

2002 Census of Government Employment Methodology

The U.S. Census Bureau sponsors and conducts this census of state and local governments as authorized by Title 13, United States Code, Section 161.

The 2002 Census of Government Employment measures the number of federal, state, and local civilian government employees and their gross payrolls for the pay period including March 12, 2002.

Population of Interest

The population of interest for this census includes the civilian employees of all the Federal Government agencies (except the Central Intelligence Agency, the National Security Agency, and the Defense Intelligence Agency), all agencies of the 50 state governments, and 87,525 local governments (i.e., counties, municipalities, townships, special districts, and school districts) including the District of Columbia.

Content of the Survey

The survey provides data on full-time and part-time employment, part-time hours worked, full-time equivalent employment, and payroll statistics by governmental function (i.e., elementary and secondary education, higher education, police protection, fire protection, financial administration, central staff services, judicial and legal, highways, public welfare, solid waste management, sewerage, parks and recreation, health, hospitals, water supply, electric power, gas supply, transit, natural resources, correction, libraries, air transportation, water transport and terminals, other education, state liquor stores, social insurance administration, and housing and community development).

The payroll data for the Federal Government are total monthly payroll only. There is no detail available for full-time or part-time employee payrolls. Three functions apply only to the Federal Government and have no counterpart at the state and local government levels: national defense and international relations, postal service, and space research and technology.

The questionnaires that were used to collect these data can be viewed at [<GET FORMS>](#) on the Government Employment and Payroll Website.

Critical definitions include the following:

Employment: Employment refers to all persons gainfully employed by and performing services for a government.

Employees: State and local government employees include all persons paid for personal services performed, including persons paid from federally funded

programs, paid elected or appointed officials, persons in a paid leave status, and persons paid on a per meeting, annual, semiannual, or quarterly basis. Unpaid officials, pensioners, persons whose work is performed on a fee basis, and contractors and their employees are excluded from the count of employees. For federal employees, employee counts are the on-board "head count" as of the end of the report period. The data collected for this survey include all federal civilian employees, including seasonal and intermittent employees, and employees on foreign assignments residing outside the 50 states and the District of Columbia. Employees of the Central Intelligence Agency, the National Security Agency, and the Defense Intelligence Agency are not included in any of the data presented by government function. Federal judges, members of Congress and their staffs, employees of the Congressional Budget Office, and elected (with the exception of the President) and appointed officials of the Executive Branch are included. Employees of non-appropriated funds of defense activities are not classified as federal employees; therefore, they are excluded.

Full-time employees: Full-time employees are defined to include those persons whose hours of work represent full-time employment in their employing government.

Part-time employees: Part-time employees are those persons who work less than the standard number of hours for full-time work in their employing government.

Full-time equivalent: Full-time equivalent (FTE) is a computed statistic representing the number of full-time employees that could have been employed if the reported number of hours worked by part-time employees had been worked by full-time employees. This statistic is calculated separately for each function of a government by dividing the "part-time hours paid" by the standard number of hours for full-time employees in the particular government and then adding the resulting quotient to the number of full-time employees.

Payroll: Payroll amounts represent gross payrolls for the 1-month period of March (31 days). The gross payroll includes all salaries, wages, fees, commissions, bonuses, or awards paid to employees during the pay period that includes the date of March 12. Payroll amounts reported for a period other than 1-month are converted to represent an amount for the month of March. All payroll figures are represented in current whole dollars and have not been adjusted for inflation.

Conversion of a reported payroll to a payroll amount that would have been paid during a 31-day month is accomplished by multiplying the reported payroll by an appropriate factor. For example, a 2-week payroll is multiplied by 2.214; a 1-week payroll is multiplied by 4.429; and a twice-a-month payroll is multiplied by 2.000.

Part-time hours: These data represent the number of hours worked by part-time employees during the pay period. Note: These data are not collected for publication but rather are used to calculate full-time equivalent employment data.

Data Collection

The data that are collected in this survey are public record and are not confidential¹. Data in these files are based on information obtained in the Census of Government Employment. Census Bureau staff compiled Federal Government data from records of the U.S. Office of Personnel Management. Thirty-seven of the state governments provided data from central payroll records for all or most of their agencies/institutions. Data for agencies and institutions for the remaining state governments were obtained by mail canvass questionnaires. Local governments were also canvassed using a mail questionnaire. However, elementary and secondary school system data in Florida, North Carolina, North Dakota, and Washington were supplied by special arrangements with the state education agency in each of these states. The E-1, E-2, E-3, E-6, E-7, and E-9 forms were available on the Employment Website developed for reporting data electronically. Of the respondents, 10.0 percent of local government respondents and 23.1 percent of state agency respondents chose to respond electronically.

The collection schedule follows:

| | |
|---------|---|
| 03/2002 | Initial mailout |
| 06/2002 | Follow-up mailout |
| 09/2003 | Data editing and imputation completed |
| 11/2003 | Released to Census Bureau Internet |
| 05/2004 | Released <i>Employment of Major Local Governments</i> (Volume 3, No. 1) |
| 09/2004 | Released <i>Compendium of Public Employment</i> (Volume 3, No. 2) |
| 10/2004 | Revised data released to Census Bureau Internet |

Data Processing

Editing

Editing is a process that tries to ensure the accuracy, completeness, and consistency of survey data. Efforts are made at all phases of collection, processing, and tabulation to minimize reporting, keying, and processing errors.

Although some edits are built into the Internet data collection instrument and the data entry programs, the majority of the edits are performed post collection. Edits consist primarily of two types: (1) *consistency edit* and (2) an *historical ratio edit* of the current year's reported value to the prior year's value.

The *consistency edits* check the logical relationships of data items reported on the form. For example, if a value exists for employees for a function then a value

¹ Title 13, United States Code, Section 9.

must exist for payroll also. If part-time employees and payroll are reported then part-time hours must exist and vice versa.

For each function where employees are reported, the *historical ratio edits* compare data for the number of employees and the average salary between reporting years. If data fall outside of acceptable tolerance levels, the item is flagged for further review. Additional checks are made comparing data from the Annual Finance Survey to data reported on the Census of Government Employment to verify that if employees are reported on the Census of Government Employment at a particular function the government also reported a corresponding expenditure on the Annual Finance Survey.

For *historical ratio edits* and *consistency edits*, the edit results are reviewed by analysts and adjusted as needed. When the analyst is unable to resolve or accept the edit failure, contact is made with the respondent to verify or correct the reported data.

Imputation

Not all respondents answer every item on the questionnaire. There are also questionnaires that are not returned despite efforts to gain a response. Imputation is the process of filling in missing or invalid data with reasonable values in order to have a complete data set for estimating state and national totals.

For nonresponding general purpose governments and for dependent and independent school districts, the imputations were based on recent historical data from either a prior year annual survey or the 1997 Census of Government Employment, if available. These data were adjusted by a growth rate that was determined by the growth of units that were similar (in size, geography, and type of government) to the nonrespondent. If there was no recent historical data available, the imputations were based on the data from a randomly selected donor that was similar (based on the same criteria) to the nonrespondent. Each of the selected donor's data items were adjusted by dividing the data item by the population (or enrollment) of the donor and multiplying the result by the nonrespondent's population (or enrollment).

For special district governments, if prior year payroll data were available, the data were brought forward with a national level growth rate applied to the prior year payroll figures. No growth rate was applied to full-time or part-time employees. Otherwise, the data were imputed to be zero. In cases where equivalent-quality (as determined by research) secondary data sources existed, the data from those sources were used.

Note: For 2002, the individual unit imputed data were not available on the data files released to the public.

Tabulation

After the data were edited and imputed, the 2002 Census of Government Employment data were aggregated to yield the viewable and downloadable files that are available on the Website. In the publications for employment statistics, total full-time equivalent employment, total March payroll, and full-time equivalent per capita ratios are published.

Sampling Variability

The data for the census are not subject to sampling and do not contain sampling error. The user should be mindful that the data for years not ending in '2' or '7' are from sample surveys and are subject to sampling error. Discussions of sampling error are available in the survey methodology descriptions for those years. For any comparisons of census year data to a sample year, the data user must perform hypothesis tests using the survey year's sampling errors. For the census year, the sampling error is zero.

Nonsampling Errors

Although every effort (as described in the Data Processing section) is made in all phases of collection, processing, and tabulation to minimize errors, the sample data are subject to nonsampling errors (such as, inability to obtain data for every variable from all units in the sample, inaccuracies in classification, response errors, misinterpretation of questions, mistakes in keying and coding, and coverage errors). These same errors may be evident in census collections and may affect the Census of Governments data used to adjust the sample during the estimation phase and used in the imputation process.

The overall response rate to the 2002 Census of Government Employment was 76.2 percent. All of the 50 state governments responded to the survey. The response rate was calculated as the number of responses received divided by the number of parent governments mailed minus the number of parent governments that were determined to be out of scope.

The 2002 response rates for all local governments follow:

| Type of government | Total | Respondents | Response rate (percent) |
|---|--------------|--------------------|--------------------------------|
| Local governments w/ dependent schools | 89,033 | 67,702 | 76.0 |
| Dependent school | 1,508 | 1,015 | 72.6 |
| Local governments w/o dependent schools | 87,525 | 66,687 | 76.2 |
| County | 3,034 | 2,233 | 73.6 |
| Municipal | 19,429 | 15,092 | 77.7 |
| Town or township | 16,504 | 11,389 | 69.0 |
| Independent school district | 13,506 | 10,592 | 78.4 |
| Special district | 35,052 | 27,381 | 78.1 |

