opportunities should be provided for correcting inaccurate or outdated information about themselves—concerns that are weaker for survey data than for AD.

WHAT STEPS CAN STAKEHOLDERS TAKE NEXT?

With planning for the 2030 Census already underway, stakeholders should stay informed about and guide the bureau's census design and operational plans. Specific steps stakeholders could take include:

- Designing and articulating guiding principles for AD use in the census, especially as they relate to equity and civil rights;
- Engaging the bureau on the various and complex uses of AD in the federal statistical system and the agency's policies governing their use;
- Advocate for research and evaluation by the bureau of specific AD uses; and
- Help the bureau identify and secure access to state and local AD that have useful information on undercounted communities.

AD have an important role to play in the federal statistical system. Whether directly or indirectly, there is an opportunity for well-designed uses of AD to help advance equity by helping address existing disparities in data quality between population subgroups. However, such an outcome will only result from careful research, evaluation, and consultation that begin in the early stages of planning for the next census.

ACKNOWLEDGMENTS

At the Georgetown Center on Poverty and Inequality Economic Security & Opportunity Initiative (GCPI ESOI), we thank Indivar Dutta-Gupta for guidance and feedback, Sheila Naughton and Christina Ge for contributions to the drafting process, and Isabella Camancho-Craft and Hailey Joyce Padua for managing the brief's design and formatting. We also thank Akina Younge, danah boyd, Terri Ann Lowenthal, and Terry Ao Minnis who graciously provided important and insightful feedback during the draft review process. Any errors of fact or interpretation remain the authors'.

Please refer any questions, suggestions, and other comments to gcpiesoi@georgetown.edu.

ENDNOTES

1. “What We Do.” U.S. Census Bureau. Available at <https://www.census.gov/about/what.html>.
2. “Evolving to Meet 21st Century Data Needs.” U.S. Census Bureau, 11 January 2021. Available at <https://www.census.gov/about/what/transformation.html>.
3. “2020 Census: Innovations Helped With Implementation, but Bureau Can Do More to Realize Future Benefits.” Government Accountability Office, June 2021. Available at <https://www.gao.gov/assets/gao-21-478.pdf>.
4. “Frequently Asked Questions: Administrative Records Data Acquisitions.” U.S. Census Bureau. Available at <https://www.census.gov/content/dam/Census/about/about-the-bureau/adrm/data-linkage/Data%20Acquisitions%20Frequently%20Asked%20Questions.pdf>.
5. Mule, Thomas. “Administrative Records and the 2020 Census.” 1 April 2021. Available at <https://www.census.gov/newsroom/blogs/random-samplings/2021/04/administrative-recor.html>.
6. “2020 Census Response Rate Update: 99.98% Complete Nationwide.” U.S. Census Bureau, 19 October 2020. Available at <https://www.census.gov/newsroom/press-releases/2020/2020-census-all-states-top-99-percent.html>.
7. Elliott, Diana, and Charmaine Runes. “An Underfunded 2020 Census Puts an Accurate Count at Risk.” Urban Institute, 18 March 2019. Available at <https://www.urban.org/urban-wire/underfunded-2020-census-puts-accurate-count-risk>.
8. For example, see Ward, Collin, and Christopher Reddy. “Opinion: We need better data about the environmental persistence of plastic goods.” PNAS, 30 June 2020. Available at <https://www.pnas.org/content/117/26/14618>; Feldberg, Greg. “We Need Better Data for Better Crisis-Fighting.” Available at <https://insights.som.yale.edu/insights/we-need-better-data-for-better-crisis-fighting>; Nelson, Alondra, and Clarence Wardell III. “An Update from the Equitable Data Working Group.” 27 July 2021. Available at <https://www.whitehouse.gov/briefing-room/blog/2021/07/27/an-update-from-the-equitable-data-working-group/>.
9. Mule. “Administrative Records and the 2020 Census.” 2021.
10. United States, Congress, House. United States Code. Title 13, section 6, Office of the Law Revision Counsel, 1990. Available at <https://uscode.house.gov/view.xhtml?path=/prelim@title13&edition=prelim>.
11. McClure, Dave, Robert Santos, and Shiva Kooragayala. “Administrative Records in the 2020 US Census.” Urban Institute, May 2017. Available at https://www.urban.org/research/publication/administrative-records-2020-us-census/view/full_report
12. “Frequently Asked Questions: Administrative Records Data Acquisitions.” U.S. Census Bureau. Available at <https://www.census.gov/content/dam/Census/about/about-the-bureau/adrm/data-linkage/Data%20Acquisitions%20Frequently%20Asked%20Questions.pdf>.
13. Ibid.
14. Capps, Kriston. “USPS Mail Carriers Are Also Collecting Crucial Housing Data.” CityLab, Bloomberg, May 20, 2014. Available at <https://www.bloomberg.com/news/articles/2014-05-20/usps-mail-carriers-are-also-collecting-crucial-housing-data>.
15. Deaver, Karen D. “Intended Administrative Data Use in the 2020 Census.” U.S. Census Bureau, 1 May 2020. Available at <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/administrative-data-use-2020-census.pdf>.
16. Morris, Darcy Steeg. “A Modeling Approach for Administrative Record Enumeration in the Decennial Census.” Public Opinion Quarterly, 81(S1), 357–38, 2017. Available at <https://academic.oup.com/poq/article/81/S1/357/3092206>.
17. “ResearchDataGov: Restricted Microdata from the U.S. Census Bureau.” University of Michigan Institute for Social Research, 14 June 2020. Available at <https://www.icpsr.umich.edu/web/appfed/studies/37732>.
18. Deaver. “Intended Administrative Data Use in the 2020 Census.” 2020.
19. Ibid.
20. “What Are Paradata?—An Example.” Census Bureau, 28 April 2017. Available at <https://www.census.gov/newsroom/blogs/research-matters/2017/04/paradata.html>.
21. Deaver. “Intended Administrative Data Use in the 2020 Census.” 2020.
22. “2020 Census Operational Plan.” U.S. Census Bureau, December 2018. Available at <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan4.pdf>.
23. Mule. “Administrative Records and the 2020 Census.” 2021.
24. Percival, Kelly and Clara Fong. “Understanding the Census Bureau’s Methods for Completing the 2020 Count.” Brennan

- Center for Justice, October 7, 2021. Available at <https://www.brennancenter.org/our-work/research-reports/understanding-census-bureaus-methods-completing-2020-count>.
25. Anderson, Margo J. *The American Census: A Social History*, Second Edition. Yale University Press, 2015. Available at <https://www.jstor.org/stable/j.ctvb1htjr>.
26. O'Hare, William P., Cara Brumfield and Jae June Lee. "Evaluating the Accuracy of the Decennial Census: A Primer on the Fundamentals of Census Accuracy and Coverage Evaluation." Georgetown Center on Poverty and Inequality, 9 October 2020. Available at <https://www.georgetownpoverty.org/issues/evaluating-the-accuracy-of-the-decennial-census/>.
27. Uhl, Sean. "Building and Maintaining the Master Address File." U.S. Census Bureau, 8 September 2011. Available at https://www2.census.gov/geo/pdfs/education/Uhl_CAS_2011.pdf.
28. "Master Address File Description." Census Bureau. Available at <https://www2.census.gov/programs-surveys/research/guidance/nlms/maf-description.pdf>.
29. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
30. "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_ch03_2014.pdf.
31. "2020 Census Local Update Census Addresses Operation Frequently Asked Questions." U.S. Census Bureau, 6 August 2019. Available at https://www2.census.gov/geo/pdfs/partnerships/luca/2020LUCA_FAQ.pdf.
32. Lee, Jae June, Sheila Naughton, and Cara Brumfield. "2020 Census Count Question Resolution & Population Estimates Challenge Programs: Opportunities for Improving Postcensal Population Estimates." Georgetown Center on Poverty and Inequality, 26 May 2021. Available at <https://www.georgetownpoverty.org/issues/2020-census-count-question-resolution-population-estimates-challenge-programs/>.
33. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
34. Ibid.
35. Ibid.
36. "2020 Census: Bureau Is Taking Steps to Address Limitations of Administrative Records." Government Accountability Office, 26 July 2017. Available at <https://www.gao.gov/products/gao-17-664>.
37. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
38. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
39. Ibid.
40. Ibid.
41. "2020 Census Program Memorandum Series: 2021.20." Census Bureau, October 18, 2021. Available at https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/NRFU-detailed-operational-plan_v20.pdf.
42. "2020 Census: Additional Actions Would Help the Bureau Realize Potential Administrative Records Cost Savings." Government Accountability Office, October 2015. Available at <https://www.gao.gov/assets/gao-16-48.pdf>.
43. Ibid.
44. "2020 Census Group Quarters Operation." Georgetown Center on Poverty and Inequality. Available at <https://www.georgetownpoverty.org/issues/democracy/census/2020-census-group-quarters-operation/>.
45. Stempowski, Deborah, and James Christy. "2020 Census Group Quarters." U.S. Census Bureau, 16 March 2021. Available at <https://www.census.gov/newsroom/blogs/random-samplings/2021/03/2020-census-group-quarters.html>.
46. Brown, Christopher, and Cara Brumfield. "Counting Military Personnel." Georgetown Center on Poverty and Inequality, 3 December 2019. Available at <https://www.georgetownpoverty.org/issues/counting-military-personnel/>.
47. Mulry, Mary, Tom Mule, Andrew Keller, and Scott Konicki. "Administrative Record Modeling in the 2020 Census." Census Bureau, 27 April 2021. Available at <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/administrative-record-modeling-in-the-2020-census.pdf>.
48. Mule. "Administrative Records and the 2020 Census." 2021.
49. Ibid.
50. Ibid.
51. For example, if a population count was needed for an address, enumerators would rely on the information in an Internal Revenue Service tax return rather than impute the value in the data processing stage. Mule. "Administrative Records and the 2020 Census." 2021.

52. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
53. Cantwell, Pat. "How We Complete the Census When Households or Group Quarters Don't Respond." U.S. Census Bureau, 16 April 2021. Available at <https://www.census.gov/newsroom/blogs/random-samplings/2021/04/imputation-when-households-or-group-quarters-dont-respond.html>.
54. Ibid.
55. Kennel, Timothy, and Patrick Cantwell. "2020 Census: Count Imputation." Census Bureau, 21 July 2021. Available at <https://www.nationalacademies.org/event/07-21-2021/docs/D9F1E251C2C8EBF9F59C6AB8CEC1025A0F55391A33D6>.
56. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
57. Kennel and Cantwell. "2020 Census: Count Imputation." 2021.
58. Ibid.
59. Ibid.
60. Cantwell. "How We Complete the Census When Households or Group Quarters Don't Respond." 2021.
61. Bentley, Mike. "2020 Census Operational Quality Metrics Overview." Census Bureau Presentation to the Census Scientific Advisory Committee, 23 September 2021. Available at <https://www2.census.gov/about/partners/cac/sac/meetings/2021-09/presentation-2020-census-operational-quality-metrics-overview.pdf>.
62. Borman, Christine. "2020 Census: Item Nonresponse, and Characteristic Imputation." Census Bureau, 21 July 2021. Available at <https://www.nationalacademies.org/event/07-21-2021/docs/DEF3F809B4C2F842F1BD0CA34E80EE5A299173BBFDE6>.
63. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
64. Ibid.
65. Ramirez, Roberto, and Christine Borman. "How We Complete the Census When Demographic and Housing Characteristics Are Missing." Census Bureau, 02 August 2021. Available at <https://www.census.gov/newsroom/blogs/random-samplings/2021/08/census-when-demographic-and-housing-characteristics-are-missing.html>.
66. Borman. "2020 Census: Item Nonresponse, and Characteristic Imputation." Census Bureau. 2021.
67. Ibid.
68. Ibid.
69. In November 2021, the Census Bureau proposed a new program called the 2020 Post-Census Group Quarters Review (2020 PCGQR) program. Similar to the CQR program in many respects, the PCGQR program will allow tribal, state, and local governmental units to submit requests to the Census Bureau to review population counts for group quarter facilities. The full scope and methodology of this program has not yet been finalized. See "Agency Information Collection Activities; Submission to the Office of Management and Budget (OMB) for Review and Approval; Comment Request; 2020 Post-Census Group Quarters Review." Federal Register, Vol. 86, No. 221, 19 November 2021. Available at <https://www.govinfo.gov/content/pkg/FR-2021-11-19/pdf/2021-25283.pdf>.
70. "Challenges to Census Data." National Conference of State Legislatures, 29 July 2021. Available at <https://www.ncsl.org/research/redistricting/challenges-to-census-data637631764.aspx>.
71. Deaver. "Intended Administrative Data Use in the 2020 Census." 2020.
72. Lee, Naughton, and Brumfield. "2020 Census Count Question Resolution & Population Estimates Challenge Programs: Opportunities for Improving Postcensal Population Estimates." 2021.
73. Ibid.
74. Mulry, et al. "Administrative Record Modeling in the 2020 Census." 2021.
75. O'Hare, Brumfield and Lee. "Evaluating the Accuracy of the Decennial Census: A Primer on the Fundamentals of Census Accuracy and Coverage Evaluation." 2020.
76. Ibid.
77. Ibid.
78. For example, see "Realizing the Promise of Administrative Data for Enhancing the American Community Survey." U.S. Census Bureau, November 2018. Available at <https://www.census.gov/content/dam/Census/programs-surveys/acs/operations-and-administration/administrative-records-in-the-american-community-survey.pdf>
79. McClure, Santos, and Kooragayala. "Administrative Records in the 2020 US Census." 2017.
80. Rastogi, Sonya, and Amy O'Hara. "2010 Census Match Study." U.S. Census Bureau, 16 November 2012. Available at https://www.urban.org/sites/default/files/publication/90446/census_ar_report.pdf.
81. Ibid.

82. McClure, Santos, and Kooragayala. "Administrative Records in the 2020 US Census." 2017.
83. Rastogi and O'Hara. "2010 Census Match Study." 2012. See also McClure, Santos, and Kooragayala. "Administrative Records in the 2020 US Census." 2017.
84. O'Hara, Amy, Izzy Youngs, and Lahy Amman. "Who is missing from administrative data?" 6 August, 2021. Available at <https://mccourt.georgetown.edu/news/who-is-missing-from-administrative-data/>.
85. Ibid.
86. In some sources of AD, such as IRS 1099 information that include W-2 wage statements and other records, children are likely to be missed. To improve the inclusion of more children in the census through AD-based enumeration, the bureau undertook new efforts for the 2020 Census to link children to parents across AD sources. For more information, see Mulry, et al. "Administrative Record Modeling in the 2020 Census." 2021.
87. Rastogi and O'Hara. "2010 Census Match Study." 2012.
88. Percival, Kelly. "Federal Laws That Protect Census Confidentiality." Brennan Center for Justice, 20 February 2019. Available at <https://www.brennancenter.org/our-work/research-reports/federal-laws-protect-census-confidentiality>.
89. Percival, Kelly. "Strict Confidentiality Laws Limit Trump Administration Search for Citizenship Data." Brennan Center for Justice, 22 October 2019. Available at <https://www.brennancenter.org/our-work/analysis-opinion/strict-confidentiality-laws-limit-trump-administration-search-citizenship>.
90. "The Promise of Evidence-Based Policymaking." Commission on Evidence-Based Policymaking, September 2017. Available at <https://static1.squarespace.com/static/56534df0e4b0c2babdb6644d/t/609adf6a4bfddf3b366db9e0/1620762476345/Report+-+Commission+on+Evidence-Based+Policymaking.pdf>.
91. See, for example, Kraus, Rebecca. "Statistical Déjà Vu: The National Data Center." Census Bureau, 1 August 2011. Available at <https://www.census.gov/history/pdf/kraus-natdatacenter.pdf>.