Benefits of Federal Statistical Research Data Centers

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he thirty-three Federal Statistical Research Data Centers (FSRDC) provide researchers access to unique datasets.¹ FSRDCs are operated by the U.S. Census Bureau in partnership with federal statistical agencies and leading research institutions in the U.S. (map of locations in Figure 1). Formerly called Census Research Data Centers, FSRDCs provide controlled access to restricted agency microdata in a secure environment to researchers, protecting respondent confidentiality. Following congressional action in 2018, the number of FSRDCs and the available data has grown significantly and is likely to continue to increase.² These data are extremely valuable to researchers and provide much more detail than data that is publicly available on federal agency websites or distributed to libraries in the Federal Depository Library Program. Federal datasets support research in economics, sociology, public health, geography, and related fields. Working with these sets provides unique research opportunities, beyond what is possible with the publicly distributed aggregated data.

Federal Statistical Research Data Centers Overview

FSRDCs are located nationwide; each of the thirty-three centers has an administrator as the primary contact. The About Us section on the FSRDC website gives an overview of the program including the Standard Application Process, Partner and Collaborating Agencies, Research Data Center Partner Institutions, and FSRDC projects. Partner institutions within each Center offer researchers an access point to FSRDC data and support. Costs are shared by partner institutions via a consortium.

In addition to the Census Bureau, federal partner and collaborating agencies provide data directly through the FSRDCs.³ The addition of these agencies allows researchers to access even more data and potentially link datasets for deeper analysis. The Partner and Collaborating Agencies section lists the available data, fees, and proposal requirements for each agency. Partner agencies also participate in the governance and oversight of the program.

Congressional Commitment to Expanded Access

While Census Research Data Centers have existed for decades, Congress recently established goals to expand access to more datasets and more data centers. The Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act) set an ambitious goal of creating a standardized process for applying to use federal data—including highly confidential datasets—for evidence-building purposes.⁴ Congress had several reasons for making it easier to find and apply for federal data assets:

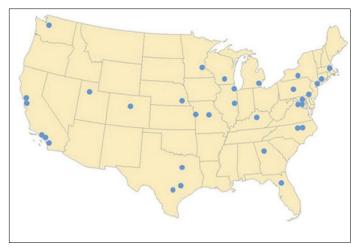


Figure 1: Map of Federal Statistical Research Data Centers¹

- Expanded and safe access to and use of data, including administrative data, to build evidence for improving public policies and programs;
- Enhanced ability to build evidence by making data available to staff at all levels of government, including state and local officials;

• Timely access for business and academic communities to high-quality data to develop insights and analytic tools that benefit citizens, policymakers, and the private sector,

The Census FSRDC program is the "front door" to accessing these highly confidential data and an increasingly important part of research work. The procedure to access data is known as the Standard Application Process, providing a systematic policy for access to confidential data from U.S. statistical agencies. This is part of a long-term plan to improve access to federal data.⁵

Relationship to Aggregated Federal Government Data

The microdata available from the FSRDCs are the detailed data that underlie the aggregated data government information librarians are most familiar with (an individual's income v. aggregated personal income for a geographic region); as such, they are part of the continuum of data products offered from the Federal government. Because these data reveal individual or firm information, they are very highly controlled, and users must submit proposals that go through extensive vetting to access them. Access to the data itself is also highly controlled, typically in a single room without any external internet access. Government information librarians benefit from familiarity with these datasets as they may offer researchers an alternative to the aggregated data that is easily available.

Benefits to Researchers: Why FSRDCs Matter

The Restricted-Use Data page provides detail as to the Available Microdata in addition to information about the Standard Application Process.⁶ A description of the data, list of sets in each section, and links are provided. The microdata is categorized into Administrative, Demographic, Economic, LEHD (Longitudinal Employer-Household Dynamics), and UMET-RICS (Measuring the Impacts of Research on Innovation, Competitiveness, and Science) datasets. This data is from Census Bureau censuses and surveys of businesses and households, linked employer-employee data, and administrative records from federal and state agencies and other sources.

Nearly all datasets accessible through the FSRDC system have a publicly available version but researchers often find these lacking due to the absence of detailed geography, aggregation, or highly useful variables (i.e., Date of Birth, Date of Death, etc.) To review research uses of the data the FSRDC Projects page⁷ provides details on active and completed projects managed by the Census Bureau (e.g., project title, abstract, FSRDC location, principal investigator, year project started, researchers, and datasets requested in project proposals). That web page also provides a list of the research outputs (papers, articles, dissertations, etc.) produced from 2000 to date by external research projects managed by the Census Bureau.

Empirical research in the social sciences leans heavily on the use of high-quality data. The data that is available from an FSRDC is known as "administrative data" and contains information down to the establishment or individual, giving researchers powerful insights, while still maintaining confidentiality. Confidentiality is maintained by the very limited way the FSRDC allows researchers to use the data. The results of the data analysis can be published, but never the underlying data.

Using this kind of data, a researcher can reliably ask questions about the effects of one's environment, education, life circumstances, or polices to assess their impact. In addition, rather than relying on survey responses, many of these data are collected in the course of the government's business, providing a large sample size and more detail. Access to this data is incredibly impactful: Economists have studied outcomes following the establishment of FSRDCs in an area and found that empiricists produce more publications (about 24% more), in more highlycited journals, and with demonstrable effects on policy making.⁸ The *Opportunity Atlas* is an example of research results from this kind of data, charting the outcomes of children using their census tract, identifying high-opportunity neighborhoods that are affordable to low-income families.⁹

The FSRDC's benefits to researchers are centered around the benefits of access to more granular data. These data offer more geographic detail, larger samples, variables with higher top codes (e.g., a much higher upper limit for income), more detailed coding within variables (e.g., exact date of birth, medical diagnosis codes), and linkages to other administrative data and external third-party data (e.g., business data from IRS, individual data from SSA).¹⁰ It is this level of detail that allows researchers to "connect the dots" and identify causation as part of their analysis.

How to Get the Data: Standard Application Process

Information about applying for access to restricted-use microdata in the FSRDCs is available on the Standard Application Process website.¹¹ The standard application process (SAP) Portal is a web-based data catalog and common application that serves as a "front door" to apply for confidential data from any of the sixteen principal federal statistical agencies and units for evidence-building purposes for approved researchers. All of the information needed for drafting and submitting proposals can be found on the SAP web page. The FSRDC website outlines the steps for drafting and submitting proposals. Researchers should first contact the administrator at their FSRDC about their research interests and goals. They can schedule a time to review how to go about drafting a successful proposal. The proposal review process can take several months; researchers should plan accordingly.

Included in the SAP web page is a link to the Research-DataGov catalog.¹² ResearchDataGov is a web portal for discovering and requesting access to restricted microdata from federal statistical agencies. Currently, users can search over 1,500 restricted datasets from sixteen agencies through this portal.

To perform statistical research in an FSRDC using non-public microdata, researchers must be both associated with an approved project and obtain Special Sworn Status (SSS), received from the Census Bureau after a proposal is submitted and approved.

Remote Access to FSRDC Datasets

Once a researcher has been approved for a project and met with the FSRDC, it may be possible to continue the research remotely from a home office. Remote access requires that all data is eligible and that the researcher has met a series of requirements; these are listed in detail on the Census web page for Secure Remote Research Environment to Access Restricted-Use Data.¹³

Researchers will begin their projects locally in their institution's FSRDC and make at least two visits with the FSRDC administrator. After the initial visits, the researchers are eligible to apply for remote access in which they will be able to work the remainder of their project from their home offices.

For a project to be approved for virtual access, all datasets approved for the project must be remote access eligible and the researcher must meet all eligibility requirements.¹³ The Census Bureau posts a spreadsheet of restricted-use datasets available for remote access.

FSRDC Membership and Costs

Access to an FSRDC comes in two ways:

1. Research institutions and institutions such as Federal Reserve Banks can join the FSRDC nearest to them geographically as a consortium member. The cost is dependent on the number of institutions that are in the consortium, typically \$20,000 and above annually, to cover the salary of a Census administrator, the construction and maintenance of the physical space, and other associated fees. This membership allows researchers within the institution to use the FSRDC without paying a separate fee. Membership costs may be shared among campus departments such as a Research office, related academic departments, and the library.

2. Researchers who do not have an institutional affiliation with a local FSRDC consortium will pay a fee to access the data at an FSRDC of their choice, typically thousands of dollars. In addition, some agencies may charge an additional small amount for accessing their data. While these fees may be a burden, the cost of managing this kind of data and its confidentiality is substantial and similar commercial data would likely cost even more. Grants can be used to pay for the access fees if a researcher does not have an affiliation with an FSRDC consortium member.

Summary

Federal Statistical Research Data Centers provide controlled access to restricted agency microdata. These datasets are extremely valuable to researchers and provide much more detail than data that is publicly available. Institutions and researchers interested in accessing data should contact the administrator at the Center that is closest geographically to their location.

The Census Bureau is bound by Title 13 of the U.S. Code to protect confidentiality. The FSRDC program makes it possible for researchers to partner with the Census for cutting edge research using the quality data that it collects about the nation's people and economy.

The Census Bureau has granted Special Sworn Status to researchers when the research goals align with the mission of the Census Bureau, benefit its programs and "Their expertise and vision allows the Census Bureau to improve [its] methods and to use [its] data in new and innovative ways that maximize [its] value to the American public."¹⁴

The views expressed in this paper are those of the author(s) and do not necessarily reflect the views of the Federal Reserve System, the Board of Governors, or the regional Federal Reserve Banks.

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References

- 1. "Federal Statistical Research Data Centers," United States Census Bureau, October 31, 2024, https://www. census.gov/about/adrm/fsrdc.html.
- 2. In 2018 there were twenty-nine FSRDCs. In addition to the thirty-three FSRDCs in operation, four Centers at the following universities will be opening soon: Puerto Rico, Ohio State, Indiana, and Iowa State. There are four additional locations approved for RDC construction: University of Tennessee, University of Chicago, University of Pittsburgh, and the St. Louis Federal Reserve Bank. Approximately two new FSRDCs have opened every year over the past decade. Samual Bondurant, Dallas FSRDC, October 16, 2024.
- 3. As of January 2025, the number of partner and collaborating agencies listed, and whether they allow remote access, has changed significantly. For a full list of Partner and Collaborating Agencies prior to January 17, 2025, see https://web.archive.org/web/20241228054916/ https://www.census.gov/about/adrm/fsrdc/partner-andcollaborating-agencies.html.

Current partners, and a downloadable spreadsheet of partners that do not allow remote access to their projects, can be found at "Secure Remote Research Environment to Access Restricted-Use Data," United States Census Bureau, January 17, 2025, https://www. census.gov/about/adrm/fsrdc/about/secure-remoteaccess.html.

- 4. Foundations for Evidence-Based Policymaking Act of 2018, P.L. 115-435, https://www.congress.gov/ bill/115th-congress/house-bill/4174/text.
- 5. The Standard Application Process," National Center for Science and Engineering Statistics, National Science Foundation, https://ncses.nsf.gov/initiatives/ standard-application-process; "Establishment of Standard Application Process Requirements on Recognized Statistical Agencies and Units," M-23-04, Office of Management and Budget, Executive Office of the President, December 8, 2022, https://web.archive.org/ web/20250116092023/https://www.whitehouse.gov/wpcontent/uploads/2022/12/M-23-04.pdf.

- 6. "Restricted-Use Data," United States Census Bureau, January 29, 2025, https://www.census.gov/topics/research/guidance/restricted-use-microdata.html.
- As of January 2025, the web page on ongoing projects has been removed. For data prior to January 2025, see: https:// web.archive.org/web/20241223014922/https://www.census.gov/about/adrm/fsrdc/about/ongoing-projects.html.
- Abhishek Nagari and Matteo Tranchero, "How Does Data Access Shape Science? Evidence from the Impact of U.S. Census's Research Data Centers on Economics Research," *NBER Working Paper Series*, Working Paper 31372, National Bureau of Economic Research, June 2023, https://doi.org/10.3386/w31372
- Raj Chetty, John N. Friedman, Nathaniel Hendren, Maggie R. Jones & Sonya R. Porter, "The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility," *NBER Working Paper Series*, Working Paper 25147, National Bureau of Economic Research, October 2018, https://doi.org/10.3386/w25147.
- Christopher Bollinger and Charles Hokayem, "Kentucky Research Data Center," Kentucky Research Data Center, University of Kentucky, September 2020, https://scholarworks.iu.edu/iuswrrest/api/core/bitstreams/b548e6d4-f38a-4b86-9626-60bb3916cf27/content, Slide 8.
- "Restricted-Use Data Application Process," United States Census Bureau, December 19, 2024, https:// www.census.gov/topics/research/guidance/restricted-usemicrodata/standard-application-process.html.
- 12. *ResearchDataGov*, ICPSR, University of Michigan, The Regents of the University of Michigan, https://www.researchdatagov.org/.
- "Secure Remote Research Environment to Access Restricted-Use Data," United States Census Bureau, January 17, 2025, https://www.census.gov/about/adrm/ fsrdc/about/secure-remote-access.html.
- Census Bureau Data Stewardship Program, DS002

 Policy on Title 13 Benefit Statements, United States
 Census Bureau, May 22, 2018, https://web.archive.org/web/20241206145329/https://www2.census.gov/foia/ds_policies/ds002.pdf, 2.