Congressional Research Service
Informing the legislative debate since 1914

Federal Workforce Statistics Sources: OPM and OMB

Updated March 25, 2020

Congressional Research Service
https://crsreports.congress.gov
R43590

CRS REPORT
Prepared for Members and
Committees of Congress

Summary

This report describes online tools, reports, and data compilations created by the Office of Management and Budget (OMB) and the Office of Personnel Management (OPM) that contain statistics about federal employees and the federal workforce.

The report also describes key characteristics of each resource and briefly discusses selected methodological differences, with the intention of facilitating the selection of appropriate data for specific purposes. This report is not intended to be a definitive list of all information on the federal workforce. It describes significant and recurring products that contain data often requested by Members or congressional staff.

Contents

Introduction 1
Comparing Methodologies: On-Board Personnel Versus Full-Time Equivalents 1
Method 1: Full-Time Equivalent Employment (OMB) 1
Method 2: On-board Employment (OPM) 2
Office of Personnel Management 3
FedScope 3
Employment and Trends 5
Common Characteristics of Government 5
Sizing Up the Executive Branch of the Federal Workforce 5
Office of Management and Budget 5
Budget of the United States 5
Analytical Perspectives 6
Appendix 7
Historical Tables 7
Consideration of Sources 7

Tables

Table 1. Measuring Full-time Equivalent Employment 2
Table 2. Federal Civilian Employees On-Board Personnel, 2012-2018 4
Table 3. Total Federal Employment 6

Contacts

Author Information 7

Introduction

According to the Office of Personnel Management (OPM), the federal workforce is composed of an estimated 2.1 million civilian workers.[1] Several federal agencies collect, compile, and publish statistics about this workforce. Sources may vary in their totals due to differences in the methods used to compile these statistics.

For example, some sources rely on "head counts" of employees (OPM), some on total hours worked (such as the Office of Management and Budget [OMB]), some on surveys of employing agencies, and others on self-identification by workers surveyed in their homes.

In addition, federal civilian employee databases may exclude particular departments, agencies, or branches of government. Some may also account for temporary or seasonal employees (such as those employed by the U.S. Census) depending on the time of year the statistics are generated.

This report describes these sources and identifies key differences in methodologies, including data collection used by OMB and OPM. Understanding these sources and their differences will facilitate selecting appropriate data for specific purposes.

Comparing Methodologies: On-Board Personnel Versus Full-Time Equivalents[2]

One example of a key methodological distinction is the difference between "full-time equivalents" (FTEs) and on-board personnel. The following two examples illustrate how the FTE and on-board methods can be used to derive different federal workforce totals.

Method 1: Full-Time Equivalent Employment (OMB)

Full-time equivalent employment is a term used to quantify employment as a function of hours worked rather than by the number of individual employees. One FTE is also known as one work year. The number of FTEs in an agency is calculated by calculating the total number of regular straight time hours (i.e., not including overtime or holiday hours) worked by employees and dividing that figure by the number of compensable hours applicable to each fiscal year. One work year, or one FTE, is equivalent to 2,080 hours[3] of work.

Table 1 offers examples in which there is a difference between the actual number of employees and the number of FTEs working the same number of total hours. It also illustrates how measuring employment by hours can substantially change the perception of the number of employees it takes to accomplish the work.

[1] Office of Personnel Management (OPM), March 2019, available at http://www.fedscope.opm.gov/. This estimate does not include the agencies and departments listed at http://www.fedscope.opm.gov/datadefn/aehri_sdm.asp#cpdf3.

[2] This section was created with assistance from Barbara Schwemle, Analyst in American National Government.

[3] The figure of 2,080 hours in the work year is derived as follows: 8 hours per day multiplied by 10 days (in a 2-week pay period) equals 80 hours; 80 hours multiplied by 26 pay periods (in a year) equals 2,080 work hours.

Table 1. Measuring Full-time Equivalent Employment

Number of Actual Employees	Work Schedule	Normal Hours Worked Per Week	Total number of weeks	Total Compensable Hours	Full-time Equivalents[a]
1	Full-time	40	52	2,080	1
2	Part-time	20	52	2,080	1
5	Full-time	40	52	10,400	5
10	Part-time	20	52	10,400	5
17	Part-time	20	52	17,680	8.5
163	Part-time	20	52	168,520	81.5

Source: Congressional Research Service (CRS) calculations based on guidelines located in Section 85 of OMB Circular No. A-11.

a. FTE equals the total number of compensable hours worked divided by 2,080 hours.

FTE employment numbers are used by OMB to manage employment in departments and agencies. The requirements for reporting FTE employment in the President's Budget are prescribed in Section 85 of OMB Circular No. A-11 on "Estimating Employment Levels and the Employment Summary (Schedule Q)."[4]

FTE data are published annually in OMB's *Budget of the United States Government* under the individual department and agency accounts in the *Appendix* as well as in the *Analytical Perspectives* and *Historical Tables* volumes.[5]

Method 2: On-board Employment (OPM)

OPM defines on-board employment as the number of employees in pay status at the end of the quarter. Data for on-board employment provide individual employee "head counts" in most departments and agencies as of a particular date, including full-time, part-time, and seasonal employees. For example, OPM's *Employment and Trends* report[6] and OPM's FedScope database[7] contain on-board employment head counts.

[4] U.S. Executive Office of the President, Office of Management and Budget, *Preparation, Submission, and Execution of the Budget* (Washington: GPO, December 2019), available at https://www.whitehouse.gov/wp-content/uploads/2018/06/a11.pdf. See Section 85.5 (c) for a detailed explanation of how FTEs are calculated.

[5] For example, see U.S. Executive Office of the President, Office of Management and Budget, *Budget of the United States Government, Analytical Perspectives Fiscal Year 2021* (Washington: GPO, 2020), pp. 52-53, and U.S. Executive Office of the President, Office of Management and Budget, *Budget of the United States Government, Historical Tables Fiscal Year 2021* (Washington, GPO, 2020), pp. 361-362.

[6] U.S. Office of Personnel Management, *Federal Civilian Workforce Statistics, Employment and Trends* (Washington: OPM). The January 2009 to September 2013 reports are available at http://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/#url=Employment-Trends.

[7] U.S. Office of Personnel Management, FedScope database, available at http://www.fedscope.opm.gov/. The database includes all executive branch agencies except the Board of Governors of the Federal Reserve System, the Central Intelligence Agency, the Defense Intelligence Agency, foreign service personnel at the State Department, the National Geospatial Intelligence Agency, the National Security Agency, the Office of the Director of National Intelligence, the Office of the Vice President, the Postal Regulatory Commission, the Tennessee Valley Authority, the White House Office, and the U.S. Postal Service. It does not include the Foreign Service. For further information, see the section labeled "Coverage" on the EHRI-SDM description page, available at http://www.fedscope.opm.gov/datadefn/

When calculating on-board personnel, each full-time, part-time, and seasonal worker is counted separately. When calculating FTEs, the collective hours those personnel work is counted. For example, an agency reporting 10 FTEs could conceivably report 20 "on-board" employees, depending on employees' work schedules.

In addition, depending on the specific date the employees are counted, an "on-board" headcount may result in wider variances in employment numbers than a count of FTEs. For example, the Census Bureau planned to hire 500,000 Census enumerators leading up to the 2020 Census,[8] many of whom were likely to be part-time employees. A count of federal *on-board employees* calculated during the employment of these Census enumerators will likely result in a substantially higher number than a count of federal FTEs during the same time period. The reason being that an FTE count examines hours worked rather than individual employee numbers.

Office of Personnel Management

OPM is an independent agency[9] that functions as the central human resources department of the executive branch. In fulfilling its mission, OPM collects, maintains, and publishes data on a large portion of the federal civilian workforce.

In FY2010, OPM established a system called the Enterprise Human Resources Integration-Statistical Data Mart (EHRI-SDM). This automated system provides access to personnel data for 96% of nonpostal federal civilian executive branch employees. The database does have exclusions; for example, not all executive branch agencies submit their personnel data to OPM. These exclusions include some national security and intelligence agencies, and the Postal Service.[10] Even with these exclusions, the EHRI-SDM is widely regarded as the most comprehensive resource available on the size and scope of the federal workforce.

More than 100 data elements are collected for each federal employee within the EHRI-SDM. These data are aggregated by OPM and published in the resources described below.

FedScope

FedScope is a website that provides public access to the EHRI-SDM, covering the most recent five years of employment, accession, and separation data provided by approximately 120 federal agencies.[11] It is available at http://www.fedscope.opm.gov/.

FedScope data are presented in five subject categories, called "cubes," each covering a different subject and time span.[12] The following are descriptions of the data cubes available through FedScope:

---

aehri_sdm.asp.

[8] U.S. Census Bureau, "2020 Census Nationwide Recruitment Campaign Gets Underway," October 22, 2019, available at https://www.census.gov/newsroom/press-releases/2019/2020-recruitment-campaign-launch.html.

[9] P.L. 95-454, Title II, §201(a), 92 Stat. 1119, October 13, 1978.

[10] For a detailed analysis of USPS employment, see CRS Report RS22864, *U.S. Postal Service Workforce Size and Employment Categories, FY1995-FY2014*, by Kathryn A. Francis.

[11] For further information, see the section market "Coverage," available at http://www.fedscope.opm.gov/datadefn/aehri_sdm.asp.

[12] For definitions of each variable, see Office of Personnel Management, "FedScope Data Definitions," February 18, 2014, available at http://www.fedscope.opm.gov/datadefn/DataDefinitions.pdf.

- **Employment**. This set of cubes contains the total number of federal employees of the included agencies, as well as other information such as age, gender, length of service, occupation, occupation category, pay grade, salary level, type of appointment, work schedule, agency, and location. Data are published quarterly (March, June, September, and December) for the most recent eight fiscal years. September data, which align with the end of the fiscal year, are available from 1998 to the present.
- **Accession**. This set of cubes contains the number of people added to the federal civilian workforce each fiscal year. It includes data elements on employees hired from outside the government and those who transferred from one type of federal service category to another.[13] The most recent 15 fiscal years of data are available.
- **Separation**. This set of cubes contains the number of people who leave the federal civilian workforce each fiscal year. It captures data elements on employees who transferred to other agencies, voluntarily resigned, retired, experienced a reduction-in-force (RIF), were terminated, or died while employed. The most recent 15 years of data are available.
- **Employment Trends**. This set of cubes displays the most recent five years of employment cube data together in one interface, facilitating workforce data comparisons and trend recognition.
- **Diversity**. This set of cubes sorts data by an Ethnicity and Race Indicator. Data elements for 13 categories of racial and ethnic groups are available for the most recent 8 years. September data, which align with the end of the fiscal year, are available from 2006 to the present.

Table 2 provides some of the most commonly requested data available from FedScope.

Table 2. Federal Civilian Employees On-Board Personnel, 2012-2018

	2012	2013	2014	2015	2016	2017	2018
United States	2,057,701	2,018,129	1,998,681	2,029,158	2,053,984	2,045,296	2,055,731
U.S. Territories	14,910	14,417	14,548	12,436	12,171	12,404	14,694
Foreign Countries	36,108	33,486	31,354	29,173	29,942	29,088	29,407
Unspecified Areas	1,502	1,230	1,224	949	941	959	970
Total	2,110,221	2,067,262	2,045,707	2,071,716	2,097,038	2,087,747	2,100,802

Source: Office of Personnel Management (OPM), FedScope, http://www.fedscope.opm.gov.

Notes: Each total is an "on-board" count for September of the year noted. Current coverage does not include the Board of Governors of the Federal Reserve, Central Intelligence Agency, Defense Intelligence Agency, foreign service personnel at the State Department, National Geospatial-Intelligence Agency, National Security Agency, Office of the Director of National Intelligence, Office of the Vice President, Postal Regulatory Commission, Tennessee Valley Authority, U.S. Postal Service, White House Office, foreign nationals overseas, Public Health Service's Commissioned Officer Corps, non-appropriated fund employees, selected legislative branch agencies, the judicial branch, or the military.

[13] The three service categories are competitive service, excepted service, and Senior Executive Service.

Employment and Trends

Employment and Trends is an occasional publication from OPM based on on-board employee data. It provides data on executive departments and independent agencies, including the Department of Defense (DOD) civilian employees, Executive Office of the President, legislative branch, and judicial branch. It presents selected data in detailed statistical tables and includes information by government branch, agency, and location. Introductory material in *Employment and Trends* explains the data presented, time lags in data releases, and caveats to consider when calculating workforce totals. The most recently released version of this resource is available at http://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/#url=Employment-Trends.

Common Characteristics of Government

Common Characteristics of Government is an annual publication that includes a brief outline of OPM's federal employee databases and it includes frequently requested data. The latest edition (FY2017) is available at https://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/common-characteristics-of-the-government/ccog2017.pdf.

Sizing Up the Executive Branch of the Federal Workforce

Sizing Up the Executive Branch of the Federal Workforce is an OPM report that provides access to frequently requested data related to the executive branch. This report includes some information related to the size of the executive branch by month and year, types of employment, and other frequently requested data. The most recent report (FY2017) is available at https://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/reports-publications/sizing-up-the-executive-branch-2016.pdf.

Office of Management and Budget

OMB is the largest component of the Executive Office of the President. OMB reports directly to the President, and it assists executive departments and agencies in implementing priorities and commitments of the President.[14] OMB produces the *Budget of the United States*, which includes federal employee statistics created using the FTE counting method.

Budget of the United States

The Budget of the United States, sometimes referred to as the President's Budget, is a four-volume set of documents that includes detailed financial information on individual programs and appropriations accounts. Three volumes of the budget include information on direct civilian FTEs.[15] Tables in the President's Budget typically include actual FTE levels for prior fiscal years

[14] More information on OMB's mission and structure can be found at http://www.whitehouse.gov/omb/.

[15] U.S. Executive Office of the President, Office of Management and Budget, *Budget of the United States Government, Analytical Perspectives Fiscal Year 2021* (Washington: GPO, 2020), pp. 52-53; U.S. Executive Office of the President, Office of Management and Budget, *Budget of the United States Government, Historical Tables Fiscal Year 2021* (Washington, GPO, 2020), pp. 361-362; and U.S. Executive Office of the President, Office of Management and Budget, *Budget of the United States Government Appendix Fiscal Year 2021* (Washington: GPO, 2020), pages on which "Employment Summary" table appears (i.e., Capitol Police on p. 16, Office of Congressional Workplace Rights on p. 18, Congressional Budget Office on p. 18, Architect of the Capital Programs on pp. 19-26).

and estimates for the two most current fiscal years. The U.S. Government Publishing Office website posts budget volumes dating back to FY1996 at https://www.govinfo.gov/app/collection/BUDGET/.

Table 3 illustrates an example of some commonly requested federal employment data found within the President's Budget.

Table 3. Total Federal Employment

(as measured by full-time equivalents)

Description	2019 Actual	2020 Estimate	2021 Estimate	Change: 2019 to 2020	
				FTE	Percent
Executive Branch Civilian					
All Agencies, Excluding Postal Service	2,085,496	2,206,137	2,172,433	-33,704	-1.6%
Postal Service[a]	583,573	585,682	578,984	-6,698	-1.2%
Subtotal, Executive Branch Civilian	2,669,069	2,791,819	2,751,417	-40,402	-1.5%
Executive Branch Uniformed Military					
Department of Defense[b]	1,363,348	1,350,264	1,356,861	6,597	0.5%
Department of Homeland Security (USCG)	42,588	50,230	50,511	281	0.6%
Commissioned Corps (DOC, EPA, HHS)	6,480	6,532	6,626	94	1.4%
Subtotal, Uniformed Military	1,412,416	1,407,026	1,413,998	6,972	0.5%
Total, Executive Branch	4,081,485	4,198,845	4,165,415	-33,430	-0.8%
Legislative Branch[c]	31,182	31,877	32,221	344	1.1%
Judicial Branch	32,973	33,716	34,143	427	1.3%
TOTAL	**4,145,640**	**4,264,438**	**4,231,779**	**-32,659**	**-0.8%**

Source: *President's FY2021 Budget, Analytical Perspectives*, Table 5-2, p. 53, https://www.govinfo.gov/content/pkg/BUDGET-2021-PER/pdf/BUDGET-2021-PER.pdf.

a. Includes the U.S. Postal Service Office of Inspector General and Postal Regulatory Commission.

b. Includes activated Guard and Reserve members on active duty. Does not include full-time support (Active Guard & Reserve (AGRSs)) paid from Reserve Component appropriations.

c. FTE data not available for the Senate (positions filled were used for actual year and extended at same level).

The following volumes of the President's Budget include information on federal employees. The current volumes can be accessed https://www.whitehouse.gov/omb/budget/.[16]

Analytical Perspectives

The *Analytical Perspectives* volume typically includes information on the federal workforce, sometimes including information on occupations, trends, education level, age distribution, and other factors. The most current *Analytical Perspectives* volume of the President's Budget is available at http://www.whitehouse.gov/omb/analytical-perspectives/.

[16] The U.S. Government Publishing Office website posts complete volumes of the *Budget of the United States Government* back to FY1996. They can be accessed at https://www.govinfo.gov/app/collection/BUDGET/.

Appendix

The *Appendix* volume typically includes an estimate of individual agency FTEs based on the President's proposal along with an estimate and actual FTE count for the prior two years. The most recent *Appendix* volume of the President's Budget is available at http://www.whitehouse.gov/omb/appendix.

Historical Tables

The *Historical Tables* volume of the President's Budget includes historical data on topics such as budget, receipts, outlays, and deficits. This volume also typically includes historical employment counts. The most recent *Historical Tables* volume of the President's Budget is available at http://www.whitehouse.gov/omb/historical-tables.

Consideration of Sources

The resources described in this report contain data often requested by Members or congressional staff. The sources covered differ in methodology, such as how employees are counted (FTEs versus on-board employees), which agencies are included or excluded from counts, and the frequency of data collection. Users should be aware of these differences when using federal workforce statistics from these sources.

Author Information

Julie Jennings
Senior Research Librarian

Jared C. Nagel
Senior Research Librarian

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.