

15. STRENGTHENING FEDERAL STATISTICS

The Federal Government's statistical agencies and programs play a vital role in generating the data that citizens, businesses, and governments need to make informed decisions. Timely, accurate, and relevant statistical data are the foundation of evidence-based decision-making. Citizens use statistical information in their daily lives, such as information on education, commuting, health, crime, or aging in their communities. These data are displayed on internet search engines, incorporated into popular applications, or downloaded from agency websites to support in-depth research on relevant policy topics. The Federal Statistical System has informed the nation about its population, condition and progress since its founding, beginning with the first constitutionally-mandated Census in 1790. Today, these statistical indicators contribute to our nation's ability to grow the economy, create jobs, measure our progress, and increase the effectiveness and efficiency of the government. Businesses depend on reliable statistical information that is nationally consistent to locate and grow their businesses, better serve customers, and link workers to jobs across our nation, including data on current and potential markets, international trade, the labor force, and changing economic conditions. State and local governments rely on Federal data to improve the lives of their citizens through better planning and delivery of essential services.

The mission of the Federal Statistical System is to collect data, transform them into useful, objective information; and make that information readily and equitably accessible to government decision makers and the public. There are thirteen Principal Statistical Agencies (PSAs—see Table 15.1) and almost 100 smaller units spread across the Executive Branch that generate statistics on such topics as the economy, Veterans, housing, crime, transportation, agriculture, energy, health, and education. The PSAs are responsible for modeling best practices in data stewardship and statistical practice.

As our society evolves, several challenges compel the Federal Statistical System to modernize and adopt new 21st century methods to continue to meet the growing needs of data users. Declining response rates to surveys raise data collection costs and harm data quality. Needed innovations that incorporate computer and data science techniques require staff with skills that are difficult for agencies to retain and keep current. Legal and organizational barriers to increased data sharing that would increase efficiency while still protecting data confidentiality make it difficult for statistical agencies to coordinate, improve data quality and utility, reduce respondent burden, and share best practices. Meanwhile, stakeholders and consumers of statistical products expect more granular and specific information to be delivered faster without compromising quality.

The Federal Statistical System works hard to meet these challenges and to remain the trusted provider of independent and accurate information amidst proliferating sources of information that often lack transparency, dependability, and proof of quality. By exploring the use of new data sources, including reusing data the government already collects as it administers programs, the PSAs and other statistical programs strengthen existing capacity and develop new methods to supplement or replace more burdensome surveys. These non-survey data sources can help agencies counter falling levels of cooperation from the public; increase the accuracy, timeliness, and relevance of their statistical products; and save money.

Outlined below are some examples of the many recent activities designed to address these challenges.

The *Bureau of the Census* conducts the Economic Census and the Census of Governments every five years, which are integral to the Bureau of Economic Analysis (BEA) estimates of gross domestic product (GDP), industry inputs and outputs, and the economic activities of more than 90,000 state and local governments. Together, these programs measure the structure and functioning of nearly the entire U.S. economy. For the most recent Economic Census and Census of Governments the Census Bureau is collecting data electronically, replacing paper-based methods used in past censuses, thereby reducing response burden, costs, and processing times.

The *Bureau of Economic Analysis* embarked on research to harness big data on housing and credit card transactions to improve statistics of consumer spending, housing investment, and regional prices and to reduce revisions to the early gross domestic product (GDP) estimates.

The *Bureau of Justice Statistics* linked a decade of data on sentences served by state prisoners in the National Corrections Reporting Program (NCRP) to other administrative datasets to inform post-prison mortality, pre- and post-prison use of subsidized housing, and post-prison enrollment in Medicaid.

The *Economic Research Service* partnered with the Census Bureau to expand the use of State-level administrative data by linking it with American Community survey data to inform key policy decisions for USDA's Food and Nutrition Assistance programs. The linked data provided new insights into these programs such as the share of people estimated to be eligible for Supplemental Nutrition Assistance Programs (SNAP) who actually participate in the program (by congressional district) and the number of SNAP participants by annual income relative to the poverty line. The public can access the data through an interactive tool on the Census website.

The *National Agricultural Statistics Service* (NASS) developed a modern, responsive web form to improve data quality and reduce respondent burden for the Census of

Agriculture, conducted every five years. NASS has also developed the operational capacity to produce acreage assessments throughout the growing season using mid-resolution satellite imagery and verified administrative ground reference data to produce a product called the Cropland Data Layer (CDL).

The *National Center for Health Statistics* initiated a program to release monthly provisional national and state level counts of drug overdose deaths to facilitate more timely release of critical indicators for public health surveillance of one of the fastest growing and most serious health concerns in the US. The Center also released data products with survey records linked to Medicare administrative enrollment and claims records, providing new opportunities for researchers to study changes in health status, health care utilization, and expenditures for survey participants with matched Medicare records.

The *National Center for Veterans Analysis and Studies*, a statistical unit within the Veterans Administration, initiated the Veterans Voices Project, an application prototype that runs sentiment analysis and applies artificial intelligence against organic real-time big data streams of public content and key measures in order to develop real-time insights on the experiences of veterans.

There are also several cross-cutting initiatives underway to modernize and strengthen the Federal Statistical System. The bipartisan Commission on Evidence-Based Policymaking was charged with determining how the Federal Government could effectively and routinely build and use evidence to improve policies and programs, and overcome the current obstacles to doing so. The Commission's 2017 final report identified many barriers to the effective use of administrative data to generate statistics and other forms of evidence and suggested ways to overcome them. These include a series of legal barriers to accessing and using administrative data for statistical purposes, as discussed in Chapter 6, Building and Using Evidence to Improve Government Effectiveness.

The Commission described coordination and capacity challenges and emphasized the need for greater coordination within and across agencies to ensure that the highest priority data are collected, and that already-collected data are used to their fullest extent. To address these challenges, the Commission recommended an expanded role for the PSAs in managing a department's data resources in support of Federal evidence building. Beyond enabling the PSAs to access and use administrative data in their own statistical programs, this expanded data stewardship role would facilitate evaluator and researcher access to these same data assets within the strong data stewardship laws and practices intrinsic to the PSAs. The Commission noted that PSAs vary in their readiness to take on this greater and essential role for achieving a coordinated and efficient evidence-building effort within departments.

The Office of Management and Budget (OMB) is charged with coordination of the evidence-building functions of the government, including the Federal Statistical System. OMB is organizing itself to leverage its statutory and other tools in a more integrated manner to improve

the use of data for evidence building. One important aspect of this is to provide data users with important information on statistical data quality in order to determine whether the data are appropriate for the purposes intended. Both a large body of knowledge and OMB standards exist on maintaining and assessing the quality of data collected through surveys and censuses. However, increasing combination of survey data with administrative records and other data sources results in new statistical data, and data quality aspects of importance to users both within and outside of government need to be measured and described consistently and transparently by the agencies producing these data products. Tools available to OMB include setting statistical standards to address data quality questions that arise when blending survey and non-survey datasets, and facilitating agency development and use of learning agendas.

Executive Order 13781, "Comprehensive Plan for Reorganizing the Executive Branch," directs agencies to develop plans to modernize and streamline their operations. To increase cost-effectiveness, improve data quality, and reduce respondent burden, the Administration is planning a review on how it can streamline Federal statistical functions across multiple Federal agencies. The results of these analyses will be included in the Comprehensive Plan when it is released later this year. The 2019 Budget also provides a framework for streamlining statistical services by targeting funding for the Economic Research Service on its core mission and examining the potential benefits of consolidating the Economic Research Service with the National Agricultural Statistical Service in fiscal year 2020.

Highlights of 2019 Program Budget Proposals

Excluding cyclical funding for the decennial census, approximately 40 percent of the total budget for these programs provides resources for 13 agencies or units that have statistical activities as their principal mission (see Table 16–1). The remaining funding supports work in approximately 94 agencies or units that carry out statistical activities in conjunction with other missions such as providing services, conducting research, or implementing regulations. More comprehensive budget and program information about the Federal statistical system, including its core programs, will be available in OMB's annual report, *Statistical Programs of the United States Government*, Fiscal Year 2018, when it is published later this year. The following highlights the Administration's proposals for the programs of the PSAs, giving particular attention to new initiatives and to other program changes.

Bureau of the Census (Census Bureau), Department of Commerce: Funding is requested to provide continued support for ongoing Census Bureau programs and to: (1) begin major field operations for the 2020 Census, including the nationwide in-field address canvassing operation, as well as final preparations for the collection of 2020 Census respondent data in FY 2020; (2) continue development and refinement of capabilities for the Census Enterprise Data Collection and Processing

System in support of the 2020 Census; (3) complete data collection and begin processing and dissemination for the 2017 Economic Census and Census of Governments; and (4) support further transformation of Census Bureau data dissemination through the Center for Enterprise Data Services and Consumer Information.

Bureau of Economic Analysis (BEA), Department of Commerce: Funding is requested to provide support for core programs including the production of some of the Nation's most critical economic statistics including GDP and to continue: (1) exploration of new and nontraditional data sources to improve the accuracy and coverage of official statistics; (2) research on expanding the geographic detail of GDP to over 3,100 U.S. counties; and (3) work to accelerate key data sources for the initial estimates of GDP to achieve more accurate early reads of U.S. economic growth.

Bureau of Justice Statistics (BJS), Department of Justice: Funding is requested to maintain BJS's portfolio of statistical programs and to: (1) continue to support the redesign efforts of the National Crime Victimization Survey and its supplements and field redesigned surveys in 2020; (2) use criminal history records to support various projects to assess criminal histories and recidivism rates of persons admitted to state prisons, compare the attributes of U.S. criminal history record systems to other industrialized countries, and continue to identify and work with states to improve the quality, accuracy, and comprehensiveness of their criminal history records; (3) continue redesign efforts on the Survey of Inmates in Local Jails to collect information on individual characteristics of jail inmates, current offenses and detention status, characteristics of victims, criminal histories, family background, gun possession and use, prior opiate and alcohol use and treatment, medical and mental health, personal characteristics, and programs and services provided in jail; (4) expand the use of administrative records to support various projects, such as using criminal history records to examine prisoner and probationer recidivism, explore the feasibility of building a national collection of arrest booking statistics, and expanding record linkages among survey, administrative, and operational records from the Census Bureau, other Office of Justice (OJP) components, and other Federal agencies to support research on various topics; and (5) provide continued support to OJP components and other Federal agencies through BJS's statistical infrastructure to examine program outcomes and improve measures to better understand the U.S. justice system, for example by looking at how the flow of Bureau of Justice Assistance Byrne/Justice Assistance Grant funds impacts changes in crime rate at the jurisdiction level and assisting the Office of Victims of Crime's efforts to collect more geographic data on victimization.

Bureau of Labor Statistics (BLS), Department of Labor: Funding is requested to explore methods to incorporate questions from the Telephone Point of Purchase Survey (TPOPS) into the Consumer Expenditure (CE) Survey. The BLS could improve survey efficiencies by incorporating the unique TPOPS questions into the CE Survey, thereby eliminating TPOPS as a stand-alone sur-

vey, as well as its overhead costs, addressing the critical need for a cost-effective alternative to TPOPS, and reducing global respondent burden. Funding is also requested to determine the feasibility of expanding collection capabilities for additional Current Employment Statistics (CES) and Quarterly Census of Employment and Wages (QCEW) information by adding a new Electronic Data Interchange (EDI) Center. Expanding the EDI operation would allow for more efficient data collection and reduce respondent burden for these programs.

Bureau of Transportation Statistics (BTS), Department of Transportation: Funding is requested to initiate a major research program to develop methods and new data sources for supplementing and enhancing portions of the Freight Analysis Framework and reducing respondent burden for the Commodity Flow Survey.

Economic Research Service (ERS), Department of Agriculture: Funding is requested for ERS's core programs of research, data analysis, and market outlook. Proposals for ERS budget priorities include research that: (1) builds on unique or confidential data sources or investments at the Federal level; (2) provides coordination for a national perspective or framework; (3) requires sustained investment and large teams; (4) directly serves the U.S. Government's or USDA's long-term national goals; and (5) addresses questions with short-run payoff or that have immediate policy implications. ERS also seeks to cover the breadth of USDA programs (except forestry) and provide funding to ensure sustained expertise in the analysis of farming, commodity markets and trade, natural resources and the environment, rural communities, food safety, food markets, and nutrition.

Energy Information Administration (EIA), Department of Energy: Funding is requested for EIA to maintain recent program enhancements, continue most core statistical and analysis activities, and follow through on planned cybersecurity initiatives. At the requested level, EIA would continue to (1) enhance its energy modeling program, including planned IT maintenance and upgrades to the National Energy Modeling System (NEMS), the nation's preeminent tool for developing long-term projections of U.S. energy production, consumption, prices, and technologies; and (2) conduct the Commercial Buildings Energy Consumption Survey (CBECS) on schedule, which is the only statistically reliable source of information on energy consumption, expenditures, and end-uses in U.S. commercial buildings. EIA would delay expansion on two programs: EIA-930 collection survey that provides near real-time supply and demand electricity data for the United States; and National Oil and Gas Gateway to include well-level oil and gas data for additional states.

National Agricultural Statistics Service (NASS), Department of Agriculture: Funding is requested to support the Census of Agriculture (COA) to obtain agricultural statistics for each County, State, and the Nation. Additional funding requested for the geospatial program would be used to integrate the Decision Support System (DSS) into NASS processes and to move production of the Cropland Data Layer (CDL) and derivative products into a secure cloud environment. The DSS integrates weath-

er, climate and crop information, customized to match the time-frame for NASS's weekly Crop Progress and Condition Reports (CPCR). Processing the data using a cloud-based service would create efficiencies and enable research to move rapidly to produce estimates for smaller geographical areas and for more commodities, especially specialty crops. The Budget also request \$5 million in additional funding to conduct the Farm Labor Survey (FLS). The survey instrument is undergoing modifications and cognitive testing to ensure that the wage rate is reflecting current trends in the industry. Additionally, the granularity of data published is under review in an effort to continue to meet stakeholder needs. In FY 2019, NASS will publish the first FLS results that are based on the improved survey instrument at increased levels of granularity.

National Center for Education Statistics (NCES), Department of Education: Funding is requested to provide support for NCES ongoing activities and to: (1) support operations of the National Assessment of Education Progress (NAEP) which is the only source of nationally comparable information about students' knowledge and skills across a wide range of academic topics; (2) support U.S. participation in the 2019 Trends in International Mathematics and Science Study (TIMSS) in grades 4 and 8 – essential for evaluating how U.S. students compare to students in many of the nation's primary economic competitors; (3) support development of the next high school longitudinal study scheduled for national collection starting in 2020 with a nationally representative cohort of 9th grade students; (4) support for evaluation of approaches to integrate NAEP information about students and National Teacher and Principal Survey (NTPS) information about teachers to both improve operational efficiency and increase available information; (5) support completion of the first administrative record driven collection of the National Postsecondary Student Aid Study (NPSAS-AC) to provide more regular data on how students are financing college education; and (6) evaluate new approaches to improve response rates and efficiency of the National Household Education Surveys (NHES).

National Center for Health Statistics (NCHS), Department of Health and Human Services: Funding is requested to provide support for ongoing NCHS programs and to: (1) enhance the agency's data linkage program which creates new information products through linkages of survey records and administrative data to maximize the utility of NCHS data; (2) continue the expansion and modernization of electronic death reporting to provide more timely information to decision makers and the public on deaths significant for public health; (3) enhance the quality and usability of surveys that are widely-used for health policy and program development, such as the National Health Interview Survey and the National Health and Nutrition Examination Survey; (4) further reduce the turnaround time associated with research access to NCHS-compiled birth and death data with continued support of the Vital Statistics Rapid Release program and the new monthly drug overdose death reports; (5) test and implement modules to the National Health and Nutrition

Examination Survey to address emerging health topics and adopt new methods and technologies for the survey's examination and laboratory components; and (6) advance research and innovation to address survey response rate issues and improve metrics for assessing data quality.

National Center for Science and Engineering Statistics (NCSES), National Science Foundation: Funding is requested to maintain NCSES ongoing activities measuring research and development trends, the science and engineering workforce, U.S. competitiveness, and the condition and progress of STEM education. NCSES seeks to preserve recent gains in coverage and data quality and to explore and develop more cost-efficient measures of innovation, entrepreneurship, and competitiveness utilizing non-survey data in these areas: (1) the impact of open source software on the economy, (2) non-traditional pathways to working in STEM, and (3) innovation through company administrative data.

Office of Research and Evaluation Statistics (ORES), Social Security Administration: Funding is requested to continue our efforts to ensure that policymakers and the public have access to objective, scientific and methodologically sound data and analysis as the dialogue on how to strengthen and reform Social Security continues. In support of this effort, we intend to consolidate the current Retirement Research Consortium and Disability Research Consortium into a single program with a scope equivalent to the two currently existing programs. This single program will address issues related to Supplemental Security Income, and Retirement, Survivors, and Disability Insurance. By funding the combined Retirement and Disability Research Consortium, we will continue to maintain our capability to produce policy relevant research on retirement, to address a shortage of disability policy research, and foster collaborative research with other Federal agencies.

Statistics of Income (SOI), Treasury Department: Funding is requested to provide support for ongoing SOI programs and to: (1) provide continued opportunities to study the impacts of tax law and economic changes on tax administration by further integrating existing administrative data with edited data to allow for improved data linkages across sectors, building on existing efforts that have reduced cost and improved timeliness by streamlining data processing, thus reducing the number of, or eliminating the need for, fields to be transcribed; (2) continue evaluation of sample designs for major programs, and implement changes to the designs to expand population coverage and improve estimation; (3) expand geographic data releases to provide the public with extensive small-area estimates for the filing population of individual taxpayers; (4) support innovative research with the potential to improve tax administration by working with experts within and outside Government; (5) ensure timely data releases to reflect the impact of legislative changes on the tax system; (6) work with other agencies to develop new products, insights, and/or methods for expanding access to data for research purposes while protecting individual taxpayer privacy; (7) conduct holistic assessments of projects to identify opportunities

to further develop relationships between SOI products, thus providing more comprehensive and statistically useful data to customers; (8) continue efforts to modernize SOI's public communications by developing extensive data visualizations, conducting social media outreach, and continue redesigning the public Tax Stats web pages; and (9) continue efforts to address the impact of IRS' con-

solidation of its Submission Processing Centers, working to minimize the effects of the center closures on the quality and timeliness of SOI's statistical products. 8 Includes funds for salaries and expenses. The FY 2018 Analytical Perspectives report did not include funds for salaries and expenses.

Table 15–1. 2017–2019 BUDGET AUTHORITY FOR PRINCIPAL STATISTICAL AGENCIES¹
(In millions of dollars)

Agency	Actual 2017	Estimate	
		2018 ²	2019
Bureau of Economic Analysis	104	97	98
Bureau of Justice Statistics ³	91	89	78
Bureau of Labor Statistics	609	605	609
Bureau of Transportation Statistics	26	26	26
Bureau of the Census ⁴	1,497	1,488	3,827
Salaries and Expenses/Current Surveys and Programs	276	274	279
Periodic Censuses and Programs	1,210	1,202	3,548
Economic Research Service	87	77	45
Energy Information Administration	122	118	118
National Agricultural Statistics Service ⁵	171	170	165
National Center for Education Statistics ⁶	295	301	299
Statistics	110	109	113
Assessment	149	148	149
National Assessment Governing Board	8	8	8
National Center for Health Statistics	160	159	155
National Center for Science and Engineering Statistics, NSF ⁷	60	57	46
Office of Research, Evaluation, and Statistics, SSA	24	32	31
Statistics of Income Division, IRS ⁸	34	34	35

¹ Reflects any rescissions and sequestration.

² FY 2018 amounts reflect the annualized continuing resolution levels.

³ Includes directly appropriated funds as well as funds transferred to BJS for research and statistical services; management and administrative (M&A) costs; and assessments for rescissions.

⁴ Amounts include discretionary and mandatory funds. 2018 estimate does not include a budget adjustment of \$187M.

⁵ Includes funds for the periodic Census of Agriculture of \$43, \$42, and \$45 million in 2017, 2018, and 2019, respectively.

⁶ Includes funds for salaries and expenses of \$18, \$18, and \$18 million in 2017, 2018, and 2019, respectively, which are displayed in the Budget Appendix under the Institute of Education Sciences (IES). In addition, the National Center for Education Statistics manages the IES grant program for the State Longitudinal Data System which is funded at \$5 million and \$6 million 2017 and 2018, respectively, and the EDFacts Initiative which is funded at \$5 million, \$12 million, and \$11 million in 2017, 2018, and 2019 respectively.

⁷ Includes funds for salaries and expenses of \$8.5, \$8.7, and \$8.7 million in 2017, 2018, and 2019, respectively.

⁸ Includes funds for salaries and expenses. The FY 2018 Analytical Perspectives report did not include funds for salaries and expenses.

