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

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.

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

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

<table>
<thead>
<tr>
<th>Phase</th>
<th>Use of Administrative Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Data Collection</strong></td>
<td>■ Update address lists</td>
</tr>
<tr>
<td></td>
<td>■ Strengthen advertising and contact strategies</td>
</tr>
<tr>
<td><strong>Data Collection</strong></td>
<td>■ Improve data quality assurance processes</td>
</tr>
<tr>
<td></td>
<td>■ Reduce burdens for field and follow-up activities, including by enumerating some nonresponding households</td>
</tr>
<tr>
<td></td>
<td>■ Enumerate people in Group Quarters facilities</td>
</tr>
<tr>
<td><strong>Data Post-Processing</strong></td>
<td>■ 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</td>
</tr>
<tr>
<td><strong>Post-Publication</strong></td>
<td>■ 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</td>
</tr>
<tr>
<td><strong>Census Evaluation</strong></td>
<td>■ Help provide an independent measure of census accuracy</td>
</tr>
</tbody>
</table>

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

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

**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, the bureau used AD to improve the official inventory (known as the Master Address File or MAF) 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. The MAF is regularly updated using multiple sources, 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) operation and, when a correction was warranted, to submit eligible AD as supporting evidence.

- **Strengthen advertising and contact strategies.** AD also helped improve the bureau’s contact strategies. The bureau used AD to help determine which areas would receive letters inviting households to self-respond online, paper questionnaires, or both. AD also informed advertising, media, and messaging strategies.

**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, reduce workloads for field and follow-up activities, and to help enumerate people living in group facilities. 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 responses 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. The bureau used ADs to help verify whether handwritten responses were accurately captured in the digitization process.

- **Reduce burdens for field and follow-up activities.** Field and in-person follow-up operations are among the most expensive parts of the census. For the 2020 Census, an important goal for the bureau was to use AD to reduce workloads for field staff and achieve cost savings. 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.

- **Enumerate people in Group Quarters facilities.** For people living in Group Quarters, 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. For example, many colleges and universities electronically transferred data files to the bureau to enumerate students living in college- and university-run housing. (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.)

- **Enumerating some nonresponding households.** For the first time, the bureau used AD to count some nonresponding households. 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. Usually, the bureau only used AD to count people in nonresponding households if two or more AD sources corroborated the information. 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.\textsuperscript{51}

**DATA POST-PROCESSING**

After data collection was complete, the bureau used AD to inform its methods to impute missing information.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{55} At this stage, the bureau uses AD\textsuperscript{56} to help sort all resolved and unresolved addresses into one of several mutually exclusive groups (called “imputation cells”).\textsuperscript{57} Addresses in each imputation cell are then sorted by geography.\textsuperscript{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.\textsuperscript{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.\textsuperscript{63}

- **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).\textsuperscript{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.\textsuperscript{63} The bureau does not use federal tax information for characteristic imputation.\textsuperscript{64} Characteristic imputation rates by key demographic and housing characteristics are not yet available, but are expected to be published in 2022.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.** In the post-publication phase, the CQR program allows Tribal, state, and local governments to request review and correction of their housing unit counts.\textsuperscript{70} The bureau will consider challenges due to processing or geographic error using AD to establish the correct location of housing units.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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). DA estimates provide a valid comparison point for evaluating census accuracy in important but limited ways.

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. These “differential undercounts” are particularly damaging to the fairness of the census. 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. 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. While studies show that a vast majority of the U.S. population can be identified in AD, 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. 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. 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.

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. 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.

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. 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.  

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.  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.  Ongoing
technical advances also present opportunities for
enhancing confidentiality when linking data together.

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


13. Ibid.


19. Ibid.


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39. Ibid.

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43. Ibid.


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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.
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58. Ibid.
59. Ibid.
60. Cantwell. “How We Complete the Census When Households or Group Quarters Don’t Respond.” 2021.
64. Ibid.
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.
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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.
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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.


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