

CHAPTER 10: COMPENSATION OF EMPLOYEES

(Updated: December 2023)

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Compensation measures the total income—both wages and salaries and supplements to wages and salaries—earned by employees in return for contributing to production during an accounting period. It is the largest component of gross domestic income (GDI), of national income, and of personal income in the U.S. national income and product accounts (NIPAs). Compensation estimates are an integral part of the NIPAs, a set of accounts that provides a logical and consistent framework for presenting statistics on U.S. economic activity (see [“Chapter 2: Fundamental Concepts”](#)).

BEA’s measures of compensation provide comprehensive and consistent economic measures of the income earned by all U.S. workers. In contrast to other available measures of compensation, the NIPA measures include not just wages and salaries but also noncash benefits—such as employer contributions to pension plans, to health insurance, and to social insurance programs. Thus, the NIPA measures of compensation are particularly useful in analyses of labor’s share in the functional distribution of income. Additionally, unit labor costs—the ratio of compensation to real output—is an important indicator of potential inflation. Moreover, analyses of the components and supporting detail underlying the compensation measures are useful for considering the differences between the individual experiences of households and the picture of the economy captured in broader aggregates such as GDP and personal income. The estimates of wages and salaries—the largest component of compensation—are critical for projecting federal budgets and Social Security trust fund balances.¹

Additionally, BEA prepares associated measures of employment and hours. While the Bureau of Labor Statistics (BLS) is the principal provider of information on the labor market in the United States (including detailed data on employment, hours, and earnings), BEA’s supplemental measures are consistent with the NIPA compensation measures and therefore facilitate analyses of NIPA-based compensation and productivity by employee. These measures are described in appendix A to this chapter; they include full-time equivalent employees and hours worked.

¹ See J. Steven Landefeld, Brent R. Moulton, Joel D. Platt, and Shaunda M. Villones, [“GDP and Beyond: Measuring Economic Progress and Sustainability,”](#) *Survey of Current Business* 90 (April 2010): 12-25.

Definitions and Concepts

Compensation measures the total remuneration, in cash or in kind, that accrues to employees in return for their work during the accounting period, regardless of when they are paid. As such, the NIPA treatment of compensation is consistent with the treatment recommended by the *System of National Accounts 2008* (SNA), in which compensation reflects total remuneration and is measured on an accrual basis.² Compensation consists of the earnings of employees, but it does not include the earnings of the self-employed, which the NIPAs treat as proprietors' income (and the SNA treats as mixed income).

Compensation is equal to the sum of *wages and salaries* and of *supplements to wages and salaries*. Wages and salaries, which generally accounts for over 80 percent of compensation, consists of cash remuneration of labor (including sick or vacation pay, severance pay, commissions, tips, and bonuses), and in-kind remuneration of labor such as transit subsidies and meals. Supplements to wages and salaries consists of employer payments that are made on behalf of employees but are not included in the regular wage payments provided directly to employees—specifically, *employer contributions for employee pension and insurance funds* and *employer contributions for government social insurance*. Because these payments are made for the benefit of employees and because the value of the contributions is typically determined, in some fashion, by their labor, they are treated as compensation. Table 10.1 shows the kinds of transactions that are included in, and excluded from, compensation of employees.

Table 10.1—Content of Compensation of Employees

Category of transaction	Comments
Wages and salaries in cash	Includes monetary wages and salaries payable by employers to employees and to corporate officers at regular intervals, including piecework payments; overtime or unusual-hour payments; payments for periods away from work due to temporary discontinuation of production, such as holidays or absences for illness; allowances for unusual location or conditions; early retirement (buyout) payments; severance pay; jury, witness, and other compensatory fees; and regular supplementary allowances, such as housing allowances.³ Includes incentive payments, commissions, tips, and bonuses payable to employees and to corporate officers. Includes employee gains from exercising nonqualified stock options (NSOs).⁴

² See Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, and the World Bank, *System of National Accounts 2008*: 7.5. For a discussion of the accrual and cash methods of accounting, see “Accounting principles” in [Chapter 2](#).

³ The source data underlying the estimates of wages and salaries do not provide the separate estimates of severance payments or of payments for time away due to illness or injury that are required for excluding them from compensation (as the SNA recommends), so they are included in the NIPA measures of compensation.

⁴ NSOs are regarded as additional, taxable, income at the time they are exercised; in contrast, incentive stock options do not require the reporting of additional income and are taxed as long-term capital gains when sold. The detailed data required for treating NSOs as compensation of employees when the options are granted (as the SNA recommends) are not currently available. Instead, NSOs are valued at the time that they are exercised, and the difference between the market price at the time of the exercise and the price paid by the employee at the time of the exercise is recorded as wages and salaries. For a discussion of the SNA recommendations and BEA's research on

	Includes wages and salaries paid to employees of unincorporated enterprises. Excludes the income received by the owners or associated household members of unincorporated enterprises, which is treated as proprietors' income. Excludes the income received by tax-exempt cooperatives, which is treated as proprietors' income. Excludes reimbursement by employers of expenditures made by employees in order to carry out their work (such as purchases of tools and equipment), which are treated as intermediate expenditures by the employer.
Wages and salaries in kind	Includes employer-provided in-kind earnings, such as transit subsidies, meals, and lodging. Excludes goods or services that employers must provide in order for employees to perform their work, which are treated as intermediate expenditures by the employer.
Supplements to wages and salaries	Includes employer contributions for employee pension and insurance funds: private pension plans, government employee pension plans, private insurance funds such as group health and life insurance, workers' compensation, supplemental unemployment insurance, and publicly administered government employee insurance plans. Includes employer contributions for government social insurance: old age, survivors, and disability insurance (social security); hospital insurance; unemployment insurance; railroad retirement; pension benefit guaranty; veterans life insurance; workers' compensation; military medical insurance; and temporary disability insurance.

Employers provide employees with pension benefits largely through two mechanisms:

- Defined contribution plans provide benefits during retirement based on the amount of money that has accumulated in an employee's account as a result of employer and employee contributions to the plans and the income earned from investment of the plans' assets.
- Defined benefit plans provide benefits during retirement based on a formula that typically depends on an employee's length of service and average pay, among other factors. To fund promised benefits to retirees, defined benefit plans primarily rely on contributions from employers and employees and on the income earned on the financial assets that the plans hold.

The contributions made by employers to both types of plans are included in supplements to wages and salaries; the interest and dividend income earned on the plans' financial assets are included in personal interest income.

The NIPAs provide two measures of compensation in order to distinguish the compensation earned by all of the employees of resident U.S. employers from the compensation earned by resident U.S. employees from all employers. "Compensation of employees, paid" is the NIPA measure of the compensation paid by U.S. resident employers to their resident and nonresident employees. That is, it excludes compensation received from the rest of the world,

NSOs, see Carol E. Moylan, "[Employee Stock Options and the National Economic Accounts](#)," *Survey* 88 (February 2008): 7-13.

and it includes compensation paid to the rest of the world.⁵ “Compensation of employees” is the NIPA measure of the compensation paid by resident and nonresident employers to U.S. resident employees. That is, it excludes compensation paid to the rest of the world, and it includes compensation received from the rest of the world.

Recording in the NIPAs

As described in [Chapter 2](#), the NIPAs can be viewed as aggregations of accounts belonging to individual transactors in the economy. In the seven summary accounts of the NIPAs, “compensation of employees, paid” appears as a component of GDI in the Domestic Income and Product Account (account 1) and “compensation of employees” appears in the Personal Income and Outlay Account (account 3) as a component of personal income.⁶ Additionally, as “compensation of employees” reflects the compensation liabilities of both resident and nonresident employers, it appears as a component of national income.⁷

The NIPAs present current-dollar annual estimates of GDI by type of income, national income by type of income, and national income by sector and legal form of organization.

- The presentation of GDI by type of income includes “compensation of employees, paid” and selected aggregate components—wages and salaries to persons, wages and salaries to the rest of the world, and supplements to wages and salaries.
- The presentation of national income by type of income includes “compensation of employees” and selected aggregate components—wages and salaries for government and for the aggregate of all other sectors and supplements to wages and salaries from employer contributions for employee pension and insurance funds and from employer contributions for government social insurance.
- The presentation of national income by sector and legal form of organization also includes “compensation of employees” and selected aggregate components—wages and salaries and supplements to wages and salaries.

Additionally, annual estimates of “compensation of employees,” wages and salaries, and the major components of supplements to wages and salaries are presented by industry.

⁵ Compensation paid to the rest of the world consists of compensation paid to foreign residents temporarily working in the United States (including undocumented migratory workers) and to Canadian and Mexican workers who commute to work in the United States. Compensation received from the rest of the world consists of compensation received by U.S. residents temporarily working abroad, working in foreign diplomatic installations, or working for international organizations in the United States, and by workers from the United States who commute to Mexico or Canada.

⁶ In addition, compensation of general government employees is a product-side component of government consumption expenditures and gross investment in account 1; see “[Chapter 9: Government Consumption Expenditures and Gross Investment](#)” for more information on the NIPA presentation of government as both a consumer/investor and a producer and on the measurement of government output as the sum of the cost of its inputs.

⁷ For a discussion of the relationship between GDP, gross national product, national income, and other important NIPA aggregates, see “Major NIPA aggregates” in [Chapter 2](#). For a discussion of domestic and national measures of production, see “Geographic coverage” in Chapter 2.

The sector-specific estimates follow the NIPA sectors—business (including government enterprises), households and institutions, general government, and the rest of the world; within the business sector, the estimates by legal form are classified according to the Internal Revenue Service (IRS) filing requirements for corporate and noncorporate business.⁸ The industry-specific estimates for 1998 forward are classified according to the North American Industry Classification System (NAICS) at the three-digit industry level, and the estimates prior to 1998 are classified according to the Standard Industrial Classification (SIC); the estimates for 1998–2000 are also available on an SIC basis.⁹ The industry-specific estimates include estimates for federal general government (which includes both civilian employees and military personnel), for federal government enterprises, for state and local general government, and for state and local government enterprises.

Estimates of “compensation of employees, paid” and “compensation of employees” and certain aggregate components are also available quarterly. The following is a list of the principal NIPA tables that present current-dollar estimates of compensation as a component of GDI and of national income.¹⁰

- 1.10 Gross Domestic Income by Type of Income
- 1.11 Percentage Shares of Gross Domestic Income
- 1.12 National Income by Type of Income¹¹
- 1.13 National Income by Sector, Legal Form of Organization, and Type of Income
- 6.2 Compensation of Employees by Industry
- 6.3 Wages and Salaries by Industry

Annual estimates of supplements to wages and salaries are also presented by industry and by detailed type of supplement in the following NIPA tables:

⁸ For descriptions of NIPA sectors and of legal forms of organization, see the section “Classification” in.

⁹ Time-series breaks caused by the conversion to NAICS and by previous revisions to the SIC are reflected in the separation of estimates into distinct tables for each range of estimates based on a different classification. For instance, table 6.2, Compensation of Employees by Industry, comprises four separate tables: table 6.2A, based on the 1942 SIC; table 6.2B, based on the 1972 SIC; table 6.2C, based on the 1987 SIC; and table 6.2D, based on the 2012 NAICS. For more information on the conversion from the SIC to NAICS, see John R. Kort, “[The North American Industry Classification System in BEA’s Economic Accounts](#),” *Survey* 81 (May 2001): 7–13.

¹⁰ As a component of the product-side measure of government consumption expenditures and gross investment, BEA prepares real (inflation-adjusted) measures of the compensation of general government employees. For more information on the derivation of inflation-adjusted measures, see “Price and Quantity Estimates” in “[Chapter 4: Estimating Methods](#).” For more information on the derivation of real compensation of general government employees, see the section “Quantity and price estimates” in [Chapter 9](#), and see Bruce E. Baker and Pamela A. Kelly, “[A Primer on BEA’s Government Accounts](#),” *Survey* 88 (March 2008): 29–38.

¹¹ The NIPAs also present annual and quarterly estimates of “compensation of employees” in NIPA table group 2 as a component of personal income. Annual and quarterly estimates of “compensation of employees” are available in [NIPA table 2.1. Personal Income and Its Disposition](#). Annual and quarterly estimates of wages and salaries are available by aggregate industry groupings in [NIPA table 2.2. Wages and Salaries by Industry](#). Monthly estimates of wages and salaries by aggregate industry groupings are available in [NIPA table 2.7. Wages and Salaries by Industry, Monthly](#). BEA also prepares state and local area estimates of compensation and its components by industry and by type. For more information, see the “Regional” page at www.bea.gov.

- 3.6 Contributions for Government Social Insurance¹²
- 6.10 Employer Contributions for Government Social Insurance by Industry
- 6.11 Employer Contributions for Employee Pension and Insurance Funds by Industry and by Type
- 7.8 Supplements to Wages and Salaries by Type

Separate receipts and expenditures accounts for defined benefit and defined contribution pension plans are presented annually in tables 7.20-7.25 for all plans, for all private defined benefit plans, for federal government defined benefit plans, for state and local defined benefit plans, and for all defined contribution plans, respectively.

Annual and quarterly estimates of wages and salaries paid to the rest of the world and wages and salaries received from the rest of the world are presented in “Table 4.1. Foreign Transactions in the National Income and Product Accounts.”

BEA also prepares nominal, or “current-dollar” estimates of compensation of employees that are not seasonally adjusted; these are available in Section 8 of the NIPA Interactive Data Tables.

Additional information on compensation is available in “Underlying Detail tables.”¹³ Compensation paid to general government employees—that is, both civilian and military employees of federal and state and local agencies excluding government enterprises—is available in several tables, but table 3.25U provides detail not found elsewhere. And while annual estimates of employer contributions for government social insurance are available in table 3.6, quarterly estimates are available as underlying detail in table 3.6U.

In addition, BEA prepares by-industry estimates of full- and part-time employees, full-time equivalent (FTE) employees, wages and salaries per FTE, hours worked by FTE, self-employed persons, and persons engaged in production (see NIPA tables 6.5-6.9). For a discussion of the derivation of the employment estimates, see appendix A to this chapter.

Other measures of compensation—or more specifically, measures of wages and employment—are prepared by the Census Bureau’s County Business Patterns series and by BLS’ Quarterly Census of Employment and Wages (QCEW) program.¹⁴ The Census Bureau’s estimates are derived from Federal administrative records and survey information from business establishments. BEA’s statistics and BLS’ statistics on compensation are both based primarily on BLS tabulations of employment and wage data from the unemployment insurance program; BEA presents the relationship between them annually in “Table 7.18. Relation of Wages and Salaries in the National Income and Product Accounts to Wages and Salaries as Published by the Bureau

¹² The NIPAs also present estimates of the benefits paid by government social insurance programs in [NIPA table 3.12. Government Social Benefits](#)

¹³ BEA does not include these detailed estimates in the published tables because their quality is significantly less than that of the higher level aggregates in which they are included. Compared with these aggregates, the more detailed estimates are more likely to be based on judgmental trends, on trends in higher level aggregates, or on less reliable source data.

¹⁴ See “[What is the difference between BEA employment and wages and BLS and Census employment and wages?](#)” on BEA’s website at www.bea.gov; select “Help” and then “FAQs.”

of Labor Statistics.” A reproduction of table 7.18 appears below in the section “Adjustments to the QCEW data.”

Overview of Source Data and Estimating Methods

As described earlier in the handbook, the NIPA estimates, including those for compensation of employees, are prepared using a wide variety of source data (see “[Chapter 3: Principal Source Data](#)”) and using estimating methods that adjust the source data to the required NIPA concepts and that fill in gaps in coverage and timing (see “[Chapter 4: Estimating Methods](#)”). Specifically, the compensation estimates are based on statistical reports from federal agencies including BLS and the Department of the Treasury, on federal budget publications and other administrative and regulatory agency reports, and on reports from private organizations (such as trade associations).

Tables 10.A (wages and salaries), 10.B (employer contributions for pension and insurance funds), and 10.C (employer contributions for government social insurance) at the end of this chapter summarize the source data and estimating methods that are used to prepare the annual estimates and the current quarterly estimates of compensation and its components. The tables follow the categories shown in NIPA tables 6.3 (for wages and salaries), 6.11 (for employer contributions for pension and insurance funds), and 3.6 (for employer contributions for government social insurance).¹⁵ The source data and methods for the current quarterly estimates reflect both seasonally adjusted and not seasonally adjusted estimates unless otherwise noted.

Annual estimates

“Compensation of employees, paid” is measured as the sum of wages and salaries and of supplements to wages and salaries. The primary source of information on annual wages and salaries is the QCEW; the sources of information on supplements to wages and salaries are as varied as the programs themselves.

Wages and salaries

The benchmark and annual estimates are derived using the same source data and methodologies. For private industry employees and for civilian employees of federal

¹⁵ In [NIPA table 6.3. Wages and Salaries by Industry](#), total wages and salaries on a national income basis—which includes wages and salaries received from the rest of the world and excludes wages and salaries paid to the rest of the world—is shown on line 1. The industry-specific estimates, beginning with “Domestic industries” on line 2, include payments to the rest of the world (and exclude receipts from the rest of the world) in order to accurately reflect each industry’s total wage and salary liability. The offsetting entry, total wages and salaries paid to the rest of the world netted against wages and salaries received from the rest of the world, is shown on line 97.

In [NIPA table 3.6. Contributions for Government Social Insurance](#), the entry “Rest-of-the-world contributions” on line 32 recognizes the employer and employee contributions for government social insurance from residents of the U.S. territories of Guam, American Samoa, and the U.S. Virgin Islands and of the U.S. commonwealths of Puerto Rico and the Northern Mariana Islands. In the NIPAs, these are treated as contributions from “nonresidents” (see the section “Geographic coverage” in [Chapter 2](#)) and as a consequence, they are not included in the NIPA estimates of total supplements to wages and salaries and are not shown in table 10.C of this chapter.

government, of state and local general government, and of the U. S. Postal Service, the estimates are primarily based on the QCEW. Estimates for the military and for other government enterprises are discussed below in the section “Adjustments to the QCEW data.” QCEW data on wages and salaries are generally available for all four quarters of the previous year at the time of the annual update of the NIPAs.

The QCEW is a federal-state cooperative program in which state employment agencies compile and report to BLS the monthly data on employment and the quarterly data on total and taxable wages that are reported to the states each quarter by private industries on quarterly tax returns and by federal agencies and state and local governments on similar reports for employees covered by state unemployment insurance (UI) laws or by the Unemployment Compensation for Federal Employees (UCFE) program. These data cover about 97 percent of employees on nonfarm payrolls. BLS tabulates the data by geographical categories (county, metropolitan statistical area, combined statistical area, state, and the nation), by six-digit NAICS industry level, and by ownership sectors (private industry, federal government, state government, or local government).

The composition of wages reported to state employment agencies is generally consistent with the NIPA definition of wages and salaries. The data are on a disbursement basis; they reflect the total wages and salaries paid during a calendar quarter, regardless of when the services were performed (although a few state laws specify that wages be reported on an accrual basis). Conversely, the NIPAs record compensation and its components on an accrual basis; they reflect the total wages and salaries earned during the period, regardless of when they were paid. In most years, the pattern of wage and salary accruals and disbursements is relatively stable, with no difference between the measures of accruals and disbursements.¹⁶ However, when there is evidence of a substantial departure from the usual pattern, BEA may incorporate a timing adjustment to better reflect the earnings accrued in each period. When these adjustments are made, they are recorded in the annual wage reconciliation table (NIPA table 7.18) discussed below in the section “Adjustments to the QCEW data.”¹⁷

BEA sums the quarterly QCEW data for each industry to derive annual estimates and makes additional adjustments to account for misreporting of wages on employment tax returns and for differences in coverage and in definitions (see the section “Adjustments to the QCEW

¹⁶ As a simple example, if wages and salaries accrued annually include bonuses that typically equal \$100, with one-half of the bonuses paid in the current year and one-half paid in the following year, then each year’s disbursed wages will include a \$50 bonus payment accrued in the current year and a \$50 bonus payment accrued in the previous year; the total bonuses paid in each year—\$100—equals the bonuses accrued.

¹⁷ Prior to the 2013 comprehensive update of the NIPAs, the NIPAs presented a third compensation measure, “compensation of employees, received” that reflected estimates of wages and salaries on a disbursement basis. An entry for “wage and salary accruals less disbursements” (WALD) in the national income tables reconciled the two accrual-based measures with this disbursement-based measure. In practice, there was often little information on the timing differences between accruals and disbursements, and the measure of WALD was typically zero. The new treatment, introduced during the 2013 comprehensive update of the NIPAs, discontinued the disbursement-based measure of “compensation of employees, received” and the measures of WALD in order to better align transactions of the personal income and outlays account with those of the private enterprise income account, to simplify the presentation of wages and salaries within the accounts, and to help bring the NIPAs in line with recommendations of the SNA. See [“Preview of the 2013 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Presentations,”](#) *Survey* 93 (March 2013): 13-39.

data”); these adjustments account for about 5 percent of the NIPA estimate of wages and salaries. BEA uses industry payroll data from the Census Bureau’s Economic Census to aggregate the estimates across industries and levels of government to prepare estimates of total wages and salaries by legal form and sector.

Supplements to wages and salaries

The benchmark and annual estimates are derived using the same source data and methodologies. Employer contributions for employee pension and insurance funds consists of the contributions made by private or government employers to privately administered retirement and insurance programs and by government employers to government employee pension plans and to publicly administered government employee insurance programs. Employer contributions for government social insurance consists of the contributions made by private and public employers to other publicly administered programs that provide certain social benefits, such as social security and Medicare.¹⁸

For employer contributions for pension funds, supplements are estimated by type of fund—defined contribution and defined benefit pension plans—and by employer—private plans and government employee plans. For defined contributions plans, future benefits are determined by the contributions made by employers and employees into the plan and by the income earned on the financial assets that the plans hold; therefore, actual contributions reflect the accrual accounting method. For defined benefit plans, future benefit entitlements are determined independently of actual contributions and may differ from them.¹⁹ Thus, in order to reflect the accrual accounting basis, the NIPA measures of employer contributions to defined benefit plans reflect actual contributions and—when actual contributions differ from the entitlements earned in the period—imputed contributions to reflect the value of the employers’ liability for entitlements and for the administrative expenses of the plan that are not fulfilled by actual contributions.²⁰ The measurement of employer contributions for both types of plans are described below and in table 10.B.²¹

¹⁸ For descriptions of the government social insurance programs included in the NIPA measure of employer contributions for government social insurance, see U.S. Bureau of Economic Analysis, [MP-5: Government Transactions](#) (Methodology Papers: U.S. National Income and Product Accounts, September 2005).

¹⁹ This is especially true in cases where the actual contributions made by employers are sporadic. For example, employers sometimes skip contributions when the plans have enjoyed unusually good investment returns; conversely, employers sometimes make large “catch up” contributions to pay down unfunded benefit obligations.

²⁰ In periods where actual contributions exceed the total liability of employers, imputed employer contributions will be negative.

²¹ The measurement of defined benefit pension plans on an accrual basis was introduced as part of the 2013 comprehensive update of the NIPAs to better align pension-related compensation with the timing of when employees earned the benefit entitlements and to be consistent with the recommendations of the SNA. The accrual-based estimates also avoid the volatility that arises when sporadic cash payments made by employers into defined benefit pension plans are used to measure compensation. For detailed information on accrual-based measures of benefit entitlements and contributions, see “[Preview of the 2013 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Presentations](#),” *Survey* 93 (March 2013): 13-39 and Marshall B. Reinsdorf and David G. Lenze, “[Defined Benefit Pensions and Household Income and Wealth](#),” *Survey* 89 (August 2009): 50-62. With the 2014 annual update of the NIPAs, defined contribution pension plans were also treated as part of the same subsector. With the 2018 comprehensive update, the valuation of state and local defined benefit pensions was changed from an accumulated benefit obligation basis to a projected benefit obligation basis.

For employer contributions to defined contribution pension plans, the estimates are primarily based on survey and administrative data from government agencies—including the Department of Labor, the Department of the Treasury, the Census Bureau, the Office of Personnel Management (OPM), the Federal Retirement Thrift Investment Board, the Pension Benefit Guaranty Corporation (PBGC), the Employment Benefits and Security Administration (EBSA), and the Department of Health and Human Services (HHS). For employer contributions to defined benefit pension plans, the NIPA estimates are based on actuarial estimates of the present value of claims to benefits accrued through service in the current period—commonly called normal costs—primarily from PBGC, EBSA, OPM, the Department of Treasury, the Department of Defense, and reports from state and local pension plans. The employers’ portion of the liability for these claims—referred to as employers’ normal costs—reflects actual and imputed employer contributions.

For privately sponsored defined benefit plans, estimates of employers’ normal costs are based on actuarial estimates of employers’ normal costs provided by the PBGC from data collected on IRS form 5500. The PBGC adjusts the estimates to include administrative expenses, and BEA adjusts the PBGC estimates to reflect a common discount rate based on the average AAA corporate bond rate published by Moody’s Investors Service.

For federal government civilian employee defined benefit pension plans, estimates of employers’ normal costs are based on OPM data published in the annual actuarial reports of the major civilian retirement plans, supplemented by data from the Department of Treasury. The estimates of employers’ normal costs are scaled up slightly to account for smaller retirement plans such as those for employees of the Foreign Service and the Coast Guard that are not included in the source data. For the military defined benefit plans, estimates of employers’ normal costs are based on Department of Defense data on normal cost rates and payroll.

For state and local employee defined benefit pension plans, the estimates of employers’ normal costs are based on the service costs and employee contribution data reported in state and local government financial reports. BEA adjusts the estimates to reflect the same discount rate that is used for measures of privately sponsored defined benefit plans. Separate measures of administrative expenses are based on Census Bureau data.

For private insurance funds and publicly administered government employee insurance plans, estimates of employer contributions are primarily based on administrative and survey data from HHS, OPM, the Department of Veterans’ Affairs, and A.M. Best’s *Aggregates and Averages*.

For employer contributions for government social insurance, estimates are derived by program. They are primarily based on administrative data from the Social Security Administration, the Department of Labor, and the Veterans’ Administration; on survey data from the Census Bureau; and on financial data from the *Budget of the United States Government (Budget)* as published by the Office of Management and Budget.

The industry-specific estimates are prepared by allocating the estimates to three-digit NAICS industries using industry-specific information from the source data or from other industry-specific data that is related to the program or fund. For instance, the source data underlying the estimates of workers' compensation do not include industry information, so industry ratios are derived from industry-specific data on occupational injuries and illnesses from BLS.

Current quarterly estimates

Current quarterly estimates of wages and salaries and of supplements to wages and salaries are published only at aggregate levels and not by detailed industries or by program. For wages and salaries, seasonally adjusted current quarterly estimates are prepared by averaging the monthly estimates of wages and salaries that are released as part of BEA's monthly personal income estimates. For the published aggregates of supplements to wages and salaries—that is, employer contributions for employee pension and insurance funds and employer contributions for government social insurance—seasonally adjusted current quarterly estimates are derived as the sum of the components (or some aggregate level of the components) that are, in most cases, prepared by extrapolation, either judgmentally or by using an indicator series (for an explanation of this method, see “Interpolation and extrapolation using an indicator series” in [Chapter 4](#)).²²

Wages and salaries

As noted above, the primary source for the annual estimates of private wages and salaries is QCEW data. Because these quarterly data are generally available 5 months after the end of a quarter, the estimates of private wages and salaries for the quarters for which the QCEW data are not yet available are derived by averaging the current monthly estimates.²³ The current monthly estimates are extrapolated for each industry from the historical monthly estimates, which are in turn based on the most recent quarterly QCEW data that are available; the industry estimates are then summed to derive the monthly estimates for total wages and salaries. The extrapolation is based on the most recent monthly data from the BLS current employment statistics (CES) program and is calculated as the growth rate for employment times average weekly hours times average hourly earnings. Similarly, once the QCEW data are incorporated into the quarterly estimates, the monthly estimates are interpolated based on the same CES indicator series. For example, the end-of-November release of Personal Income and Outlays for October contains monthly estimates of wages and salaries for July through October that are CES extrapolations of revised monthly estimates for the second quarter that are based on newly available QCEW data. In turn, the end-of-November release of GDP for the third quarter (second estimate) contains third-quarter estimates of wages and salaries that are derived by averaging the monthly Personal Income and Outlay estimates.

²² Most of the source data that are used for extrapolation are seasonally adjusted; when this is not the case, BEA seasonally adjusts data that display seasonality (see the section “Seasonal adjustment” in [Chapter 2](#)). In cases where estimates are extrapolated without the use of indicator series, there is no monthly or quarterly seasonality.

²³ The monthly estimates of personal income, including compensation, are expressed at annual rates; consequently, the current quarterly estimates, also expressed at annual rates, may be derived by averaging the monthly estimates.

In general, the release of the “third” current quarterly estimate of GDP marks the last opportunity to revise most NIPA estimates until the next annual update. However, because of the importance of the QCEW as a data source and because of the 5-month lag in its availability, an exception is made for private wages and salaries and for private employer contributions for government social insurance (for which the estimates are generally based on estimates of private wages and salaries). As part of the “second” current quarterly release of GDP, the *preceding* quarter’s estimates for these series and for affected income-side aggregates are revised in order to incorporate the newly available QCEW data.²⁴ Thus, continuing with the example above, the end-of-November release of GDP for the third quarter (second estimate) *also* contains revised estimates of wages and salaries for the *second* quarter that are based on newly available QCEW data. The months of the second quarter are interpolated based on the QCEW-derived quarterly control.

For federal and for state and local government employees, the current quarterly estimates are derived by summing monthly extrapolations from the most recent annual estimates. Federal civilian estimates for both general government and government enterprises are extrapolated using an indicator series that is based primarily on CES employment data. Federal military estimates are extrapolated using Department of Defense employment data. State and local government estimates for both general government and government enterprises are extrapolated using an indicator series that is based on CES employment data and on information on the change in the cost of labor from the BLS employment cost index.

Supplements to wages and salaries

Current quarterly estimates of employer contributions for employee pension and insurance funds are released only for the aggregate, which is prepared as the sum of the components or aggregate levels of the components. In most cases, the component estimates are prepared by judgmentally projecting annual estimates into the next year and then interpolating those projected annual estimates into quarterly (and monthly) estimates.

Current quarterly estimates of employer contributions for government social insurance funds are also prepared as the sum of its components. These components are generally extrapolated from the annual estimates to quarterly (and monthly) estimates using indicator series, so they are made available as part of the NIPA underlying detail (see the section “Recording in the NIPAs”). In most cases, the indicator series are based on NIPA wage and salary estimates or the component estimates are extrapolated without an indicator but with information from *Budget* projections of relevant outlays. As mentioned earlier, the estimates of

²⁴ This procedure was introduced as part of the 2002 annual update in order to reduce the magnitude of revisions to the estimates of wages and salaries. (See the box “Revisions to Wages and Salaries and to Profits” in Eugene P. Seskin and Stephanie H. McCulla, “[Annual Revision of the National Income and Product Accounts](#),” *Survey* 82 (August 2002): 24-25.) Affected aggregates include gross domestic income, the statistical discrepancy, gross national income, national income, personal income, disposable personal income, personal taxes, personal saving, gross (national) saving, compensation, and gross product of corporate business. Other components that are closely linked to wages and salaries, such as personal current taxes and employer contributions for government social insurance, are also revised. Product-side series, including government compensation, which is a component of GDP, are not revised.

employer contributions for government social insurance funds for the preceding quarter are revised to incorporate newly available QCEW data as part of the “second” current quarterly release of GDP.

The not seasonally adjusted (NSA) estimates of compensation of employees are derived using the same methods as the seasonally adjusted estimates, using not seasonally adjusted versions of the same indicators.

Adjustments to the QCEW data

The QCEW data on wages and salaries are largely consistent with the concepts and definitions underlying the NIPA estimates of wages and salaries. However, in deriving the annual estimates of wages and salaries for the NIPAs, BEA adjusts the QCEW data to account for misreporting of wages (including tips) on employment tax returns and for differences in coverage and in definitions. A reconciliation of the BLS and the NIPA estimates of wages and salaries is presented annually in [NIPA table 7.18](#), a reproduction of which is shown for a single year in table 10.2 below.

Table 10.2: Relation of BLS Wages and Salaries and NIPA Wages and Salaries
(Billions of dollars)

Line in NIPA table 7.18	NIPA line item	2017
1	Total wages and salaries, BLS ¹ Plus:	7,966.3
2	Adjustment for misreporting on employment tax returns ²	94.1
3	Adjustment for wages and salaries not covered or not fully covered by unemployment insurance	393.4
4	Government	151.4
5	Other	242.0
6	Timing adjustment for accrual basis	0.0
7	Equals: Wages and salaries, NIPAs	8,453.8

¹ Total annual wages of workers covered by state unemployment insurance (UI) laws and by the Unemployment Compensation for Federal Employees program. Data for the most recent year are preliminary.

² Consists of unreported wages and salaries paid by employers and of unreported tips.

Adjustment for misreporting on employment tax returns (line 2). Adjustments are made to the QCEW data to account for wages and salaries that are underreported on employment tax returns, for tips that are underreported, and for wages and salaries that are not reported at all because the employers fail to file an employment tax return.

- The estimates of underreported income are based on audits of individual employment tax returns undertaken as part of the IRS National Research Program (NRP) for the 2001, 2006, 2008-2010, 2011-2013, 2014-2016 and 2017-2019 (projected) as well as tax gap measures for various years from the previous IRS TCMP studies.²⁵
- The adjustment for underreported tips or gratuities is derived in the preparation of BEA's input-output accounts for industries—primarily accommodations, food services, taxis, barber shops, and beauty salons—where tips are a significant factor in compensation. The adjustment is based on the assumption that not all tips are included in the wages and salaries reported on the employment tax returns, and it is derived using information on industry sales and information on “tip rates” from the IRS.
- The estimates of nonreported income are based on “exact-match” studies that the Census Bureau provides to BEA. These studies match records from the Current Population Survey (CPS), conducted by the Census Bureau for BLS, with individual IRS tax returns in order to estimate nonfiler income for individuals.

Adjustment for wages and salaries not covered or not fully covered by unemployment insurance (line 3). The QCEW data provide almost complete coverage for most private industry employees, federal civilian employees, and state and local government employees. However, for

²⁵ The IRS Taxpayer Compliance Measurement Program had provided estimates of misreported income for selected years since 1963. In 2001, the IRS launched the NRP to update the research and to reflect a changing economy, revisions to the tax code, and shifts in individual behavior.

military personnel and for certain private industries for which the QCEW provides little or no coverage—railroads, farms, farm labor contractors, private elementary and secondary schools, religious membership organizations, and private households—estimates of wages and salaries are prepared separately using other source data.

- Government (line 4). This entry reflects the addition of the NIPA estimate for wages and salaries of military personnel and for various other government wage and salary payments not captured by the QCEW. The compensation paid to military personnel is based on *Budget* data and includes cash wages as well as in-kind compensation such as uniform and housing allowances and rations. The wage and salary information in the *Budget* is available on a fiscal year basis; actual wage and salary expenses are provided for one year, and projections are provided for the current year and the budget year (for example, the FY2015 *Budget* provides actual expenses for FY2013 and projected expenses for FY2014 and FY2015). BEA converts the fiscal year estimates to a calendar year basis by allocating one quarter of the estimate for a given fiscal year to the previous year and three quarters to the given year.

Additional government-related adjustments are made for students and their spouses employed by public colleges or universities, for elected officials and members of the judiciary, for intelligence agents, for interns employed by publicly administered hospitals and by social service agencies, for judicial fees paid to jurors and witnesses, for compensation of prison inmates, and for marriage and license fees paid to justices of the peace. These adjustments, which comprise only a very small share of the total government adjustment, are prepared using a variety of source data, including data from the Census Bureau and the Department of Justice.

- Other (line 5). This entry accounts for all of the other adjustments that are made in the estimation of NIPA wages and salaries, including estimates for employees not covered by the QCEW and estimates for differences between the QCEW and the NIPA definitions of wages and salaries.

Adjustments for employees not fully captured in the QCEW data are made as follows:

- *for federal government enterprises* excluding the U.S. Postal Service (which is covered by the QCEW), based on *Budget* data.
- *for farms*, based on data on farm labor expenses from the U.S. Department of Agriculture (USDA).
- *for farm labor contractors*, primarily based on data for contract farm labor expenses from the Census of Agriculture.
- *for private elementary and secondary schools*, primarily based on annual payroll data from the Census Bureau's *County Business Patterns*; estimates of in-kind wages are judgmentally derived.
- *for religious membership organizations*, primarily based on annual payroll data from the Census Bureau's *County Business Patterns*; estimates of in-kind wages are judgmentally derived.
- *for private households*, primarily based on CPS data; estimates of in-kind wages are judgmentally derived.

- *for railroads*, primarily based on wage and salary data from the Railroad Retirement Board.

Adjustments for differences between the QCEW and the NIPA definitions of wages and salaries include the following:

- An adjustment to include compensation received from foreign employers and to exclude compensation paid to foreigners in order to make the measure consistent with national income, derived from ITA estimates of compensation received from foreigners. Alternatively, in gross domestic income tables, the ITA estimate of compensation paid to the rest of the world is included and the ITA estimate of compensation received from the rest of the world is excluded. The ITA estimates of compensation received from, and paid to, foreigners are based mostly on data from foreign statistical authorities and from the IRS, as well as various demographic and labor market data from the USDA and the Department of Labor.²⁶
- An adjustment to include employer contributions to “cafeteria plans” that are excluded from the QCEW data for private industries and for state and local governments when state laws do not count them as wages for unemployment insurance purposes. These plans allow participating employees to use a portion of their salaries on a pre-tax basis to pay for health insurance and for “flexible spending accounts,” which reimburse employees for medical care and for dependent daycare. The adjustment is based on data from the Agency for Healthcare Research and Quality’s Medical Expenditure Panel Survey and on trade source data.²⁷ This adjustment is not needed for federal employer contributions to these plans because they are included in the QCEW data for all states.

Adjustment for timing for accrual basis (line 6). This adjustment accounts for differences in the timing of wage and salary disbursements from QCEW data and the accrual basis underlying the NIPA measure of wages and salaries. A positive adjustment reflects a net amount of compensation that was earned, but not actually received (and therefore not reflected in the source data) during the period, and a negative adjustment reflects a net amount of compensation that was paid (and reflected in the source data), but not actually earned, during the period. In practice, as reliable source data are generally lacking on these differences, timing adjustments are infrequent.

²⁶ For more information on the sources and methods for estimating compensation paid to and received from the rest of the world, see the section “Compensation of Employees” in “[U.S. International Transactions Accounts: Concepts and Estimation Methods](#),” at www.bea.gov.

²⁷ For more information, see Clinton P. McCully and Steven Payson, “[Preview of the 2009 Comprehensive Revision of the NIPAs](#),” *Survey* 89 (May 2009): 11.

Table 10.A—Summary of Methodology Used to Prepare Estimates of Wages and Salaries

Line in NIPA table 6.3	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates (Indicator series used to extrapolate)
3	Private industries	Most industries: QCEW, with adjustments by BEA for coverage, misreporting, and definitions (see the section “Adjustments to the QCEW data”). For certain other industries, or types of enterprises within industries, other sources as follows: <u>Farms</u>¹: USDA farm labor expense data on cash wages and payments-in-kind by owner-operators to hired farm labor. <u>Farm labor contractors</u>: For Arizona and California, QCEW. For other states, for benchmark years, Census of Agriculture contract farm labor expenses, and for nonbenchmark years, straight-line interpolations of benchmark-year estimates. <u>Private elementary and secondary schools</u>: For cash wages, Census Bureau <i>County Business Patterns</i> data on annual payrolls; for pay-in-kind, judgmentally derived. <u>Religious membership organizations</u>: For cash wages, Census Bureau <i>County Business Patterns</i> data on annual payrolls. For in-kind wages, judgmentally derived. <u>Private households</u>: For cash wages, BLS <i>Current Population Survey</i> data. For pay-in-kind, judgmentally derived. <u>Railroads</u>: U.S. Railroad Retirement Board data on wages and salaries subject to the payroll tax that supports the railroad retirement system, adjusted to include the portion of wages and salaries not subject to the tax, based on the number of employees whose wages and salaries exceed the limit for retirement taxation. <u>NSA</u>: For historical quarters subject to revision, NSA estimates are interpolated from the annual control value using NSA QCEW by industry as the indicator.	CES employment, hours, and earnings data. <u>NSA</u>: For quarters in which NSA QCEW data are available, NSA estimates are extrapolated from the most recent estimates not subject to revision using the quarter-to-quarter change in NSA QCEW. For quarters where NSA QCEW data are unavailable, NSA estimates are derived by industry as a five-year moving average of the implied seasonal factor multiplied by the CES-based seasonally adjusted series.
86	Government:		
87	Federal government:		
89	Civilian general government	For cash wages, QCEW with adjustments by BEA for coverage (see the section “Adjustments to the QCEW data”). For in-kind transit benefits, Department of Transportation.	CES civilian employment data.
90	Military ²	For cash and in-kind wages, <i>Budget of the United States Government</i> .	Department of Defense manpower reports.
91	Government enterprises	For U.S. Postal Service, QCEW data. For other enterprises, <i>Budget</i> data.	CES employment data for Postal Service.
92	State and local government:		
93	General government	QCEW data for all state and local employees allocated to general government and government enterprises using Census Bureau <i>Public Employment</i> payroll data with adjustments by BEA for coverage (see the section “Adjustments to the QCEW data”).	CES employment data and BLS employment cost index data.

Table 10.A—Summary of Methodology Used to Prepare Estimates of Wages and Salaries

Line in NIPA table 6.3	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates (Indicator series used to extrapolate)
96	Government enterprises ³	QCEW data for employees allocated to government enterprises using Census Bureau <i>Public Employment</i> payroll data.	CES employment data and BLS employment cost index data.
97	Rest of the world:		
98	Receipts from the rest of the world	ITA estimates.	ITA estimates.
99	Less: Payments to the rest of the world ⁴	ITA estimates.	ITA estimates.

¹ NAICS crop and animal production.

² Includes Coast Guard.

³ Employees of Indian tribal governments are classified in state and local government. NAICS crop and animal production.

⁴ Includes estimates of foreign professional workers and undocumented Mexican migratory workers employed temporarily in the United States.

BEA Bureau of Economic Analysis

BLS Bureau of Labor Statistics

CES Current Employment Statistics, BLS

ITA International Transactions Accounts, BEA

QCEW Quarterly Census of Employment and Wages, BLS

Table 10.B—Summary of Methodology Used to Prepare Estimates of Employer Contributions for Employee Pension and Insurance Funds			
Line in NIPA table 6.11	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates* (Indicator series used to extrapolate)
22	Employer contributions for employee pension and insurance funds	See method for each component.	The aggregate of unreleased measures of (1) private employer contributions for employee pension and insurance funds, (2) federal government employer contributions for employee pension and insurance funds, and (3) state and local government employer contributions for employee pension and insurance funds. (1) For the aggregate of private employer contributions for private pension and insurance funds, judgmental trend. (2) For the aggregate of federal employer contributions for employee pension and insurance funds, the sum of unreleased measures of (1) federal government employer contributions to government employee pension plans, (2) federal government employer contributions to group health insurance, (3) federal government employer contributions to group life insurance, and (4) federal government employer contributions to publicly administered government employee insurance plans. See corresponding entries below. (3) For the aggregate of state and local employer contributions to employee pension and insurance funds, the sum of unreleased measures of (1) state and local government employer contributions to government employee pension plans, (2) state and local government employer contributions to group health insurance, (3) state and local government employer contributions to group life insurance, and (4) state and local government employer contributions to workers' compensation. <u>NSA</u>: Seasonally adjusted and NSA measures of employer contributions for employee pension and insurance funds are presumed equal.
23	Pension plans ¹		
24	Private pension plans		
25	Defined benefit	For all except 2 most recent years, employers' normal costs based on BEA tabulations of plan-level data provided by PBGC from IRS form 5500 on employer normal costs for each plan, adjusted to a uniform discount rate based on AAA	Quarterly estimates are not released at this level of detail; see line 22.

Table 10.B—Summary of Methodology Used to Prepare Estimates of Employer Contributions for Employee Pension and Insurance Funds			
Line in NIPA table 6.11	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates* (Indicator series used to extrapolate)
		corporate bond rates from Moody's Investors Service and aggregated to the total for all industries. ² For second most recent year, employers' normal costs based on BEA tabulations of form 5500 data provided by PBGC with adjustments by BEA for coverage. For most recent year, employers' normal costs derived as BEA's normal cost rate applied to total covered payroll; form 5500 data are not available for the most recent year. Covered payroll is derived as the product of NIPA wages and salaries and a coverage rate, which is derived as the ratio of the number of active participants, from EBSA data, to private full-time equivalent employees, from NIPA estimates.	
26	Defined contribution	For all except 2 most recent years, employers' cash contributions from EBSA tabulations of IRS form 5500 data for three-digit NAICS industries. For second most recent year, PBGC tabulations of IRS form 5500 data, and for most recent year, Standard and Poor's 500 and other corporate financial data.	Quarterly estimates are not released at this level of detail; see line 22.
27	Government employee pension plans	See method for each component,	Quarterly estimates are not released at this level of detail; see line 22. For unreleased measures of government employee pension plans, the sum of unreleased measures of federal government employee pension plans and state and local employee pension plans; see lines 28 and 29.
28	Federal	<u>Civilian</u>: For defined contribution plans, such as Thrift Savings Plan, actual contributions based on Federal Retirement Thrift Investment Board data. For defined benefit plans, for all except most recent year, total employer contributions based on OPM estimates of employers' normal costs for the Federal Employees Retirement System (FERS), and normal cost rates and payroll data for the Civil Service Retirement System (CSRS), adjusted to alternative discount rates. Total employer contributions are scaled up by BEA to reflect smaller plans not included in OPM data. For the most recent year for both FERS and CSRS plans, total employer contributions based on OPM projections of normal cost rates and payroll data. <u>Military</u>: For defined contribution plans, contributions to the Thrift Savings Plan based on Federal Retirement Thrift Investment Board data and judgmental trends.	Quarterly estimates are not released at this level of detail. See line 22. For unreleased measures of federal government employer contributions to government employee pension plans, the sum of components: <u>Civilian</u>: For defined contribution plans, CES employment. For defined benefit plans, interpolation without indicator of annual estimates extrapolated based on OPM projections of normal cost rates and payroll data. <u>Military</u>: For defined contribution plans, contributions to the Thrift Savings Plan based on Federal Retirement Thrift Investment Board data and judgmental trends. For contributions for defined benefit plans, interpolation without indicator of annual estimates extrapolated based on DoD projections of normal cost rates and payroll data.

Table 10.B—Summary of Methodology Used to Prepare Estimates of Employer Contributions for Employee Pension and Insurance Funds			
Line in NIPA table 6.11	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates* (Indicator series used to extrapolate)
		For defined benefit plans, for all except the most recent year, total employer contributions derived from DoD reports on employer normal cost rates and payroll. For the most recent year, total employers' normal costs derived from DoD Office of the Actuary projections of normal cost rates and payroll.	
29	State and local	For defined contributions plans, ratio of employer contributions as a percent of compensation to wages as a percent of compensation from BLS Employer Costs for Employee Compensation survey data applied to NIPA wages and salaries. For defined benefit plans for all except 2 most recent years, employers' normal cost based on financial and actuarial reports of a sample (covering 90 percent of universe) of S&L retirement systems scaled up to represent the universe of systems and adjusted to reflect common actuarial cost method and discount rate, plus administrative expenses based on Census data. For second most recent year, employers' normal cost extrapolated using incomplete sample data and administrative data based on judgmental trend. For most recent year, judgmental trend.	Quarterly estimates are not released at this level of detail. See line 22. For unreleased measures of state and local employer contributions to employee pension plans, the sum of components: For defined contribution plans, same as annual. For defined benefit plans, extrapolated using NIPA wages and salaries.
30	Private insurance funds		
31	Group insurance		
32	Group health insurance	For private employer contributions, Health and Human Services' Agency for Health Care Research and Quality's <i>Medical Expenditure Panel Survey</i> data on insurance purchased by employers for employees and on health insurance provided by employers who insure themselves (self-insurance). For state and local government contributions, for all except most recent year, same as for private employers. For most recent year, judgmental trend. For federal government contributions, OPM internal accounting report for the Federal Employee Health Benefits Program.	Quarterly estimates are not released at this level of detail. See line 22. For unreleased aggregate of private employer contributions for private pension and insurance funds, judgmental trend. For unreleased measures of state and local government employer contributions to group health insurance, judgmental trend. For unreleased measures of federal government employer contributions to group health insurance, CES employment data.
33	Group life insurance	For private and for state and local government, for all except the most recent year, A.M. Best's <i>Aggregate and Averages Life/Health</i> data on premiums paid. For most recent year, extrapolated based on the percent change in net premiums from A.M. Best data.	Quarterly estimates are not released at this level of detail. See line 22. For unreleased aggregate of private employer contributions for private pension and insurance funds, judgmental trend.

Table 10.B—Summary of Methodology Used to Prepare Estimates of Employer Contributions for Employee Pension and Insurance Funds			
Line in NIPA table 6.11	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates* (Indicator series used to extrapolate)
		For federal government contributions for civilian employees, OPM internal accounting report for the Federal Employee Group Life Insurance Program. For federal government contributions for active duty military personnel and their families, Veterans' Affairs Administration data on premiums paid for Servicemen's Group Life Insurance.	For unreleased measures of federal government employer contributions for group life insurance, CES employment data. For unreleased measures of state and local government employer contributions to group life insurance, CES employment data.
34	Workers' compensation	A.M. Best's <i>Aggregates and Averages Property/Casualty</i> data on premiums paid, supplemented by data from the National Academy of Social Insurance (NASI) for self-insured and for large deductible policies, and by data on the contributions made to privatized funds that are not covered by A.M. Best or by NASI from the National Council on Compensation Insurance, the National Association of Insurance Commissioners, and the American Association of State Compensation Insurance Funds.	Quarterly estimates are not released at this level of detail. See line 22. For unreleased aggregate of private employer contributions for private pension and insurance funds, judgmental trend. For unreleased measures of state and local government employer contributions to workers' compensation, CES employment data.
35	Supplemental unemployment benefit funds	EBSA tabulations of IRS form 5500 data.	Quarterly estimates are not released at this level of detail. See line 22. For unreleased aggregate of private employer contributions for private pension and insurance funds, judgmental trend.
36	Publicly administered government employee insurance plans ³	<i>Monthly Treasury Statement</i> data on employer contributions to the "Medicare-Eligible Retiree Health Care Fund"	Quarterly estimates are not released at this level of detail. See line 22. For unreleased measures of military employment, DoD manpower reports.

*Quarterly estimates are provided only for the aggregate of employer contributions for pension and insurance funds.

¹ Includes defined benefit and defined contributions plans. Additional detail is available in NIPA tables 7.20-7.25.

² Plan-level data are assigned to a 6-digit NAICS code based on the primary industry of the employer.

³ Includes the Medicare-eligible Retiree Health Care Fund.

BEA	Bureau of Economic Analysis	EBSA	Employment Benefits and	NIPA	National Income and Product
BLS	Bureau of Labor Statistics		Security Administration		Accounts
CES	Current Employment	IRS	Internal Revenue Service	OPM	Office of Personnel
	Statistics, BLS	MTS	Monthly Treasury Statement		Management
DoD	Department of Defense	NAICS	North American Industry	PBGC	Pension Benefit Guaranty
			Classification System		Corporation

Table 10.C—Summary of Methodology Used to Prepare Estimates of Employer Contributions to Government Social Insurance			
Line in NIPA table 3.6	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates* (Indicator series used to extrapolate)
5	Old-age, survivors, and disability insurance	SSA <i>Social Security Bulletin: Annual Statistical Supplement</i> data on wages and salaries subject to OASDI taxes multiplied by OASDI tax rate.	NIPA wages and salaries for appropriate industries.
6	Hospital insurance	For all employees except those in the railroad industry, SSA wages and salaries multiplied by the hospital-insurance tax rate. For railroad employees, U.S. Railroad Retirement Board calendar year data on railroad wages and salaries multiplied by the hospital insurance tax rate.	For workers covered by OASDI, same as for OASDI. For workers not covered by OASDI, judgmental trend.
8	State unemployment insurance	QCEW data on total unemployment insurance taxes.	For contributions by private employers, NIPA private wages and salaries less those of railroad, farm, and private household workers. For state and local reimbursements, unemployment insurance rate.
9	Federal unemployment tax	Sum of (1) Office of Workforce Security, Department of Labor tabulations of taxable wages and salaries by state from annual tax returns filed by employers multiplied by the effective federal tax rate and (2) for states that have borrowed funds to finance unemployment benefits, either the taxable wages and salaries multiplied by the surtax rate or state-provided data on the amount of surtax.	NIPA private wages and salaries less those of railroad, farm, and private household workers.
10	Railroad employees unemployment insurance	<i>Monthly Treasury Statement</i> data on railroad unemployment tax receipts.	NIPA railroad wages and salaries.
11	Federal employees unemployment insurance	Imputation based on Office of Workforce Security data on unemployment benefits paid to unemployed former federal employees.	Same as for annual estimates.
12	Railroad retirement	U.S. Railroad Retirement Board <i>Annual Report</i> data on wages and salaries subject to railroad retirement multiplied by railroad retirement tax rates.	NIPA railroad wages and salaries.
13	Pension benefit guaranty	Pension Benefit Guaranty Corporation monthly data on premiums paid by employers, aligned to the calendar years in which the premiums were accrued.	Extrapolated using information from fiscal year projections of premium collections from the <i>Budget of the United States Government</i> .
14	Veterans life insurance	Veterans Affairs <i>Annual Report</i> data on premiums paid by the federal government to life insurance programs for veterans.	Judgmental trend.
15	Workers' compensation	Imputation equal to benefits paid based on unpublished data on benefits from the Department of Labor's Employment Standards Administration.	Extrapolated using information from fiscal year projections of premium collections from the <i>Budget</i> .

Table 10.C—Summary of Methodology Used to Prepare Estimates of Employer Contributions to Government Social Insurance			
Line in NIPA table 3.6	Component	Benchmark-year and nonbenchmark-year estimates	Current quarterly estimates* (Indicator series used to extrapolate)
16	Military medical insurance ¹	Imputation equal to benefits based on benefits data from the Department of Defense Military Health System's annual TRICARE report.	Extrapolated using information from fiscal year projections of premium collections from the <i>Budget</i> .
18	State and local temporary disability insurance	Required only by New Jersey and California. For New Jersey, estimated as a percentage of Census COG/GF data on total contributions for New Jersey. For California, estimated based on data on total employee contributions from California Employment Development Department.	Judgmental trend.
19	State and local workers' compensation	For state government contributions, COG/GF fiscal year data on state and local government contributions. For local government contributions, state government contributions multiplied by the ratio of local government full-time equivalent employees to state government full-time equivalent employees. For private employer contributions, COG/GF data on premiums.	CES employment data and judgmental extrapolation of premiums data.

*Quarterly estimates are provided as underlying detail only; these detailed estimates are not included in the published tables because their quality is significantly less than that of the higher level aggregates in which they are included. Compared with these aggregates, the more detailed estimates are more likely to be either based on judgmental trends, on trends in the higher level aggregate, or on less reliable source data.

¹ Consists of payments for medical services for dependents of active duty military personnel at nonmilitary facilities.

BEA	Bureau of Economic Analysis
COG/GF	Census of Governments and Annual Surveys of Government Finances, Census Bureau
NIPA	National Income and Product Accounts
OASDI	Old-age, Survivors, and Disability Insurance
QCEW	Quarterly Census of Employment and Wages, Bureau of Labor Statistics
SSA	Social Security Administration

Appendix A: NIPA Measures of Employment and Hours

BLS is the principal provider of information on the labor market in the United States, including detailed data on employment, hours, and earnings. BEA prepares its own measures of employment and hours—based primarily on BLS data—to provide estimates that are consistent with the NIPA measures of compensation. That is, the NIPA measures of compensation and of employment and hours cover the same employees, they are adjusted consistently for misreporting, coverage, and definitions, and they are based primarily on the BLS Quarterly Census of Employment and Wages (QCEW) source data. Thus, the NIPA measures of employment and hours facilitate analyses of NIPA-based compensation and productivity by employee.

The QCEW program serves as a near census of quarterly employment information by 6-digit NAICS industry. The data reflect the number of workers covered by the Unemployment Insurance (UI) or the Unemployment Compensation for Federal Employees (UCFE) programs and are derived from quarterly reports filed by almost every employer in the U.S., Puerto Rico, and the U.S. Virgin Islands. All filled positions are included, whether full or part-time, temporary, or permanent; as such it is likely that a multi-job holder will be counted two or more times in QCEW data. The estimates include foreign professional workers and undocumented migratory workers employed temporarily in the United States; these are classified as “Rest of world.”

The NIPA measures of employment by industry from 2001 forward are classified according to the North American Industry Classification System; prior to 2001, the measures are classified according to the Standard Industrial Classification system.

Recording in the NIPAs

The NIPAs present current-dollar annual estimates of employment and hours by industry in the following tables:

- 6.4 Full-Time and Part-Time Employees by Industry
- 6.5 Full Time Equivalent Employees by Industry
- 6.6 Wages and Salaries per Full Time Equivalent Employee by Industry
- 6.7 Self-Employed Persons by Industry
- 6.8 Persons Engaged In Production by Industry
- 6.9 Hours Worked by Full-Time and Part-Time Employees by Industry

Overview of Source Data and Estimating Methods

The NIPAs present the following annual employment estimates:

Full- and part-time employees by industry. This measure is derived as the annual sum of the QCEW tabulations of the monthly employment data reported to the states each quarter by

private industries on quarterly tax returns for employees covered by UI laws and by federal agencies and state and local governments on similar reports for employees covered by the UCFE program. The measure is adjusted as described in the section on “Adjustments to the QCEW employment data.”

Full-time equivalent employees by industry. This measure equals the number of employees on full-time schedules plus the number of employees on part-time schedules converted to a full-time basis. For the current year, the number of nonfederal full-time equivalent employees in each industry is the product of the total number of employees, from the QCEW, and the ratio of average weekly hours per employee for all employees to average weekly hours per employee on full-time schedules, based on data from the Current Population Survey (CPS) conducted by the Census Bureau for BLS. For previous years, the number of full-time equivalent employees in each industry is the product of the total number of employees and the ratio of full time employees to total employees, also from the CPS. An industry’s full-time equivalent employment will be less than the number of its employees on full- and part-time schedules, unless it has no part-time employees. For federal employees and for the military, the number of full-time equivalent employees is based on data from the Budget of the United States Government.²⁸

Wages and salaries per full-time equivalent employee by industry. This measure is derived as the NIPA wages and salaries by industry divided by the NIPA measure of full-time equivalent employees by industry.

Self-employed persons by industry. This measure consists of active proprietors or partners who devote a majority of their working hours to their unincorporated businesses. Unpaid family workers are not included. The measure is from BLS data on self-employment by industry and is not adjusted by BEA.

Persons engaged in production by industry. This measure equals the NIPA measure of full-time equivalent employees plus the number of self-employed persons in each industry.

Hours worked by full- and part-time employees by industry. For employees excluding the military, this measure is derived as the product of total full- and part-time employees and the number of average weekly hours per employee for all employees, multiplied by 52 weeks, based on BLS data. For the military, this measure is derived as the product of the number of active duty military members and an assumed number of hours per year, plus the product of the number of reservists and an assumed number of hours per year.

²⁸ For federal civilian employees, the data are from the Historical Tables of the budget, available at <https://www.whitehouse.gov/omb/historical-tables/>.

Adjustments to the QCEW employment data

The QCEW employment data are largely consistent with the concepts and definitions underlying the NIPA estimates of employment and hours. However, as with the QCEW wage and salary data, BEA makes adjustments to make the data fully consistent with NIPA concepts, definitions, and coverage. First, BEA adjusts employment so that it remains consistent with the wages and salaries estimates adjusted for misreporting. Second, though the QCEW program provides partial information on agricultural industries and on employees in private households, BEA uses additional source data to estimate most or all of the employment for the same industries for which wages and salaries are adjusted: farms, farm labor contractors, private households, private elementary and secondary schools, religious membership organizations, railroads, military, and U.S. residents who are employed by international organizations and by foreign embassies and consulates in the United States.

Adjustment for misreporting. An adjustment is made to the QCEW data on private sector employment for consistency with the misreporting adjustments made to wages and salaries. That is, employment is adjusted in accordance with the adjustment to wages and salaries so that the proportional relationship between them remains the same.

Adjustment for employment that is not covered or not fully covered by UI and UCFE programs. An adjustment is made to add the employment of several industries that are not covered or that are not fully covered by the UI and UCFE programs. Following the entries in table 10.2, the adjustments are:

Government. Military employment is measured as the number of military personnel assigned to active duty units plus the number of military reserve unit members. The estimate is based on data from the Budget.

Additional government-related adjustments are made for the employment of students and their spouses by public colleges or universities, for elected officials and members of the judiciary, for intelligence agents, and for interns employed by publicly administered hospitals and by social service agencies. These adjustments, which comprise only a very small share of the total government adjustment, are based on corresponding adjustments underlying BEA's estimates of state personal income.²⁹

Other. Other adjustments include estimates for employees not fully covered by the QCEW, as follows:

- *for federal government enterprises* based on supplemental *Budget* data.
- *for farms*, based on quarterly data from USDA's National Agricultural Statistics Service on farm labor.
- *for farm labor contractors*, based on corresponding adjustments underlying BEA's state personal income estimates based on USDA data on expenditures for farm contract labor.

²⁹ For more information on BEA's estimates of state personal income, see "[State Personal Income and Employment](#)" at www.bea.gov.

- *for railroads*, based on data from the Railroad Retirement Board.
- *for private elementary and secondary schools*, based on corresponding adjustments underlying BEA's state personal income estimates, which are in turn based on the employment reported annually by the Census Bureau's *County Business Patterns* (CBP).
- *for religious organizations*, based on CBP data.
- *for private households*, based on CPS data.