

State Personal Income and Employment Methodology

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I. INTRODUCTION

This guide presents the conceptual framework, the data sources, and the statistical methodologies used by the Regional Economic Measurement Division of the Bureau of Economic Analysis (BEA) to estimate personal income and employment for states. Personal income is defined as the income received by, or on behalf of, all the residents of an area (nation, state, or county) from all sources. It consists of the income received by persons from participation in production, from government and business in the form of transfers, and from government in the form of interest (which is treated like a transfer receipt). Alternatively, personal income can be defined as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income, dividends, interest, and rent, and personal current transfer receipts, less contributions for government social insurance. Because the personal income of an area represents the income that is received by, or on behalf of, all the persons who live in that area, and because the estimates of some components of personal income (wage and salary disbursements, supplements to wages and salaries, and contributions for government social insurance) are made on a place-of-work basis, state personal income includes an adjustment for residence. The residence adjustment represents the net flow of compensation (less contributions for government social insurance) of interstate commuters. Disposable personal income is the income that is available to persons for spending or saving. It is calculated as personal income less personal current taxes paid to Federal, state, and local governments. Persons consists of individuals, nonprofit institutions that primarily serve individuals, private noninsured welfare funds, and private trust funds. The last three categories are referred to as "quasi-individuals."

The state estimates of personal income are designed to be conceptually and statistically consistent with the national estimates of personal income in the National Income and Product Accounts (NIPA). State estimates together with the estimate for the District of Columbia sum to a national total which is very similar to the NIPA estimate except for some minor differences in the treatment of U.S. residents working abroad and the income of foreign residents working in the U.S.

A brief history

In the mid-1930's, BEA began work on the estimation of regional income as part of the effort to explain the processes and structure of the nation's economy. As a result, it published annual state estimates of "income payments to individuals" in the April 1940 issue of the *Survey of Current Business*. These income payments were calculated as the sum of (1) wages and salaries, (2) other labor income and relief, (3) entrepreneurial withdrawals, and (4) dividends, interest, net rents and royalties.

During the 1940's and early 1950's, BEA developed an integrated set of national economic accounts, sought additional source data, and improved the methods used to prepare the estimates. One result of this work was the development of state personal income—a measure that is more comprehensive than state income payments. Estimates of state personal income were first published in the September 1955 *Survey*.

State personal income differs significantly from state income payments in five ways:

- State personal income consists of six major components (supplements to wages and salaries and personal current transfer receipts replaced other labor income and relief, and the component, contributions for government social insurance, was added as an explicit deduction);
- Personal income includes more component detail and a broader range of income-in-kind and imputed income items than state income payments;
- Personal income includes the income of nonprofit institutions that primarily serve individuals, private noninsured welfare funds, and private trust funds (collectively called quasi-individuals);
- Personal income includes employer (both private and government) contributions to pension funds—as part of supplements to wages and salaries—instead of the benefits paid by the funds; and
- Personal income includes personal current transfer receipts from business.

In addition, in the mid-1950's, BEA began work on preparing estimates for local areas. It prepared estimates for a few counties in the states in the Mideast and Plains regions.

In the late 1950's, BEA developed estimates of state disposable personal income. This series was published occasionally in the *Survey* in the 1960's and 1970's and has been published annually beginning with 1982.

During the 1960's, BEA developed quarterly estimates of state personal income. The first set of these estimates as a continuous time series was published in the December 1966 issue of the *Survey*. In addition, BEA prepared a personal income series for metropolitan areas and for nonmetropolitan counties for selected years 1929-62.

In the early 1970's, BEA developed estimates of personal income for counties in metropolitan areas. These estimates were published for the first time in the April 1975 *Survey*. Later in the 1970's it developed estimates of employment for states, counties, and metropolitan areas.

In the 1980's, BEA developed estimates of gross domestic product (GDP) by state and industry.¹ These estimates, as an established series, were first presented in the May 1988 *Survey*.

Now, BEA prepares annual and quarterly estimates of state personal income and annual estimates of state disposable personal income, employment, and GDP by state. It also prepares annual estimates of personal income and employment for all metropolitan areas and counties.

Uses of the state estimates

The state estimates of personal income and its components, per capita personal income, disposable personal income, employment, and GDP by state are widely used by both the public and the private sectors to measure and track economic well-being over

¹ These estimates were originally called gross state product.

time and to make comparisons across states in the level and composition of economic activity and the value added by a state's industries. These estimates provide a framework for the analysis of state economies, and they serve as a basis for decision making.

Federal agencies use these estimates in econometric models, such as those used to project energy and water use; they also use the estimates as a basis for allocating funds and for determining matching grants. For example, the distribution of \$215 billion in Federal funds is affected by the estimates of state per capita personal income. The estimates of GDP by state are also used to allocate federal funds.

In addition, the Census Bureau uses the estimates of state per capita personal income as the key predictor variable in the preparation of state estimates of the mean annual income of four-person families.

State governments use the state estimates of personal income and GDP to measure the economic base of planning areas. They also use the estimates in econometric models for various planning purposes and to project tax revenue and the need for public utilities and services. Currently, 21 states have set constitutional or statutory limits on state government revenue and spending that are tied to state personal income or to one of its components. These states account for more than one-half of the population of the United States.² A majority of the states use the quarterly estimates of state personal income to project tax collections.

University schools of business and economics use the estimates for theoretical and applied economic research. Some of these schools distribute the estimates in abstracts or similar reports to various state and local government agencies, regional councils of governments, private research groups, businesses, and libraries.

Businesses use the estimates for planning activities, such as evaluating markets for new or established products and determining areas for the location, expansion, and contraction of their activities.

Geographic characteristics of the source data

Personal income, by definition, is a measure of the income received by persons, and the estimates of state and county personal income should reflect the residence of the income recipients. However, some of the data that are used to estimate some components of personal income are reported by the recipient's place of work rather than by the recipient's place of residence. Therefore, these components are estimated on a place-of-work basis, the amounts aggregated, and the aggregate (called the income subject to adjustment) adjusted to a place-of-residence basis. Thus the combination of the components of personal income plus the residence adjustment yields personal income on a place-of-residence basis.

The estimates of wages and salaries, supplements to wages and salaries, and contributions for government social insurance (by employers and employees) are mainly derived from data that are reported by place of work. These data are reported by industry in the state and county in which the employing establishment is located.

The estimates of nonfarm proprietors' income and contributions for government social insurance (by the self-employed) are derived from source data that are reported by

² National Conference of State Legislatures, *State Tax and Expenditure Limits 2005*, <http://www.ncsl.org/programs/fiscal/telsabout.htm>.

the tax-filing address of the recipient. This address is usually that of the proprietor's residence; therefore, these data are assumed to be reported by place of residence.

The estimates of farm proprietors' income are derived from data that are reported by the principal place of production, which is usually the county in which the farm has most of its land and in which most of the work is performed. Because most farm proprietors live on, or near, their land, the place of residence is assumed to be the same as the place of work.

The estimates of rental income of persons, personal dividend income, personal interest income, personal current transfer receipts, and contributions for supplementary medical insurance and for veterans' life insurance are derived from data that are reported by the place of residence of the income recipient.

Differences in geographic scope and in classifications between the NIPA and state and county estimates

Estimates of personal income in the national income and product accounts (NIPA) differ from the state and county estimates primarily because of different treatments of the income of U.S. citizens living and working abroad and of foreign nationals living and working in the United States.

The differences mainly stem from different concepts of residence. For NIPA personal income, a U.S. resident has a center of economic interest in the U.S. and resides, or expects to reside, in the U.S. for a year or more. For state and county personal income, a resident is a participant in a U.S. regional economy, regardless of his national allegiance or duration of residence.

In general, the NIPA measure of personal income is slightly broader than state and county personal income:

- NIPA personal income includes the earnings of Federal civilian and military personnel stationed abroad and the property income received by the Federal retirement plans of these workers. The regional measure of personal income does not include this income.³
- NIPA personal income includes all income earned by U.S. citizens living abroad for less than a year. State and county personal income excludes the portion earned while these people live abroad. Both NIPA and state and county personal income exclude the income of private U.S. citizens living outside the country for a year or more.
- NIPA personal income includes the income of foreign nationals only if they live and work in the United States for a year or more. State and county personal income includes the income of resident foreign nationals working in the United States—including migrant workers—regardless of length of residency.
- Both measures include the income of U.S. residents employed by international organizations or by other countries while living in the United States and exclude the income of foreign nationals employed by their home governments or by international organizations in the United States.

³ See David G. Lenze, "New treatment of state estimates of military compensation," *Survey of Current Business* 85 (October 2005): 116.

In addition, the annual estimates of NIPA personal income can differ slightly from the national totals of state and county personal income because of differences in the availability of source data. Some data that were not available when the NIPA estimates were prepared may become available afterwards when state and county personal income is estimated.

Industrial classification

Up through 2000, the Standard Industrial Classification (SIC) was used (with some slight modifications) for the industrial classification of private sector wage and salary disbursements, compensation, earnings, and employment. The *Standard Industrial Classification Manual, 1967* was used for the years 1969-74, the *1972 Manual* was used for the years 1975-87, and the *1987 Manual* was used for 1988-2001 for states and 1988-2000 for counties.⁴

Since 2001, the North American Industry Classification System (NAICS), with some slight modifications, has been used.⁵ The 2002 edition of NAICS was used for the years 2001-06 and the 2007 edition is used for subsequent years. In addition, earnings and employment estimates that were originally compiled on an SIC basis have been converted to a NAICS basis 1990-2000 to provide users with longer time series on the current industrial classification system.

For the public sector, the estimates of wages and salaries, employer contributions for employee pension and insurance funds, and employment are classified by level of government—Federal, state, and local. The estimates for the Federal government are sub classified into civilian and military.

Concordances between the line codes and industry names used by BEA and those in the NAICS and SIC manuals are presented in an appendix.

Per capita personal income

Per capita personal income is calculated as the personal income of the residents of a given area divided by the resident population of that area. In computing per capita personal income for states and counties, BEA uses the Census Bureau's annual midyear population estimates. Except for college student and other seasonal populations, which are measured as of April 1, the population for all years is estimated as of July 1.

In states and counties where farm income predominates, additional considerations should be taken into account. Farm proprietors' income as measured for personal income reflects returns from current production; it does not measure current cash flows. Sales out of inventories are included in current gross farm income, but they are excluded from net farm income because they represent income from a previous year's production. Additions to inventories are included in net farm income at current market prices;

⁴ Executive Office of the President, Office of Management and Budget, Statistical Policy Division, *Standard Industrial Classification Manual, 1967* (Washington, DC: U.S. Government Printing Office (GPO), 1967); *Manual, 1972* (GPO, 1972); *Manual, 1987* (GPO, 1987).

⁵ Office of Management and Budget: *North American Industry Classification System, United States, 2002* (Lanham, MD: Bernan Press, 2002) and Office of Management and Budget: *North American Industry Classification System, United States, 2007* (Lanham, MD: Bernan Press, 2007)

therefore, farmers' attempts to regulate their cash flows by adjusting inventories are not reflected in BEA's farm proprietors' income estimates. However, this regulation of cash flows by farmers extends their earnings cycles, so it helps them to survive losses or lowered income for 2 or 3 years. In addition, the per capita personal income of sparsely populated areas that are dependent on farming will react more sharply to the vagaries of weather, world market demand, and changing government policies related to agriculture than that of areas where the sources of income are more diversified.

Personal income, adjusted gross income, and money income

Personal income as defined by BEA differs substantially from adjusted gross income (AGI), the principal measure of the income of individuals that is used by the Internal Revenue Service. Personal income also differs from money income, an income concept developed by the Census Bureau.

As compared with AGI, personal income consists of the income of nonprofit institutions serving individuals, private noninsured welfare funds, and private trust funds as well as of individuals, whereas AGI consists only of the income of individuals who file individual income tax returns. Personal income also includes employer contributions to private health and pension funds and to government employee retirement plans, several types of imputed incomes, transfer receipts, and all of the interest received by individuals, whereas AGI excludes all employer contributions, imputed incomes, most transfer payments, and the nontaxable interest received by individuals. Personal income, unlike AGI, excludes personal contributions for social insurance, realized capital gains and losses, and pension and annuity benefits from private and government employee retirement plans.⁶

Personal income differs from money income mainly because money income consists only of the income that is received by individuals in cash and its equivalents.⁷ Personal income, unlike money income, includes imputed income, lump-sum payments not received as part of earnings, certain in-kind personal current transfer receipts—such as Medicaid, Medicare, and food stamps—and employer contributions to private health and pension funds and to government employee retirement plans. Personal income, unlike money income, excludes personal contributions for social insurance, pension and annuity benefits from private and government employee retirement plans, and income from interpersonal transfers, such as child support.

Personal income for a given area and year includes the income received by individuals living in that area during that year. In contrast, money income for a given area and year consists of the income received during the year by individuals living in the area on April 1 of the following year, regardless of where they were living when they received the income. The income received by individuals who died or moved abroad before April 1 of the following year is not included in the money income of any area.

⁶ For more information on adjusted gross income, see Mark A. Ledbetter, "Comparison of BEA Estimates of Personal Income and IRS Estimates of Adjusted Gross Income," *Survey* 86 (November 2006):29-36.

⁷ For a very detailed comparison of personal income and money income see John Ruser, Adrienne Pilot, and Charles Nelson, "Alternative Measures of Household Income: BEA Personal Income, CPS Money Income, and Beyond," available on the BEA web site.

Personal income is prepared quarterly for states and annually for counties, whereas money income is prepared in greatest detail annually for the nation on the basis of responses to the Current Population Survey (CPS). State estimates are also prepared from the CPS, but they are typically the average of two or more years.⁸

Employment

BEA gives equal weight to full-time and part time jobs in its estimates of employment. Wage and salary jobs and proprietors' jobs are counted, but unpaid family workers and volunteers are not. Proprietors' employment consists of the number of sole proprietorships and the number of general partners. Wage and salary employment is on a place of work basis. Proprietors' employment, however, is more nearly by place of residence because, for nonfarm sole proprietorships, the estimates are based on IRS tax data that reflect the addresses from which the proprietors' individual tax returns are filed, which are usually the proprietors' residences. Nonfarm partnership employment reflects the tax-filing address of the partnership, which may be either the residence of one of the partners or the business address of the partnership. Farm proprietors' employment is a count of farms operated by sole proprietors plus the number of partners operating farm partnerships estimated from U.S. Department of Agriculture data. The residence and place of work of farm proprietors' employment is assumed to be the same—the county in which most of farmland is located.

The employment estimates are designed to be consistent with the estimates of wage and salary disbursements, proprietors' income, and earnings. The employment estimates are based on the same sets of source data as the corresponding earnings estimates and are prepared with parallel methodologies. However, two components of proprietors' income—the income of limited partnerships and the income of tax-exempt cooperatives—have no corresponding employment estimates.

Sources of the data

The estimates of personal income are primarily based on administrative-records, surveys, and censuses.

The data from administrative records may originate either from the recipients of the income or from the payer of the income. These data are a byproduct of the administration of various Federal and state government programs. The most important sources of these data are: The state unemployment insurance programs of the Bureau of Labor Statistics, U.S. Department of Labor; the social insurance programs of the Centers for Medicare and Medicaid Services (CMS, formerly the Health Care Financing Administration), U.S. Department of Health and Human Services, and the Social Security

⁸ Money income for states, counties, and cities has been prepared decennially on the basis of data from the "long-form" sample of the census of population. It is prepared annually for states and will eventually be prepared annually for counties on the basis of data from the American Community Survey (ACS). The income detail in the Census and in the ACS is much less than in the CPS. The Small Area Income and Poverty Estimates program of the Census Bureau has prepared post-censal estimates of median household income for counties. In addition, the Census Bureau prepares estimates of median household income for states using data from the annual Current Population Survey and the American Community Survey.

Administration; the Federal income tax program of the Internal Revenue Service, U.S. Department of the Treasury; the veterans benefit programs of the U.S. Department of Veterans Affairs; and the military payroll systems of the U.S. Department of Defense.⁹

The data from censuses are mainly collected from the recipients of the income. The most important sources of census data for the personal income and employment estimates are the census of agriculture, which is conducted by the U.S. Department of Agriculture (USDA), and the census of population and housing, which is conducted by the Bureau of the Census, U.S. Department of Commerce.

Some of the estimates are based on data from other sources. For example, the USDA's national and state estimates of the income of all farms constitute the principal basis for BEA's national and state estimates of farm proprietors' income. The USDA uses sample surveys, along with census data and administrative-records data, to derive its estimates.

Using administrative records data and census data to measure income as defined in the national income and product accounts has both advantages and disadvantages. By using these data, BEA can prepare detailed annual estimates of personal income for the nation, states, and counties at a relatively low cost and without increasing the reporting burden on businesses and households. However, because the source data often do not precisely match the concept being estimated, they must be adjusted to compensate for differences in definitions, coverage, and geographic detail.

Release and publication schedule

The quarterly and annual estimates of state personal income and the annual estimates of local area personal income are first released on BEA's Web site at www.bea.gov and in news releases; the release dates are announced in advance and are listed on the Web site and in the *Survey of Current Business*.

The quarterly state estimates of personal income are subsequently published in the January, April, July, and October issues of the *Survey*.

The preliminary annual state estimates of total and per capita personal income and of total and per capita disposable personal income are published in the April *Survey*. The revised annual estimates of state personal income by major type and of earnings by industry are published in the September or October *Survey*.

The local area estimates of total and per capita personal income are published in the May *Survey*. Accelerated estimates of metropolitan area personal income are published in the September *Survey*.

Preparation and revision schedule

Personal income estimates are first prepared for the Nation and then for states, estimates for metropolitan statistical areas (MSAs) are prepared next, and lastly they are prepared for counties. Estimates for the BEA regions are aggregations of the state estimates, and estimates for micropolitan areas and BEA economic areas are aggregations of county estimates.

⁹ The data from the state unemployment insurance programs are collected by the various state employment security agencies and are assembled and supplied to BEA by the U.S. Bureau of Labor Statistics.

Quarterly estimates of state personal income are prepared about three months after the end of the quarter. The preliminary annual state estimates are prepared about three months after the end of the year, and the revised state estimates are prepared about eight or nine months after the end of the year. Preliminary annual MSA estimates are released on an accelerated basis eight months after the end of the year. The annual estimates of local area personal income are prepared about 16 months after the end of the year.

In March of each year, the annual and quarterly state estimates for the three years before the previous year are revised in order to incorporate the newly available data for wages and salaries that are used to prepare the county estimates for those years and to reflect the county-level estimation of the adjustment for residence. In addition, the state estimates for the fourth quarter of the previous year are prepared, and the estimates for the first three quarters are revised; the preliminary annual state estimates for the previous year are prepared by averaging these quarterly estimates.

In April, the estimates of local area personal income for the year before the previous year are prepared, and the estimates for the two years before that are revised.

In June, the state estimates for the first quarter of the current year are prepared, and the estimates for the four quarters of the previous year are revised.

In August or September, the annual state estimates for the previous year are revised using the annual, rather than the quarterly, methodology, and the annual estimates for the two years before that are revised. In a separate release, accelerated annual estimates of MSA personal income for the previous year are published.

In September, the state estimates for the second quarter of the current year are prepared, and the estimates for the first quarter are revised. Further, the estimates for the quarters of the previous three years are revised for consistency with the revised annual estimates.

In December, the estimates of state personal income for the third quarter of the current year are prepared, and the estimates of the first and second quarters are revised.

Aside from this schedule, the state and local area estimates are normally revised again only after a comprehensive, or benchmark, revision of the NIPA. Comprehensive revisions of the NIPA are made approximately every four or five years.¹⁰

In a comprehensive NIPA revision, the national estimates of personal income are affected by statistical changes that result from the introduction of new source data and the use of improved estimating methods. The national estimates may also be affected by the definitional and classificatory changes that are made so that the NIPA will reflect the evolving economy of the United States. For example, as part of the 2003 comprehensive revision, the definition of property and casualty insurance services was changed to recognize the implicit services that are funded by property income; to provide a more appropriate treatment of insured losses that reduces the large swings in measured services that result from catastrophes, such as the terrorist attacks of September 11, 2001; and to change the treatment of reinsurance. As a result, personal interest income now includes an imputed value of interest income attributable to persons as policyholders, and business

¹⁰ For the results of the latest comprehensive revision of the NIPA, see Eugene P. Seskin and Daniel Larkins, "Improved Estimates of the National Income and Product Accounts for 1929-2002: Results of the Comprehensive Revision," *Survey of Current Business* 84 (February 2004): 7-29.

transfer payments to persons now includes net insurance settlements received by persons.¹¹

Tables

The state personal income data are organized in a set of tables. The data are available online and on a CD-ROM. Annual data for 1929-2006 are available for states, the District of Columbia, the eight BEA regions, and the United States.¹² Annual data are presented by SIC two-digit industry for 1958-2000, by SIC one-digit industry for 1929-1957 and 2001, and by North American Industry Classification System (NAICS) three-digit industry for 2001-2006, except as noted. Quarterly data by industry are presented by SIC division for 1948-2001 and by NAICS sector for 2001 to the present.

- Summary of personal income, per capita personal income, and population, 1929-2006 (tables SA1-3) and of disposable personal income and per capita personal income, 1948-2006 (tables SA51-52);
- Annual income and employment summary (table SA04), 1929-2006;
- Annual estimates of personal income by major component and of place-of-work earnings by SIC industry 1929-2001, and NAICS three-digit industry for 1990-2006 (table SA05);
- Annual estimates of compensation of employees by place of work by SIC industry 1998-2001 and NAICS industry 2001-06 (table SA06);
- Annual estimates of wage and salary disbursements by place of work by SIC industry 1929-2001 and NAICS industry 2001-06 (table SA07);
- Annual estimates of number of jobs—both those held by employees and those held by sole proprietors and partners—by place of work by SIC industry for 1969-2001 and NAICS industry 1990-06 (table SA25);
- Annual estimates of number of jobs held by employees by place of work by SIC industry for 1969-2001 and NAICS industry 2001-06 (table SA27);
- An economic profile table that includes a selection of data from several of the other tables and component detail for dividends, interest, and rent for 1958-2006 (table SA30);
- Annual estimates of personal current transfer receipts by major program for 1948-2006 (table SA35);
- Annual estimates of farm income and expenses that include major categories of gross receipts and expenses for all farms and four measures of farm income for 1969-2006 (table SA45);
- Annual estimates of personal current taxes by level of government and by type for 1948-2006 (table SA50);
- Quarterly personal income for 1948-present (table SQ1);

¹¹ Robert L. Brown, G. Andrew Bernat, Jr., and Adrienne T. Pilot, “Comprehensive Revision of State Personal Income: Preliminary Estimates for 2003: Revised Estimates for 1969-2002,” *Survey* 84 (May 2004):27-90.

¹² See “Geographic areas” in the Glossary. Also see the list of BEA regions with their constituent states on the BEA website <http://www.bea.gov/bea/regional/docs/regions.asp> or under “Documentation” on the CD-ROM.

- Quarterly income summary for 1948-present (table SQ4);
- Quarterly estimates of personal income by major component and of earnings by place of work by SIC industry 1948-2001 and NAICS industry 2001-present (table SQ5);
- Quarterly estimates of compensation of employees by SIC industry 1948-2001 and NAICS industry for 2001-present (table SQ6); and
- Quarterly estimates of wage and salary disbursements by place of work by SIC industry 1948-2001 and NAICS industry 2001-present (table SQ7).

Availability of the state and local area estimates

Before the state and local area estimates are published in the *Survey*, they are available in printed and electronic news releases.¹³ The complete set of personal income and employment estimates for local areas are available interactively on BEA's Web site. Go to www.bea.gov/bean/regional/reis/ to access these estimates.

The local area estimates of personal income and of employment are also available through the members of the BEA User Group, which consists of state agencies and universities that help BEA to disseminate the estimates in their states. Go to <http://www.bea.gov/bean/regional/docs/usergrp.cfm> to access a list of the BEA User Group members or see the list of members under "Documentation" on the CD-ROM.

For more information, call the Regional Economic Information System at 202-606-5360, fax 202-606-5322, or e-mail reis.remd@bea.gov.

¹³ BEA's national, regional, international, and industry estimates, the *Survey of Current Business*, and BEA news releases are available without charge on BEA's Web site at www.bea.gov. By visiting the site, you can also subscribe to receive free e-mail alerts of BEA releases and announcements.

II. WAGE AND SALARY DISBURSEMENTS

Wage and salary disbursements consist of the monetary remuneration of employees (including the salaries of corporate officers, commissions, tips, bonuses, and severance pay); employee gains from exercising nonqualified stock options; distributions from nonqualified deferred compensation plans; and an imputation for pay-in-kind (such as the meals furnished to the employees of restaurants).

Wage and salary disbursements are measured before deductions, such as social security contributions, union dues, and voluntary employee contributions to defined contribution pension plans such as 401(k) plans and they reflect the amount of wages and salaries disbursed, but not necessarily earned, during the year. The estimates are prepared, with a few exceptions, at the North American Industry Classification System (NAICS) three-digit industry level.¹

Wage and salary disbursements accounted for 55 percent of total personal income at the national level in 2006 (see table A, which also shows the relative size of wages paid by industry).

Both the national and the state estimates of wage and salary disbursements are based primarily on the Quarterly Census of Employment and Wages (QCEW), data that originate from the state unemployment insurance (UI) system, and from the UI program for Federal civilian employees. These data are assembled by the Bureau of Labor Statistics (BLS) of the Department of Labor. The data, reported quarterly on Form ES-202, the state UI contribution reports filed by employers in the industries covered by, and subject to, each state's UI laws and by Federal agencies, are tabulated by county and by NAICS six-digit industry. The QCEW data account for 95 percent of wage and salary disbursements as estimated by BEA (table B).

Under most state UI laws, wages and salaries include bonuses, tips, and the cash value of meals and lodging provided by the employer—that is, pay-in-kind.

The estimates of wages and salaries for a few industries are prepared largely or entirely with data other than the QCEW data. These industries are either not covered by state UI or are only partly covered. For three of these industries—support activities for agriculture and forestry; private education; and religious, grantmaking, civic, professional and similar organizations—the estimates are prepared as the sum of (1) an estimate for the fully covered portion of the industry, based on the QCEW data, and (2) an estimate for the incompletely covered portion of the industry, based largely or entirely on other source data, as discussed below.

Wages and salaries in industries fully covered by the UI programs

The national and state estimates of wages and salaries in industries that are fully covered by state UI programs are based on quarterly QCEW data for wages and salaries,

¹ NAICS has been used since 2001. Previously the Standard Industrial Classification (SIC) was used. In order to provide users with a longer time series of data on a NAICS basis, BEA converted its earnings and employment data, originally compiled on an SIC basis, to a NAICS basis from 1990 to 2000. See “NAICS Earnings and Employment by Industry, 1990-2000” in Chapter XII Technical Notes. See also “Industrial Classification” in Chapter I Introduction.

or payrolls. The national estimates of the wages and salaries of federal civilian employees, covered by the Federal UI program, are also based predominately on QCEW. Because the QCEW data do not precisely meet BEA's statistical and conceptual requirements, the data must be adjusted to provide complete coverage of all components of wages and salaries and the wages of all employees (including, for example, the wages of students and elected officials) and the proper industrial and geographic classifications.

Adjustment for congressional staff wages.—In the QCEW data for Federal civilian employees, all the wages and salaries for congressional staff are assigned to Washington, DC. However, some of these wages are earned by congressional staff who work in the state offices of the members of Congress. BEA assumes that 25 percent of the total congressional payrolls are earned by congressional staff in state offices, so this percentage of these payrolls is allocated to states in proportion to their congressional representation.

Adjustment for tax misreporting.—Approximately \$122 billion of wages and salaries not reported by employers is added to the QCEW data (Table B). Because state-level data are unavailable, the national estimate for each industry is allocated to states in proportion to the QCEW payroll data for the industry.

The national estimate for each industry is prepared in two parts: One part is prepared for the payrolls that were underreported by employers, and one part is prepared for the payrolls that were not reported, because employers failed to file a report.²

In addition, tips are assumed to be understated in the UI contribution reports from the following industries: health and personal care stores; general merchandise stores; air transportation; railroad transportation; taxicabs, (a part of transit and ground passenger transportation); scenic and sightseeing transportation; couriers and messengers; administrative and support services; amusement, gambling, and recreation industries; accommodation services; food services and drinking places; personal and laundry services; and religious, grantmaking, civic, professional and similar organizations. For each of these industries, the national estimate of the unreported tips, which is derived in the preparation of BEA's input/output accounts for benchmark years and interpolated and extrapolated for other years, is allocated to states in proportion to the QCEW payroll data for the industry (or Railroad Retirement Board data for the railroad transportation industry).

Adjustments for wages and salaries that are excluded from the QCEW data.—The QCEW payroll data for some states exclude some of the voluntary employee contributions to certain deferred compensation plans, such as 401(k) plans. The payroll data for Washington State exclude the salaries paid to corporate officers. In addition, the QCEW data for specific industries exclude certain, usually small, amounts of wages and salaries that are not covered by state UI programs.

For years prior to 1998, the voluntary contributions made by employees to deferred compensation plans were not fully reported for all states in the QCEW payroll data. An adjustment to include these contributions was made to each industry at both the national and state levels. The national adjustment was based on data from the Internal Revenue Service Form 5500 (*Annual Return/Report of Employee Benefit Plan*) and was distributed to the 19 states that informed the Bureau of Labor Statistics that they had not

² Robert P. Parker, "Improved Adjustments for Misreporting of Tax Return Information Used to Estimate the National Income and Product Accounts, 1977," *Survey of Current Business* 64 (June 1984): 17-25.

issued explicit reporting requirements for the contributions. The national adjustment for each industry was allocated to those states in proportion to the amount of reported wages and salaries for the industry in those states.

From 1998 forward, the extent of the underreporting of voluntary contributions made by employees to deferred compensation plans has declined to zero for all states except for Alaska. An adjustment for the contributions made by Alaska State government employees since 1996, based on information from the Alaska Department of Labor, is made to the state government payrolls of that state.³

The salaries of corporate officers in Washington State, who are exempt by state law from UI coverage, are excluded from the QCEW payroll data for private industries. Therefore, an adjustment is made to include these salaries based on estimates that are provided quarterly by the Washington State Employment Security Department.

The payrolls of railroad carrier affiliates are not included in the data for transportation services, and the payrolls of railway labor organizations are not included in the data for religious, grantmaking, civic, professional and similar organizations. These industry segments are covered by the Railroad Unemployment Insurance system rather than by the state UI system. The employers in these segments file reports that include payroll data with the Railroad Retirement Board, which provides these data to BEA. The data for each employer are then added to the QCEW data for the appropriate industry for the nation and for each state.

The payrolls of some nonprofit organizations are excluded from mandatory UI coverage in most states. Estimates of the payrolls of these small organizations are prepared for various industries. A national estimate of the employment for each industry is received from the Bureau of Labor Statistics.⁴ The national estimate of the wages and salaries for each industry is derived as the product of the employment estimate and the annual average wages and salaries of the UI-covered employees in the industry. The national estimate for the organizations in each industry is allocated to states in proportion to the QCEW payroll data for the industry.

The wages and salaries of students and spouses of students who are employed by the institutions of higher education in which the students are enrolled are excluded from the QCEW payroll data for private, state government, and local government educational institutions. However, employment data that include the student employees of private institutions are published annually in *County Business Patterns* and employment data that include the student employees of government institutions are available from the Census Bureau's State and Local Government Employment and Payroll web site. The national and state estimates of the wages of student and spousal employees therefore are estimated as the product of the number employed in private and government institutions and an average wage of part-time government employees obtained from the Census Bureau's Governments Division.

The pay-in-kind of members of religious orders who teach at private colleges and universities is excluded from the QCEW payroll data for private education. The national

³ Beginning with 1996, employers in Alaska are no longer required to include the employee contributions in the reported wages and salaries.

⁴ The presumed non-covered employment is derived from the Current Employment Statistics (CES) survey which is provided by the National Benchmark Branch Division of CES, Office of Industry Employment Statistics, Bureau of Labor Statistics.

estimate of pay-in-kind is distributed to states in proportion to the number of full-time teachers who are members of religious orders, as reported in the “General Summary” of the *Official Catholic Directory*.⁵

The pay-in-kind of workers in private hospitals who do not receive cash wages are excluded from the QCEW data for private hospitals; these workers are mainly interns, student nurses, and members of religious orders. The national estimate of pay-in-kind of these workers is allocated to states in proportion to QCEW employment for private hospitals. A national estimate of their wages is derived as the product of an employment estimate from the Bureau of Labor Statistics and the annual average wage of UI-covered employees in the hospital industry. This national estimate of wages is allocated to states in proportion to QCEW wages for private hospitals.

The salaries of certain employees of state and local governments—primarily elected officials, members of the judiciary, and interns employed by government-operated hospitals—are excluded from the QCEW payroll data for state and local government employees. The national and state estimates are based on employment data from the BLS Current Employment Statistics program.

The commissions received by certain employees, primarily insurance solicitors, are excluded from the QCEW data. A national estimate of the wages and salaries of these employees is derived as the product of an employment estimate from the Bureau of Labor Statistics and the annual average wage of UI-covered employees in the insurance industry.⁶ The national estimate is allocated to states in proportion to the QCEW payroll data for the insurance industry.

As part of the 2003 comprehensive revision of the national income and product accounts, three components of personal income that were included in other labor income were moved to wage and salary disbursements. The three components are fees paid to jurors and witnesses, compensation of prisoners, and marriage fees paid to justices of the peace.

The national estimates of the fees paid to jurors and witnesses are based on data from the Budget of the United States Government and from the Census Bureau’s annual *State Government Finances*. The estimates are allocated to states using BEA’s estimates of wages paid to state government employees, excluding education.

The national estimates of the compensation of prisoners are based on data provided by the Department of Justice. The national estimate is allocated to states on the basis of wages paid to prison employees. Compensation paid to federal prisoners is allocated only to those states that have a Federal prison.

In the absence of source data, marriage fees paid to justices of the peace are arbitrarily assumed to be a constant \$10 million. The national estimate is allocated to

⁵ “General Summary,” *Official Catholic Directory* (New York: P.J. Kenedy and Sons). The *Directory* is published annually. The “General Summary” is a tabulation of the number of members of religious orders who are employed in Catholic institutions in each diocese and in each state. The data are classified by clerical title and by religious assignment. The data for the Archdiocese of Washington, DC, which includes the nearby suburban counties in Maryland, are apportioned between the District of Columbia and Maryland on the basis of the detailed information in the *Directory*.

⁶ The presumed non-covered employment is derived from the Current Employment Statistics Survey (CES) which is provided by the National Benchmark Branch Division of CES, Office of Industry Employment Statistics, Bureau of Labor Statistics.

states based on BEA estimates of wages paid to local government employees, excluding education.

Wages and salaries in industries not fully covered by the state UI programs

The estimates of wages and salaries for eight industries are primarily based on data other than QCEW data. For five industries—farms, farm labor contractors, private households, private elementary and secondary schools, and religious membership organizations—there is full UI coverage in only a few states. The other three industries—railroads, military, and other—are not covered by any state UI program. In addition, because these estimates are primarily based on data that do not include wages paid in kind, an estimate of pay-in-kind is prepared for these industries (except farm labor contractors, railroads, and other). The national estimate of pay-in-kind for each industry is identical to the imputed value of the goods and services furnished without charge by employers to their employees, as estimated for inclusion in personal consumption expenditures.⁷

Farms.—Wages and salaries for farms consist of the cash wages and pay-in-kind of hired farm labor and the salaries received by the owner-operators of farm sole proprietorships, partnerships, and family-held corporations.⁸ The national and state estimates of the cash wages and pay-in-kind of hired farm labor are based on the estimates of farm labor expenses that are prepared by the U.S. Department of Agriculture (USDA) as part of its estimates of farm income.⁹ The national and state estimates of the salaries of owner operators are based on unpublished data from the USDA.

Farm labor contractors.—Farm labor contractors are classified in support activities for agriculture and forestry. Farm labor contractors and their employees are only partially covered by UI laws in most states. However, in Arizona and California, all of the employees are covered. The national estimates are based on data for contract farm labor expenses from the 1992 and 1997 Censuses of Agriculture. For Arizona and California, the QCEW reported wages are used as the estimates. The estimates for the other states for 1992 and 1997 are based on the data for contract farm labor expenses from the censuses of agriculture for those years. The estimates for 1993-96 are based on straight-line interpolations between the 1992 and 1997 data, and the 1997 data are used to prepare the estimates for 1998-2004.

Private households.—The national estimates of the cash wages paid to the employees of private households are based on data from the Current Population Survey. The state estimates of cash wages are based on a special tabulation of journey-to-work (JTW) data from the 2000 Census of Population. The wage data are extrapolated by the annual change in population. The extrapolated series for each year is adjusted

⁷ See (1) food furnished to employees, including military and domestic service, (2) standard clothing issued to military personnel, and (3) employees' lodging, lines 171-173 in Table 7.12, "Imputations in the National Income and Product Accounts," *Survey of Current Business* 87 (August, 2007): 163.

⁸ Family-held corporations are those qualified under the Internal Revenue Code subchapter S.

⁹ The USDA state estimates of farm labor expenses exclude the salaries received by the owner-operators; these salaries are treated as part of the return to capital. The BEA treatment of the salaries received by owner-operators of farms is different from the treatment of salaries received by owner-operators of nonfarm enterprises. Their salaries are included in nonfarm proprietors' income.

proportionately to sum to the national estimate of cash wages. The national estimates of pay-in-kind are distributed to the states using JTW place-of-work data on private household employment. The employment data are extrapolated from 2000 using a method similar to that used for wages.

Private elementary and secondary schools.—The private elementary and secondary school industry is partially covered by state UI programs, but it is treated as if it were not covered, because religiously affiliated schools, which are exempt from state UI coverage, account for most of the wages and salaries for this industry. The national and state estimates of cash wages are based on annual payroll data reported in *County Business Patterns*.¹⁰ The national estimate of the pay-in-kind for these schools is distributed to states on the basis of the number of full-time teachers in religious orders.¹¹

Religious membership organizations.—The national and state estimates of cash wages for religious membership organizations are based on payroll data reported for these organizations in *County Business Patterns*. The estimate of pay-in-kind for religious membership organizations reflects the value of the food, laundering, lodging, and miscellaneous items received by members. The national estimate for religious pay-in-kind is allocated to the states based on employment levels for religious membership organizations found in *County Business Patterns*.

Railroads.—The national and state estimates of the wages and salaries paid by railroad companies, which are not covered by the state UI system, are based on wage and salary data from the Railroad Retirement Board (RRB). The RRB data that are used for the state estimates represent the wages and salaries subject to the payroll tax that supports the railroad retirement system; these data are tabulated according to the state of residence of the employee. The data are adjusted (1) to reflect the portion of the wages and salaries not subject to the tax and (2) to convert them to a place-of-work basis. The former adjustment is based on the RRB-reported number of employees living in each state whose wages or salaries exceed the limit for retirement taxation. The latter adjustment is based on JTW data for railroad employees from the 2000 census.

Military.—Wages and salaries for the military services consist of cash wages (including allowances) of full-time personnel of the armed services (including the Coast Guard), cash wages of the members of the Reserves including the National Guard, and pay-in-kind received by the full-time and reserve enlisted personnel of the armed services.¹²

The national estimates of the cash wages of the military services are based on data from the budget of the United States.

The state estimates of cash wages of the full-time personnel of the Army, the Navy, the Air Force, and the Marine Corps are prepared in three steps. First, approximations of quarterly cash wages are calculated for subgroups of personnel—for officers and for enlisted personnel in the Navy and Marine Corps and for each pay grade of the Army and the Air Force. The approximations are derived from quarterly averages

¹⁰ The *County Business Patterns* data are tabulated from the administrative records of the Old-age, Survivors, and Disability Insurance program. This program exempts nonprofit religious organizations, such as these schools, from mandatory coverage, but its provisions for elective coverage have resulted in the participation of most of these schools.

¹¹ *Official Catholic Directory*. See footnote 6.

¹² The estimates of pay-in-kind reflect the value of the food and standard-issue clothing received by enlisted personnel.

of monthly data on the number of military personnel at each installation and from national annual data on average pay for each subgroup from the Department of Defense.¹³ The quarterly average number of personnel are summed over all installations in each county to obtain the quarterly average number of personnel for each subgroup, and then multiplied by the national annual average pay (for example, the number of Navy officers in each county is multiplied by the national average pay of Navy officers).

Second, the approximations of the quarterly cash wages for each subgroup in each county are summed to obtain county approximations, and the county approximations for each service are summed to obtain state approximations for each service. Third, the quarterly state approximations for each service are averaged to yield calendar year approximations, which are then adjusted proportionately to sum to the national estimates.

The national estimate of cash wages for the full-time personnel of the Coast Guard is allocated to states in proportion to an annual summation of monthly Coast Guard payroll from the Department of Homeland Security.

The national estimate of wages for the Reserves for each calendar year is allocated to states in proportion to payroll data for the calendar year from the Washington Headquarters Service of the Department of Defense.

The national estimate of the pay-in-kind of full-time personnel in the Coast Guard is allocated to the states in proportion to the number of enlisted personnel in the Coast Guard reported by the Department of Homeland Security, and the national estimate for each of the other services is allocated by the number of enlisted personnel in each service reported by the Department of Defense. The national estimate for the Reserves is allocated to states in the proportion to the estimates of cash pay.

Other.—Other wages and salaries consist of the wages and salaries of U.S. residents who are employed by international organizations and by foreign embassies and consulates in the United States. The national estimates are prepared by BEA as part of the balance of payments accounts. The national estimates for all years are allocated to states in proportion to estimates of the administrative expenditures of these organizations in 1968.

Alternative measure of wages

Another measure of wages by place of work is the payroll data published in the Census Bureau's *County Business Patterns* (CBP). It differs in source data and coverage from BEA's wage and salary disbursements and QCEW wages.¹⁴

The CBP data are derived from Census Bureau business establishment surveys and Federal administrative records.

The coverage of the CBP data differs from that of the QCEW data primarily because the CBP data exclude most government employees, while the QCEW data cover civilian government employees.¹⁵ CBP data also exclude several private industries

¹³ The Army and the Air Force provide average base pay; the Navy and Marine Corps provide average base pay and allowances.

¹⁴ See table B.

¹⁵ The CBP data cover only those government employees who work in government hospitals, federally chartered savings institutions and credit unions, retail liquor stores, wholesale liquor establishments and university publishers. QCEW data in most states exclude state and local elected officials, members of the

covered at least in part by the QCEW: crop and animal production; rail transportation; insurance and employee benefit funds; trusts, estates, and agency accounts; and private households. However, the CBP data cover the employees of educational institutions, membership organizations, and small nonprofit organizations in other industries more completely than the QCEW data.¹⁶

Beginning in 2001, QCEW includes employees of Indian tribal governments and enterprises in local government. These employees were previously included in the relevant private industries.¹⁷ In the CBP data, these employees are still classified in private industries.

judiciary, state national and air national guardsmen, temporary emergency employees, and those in policy and advisory positions.

¹⁶ Some religious elementary and secondary schools are not covered by QCEW because of a 1981 Supreme Court decision stating “schools operated and supported by churches and not separately incorporated [are] held exempt from unemployment compensation taxes.” College students (and their spouses) employed by the school in which they are enrolled and student nurses and interns employed by hospitals as part of their training are also excluded from QCEW. While QCEW coverage varies, half of the states only include nonprofit organizations with four or more employees during twenty weeks in a calendar year.

¹⁷ For example, employees of casinos owned by tribal councils were included in the North American Industry Classification System subsector “Amusement, Gambling, and Recreation Industries.”

Table A.--Relative Importance to Personal Income of Wage and Salary Disbursements, by Component, United States, 2006

	Millions of dollars	Percent of personal income
Personal Income /1/..	10,966,808	100.00
Wage and salary disbursements/2/..	6,014,067	54.84
Farm..	19,554	0.18
Forestry, fishing, related activities and other/3/..	18,343	0.17
Mining..	48,337	0.44
Utilities..	43,030	0.39
Construction..	351,491	3.21
Manufacturing..	730,968	6.67
Durable goods manufacturing..	487,915	4.45
Wood product manufacturing..	19,990	0.18
Nonmetallic mineral product manufacturing..	23,328	0.21
Primary metal manufacturing..	25,277	0.23
Fabricated metal product manufacturing..	68,716	0.63
Machinery manufacturing..	64,354	0.59
Computer and electronic product manufacturing..	107,127	0.98
Electrical equipment and appliance manufacturing..	21,621	0.20
Transportation equipment manufacturing..	106,917	0.97
Furniture and related product manufacturing..	19,320	0.18
Miscellaneous manufacturing..	31,265	0.29
Nondurable goods manufacturing..	243,053	2.22
Food manufacturing..	54,502	0.50
Beverage and tobacco product manufacturing..	10,129	0.09
Textile mills..	6,870	0.06
Textile product mills..	5,096	0.05
Apparel manufacturing..	7,705	0.07
Leather and allied product manufacturing..	1,463	0.01
Paper manufacturing..	24,877	0.23
Printing and related support activities..	27,312	0.25
Petroleum and coal products manufacturing..	9,495	0.09
Chemical manufacturing..	63,057	0.57
Plastics and rubber products manufacturing..	32,547	0.30
Wholesale trade..	346,621	3.16
Retail trade..	406,238	3.70
Transportation and Warehousing..	189,430	1.73
Air transportation	26,681	0.24
Rail transportation	13,746	0.13
Water transportation	3,866	0.04
Truck transportation	58,538	0.53
Transit and ground passenger transportation	10,737	0.10
Pipeline transportation	3,576	0.03
Scenic and sightseeing transportation	745	0.01
Support activities for transportation	25,622	0.23
Couriers and messengers	22,697	0.21
Warehousing and storage	23,222	0.21
Information..	202,392	1.85
Publishing industries, except Internet	60,759	0.55
Motion picture and sound recording industries	20,721	0.19
Broadcasting, except Internet	20,713	0.19
Internet publishing and broadcasting	2,688	0.02
Telecommunications	65,402	0.60
ISPs, search portals, & data processing	29,863	0.27
Other information services	2,246	0.02
Finance and insurance..	489,420	4.46

Real estate and rental and leasing..	93,945	0.86
Professional and technical services..	534,111	4.87
Management of companies and enterprises..	158,575	1.45
Administrative and waste services..	245,010	2.23
Educational services..	93,858	0.86
Health care and social assistance..	597,951	5.45
Arts, entertainment, and recreation..	62,540	0.57
Accommodation and food services..	191,536	1.75
Other services, except public administration..	182,312	1.66
Government and government enterprises..	1,008,405	9.20
Federal, civilian..	174,632	1.59
Military..	83,721	0.76
State and local..	750,052	6.84

Footnotes

1. Includes the adjustment for residence which is the net inflow of the earnings of interarea commuters. For the United States, it consists of adjustments for border workers: Wage and salary disbursements to U.S. residents commuting to Canada less wage and salary disbursements to Canadian and Mexican residents commuting into the United States.

2. Includes wages received by border workers employed in the United States.

3. "Other" consists of the wage and salary disbursements of U.S. residents employed by international organizations and foreign embassies and consulates in the United States.

NOTE.-- Detail may not add to totals due to rounding.

**Table B. Relation of BEA Wage and Salary Disbursements to
Wages as Published by the Bureau of Labor Statistics, United States, 2006**

	Millions of dollars
Total wages, BLS...	5,690,802
Plus: Adjustments made by BEA:	
For unreported wages and unreported tips on employment tax returns...	121,653
For wages and salaries not covered or not fully covered by unemployment insurance:	
Private...	105,486
Government...	96,009
Other adjustments ¹ ...	117
Equals: Wage and salary disbursements, BEA...	6,014,067

Footnotes

1. Consists of adjustments to the wage and salary estimates to remove employees of U.S. companies stationed overseas, add U.S. residents who are employed by international organizations and by foreign embassies and consulates in the United States, and reflect updates to published BLS Quarterly Census of Employment and Wages (QCEW) data.

III. SUPPLEMENTS TO WAGES AND SALARIES

Supplements to wages and salaries consist of employer contributions for employee pension and insurance funds (previously called other labor income) and employer contributions for government social insurance. Supplements accounted for 19 percent of compensation at the national level in 2006 (table C). In the new presentation of state personal income, employer contributions for government social insurance is included as a component of supplements to wages and salaries, compensation, and earnings by place of work. It also is included in total contributions for government social insurance, which consists of both employer contributions and employee and self-employed contributions and which is deducted in the calculation of personal income and net earnings by place of residence. This change provides the user with a more comprehensive measure of labor costs of production by industry in an area, but it does not affect personal income or net earnings by place of residence.

Employer Contributions for Employee Pension and Insurance Funds

Employer contributions for employee pension and insurance funds consists of employer contributions to (1) private employee pension and welfare funds, (2) privately administered workers' compensation plans, (3) government employee health and life insurance plans, and (4) government employee retirement plans.¹ Employer contributions for employee pension and insurance funds accounted for approximately 13 percent of compensation at the national level in 2006 (table C).

Private employee pension and welfare funds

Contributions by employers to privately administered pension and welfare funds, which consist of their (1) payments to pension and profit-sharing funds, (2) premiums for group health insurance, (3) premiums for life insurance, and (4) payments to supplemental unemployment benefit funds, accounted for 8.1 percent of compensation in 2006 (table C). Employee contributions to the funds, capital gains of the funds, and payments of benefits by the funds are not counted in personal income. The property income of the pension and life insurance funds is counted as part of personal dividends, interest and rent.

National estimates.—The national estimates of employer payments to **private pension and profit-sharing funds** are based mainly on data tabulated from Internal Revenue Service Form 5500 (*Annual Return/Report of Employee Benefit Plan*) and are

¹ Employer contributions for employee pension and insurance funds excludes employer contributions to social insurance funds, such as those for the Old-age, Survivors, and Disability Insurance (social security) program. Generally, government-administered funds that provide benefits to individuals are classified as social insurance; however, government employee retirement plans are treated similarly to private pension plans. The benefits paid from social insurance funds are counted as part of the transfer payments component of personal income. For the difference in the treatment of government employee retirement plans and social security, see footnote 10 in Brent R. Moulton, Robert P. Parker, and Eugene P. Seskin, "A Preview of the 1999 Comprehensive Revision of the National Income and Product Accounts," *Survey of Current Business* 79 (August 1999): 11.

prepared at the North American Industrial Classification (NAICS) three-digit industry level.²

The national all-industry estimates of premiums for **group health insurance** for years after 1996 are based mainly on data collected by the Medical Expenditure Panel Survey (MEPS). This survey covers both health insurance purchased by employers for their employees and health insurance provided by employers on a self-insured basis. Self insurance by employers accounts for about half of all health insurance provided to employees.³ The estimates for 1986-1996 are based mainly on extrapolations of the 1996-2001 MEPS data by the relative change in 1986-1996 data on employers' health insurance costs from the Employer Costs of Employee Compensation (ECEC) report of the Bureau of Labor Statistics (BLS). The estimates are disaggregated to the SIC three-digit industry level based on data from the ECEC and on the distribution of wage and salary accruals. The estimates prior to 1986 are based mainly on total private expenditures on health insurance (including the cost of self-administered plans) from the 1986 National Health Account of the Centers for Medicare and Medicaid Services (CMS), formerly the Health Care Financing Administration. Premiums paid by employees are subtracted using consumer expenditures for health insurance (excluding Medicare premiums) from the BLS Consumer Expenditure Survey.

The national estimates of premiums paid by employers for **group life insurance** are based mainly on data provided by the American Council on Life Insurance (ACLI), and the national estimates of **payments to supplemental unemployment benefit funds** are based mainly on data from labor union and industry sources and from BLS. The estimates by NAICS sector are also based on the ACLI, BLS, union and industry sources. These estimates are allocated to the NAICS three-digit industries based on the distribution of wage and salary accruals.

State estimates.—State estimates of payments to these private benefit funds are prepared for each private industry. Because state data are not available from the sources used to prepare the national estimates, the payments amount for each industry is typically allocated to the states in proportion to state estimates of wages and salary disbursements for the industry.⁴ However, the large payments made by two motor vehicle manufacturing firms to their under funded pension funds in 1992-95, were allocated to states in proportion to each firm's employment in motor vehicle manufacturing.

Privately administered workers' compensation plans

Contributions by employers to privately administered workers' compensation funds consist of (1) net premiums paid by employers to private insurance companies for workers' compensation insurance, (2) benefit payments by self-insured employers, and

² See the section "Changes in Methodology" in "Improved Estimates of the National Income and Product Accounts for 1959-95: Results of the Comprehensive Revision," *Survey* 75 (January/February 1996): 22-27.

³ See the section "Changes in Methodology" in "Annual Revision of the National Income and Product Accounts: Annual Estimates, 1997-99, and Quarterly Estimates, 1997:I-2000:I," *Survey* 80 (August 2000): 27-29.

⁴ Because wage and salary disbursements by industry are used to allocate the national estimates to states, the state estimates reflect the various mixes of industries among the states and the wide variation in contribution rates relative to wages among industries, but not the variation in contribution rates among states for a given industry.

(3) court-awarded payments by the railroad industry and the water transportation industry for work-related injuries.⁵ Employer contributions to these funds accounted for about 0.8 percent of compensation in 2006 (table C).

National estimates.—The national estimate for net premiums paid by employers to private insurance companies is based on data compiled annually by A.M. Best Company, Inc., supplemented by data from the National Council on Compensation Insurance (NCCI), the National Association of Insurance Commissioners (NAIC), and the American Association of State Compensation Insurance Funds (AASCIF).⁶ The estimate of employers' costs for self-insurance is based on state-level data compiled by the Social Security Administration (SSA) and by the National Academy of Social Insurance (NASI).⁷ The allocation of national estimates to NAICS three-digit industries is based on BEA estimates of employment by industry and on BLS data on occupational injury incidence rates. The national estimates of court-awarded payments are based on data provided by the Federal Railroad Administration and the Maritime Administration of the Department of Transportation.

State estimates.—The state estimates are prepared in three parts: For railroad transportation, for water transportation, and for all other industries. State data for the court-awarded payments by the railroad and water transportation industries are unavailable. For the railroad industry, the national estimate of these payments is allocated to states in proportion to the number of workers killed or injured in railroad accidents, as reported in the *Annual Accident/Incident Bulletin* by the Federal Railroad Administration. For the water transportation industry, the national estimate of court-awarded payments is allocated to states in proportion to estimates of wages and salaries for this industry.

The state estimates of premiums and benefits paid by employers in the other industries are prepared by dual allocation.⁸ In this three-step procedure, the national estimates for each industry are allocated to states in proportion to state estimates of wages and salaries for the industry.⁹ Second, for each state the sum of two data series: (1) Earned premium data collected from the NAIC and (2) data on benefits paid by self-insured employers from the NASI is allocated in proportion to the output of the first step.

⁵ Programs for workers' compensation insurance are authorized by law in all states and in the District of Columbia. All but five states authorize programs for private workers' compensation insurance. Federal laws authorize court-awarded payments by the railroad industry and the water transportation industry. Laws in many states authorize self-insurance. Workers' compensation insurance provided by government-operated funds is classified as social insurance, and the premiums paid to these funds are classified as employer contributions for government social insurance. Benefits paid by government operated funds are classified as transfer payments to persons, and are therefore part of personal income. Benefits paid by privately operated funds, however, are accounted for in personal consumption expenditure.

⁶ Some state-chartered workers' compensation insurance funds have mixed public and private characteristics and are not included in the A.M. Best data for private insurance carriers or in the Census Bureau data for social insurance funds. BEA treats these funds as private and obtains data for them from the other sources.

⁷ The SSA series of employer costs for self-insurance was discontinued after 1995 and succeeded by the NASI series.

⁸ See "Dual allocation" in Chapter XII Technical Notes.

⁹ For West Virginia, the state estimate is allocated to industries in proportion to data provided by the West Virginia Workers Compensation Commission.

Third, the national estimates for each industry are allocated to states in proportion to the output of the second step.

Government employee health and life insurance plans

Government employee health and life insurance plans are treated similarly to private health and life insurance funds in the National Income and Product Accounts (NIPA). For the measurement of personal income, employer contributions to the plans are counted as part of employer contributions for employee pension and insurance funds. Employer contributions to these funds accounted for about 1.9 percent of compensation in 2006 (table C). Employee contributions to the funds and the payment of benefits by these funds are not recorded in personal income.

Federal, state, and local government employees.—National estimates of payments for government employees for group health insurance for 1997 are based mainly on data collected by the Medical Expenditure Panel Survey.¹⁰ Estimates for 1991-1996 and for 1998-forward are based mainly on extrapolations of 1997 MEPS data by the relative change in 1991-1996 and 1998-forward data on employers' health insurance costs from the Employer Costs of Employee Compensation (ECEC) report of the Bureau of Labor Statistics (BLS). Estimates prior to 1991 are based mainly on total private expenditures on health insurance (including the cost of self-administered plans) from the 1991 National Health Account of the Health Care Financing Administration. Premiums paid by employees are subtracted using consumer expenditures for health insurance (excluding Medicare premiums) from the BLS Consumer Expenditure Survey. National estimates of premiums paid by employers for group life insurance are based mainly on data provided by the American Council on Life Insurance (ACLI).

National estimates of Federal, state, and local government payments to government employee group health and life insurance funds are allocated to states in proportion to BEA estimates of wage and salary employment for each level of government. Payments are allocated by employment rather than wages because health care premiums typically are a fixed amount per employee rather than a percentage of wages.

Government employee retirement plans

Government employee retirement plans are treated similarly to private pension plans in the NIPA.¹¹ For the measurement of personal income, employer contributions to retirement funds are counted as part of employer contributions for employee pension and insurance funds, and the property income of the funds is counted as part of personal dividend income or personal interest income. Employee contributions to the funds, capital gains of the funds, and fund payments of benefits to retired persons and survivors are not counted in personal income. Employer contributions to these funds accounted for about 2.2 percent of compensation in 2006.

¹⁰ See the section "Changes in Methodology" in "Annual Revision of the National Income and Product Accounts: Annual Estimates, 1997-99, and Quarterly Estimates, 1997:I-2000:I," *Survey* 80 (August 2000): 27-29.

¹¹ In addition to or instead of coverage under government employee retirement plans, many government employees are covered by the Old-age, Survivors, and Disability Insurance Program (social security); see footnote 1.

Federal civilian employees.—Government employee retirement plans for Federal civilian employees consist of the Civil Service Retirement System (CSRS), which covers only employees hired before 1984; the Basic Benefit Plan of the Federal Employees Retirement System (FERS), which covers mainly employees hired after 1983; the Thrift Savings Plan (TSP); and several plans that cover specific groups of employees, such as the plan for Foreign Service Officers. Employees covered by FERS are also covered—but those covered by CSRS are not covered—by Old-age, Survivors, and Disability Insurance (social security). Employees covered by both CSRS and FERS are eligible to participate in TSP, but employer contributions to TSP are made only on behalf of employees covered by FERS. Employee contributions are required to both the CSRS and the Basic Benefit Plan of FERS; employee contributions to the TSP are optional. The national estimate of employer contributions to all of the retirement funds for Federal civilian employees is based mainly on data from the *Monthly Treasury Statement* and is allocated to states in proportion to Federal civilian wages and salaries.

Military personnel.—Military personnel are covered both by social security and by the military retirement system.¹² Retirement benefits under the latter require a minimum of 20 years of service, but the benefits begin immediately upon retirement, regardless of age. No employee contribution is required. The national estimate of employer contributions for military retirement is based mainly on data from the *Monthly Treasury Statement* and is allocated to states in proportion to military wages and salaries.

State and local government employees.—Government employee retirement funds for state and local government employees consist of funds operated by state and local governments and by private carriers. The pension funds for state and local government employees operated by private carriers consist only of annuity funds for select groups of employees—primarily teachers. Some local government employees are covered by plans operated by state governments. Employee contributions to state and local government funds may or may not be required.

National and state estimates of employer contributions to government-operated funds are based on data from the Census Bureau's annual *State & Local Government Employee-Retirement Systems*. State estimates of contributions for state government employees are based on the total contributions received by the state-operated funds less the contributions made for local government employees to those funds. State estimates of contributions for local government employees are based on the total contributions received by the funds operated by local governments plus the contributions made for local government employees to state-operated funds.

The national and state-level estimates of government employer contributions to pension funds operated by private carriers are based on data from the Teachers Insurance and Annuity Association/College Retirement Equities Fund (TIAA-CREF).

Employer Contributions for Government Social Insurance

Employer contributions for government social insurance consists of employer payments under the following government social insurance programs: (1) Old-age, Survivors', and Disability Insurance (OASDI) and Hospital Insurance (HI); (2)

¹² Beginning in 2002 contributions to the military retirement system include contributions to the Uniformed Services Retiree Health Care Fund.

unemployment insurance; (3) railroad retirement; (4) pension benefit guaranty; (5) military medical insurance; (5) veterans' life insurance; (6) Federal workers' compensation; (7) state-administered workers' compensation; and (8) state-administered temporary disability insurance. These contributions accounted for 6.1 percent of compensation at the national level in 2006 (table C). The estimates of employer contributions for government social insurance are developed for each program by industry.

Contributions for OASDI and HI

Contributions by employers for OASDI and HI are made on behalf of private sector, federal, state, and local government employees who are covered by the OASDI and HI programs and account for about 5.1 percent of compensation in 2006. Most employers contribute to both the OASDI and HI programs on behalf of their employees. However, employees of the railroad industry, federal employees in the Civil Service Retirement System, and some state and local government employees covered under their employers' pension programs are covered by the HI program but not by the OASDI program.

Estimates of employer contributions to OASDI and HI are prepared separately for each private industry, for Federal civilian employees, for state government employees, for local government employees, and for military personnel. National estimates of contributions are based on data from the Social Security Administration.

State estimates of contributions by private sector employers are based on estimates of wage and salary disbursements that have been adjusted so that the average wage for each state and industry does not exceed the annual maximum wage that is taxable. State estimates of contributions by Federal civilian employers are prepared in proportion to the estimates of wage and salary disbursements for Federal civilian employees. State estimates of contributions by the military are prepared in proportion to state estimates of military wage and salary disbursements excluding pay-in-kind.

State estimates of contributions to OASDI and HI by state and local government employers are based on data reported in the 1987 Census of Government. The 1987 state estimates are extrapolated forward by estimates of state and local government wage and salary disbursements that have been adjusted to reflect coverage rates under OASDI for state and local government employees in each state. These coverage rates were provided by the Social Security Administration.

Contributions for unemployment insurance

Employer contributions for unemployment insurance consist of: state unemployment insurance (UI) taxes on employers; Federal unemployment taxes; railroad unemployment insurance taxes; and an imputation for Federal contributions for the Unemployment Compensation for Federal Employees (UCFE) and Unemployment Compensation for Ex-Service Members (UCX) programs. Employer contributions for unemployment insurance account for XXXX percent of compensation (table C).

State unemployment insurance and Federal unemployment tax funds.—State unemployment insurance taxes and Federal unemployment taxes provide for payments of unemployment compensation to workers who have lost their jobs. Private sector

employers covered by the unemployment insurance program and state and local governments pay both a Federal and a state unemployment tax.

National estimates of state unemployment insurance taxes on employers and Federal unemployment taxes are based on data from the Employment and Training Administration. State estimates are based on employer contributions data by state and industry from the Unemployment Insurance Contributions Report, which is provided by the Bureau of Labor Statistics of the Department of Labor.

Railroad employees' unemployment insurance.—The Railroad Unemployment Insurance Act of 1938, established a system of benefits for unemployed railroad workers that is financed by railroad employers and administered by the Railroad Retirement Board (RRB). National estimates of employer contributions for this program are based on data from the *Monthly Treasury Statement of Receipts and Outlays of the United States Government* and are allocated to states using estimates of railroad wage and salary disbursements.

Federal employees' unemployment insurance.—The Unemployment Compensation for Federal Employees (UCFE) program and the Unemployment Compensation for Ex-Service members (UCX) program provide unemployment compensation to former Federal civilian employees and to unemployed, newly discharged servicemen. Estimates of employer contributions for these two programs are imputations based on unemployment compensation paid to former Federal employees.

Employer contributions for the UCFE and UCX programs are estimated separately. National estimates are based on data from both the Office of Management and Budget and the Employment and Training Administration. State estimates are based on wage and salary disbursements for Federal civilian workers and for active duty military personnel.

Contributions for railroad retirement

Railroad retirement is treated in the NIPAs as a social insurance fund. Railroad employers contribute a percentage of wages that matches the rate of OASDI and HI. In addition, employers contribute a supplemental tax that is calculated to yield benefits comparable to private pensions.

National estimates of employer contributions for this federally-administered program are based on taxable wages and tax rate data from the RRB. State estimates are prepared in proportion to estimates of railroad wage and salary disbursements.

Contributions for the Pension Benefit Guaranty Corporation

The Pension Benefit Guaranty Corporation (PBGC) is a Federal government corporation established by Title IV of the Employee Retirement Income Security Act of 1974 to encourage the continuation and maintenance of defined benefit pension plans, and to provide timely and uninterrupted payment of pension benefits to participants and beneficiaries in plans covered by the PBGC. The PBGC collects insurance premiums from employers that sponsor insured pension plans. Coverage in this program is not universal. National estimates of employer contributions to PBGC are based on data from the budget of the United States. State estimates are prepared separately for each industry and are based on estimates of wage and salary employment.

Contributions for military medical insurance

Military medical insurance (TRICARE) is a health care program that covers health care at nonmilitary facilities for active duty and retired members of the uniformed services, their families, and their survivors. Benefits to dependents of active duty personnel of this program are treated as paid by a social insurance fund in order to make the compensation of military personnel comparable to the compensation of other government and private sector employees. A social insurance contribution—equal to the benefits paid—is imputed to the military employer. National estimates of employer contributions for military medical insurance are based on data from the Department of Defense. State estimates are based on BEA estimates of military wage and salary disbursements.

Contributions for veterans' life insurance

Contributions for veterans' life insurance are premiums paid by the Federal government under five life insurance programs administered by the Department of Veterans Affairs (DVA). The national estimate of these contributions is based on unpublished data provided by DVA. State estimates are based on BEA estimates of military wage and salary disbursements.

Contributions for Federal workers' compensation

The Federal government pays workers' compensation benefits to Federal employees injured on the job. All estimates of workers' compensation contributions are imputations based on estimates of benefits paid. National estimates of employer contributions for Federal workers' compensation are based on data from the Employment Standards Administration of the Department of Labor. State estimates are based on BEA estimates of Federal civilian and military wage and salary disbursements.

Contributions for state-administered workers' compensation

Many states have created state-administered workers' compensation funds to provide benefits to individuals with employment-related injuries and illnesses and to survivors of individuals who died from employment-related causes. These government insurance funds and state-administered second injury funds are treated in the NIPA as social insurance funds. National estimates of employer contributions for state-administered workers' compensation are based on government finance data provided by the Census Bureau. State estimates of these contributions are based on data from the Census Bureau's annual *State Government Finances*.

Contributions for state-administered temporary disability insurance

State-administered temporary disability insurance programs provide workers with partial compensation for loss of wages caused by temporary non-occupational disability. Five states have implemented temporary disability insurance programs: California, Hawaii, New Jersey, New York, and Rhode Island. Of these five states, only New Jersey has a program that requires employers to contribute.¹³ Therefore, the national estimate

¹³ Three states require employee contributions. These are recorded under employee and self-employed contributions for government social insurance (chapter VII).

equals the estimate for the state of New Jersey and is based on government finance data provided by the Census Bureau. This estimate is distributed to industries by BEA estimates of New Jersey wage and salary disbursements.

Table C.--Relative Importance to Compensation of Supplements to Wages and Salaries, by Component, United 2006

	Millions of dollars	Percent of compensation
Compensation..	7,427,933	100.00
Supplements to wages and salaries	1,413,866	19.03
Employer contributions for employee pension and insurance funds	962,762	12.96
Private employee pension and welfare funds	600,184	8.08
Privately-administered workers' compensation plans	56,079	0.75
Government employee health and life insurance plans	140,422	1.89
Government employee retirement plans	166,077	2.24
Federal civilian	51,409	0.69
Military	48,549	0.65
State and local	66,119	0.89
Employer contributions for government social insurance	451,104	6.07
Old-age, survivors, and disability insurance, and health insurance	377,364	5.08
Unemployment insurance	43,578	0.59
Railroad retirement	2,762	0.04
Pension Benefit Guaranty Corporation	1,698	0.02
Military medical insurance, Veterans' life insurance, and federal workers' compensation	4,934	0.07
State-administered workers' compensation	20,733	0.28
State-administered temporary disability insurance	35	0.00

NOTE.-- Detail may not add to totals due to rounding.

IV. PROPRIETORS' INCOME

Proprietors' income with inventory valuation and capital consumption adjustments is the current-production income of sole proprietorships, partnerships, and of tax-exempt cooperatives. A sole proprietorship is an unincorporated business required to file Schedule C of IRS Form 1040 (*Profit or Loss from Business*) or Schedule F (*Profit or Loss from Farming*). A partnership is an unincorporated business association required to file Form 1065 (*U.S. Return of Partnership Income*). A tax-exempt cooperative is a nonprofit business organization that is collectively owned by its customer-members. Proprietors' income includes corporate directors' fees, but it excludes the imputed net rental income of owner-occupied housing as well as the dividends and the monetary interest that are received by nonfinancial sole proprietorships and partnerships and the rental income received by persons not primarily engaged in the real estate business.¹

Proprietors' income accounted for over 9 percent of total personal income at the national level in 2006 (table D). The estimates of proprietors' income are generally presented in two parts—nonfarm proprietors' income, which accounted for about 98 percent of proprietors' income, and farm proprietors' income, which accounted for the remaining 2 percent.

Nonfarm proprietors' income

The estimation of nonfarm proprietors' income will be discussed in two parts: (1) the income received by nonfarm sole proprietorships and partnerships, and (2) the income received by tax-exempt cooperatives.

Income of nonfarm sole proprietorships and partnerships

National estimates of the income of nonfarm sole proprietorships and partnerships are based on tabulations of Internal Revenue Service (IRS) tax returns: (1) "net profit or (loss)" reported on Schedule C of Form 1040, for sole proprietorships; (2) "ordinary business income (loss)" from Form 1065, for partnerships; and (3) "net rental real estate income (loss)" from Schedule K of Form 1065.² Because these data do not always reflect the income earned from current production and because they are incomplete, the estimates also include four major adjustments—the inventory valuation adjustment (IVA), the capital consumption adjustment (CCAdj), the misreporting adjustment, and the adjustment for the net margins on owner-built housing.³ The IVA removes the effects of gains and losses that result from changes in the prices of products withdrawn from inventories. The CCAdj represents the difference between capital consumption allowances (depreciation on the historical-cost basis used in the source data) and the

¹ The dividends are included in personal dividend income, the monetary interest, in personal interest income, and the rental income, in rental income of persons. See Chapter V Dividends, Interest, and Rent.

² The net profit or (loss) reported on Schedule C of Form 1040 includes corporate directors' fees. Descriptions are based on forms for 2005.

³ Estimates of the IVA and CCAdj are in NIPA table 1.13, an estimate of the misreporting adjustment is in table 7.14, and an estimate of the margin on owner-built housing is in table 7.12 (line 225) in the *Survey of Current Business* 86 (August 2006).

consumption of fixed capital (depreciation valued on a replacement-cost basis and the effects of the accidental destruction of depreciable plant and equipment).⁴ In addition, specific adjustments are made for the accidental destruction caused by major natural disasters.

The misreporting adjustment is an estimate of the net income of sole proprietors and partnerships that is not reported on tax returns. This adjustment accounted for about 43 percent of nonfarm proprietors' income in 2006.⁵

The adjustment for the net margins on owner-built housing is an addition to the estimate for the construction industry. It represents the imputed value of the net income of individuals from the construction or renovation of their own dwellings.

Like the national estimates, the state estimates are based on data tabulated from Schedule C of Form 1040 and from Form 1065. The geographic coding of the data is by tax-filing address. This address is assumed to be the same as the address of the place of residence.⁶

The national estimates reflect decreases in income that result from damage to fixed capital caused by natural disasters, such as hurricanes and floods; damage to inventories is also reflected in the adjustments. The national and state adjustments are prepared primarily on the basis of reports of insured losses by state from private sources and grants for disaster housing assistance by state from the Federal Emergency Management Agency.⁷

The source data necessary to prepare the other adjustments—the IVA, the CCAdj, the misreporting adjustment, and the net margins on owner-built housing—are available only at the national level. Therefore, the national estimates of nonfarm proprietors' income that include the IVA and CCAdj are allocated to states in proportion to tax return data that do not reflect the IVA and CCAdj. The national estimates of nonfarm proprietorship and partnership income, excluding the misreporting adjustment, for 1992-2001 for most of the SIC two-digit industries were allocated to states in proportion to the sums for each industry of "net profit or (loss)" reported on Schedule C and "ordinary business income (loss)" from Form 1065.⁸ For coal mining, the national estimate, excluding the misreporting adjustment, was allocated to states in proportion to the

⁴ The capital consumption adjustment also includes the differences between the service lives and the depreciation patterns used for tax accounting and the empirically based depreciation schedules that are used for national economic accounting. See Arnold J. Katz and Shelby W. Herman, "Improved Estimates of Fixed Reproducible Tangible Wealth, 1929-95," *Survey* 77 (May 1997): 69-92. See also "Capital consumption adjustment" and "Inventory valuation adjustment" in Chapter XIII Glossary.

⁵ For more information about the misreporting adjustment see Robert P. Parker, "Improved adjustments for misreporting of tax return information used to estimate the national income and product accounts, 1977," *Survey* 64 (June 1984):17-25; "The Comprehensive Revision of the U.S. National Income and Product Accounts: A Review of Revisions and Major Statistical Changes," *Survey* 71 (December 1991):39-40; and "Improved Estimates of the National Income and Product Accounts for 1959-95: Results of the Comprehensive Revision" *Survey* 76 (January/February 1996):1-31.

⁶ For additional information, see the section "Geographic characteristics of the source data" in Chapter I Introduction.

⁷ See "Disaster Adjustments" in Chapter XII Technical Notes.

⁸ For chemicals and allied products, the state data were adjusted to exclude the income of partnerships with gross receipts of \$20 million or more and fewer than four partners; the partners in these partnerships are assumed to be corporations.

number of Schedules C plus the number of partners in general partnerships.⁹ For the other industries, the national estimates, excluding the misreporting adjustment, were allocated to states in proportion to net receipts (“gross receipts or sales” less “returns and allowances” as reported on Form 1040 Schedule C and Form 1065) for each industry.¹⁰

National estimates of the misreporting adjustment for 1992-2001 for all SIC industries except coal mining were allocated to states in proportion to net receipts for each industry. The data for net profit (or loss) are inappropriate for the allocation of the state estimates of this adjustment because net profit (or loss) is reduced by the misreporting that this adjustment largely reflects. For coal mining, the national estimate of the misreporting adjustment was allocated to states in proportion to the same series that was used to allocate the estimate excluding the misreporting adjustment.

National estimates of nonfarm proprietorship and partnership income, excluding the misreporting adjustment, for 2001-2004 for North American Industry Classification System (NAICS) subsector industries were allocated to states in proportion to tabulations by industry of the IRS profit and income data described above.¹¹ National estimates of the misreporting adjustments for 2001-2004 were allocated to states in proportion to net receipts for each industry.¹²

The 2005 state estimates of nonfarm proprietorship and partnership income, excluding the misreporting adjustment, for NAICS industries were extrapolated from the 2004 state estimates in three steps. First, national controls by industry for 2005 were allocated to states in proportion to each state's estimate for 2004. Next, the 2004 state estimates were summed to all-industry totals. These totals were extrapolated to 2005 by the relative change in the preliminary annual state estimates of nonfarm personal income.¹³ The extrapolated estimates were then adjusted proportionately to sum to the national all-industry control for the year. Each state's estimates of nonfarm proprietors' income from the first step were then adjusted proportionately to sum to these all industry totals. Third, the resulting industry estimates were then adjusted proportionately to sum to the national industry controls. Estimates for 2006 were extrapolated from 2005 by an identical process.

The 2005 and 2006 national estimates of the misreporting adjustment by industry were allocated to states using a weighted average of IRS net receipts data for 2003 and 2004 where the 2003 data was given a double weight. The estimates of nonfarm proprietorship and partnership income excluding the misreporting adjustment were then combined with estimates of the misreporting adjustment to yield nonfarm proprietors' income, excluding the income of nonfarm tax-exempt cooperatives.

⁹ For coal mining, a large proportion of net profit or (loss) is reported by limited partnerships from states that appear to be neither the states where the mining operations take place nor the states where most of the partners live.

¹⁰ The net profit or (loss) for these industries is not used because the data for these industries are highly volatile, an indication that they may be unreliable. In addition, these data frequently fluctuate into the negative range, so that they are difficult to use in an allocation procedure.

¹¹ The allocator for year *t* is an average of the IRS profit and income data for years *t*, *t*-1, and *t*-2.

¹² The allocator is an average of net receipts data for the current and two previous years.

¹³ The preliminary estimate is an average of the quarterly personal income estimates released each June.

Income of nonfarm tax-exempt cooperatives

The income of tax-exempt cooperatives consists of the net income, including the IVA and the CCAdj, received by agricultural cooperatives, rural electric cooperatives, and rural telephone cooperatives.

Agricultural cooperatives are mainly farm-marketing cooperatives and farm-supply cooperatives; they are classified in NAICS (and SIC) in wholesale trade. Until 2001, the national and state estimates of the net income of these cooperatives were based on data provided by the Rural Business and Cooperative Service of the U.S. Department of Agriculture. Since 2001 the national control is distributed to states in proportion to proprietorship and partnership income, excluding the misreporting adjustment, in the nondurable wholesale trade industry.

Until 1999, the national and state estimates of the net income of rural electric cooperatives and rural telephone cooperatives were based on annual data for the net margin, or profit, of the cooperatives that have outstanding loans from the Rural Utilities Service (RUS) (formerly the Rural Electrification Administration) of the U.S. Department of Agriculture. For the state estimates, the net margin of each cooperative was allocated to the states in proportion to the distribution of the cooperative's customer-members reported by the RUS. The allocated amounts for each type of cooperative were summed to state totals, and these totals were then used to allocate the national estimates to states. Data for 1999 were used to distribute the national controls for 2000 and 2001. Since 2001 national controls are distributed to states by estimates of proprietorship and partnership income, excluding the misreporting adjustment in broadcasting and telecommunications (for rural telephone cooperatives) and utilities (for rural electric cooperatives).

Farm Proprietors' Income

Farm proprietors' income is the income received by the sole proprietorships and partnerships that operate farms. The national and state estimates of this income are based largely on the national and state estimates of the net income of all farms prepared by the Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA).¹⁴ For a variety of reasons discussed below, the BEA estimates of the income of all farms differ somewhat from those used by USDA.¹⁵ In addition, BEA estimates corporate farm income. This is subtracted from the income of all farms in order to derive farm proprietors' income.¹⁶

¹⁴ The state estimates of farm proprietors' income are not controlled to the NIPA estimates. The NIPA methodology, using national aggregates of the components of farm proprietors' income and constrained to be consistent with other farm sector estimates appearing in the national accounts, yields different estimates than the independently applied state methodology, using state-level data. It is felt that the gap between the NIPA estimate and the sum of the state estimates is tolerable because of the much greater importance of farm proprietors' income to some states and because the gap is a very small percentage of total personal income, when summed over all states.

¹⁵ For information about the source data and the methods used to derive the USDA estimates, see Economic Research Service, *Major Statistical Series of the U.S. Department of Agriculture, Volume 3: Farm Income* (Washington, DC: National Technical Information Service (NTIS), November 1988).

¹⁶ For the differences between the USDA and the BEA estimates of net farm income at the national level, see NIPA table 7.15 "Relation of Net Farm Income in the National Income and Product Accounts to Net

The net income of all farms is defined as gross output less production expenses. For most of the components of gross output and for many components of production expenses, estimates are prepared at the state level and summed to yield national estimates.

Gross farm output

Gross farm output consists of cash receipts from the sale of agricultural products, Federal Government payments to farm operators, imputed and miscellaneous income received, and the value of the change in farm inventories.

Cash receipts from sale of agricultural products.—Cash receipts from sales accounted for about 89 percent of gross farm output at the national level in 2006. Cash receipts consist of the gross revenue received by farmers from the sale of crops, livestock, and livestock products and of the value of defaulted loans made by the Commodity Credit Corporation (CCC) and secured by crops. The estimates of cash receipts are based on USDA state estimates of cash receipts adjusted to reflect differences in the treatment of CCC loans and intrastate interfarm sales.

The USDA estimates of cash receipts from crop sales include the net value of CCC loans (loans less redemptions); the loans are treated as crop sales, and any subsequent defaults on the loans do not affect the USDA estimates of the net income of all farms. BEA classifies the CCC loans as financial transactions: Crops held under CCC loan remain in measured farm inventories unless the loan is defaulted. The default of a loan is considered to be a sale of the crops and a reduction in farm inventories. To reflect this difference, BEA adjusts the USDA estimates of cash receipts from sales and the value of inventory change for each type of crop.¹⁷ The national estimates of the adjustments for each crop are allocated to states in proportion to data on net CCC loan activity for the crop from the Farm Service Agency.

Intrastate interfarm sales of livestock are not included in the USDA estimates of cash receipts for livestock sales or in the USDA estimates of the expenses of livestock purchases but those sales are included in the BEA estimates. However, the receipts for these sales offset the expenses for these purchases in the state estimates of farm income. To reflect this difference, BEA adjusts the USDA state estimates of cash receipts from the sale of livestock and the expenses of livestock purchased. The value of intrastate interfarm sales of livestock is estimated by subtracting USDA state-level data on livestock purchased from Census of Agriculture data on livestock purchased (the Census of Agriculture data include intrastate interfarm sales).

Federal Government payments to farm operators.—Federal Government payments to farm operators consist of deficiency payments under price support programs for specific commodities, disaster payments, conservation payments, and direct payments to farmers under federal appropriations legislation. The estimates of government

Farm Income as Published by the U.S. Department of Agriculture," *Survey* 86 (September 2006): 21

¹⁷ The adjustments to the USDA estimates of the value of inventory change largely offset the adjustments to the estimates of cash receipts. The adjustments also reflect the differences in valuation that result from the differences in the timing of the sales and of the changes in inventories. For more information, see Robert P. Parker, "A Preview of the Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," *Survey* 71 (September 1991): 30.

payments are based on USDA national and state estimates of direct government payments.

Imputed and miscellaneous income received.—Imputed and miscellaneous income received consists of the imputed income from home consumption and the gross income from farm-related activities other than crop and livestock production.

Home consumption is an imputed estimate of the market value of food that is produced and consumed on farms. The estimates of home consumption are based on USDA national and state estimates of home consumption.

Gross income from farm-related activities includes the use of farms for recreational activities—such as hunting or fishing—the sale of forest products, and custom work performed for other farm operators—such as clearing land and harvesting crops. The estimates are based on USDA estimates of revenue from services and forestry adjusted to remove the imputed gross rental value of farm housing and patronage dividends received by farm operators as measured by USDA. BEA classifies the production of services of farm housing owned by farm operators in the real estate industry rather than in the farm industry and records the net rents in the rental income of persons. Patronage dividends received by farm operators are from agricultural cooperatives, which are mainly farm-marketing and farm-supply cooperatives. BEA classifies the income of these cooperatives as nonfarm proprietors' income.¹⁸

Value of the change in farm inventories.—The value of the change in farm inventories is an estimate of the value, at market prices, of the change in the quantity of inventories of harvested crops, livestock, materials, and supplies owned by farmers. For crops, for example, the estimate of the value of the change in the inventories of each type of crop is calculated as the difference between the value of the crops that are produced and the value of the crops that are sold or used as feed. This calculation accounts for all inventories, regardless of the location of their storage, that are owned by farmers. The estimates of the value of the change plus the estimates of cash receipts from the sales of crops during the year yields a measure of the gross output of crops during the year.

The estimates of value of the change in crop and livestock inventories are based on USDA state estimates of the value of change in crop and livestock inventories. The USDA estimates for crops are adjusted to include the changes in the inventories of crops that are held as collateral for CCC loans, as discussed above.

BEA defines farm inventories to include materials and supplies—such as feed, seed, and fertilizer—starting in 1991. The USDA estimates of the net income of all farms exclude such inventories. The national estimate of the value of the change in these inventories is allocated to states in proportion to the USDA data on the year-to-year change in purchased inputs. Since the latter data were discontinued in 2003, the data for 2003 are used for 2004-06.

Production expenses

Farm production expenses consist of purchases of feed, livestock and poultry, seed, fertilizer, agricultural chemicals and lime, and petroleum products; labor expenses;

¹⁸ The income of agricultural cooperatives that BEA measures as part of nonfarm proprietors' income is the profits of the cooperatives. The income from the agricultural cooperatives that BEA excludes from the USDA measure of farm income is the patronage dividends that are paid to farm operators out of the current and accumulated profits of the cooperatives.

machinery rental and custom work; animal health costs; and all other expenses including depreciation.¹⁹ BEA adjusts the USDA state estimates of production expenses to account for methodological differences in the treatment of depreciation and to conform to BEA definitions and classifications.

Depreciation.—Both the USDA and the BEA estimates of depreciation expenses are on current replacement-cost basis. However, the BEA estimates reflect a geometric depreciation schedule, whereas USDA estimates reflect a declining-balance schedule. The amount of the difference between the BEA and the USDA national estimates of depreciation is allocated to states in proportion to the USDA estimates. These amounts are added to the USDA state estimates of depreciation to yield the BEA estimates.

Wages and salaries.—The USDA classifies the wages and salaries received by the owner-operators of sole proprietorship farms, partnership farms, and family-held corporate farms as part of the return to capital and therefore does not include them in its estimates of production expenses. BEA classifies these wages and salaries as an expense item and adds them to the USDA estimates of other production expenses. The BEA national and state estimates of these wages and salaries are based on data provided by the USDA.

Fines.—The USDA estimate of production expenses also excludes an estimate of the payment of fines by farm operators to the Federal Government. BEA classifies these fines as a production expense and adds these fines to the USDA estimates of production expenses. The national estimate of these fines is allocated to states in proportion to the USDA estimates of cash receipts from the sale of crops and livestock.

Farm housing.—The USDA estimates of farm production expenses include expenses—such as property taxes and mortgage insurance—associated with the production of services of farm housing owned by farm operators. Since BEA classifies the production of farm housing in the real estate industry rather than in the farm industry, the expenses associated with the operation farm housing are removed from the USDA estimates. The national estimates of farm housing expenses are allocated to the states in proportion to data on operator dwelling expenses provided by USDA.

Livestock purchased.—The USDA production expense estimates are further adjusted to include intrastate interfarm purchases of livestock as discussed above.

Corporate farm income

The USDA estimates of the total net income of all farms, reflecting the coverage of the underlying source data, include the income of corporate farms. BEA makes an adjustment to exclude the income of these farms.

National control totals of corporate farm income for 1992-2006 were prepared in five steps. First, the proportions of each of four components of gross output and the proportion of total production expenses that were accounted for by corporate farms for 1992 and for 1997 were calculated from data from the censuses of agriculture.²⁰ Second,

¹⁹ Labor expenses consist of the payments to farm labor contractors and the cash wages, pay-in-kind, and supplements to the wages of hired labor. All other expenses consist mainly of the estimates of overhead, such as depreciation, mortgage interest, taxes, and the costs of electricity and telephone service.

²⁰ The four components of gross output are cash receipts from the sale of agricultural products, cash receipts from other farm-related activities, Federal government payments, and the value of the change in inventories.

corporate proportions for the corresponding gross output components and for production expenses were calculated for 1992-2006 from data from the Agricultural Resource Management Survey, with the data from 2005 held constant for 2006. Third, the 1992 and 1997 census-based proportions were interpolated to 1993-96 and extrapolated to 2006 by the relative change in a moving average of the corresponding survey-based proportions.

Fourth, the extrapolated proportions for each year were multiplied by the BEA national estimate of each component of the gross output for all farms and by the BEA national estimate of the production expenses for all farms in order to obtain the national estimates of the components and of production expenses for corporations.²¹ Fifth, the estimate of corporate production expenses for the year was subtracted from the sum of the estimates of the components of corporate gross output in order to obtain the national control totals for the income of corporate farms.

The national control totals for the net income of corporate farms for 1992-2006 were disaggregated to the state level in three steps. First, the corporate proportions of total cash receipts from the sale of crops and livestock for 1992 and for 1997 for each state were calculated from data from the censuses of agriculture and proportions for 1993-96 were derived with straight-line interpolation. Second, the proportions for each year were multiplied by the BEA state estimates for the year in order to obtain state approximations of the net income of corporate farms for those years; the 1997 proportions were used to obtain the approximations for 1998-2005. Third, the national control total for the net income of corporate farms for each year was allocated to states in proportion to the state approximations.

²¹ In deriving the national estimates of corporate income, the value of the change in inventories of materials and supplies is added to the BEA national estimate of the production expenses and not included with crop and livestock inventory change in gross output.

Table D.--Relative Importance to Personal Income of Proprietors' Income, by Component, United States, 2006

	Millions of dollars	Percent of personal income
Personal income..	10,966,808	100.00
Proprietors' Income/1/..	1,003,201	9.15
Farm..	15,816	0.14
Forestry, fishing, and related activities..	7,179	0.07
Mining..	48,305	0.44
Utilities..	26,048	0.24
Construction..	123,782	1.13
Manufacturing..	85,307	0.78
Wholesale and retail trade..	86,008	0.78
Transportation and warehousing..	38,592	0.35
Information..	50,969	0.46
Finance and insurance..	68,311	0.62
Real estate and rental and leasing..	91,937	0.84
Professional and technical services..	186,009	1.70
Management of companies and enterprises..	-102	0.00
Administrative and waste services..	32,204	0.29
Educational services..	3,747	0.03
Health care and social assistance..	81,199	0.74
Arts, entertainment, and recreation..	13,485	0.12
Accommodation and food services..	11,668	0.11
Other services except public administration..	32,737	0.30

Footnotes

1. Shown with inventory valuation and capital consumption adjustments.

NOTE.-- Detail may not add to totals due to rounding.

V. DIVIDENDS, INTEREST, AND RENT

The state estimates of personal dividend income, personal interest income, and rental income of persons are presented together. These three components accounted for almost 17 percent of total personal income at the national level in 2006 (see table E). The estimates consist of the income that is received by persons and by private and government employee retirement funds on behalf of persons.¹ The national estimates of dividends, interest, and monetary rent are based on data that are not available for states. The state allocations of the national estimates of the income received by individuals are based mainly on individual income tax data.

Personal Dividend Income

Personal dividend income are the payments in cash or other assets, excluding the corporations' own stock, that corporations in the United States or abroad make to persons who are U.S. residents. Personal dividend income accounted for 6.3 percent of total personal income at the national level in 2006 (table E). The state estimates of personal dividend income are prepared in four parts: Dividends received by individuals, dividends received by private and government employee retirement funds, dividends received by nonprofit institutions, and dividends received, retained, and reinvested by fiduciaries.

Dividend income received by individuals.—Dividend income received by individuals is the sum of two components: dividends received from S-corporations and all other dividends.² State estimates of the dividends received by individuals from Subchapter S corporations, based on unpublished sample data for “S-Corporation net income less loss” from the Statistics of Income Division of the Internal Revenue Service (IRS), are used to allocate the corresponding national estimate to states. This income is reported on Schedule E of Form 1040.

State estimates of the dividends received from other corporations, based on tabulations of the dividends reported by individuals on IRS Form 1040 and included in the IRS Individual Master File (IMF), are used to allocate the national estimate of all other dividends received by individuals.³

Dividend income received by private and government employee retirement funds.—This income comprises the dividends received by private noninsured pension

¹ Persons includes individuals and quasi-individuals (nonprofit institutions that primarily serve individuals, private noninsured welfare funds, and private trust funds administered by fiduciaries). See “Persons” and “Fiduciary” in Chapter XIII Glossary.

² Corporations taxed under subchapter C of the Internal Revenue Code pay corporate income taxes on their profits and shareholders in such corporations pay individual income taxes when the profits are distributed to them as dividends. In contrast, subchapters S corporations do not pay taxes on profits; instead shareholders must report their portion of the corporation's profits or losses on Schedule E of their individual income tax returns, whether or not they actually receive cash.

³ These tabulations are published in the SOI Bulletin about 18 months after the end of the reference year; therefore, the state estimates for years in which IMF tabulations are not available are extrapolations using past trends in the IMF data, as determined from a regression of the growth rate in the IMF data for each state on its national counterpart. Occasionally unpublished SOI sample data are used instead of the SOI Bulletin tabulations.

plans, the Federal civilian employees' Thrift Savings Plan (TSP), and by state and local government employee retirement plans.⁴ For each of these categories a portion of the dividends is assumed to be received on behalf of current employees, and a portion on behalf of retired persons and their survivors.⁵

The currently-employed portion of the dividends received by private noninsured pension funds is allocated to states using state-of-residence estimates of wage and salary disbursements.⁶ State estimates of the retired portion reflect the geographic distribution of state estimates of Old-age, survivors, and disability insurance (OASDI) payments.

For the dividends received by the TSP, the state estimates of the currently employed portion are based on residence-adjusted state estimates of Federal civilian wages and salaries. State estimates of the retired portion are based on state estimates of Federal civilian retirement benefits by state.⁷

For the dividends received by state and local government employee retirement funds, the state estimates of both the currently employed and the retired portions are based on state-level data for the dividends received by the funds from the Census Bureau's annual *Finances of Employee-retirement Systems of State and Local Governments*. These data are available beginning with 1994. The currently employed portion is extrapolated to earlier years by the relative change in state and local government wages and salaries. The retired portion is extrapolated by the relative change in benefits paid by the plans.⁸ Both portions are then adjusted to a place-of-residence basis to yield the allocating series for the dividends received by the funds.

⁴ The dividends received by fully insured pension funds are counted under the imputed interest received from life insurance carriers.

⁵ For private pension plans, the division of dividends into the currently-employed and the retired portions is based largely on participation rates in the social security retirement system. The division corresponds roughly to the relative numbers of participants—those making contributions and those receiving benefits. For the Federal civilian and the state and local government retirement plans, the division between the currently employed and retired portions is roughly in accord with participation rates in those systems, based on data provided by the Office of Management and Budget (for the federal plan) and on information from the Census Bureau's annual *Finances of Employee-retirement Systems of State and Local Governments* (for the state and local government plans).

⁶ Prior to the conversion from SIC to NAICS, the state estimates of the currently-employed portion of dividend income received by private pension funds were prepared using residence-adjusted employer contributions to these funds as the geographical allocator. The state-of-residence estimates of employer contributions to private pension plans were based on year 2000 benchmark estimates: The 2000 national estimate of the contributions for each Standard Industrial Classification two-digit industry was allocated to states in proportion to the earnings of wage and salary workers employed in that industry as reported in the 2000 Census of Population. The 2000 estimate for each industry was then extrapolated back to the 1990 benchmark and forward to the latest year by the relative change in the BEA estimates of wages and salaries for the industry. The estimates by industry were then summed to the all-industry level.

⁷ Federal civilian employee retirement and disability payments are benefits (including lump-sum withdrawals) received by retired Federal Government employees and their survivors from the following retirement plans: The Civil Service Retirement System; the Basic Benefit Plan of the Federal Employees Retirement System; and special contributory and noncontributory retirement plans, such as those of the Foreign Service, the Federal Reserve Board, and the Tennessee Valley Authority. The national estimate of these payments is allocated to states in proportion to data for the payments for September of each year from the Office of Personnel Management.

⁸ These benefits were formerly published as a transfer payment (state and local government employee retirement payments) in the State Personal Income Account. See the methodology published on the *State Personal Income 1929-97* CD ROM.

Dividend income received by nonprofit institutions.—The national estimate of dividend income received by nonprofit institutions is allocated to the states in proportion to the annual state estimates of the civilian population prepared by the Census Bureau.

Dividend income retained by fiduciaries.—The available data for dividend income retained by fiduciaries do not reflect the location of the individuals on whose behalf the dividends are received. Therefore, the national estimate of the dividends *retained* by fiduciaries is allocated to states in proportion to IMF dividends, which includes the dividends *distributed* by fiduciaries to individuals.

Personal Interest Income

Personal interest income is the interest income (monetary and imputed) from all sources is received by individuals, private and government employee retirement plans, nonprofit institutions, and by estates and trusts. Personal interest income accounted for 10 percent of total personal income at the national level in 2006 (table E). Monetary interest accounted for 6.3 percent of total personal income, and imputed interest accounted for over 3.7 percent.

Monetary interest income

The state estimates of monetary interest income are prepared in the following parts: The net interest accrued on unredeemed series E, EE, H, and HH bonds issued by the Federal Government and owned by individuals, the other interest received by individuals, the interest received by private and government employee retirement plans, the interest received by nonprofit institutions, and the interest retained by fiduciaries.

Net accrued interest income from Federal Government savings bonds.—The state estimates of the net accrued interest on unredeemed series E, EE, H, and HH bonds are prepared in two steps.⁹ First, the national estimate of the total interest accrued on savings bonds during a year, obtained from the *Treasury Bulletin*, is allocated to the states in proportion to the value of the unredeemed bonds at the end of the year, and the national estimate of the accrued interest realized from bonds redeemed during the year, also obtained from the *Treasury Bulletin*, is allocated to the states in proportion to the value of the unredeemed bonds at the end of the preceding year.¹⁰ Second, the state estimate of the realized interest is subtracted from the state estimate of the total accrued interest to yield the state estimate of the net accrued interest.

Other interest income received by individuals.—Other interest income consists largely of interest that is reportable for Federal individual income tax (including the nontaxable interest from municipal bonds); it also includes the interest accrued on individual retirement arrangements (IRAs) and other tax-deferred savings accounts in the year in which the interest is earned. (The IMF interest data do not include interest on tax-deferred savings accounts because it is reported on tax returns as part of taxable withdrawals, not as interest, in the year in which the funds are withdrawn.)

⁹ The net accrued interest is the excess of the interest accrued on the bonds during the year over the accrued interest that was realized from the bonds redeemed during the year. The interest accrued on unredeemed bonds is treated as if it were received by individuals as it accrues because it is available to the individuals.

¹⁰ The state data series for the value of the unredeemed bonds are tabulated by the Bond Division of the Department of the Treasury.

The state estimates are based on IMF interest data supplemented by a series prepared from IMF dividends data.¹¹ The supplementation is necessary because the reportable interest received by individuals from regulated investment companies, such as money market mutual funds, is reported as dividend income on IRS Form 1040.

The state estimates are prepared in four steps. First, the national ratio of the reportable interest received by individuals from regulated investment companies to the sum of this interest and the estimate of the dividends (excluding such interest) received by individuals is calculated.¹² Second, this ratio is multiplied by the IMF dividends for each state to yield a first approximation of the interest from regulated investment companies that is reported as dividends. Third, the first approximations are added to the IMF state tabulations of interest to yield provisional state estimates of interest. Fourth, the national estimate of the interest is allocated to states in proportion to the provisional estimates.

Interest income received by private and government employee retirement funds.—This income comprises the interest received by private noninsured pension funds, the Federal civilian employee retirement funds (including the TSP), the military retirement fund, and by state and local government employee retirement funds.¹³ For each fund, a portion of the interest is assumed received on behalf of current employees, and a portion on behalf of retired persons and their survivors.¹⁴

The national estimate of the currently-employed portion of the interest received by private noninsured pension funds is allocated to states using state-of-residence estimates of wage and salary disbursements.¹⁵ The state estimates of the retired portion are allocated in proportion to the geographic distribution of OASDI payments.

For the interest received by the Federal civilian funds, the state estimates of the currently-employed portion are based on residence-adjusted state estimates of Federal civilian wages and salaries, and state estimates of the retired portion, on state estimates of Federal civilian retirement benefits by state.¹⁶

The national estimate of the interest received by the military retirement fund is split into that attributed to current annuitants and that attributed to active duty personnel and reservists using the present value of future benefits of each group from the *Valuation of the Military Retirement System*. The interest attributed to active duty personnel and reservists is allocated to states on the basis of residence-adjusted state estimates of the base pay of active-duty military personnel, and the interest attributed to current annuitants is allocated on the basis of state estimates of military retirement benefits.¹⁷

¹¹ See footnote 3.

¹² The national estimate of the reportable interest received by individuals from regulated investment companies is prepared as part of the reconciliation of personal income and adjusted gross income. See Mark A. Ledbetter, "Comparison of BEA Estimates of Personal Income and IRS Estimates of Adjusted Gross Income," *Survey of Current Business* 85 (November 2005): 30-35.

¹³ The interest received by fully insured pension funds are counted under the imputed interest received from life insurance carriers.

¹⁴ See footnote 5. The division of the interest received by the military retirement fund into the currently employed and retired portions is based on information obtained from the Department of Defense.

¹⁵ See footnote 6.

¹⁶ See footnote 7.

¹⁷ National estimates of military retirement benefits, including the benefits of Coast Guard personnel, and their survivors are allocated to states in proportion to payments data for September that are provided each year by the Department of Defense.

For the interest received by the state and local government employee retirement funds, the state estimates of both the currently-employed and the retired portions are based on state-level data for the interest received by the plans from the Census Bureau's annual *Finances of Employee-retirement Systems of State and Local Governments*.¹⁸ These data are available beginning with 1994. The currently employed portion is extrapolated to earlier years by the relative change in state and local government wages and salaries. The retired portion is extrapolated by the relative change in benefits paid by the plans.¹⁹ Both portions are then adjusted to a place-of-residence basis to yield the allocating series for the interest received by the funds.

Interest income received by nonprofit institutions.—Because state data are unavailable, the national estimate is allocated to the states in proportion to the annual state estimates of the civilian population prepared by the Census Bureau.

Interest income retained by fiduciaries.—The available data for this interest do not reflect the location of the individuals on whose behalf the interest is received. Therefore, the national estimate of the interest retained by fiduciaries is allocated to states in proportion to IMF interest, which includes the interest *distributed* by fiduciaries to individuals.

Imputed interest income

Imputed interest income consists of (a) the value of depositor services furnished without payment by financial intermediaries except life insurance carriers, (b) premium supplements for property and casualty insurance, and (c) the interest received from life insurance carriers.²⁰

The imputed value of depositor services is an estimate of the value of services such as checking and record keeping that financial intermediaries (banks, credit agencies and regulated investment companies) provide to persons without an explicit charge.

Premium supplements for property and casualty insurance is the property income that property and casualty insurance carriers earn on reserves held to pay claims. This income is deemed to be paid out to policyholders and then paid back as premium supplements even though in actuality the insurance companies retain the property income.

The imputed interest received from life insurance carriers consists of the property income life insurance carriers earn on life insurance and annuity reserves. This income is deemed to be paid out to policyholders and then paid back as premium supplements even though in actuality the insurance companies retain the property income.

An aggregate national estimate of imputed interest is allocated to states in proportion to interest reported by individuals to the IRS, as tabulated from the IMF.

Rental Income of Persons

The rental income of persons with capital consumption adjustment is the net current-production income of persons from the rental of real property except for the

¹⁸ The interest received by the funds is derived as a residual from the published data: Total investment income less dividends and capital gains.

¹⁹ See footnote 8.

²⁰ See "Imputation" in Chapter XII Technical Notes.

income of persons primarily engaged in the real estate business; the imputed net rental income of owner-occupants of housing; and the royalties received by persons from patents, copyrights, and rights to natural resources.²¹ The rental income of private noninsured pension funds is imputed to persons and counted as part of rental income of persons with capital consumption adjustment. The estimates include BEA adjustments for uninsured losses to fixed capital caused by disasters, such as hurricanes and floods.

The national estimate of the rental income of persons accounted for 0.5 percent of total personal income in 2006 (table E). Monetary rental income accounted for 0.46 percent of total personal income, and imputed rental income accounted for 0.04 percent.

Monetary rental income

The state estimates of monetary rental income are prepared in the following parts: The net rent and royalties received by individuals, the net rent and royalties received by private noninsured pension funds, the net rent and royalties received by nonprofit institutions, and the net rent and royalties retained by fiduciaries.

Net rent and royalties received by individuals.—Because the available state data are unreliable, the national estimate of the net rent and royalties received by individuals, excluding net rents to farm operators, is allocated to states in proportion to the IMF tabulations of the gross rent and royalties reported on Schedule E of Form 1040.²² The national estimate of net monetary rents received by farm landlords is allocated to the states in proportion to the market value of land and buildings from the Census of Agriculture. Data between census years are interpolated and data from the 1997 Census are used for subsequent years

Net rent and royalties received by private noninsured pension plans.—A portion of such rent and royalties is assumed to be received on behalf of current employees, and a portion on behalf of retired persons and their survivors.²³ The national estimate of the currently-employed portion of the dividends received by private noninsured pension funds is allocated to states using state-of-residence estimates of wage and salary disbursements.²⁴ The state estimates of the retired portion reflect the geographic distribution of OASDI payments.

Net rent and royalties received by nonprofit institutions.—Because state data are unavailable, the national estimate of the net rent and royalties received by nonprofit institutions is allocated to the states in proportion to their civilian population as estimated by the Census Bureau.

Net rent and royalties retained by fiduciaries.—The national estimate of net rent and royalties retained by fiduciaries is allocated to states using tabulations of “total estate and trust income or (loss)” from Schedule E of IRS Form 1040.²⁵ This item consists mainly of rental income received by individuals from fiduciaries. It is assumed

²¹ The net rental income received by persons who are primarily engaged in the real estate business is included in nonfarm proprietors’ income.

²² The available estimates from the Internal Revenue Service for net rent are unreliable as a basis for the estimation of monetary rent because of large sampling errors in the estimates for the less populous states. For years in which gross rent and royalties are unavailable, the estimates are extrapolated using total personal income.

²³ See footnote 5.

²⁴ See footnote 6.

²⁵ For years in which the Schedule E data are not available, the previous year’s values are used.

that the geographic distribution of this income is similar to the distribution of net rent and royalties retained by fiduciaries.

Imputed rental income

Imputed rent is an imputation for the net rental income of owner-occupied housing. It is based on the assumption that owner-occupants are in the rental business and that they are renting the houses in which they live to themselves: As tenants, they pay rent to the landlords (that is, to themselves); as landlords, they collect rent from their tenants (that is, from themselves), they incur expenses, and they may have a profit or a loss from the rental business.²⁶ The state estimates of imputed net rental income are prepared in two parts: Imputed net rent received by the owner-occupants of mobile homes and imputed net rent received by the owner-occupants of all other dwellings.

Imputed net rent from mobile homes.—National estimates of imputed net rent from mobile homes for census years were allocated to the states in proportion to the number of mobile homes from the Census of Housing. Intercensal estimates of the number of mobile homes are straight line interpolations of the census benchmarks. The 2000 estimates are extrapolated forward using the aggregate value of mobile homes from the American Community Survey

Imputed net rent from all other dwellings.—National estimates of imputed net rent from all other dwellings, excluding disaster adjustments, were allocated to states using estimates of the rental value of owner-occupied dwellings. For census years, estimates of the gross rental value of owner-occupied, single-family dwellings were derived from Census of Housing data. Intercensal estimates of gross rental values are straight-line interpolations of the census benchmarks. The 2000 estimates of gross rental values were extrapolated forward using the aggregate value of all owner-occupied dwellings from the American Community Survey. National disaster adjustments are distributed to states on the basis of reports of insured losses from private sources and data from the Federal Emergency Management Agency.²⁷

²⁶ See “Imputation” in Chapter XII Technical Notes.

²⁷ See “Disaster Adjustments” in Chapter XII Technical Notes.

Table E.--Relative Importance to Personal Income of Personal Dividend Income, Personal Interest Income, and Rental Income of Persons, by Component, United States, 2006

	Millions of dollars	Percent of personal income
Personal income..	10,966,808	100.00
Personal dividend income, personal interest income, and rental income of persons..	1,850,122	16.87
Personal dividend income..	696,259	6.35
Personal interest income..	1,099,326	10.02
Monetary..	690,057	6.29
Imputed..	409,269	3.73
Rental income of persons/1/..	54,537	0.50
Monetary..	50,331	0.46
Imputed..	4,206	0.04

Footnotes

1. Shown with the capital consumption adjustment.

NOTE.-- Detail may not add to totals due to rounding.

VI. PERSONAL CURRENT TRANSFER RECEIPTS

Personal current transfer receipts are benefits received by persons for which no current services are performed. They are payments by governments and businesses to individuals and nonprofit institutions serving individuals.¹ Transfer receipts accounted for almost 15 percent of total personal income at the national level in 2006 (table F).

Estimates are prepared for approximately 50 subcomponents of transfer receipts. The subcomponents are classified by source—government or business—and may also be classified by recipient—individuals or nonprofit institutions serving individuals. In this discussion, transfer receipts are presented in three major groups—receipts of individuals from governments, receipts of nonprofit institutions serving individuals, and receipts of individuals from businesses.

At the state level, approximately 95 percent of the estimates of transfer receipts are derived from direct measures of the receipts. The proportion is lower for current estimates and rises as more complete source data become available. Source data are typically from the federal agency providing the benefits or administering the fund. For some programs, data may be drawn from Census publications, including the *Consolidated Federal Funds Report (CFFR)*, *Federal Assistance Award Data System (FAADS)*, *State Government Finances*, and *State and Local Government Finances*. The remaining 5 percent are allocations of national estimates in proportion either to data that are related to the components or to the most relevant population series.²

Most of the state estimates of transfer receipts are based on data for a calendar year, but some of the estimates are based on data for fiscal years. When data for fiscal years are used, the data for the two fiscal years that overlap the calendar year are averaged with the appropriate weights to yield the data for the calendar year.

This chapter is organized according to the order of the presentation of the components and subcomponents in table F. Each estimated item is briefly defined and the preparation of the state estimates is described.

Current Transfer Receipts of Individuals from Governments

Current transfer receipts of individuals from governments accounted for about 96 percent of total transfer receipts at the national level in 2006. The national estimates of current transfer receipts of individuals from governments are generally based on source data on government payments to the individual beneficiaries or to the vendors that provide specified goods or services to the beneficiaries. Expenditures for administrative

¹ Transfer receipts from the rest of the world are netted against similar payments to the rest of the world, and the net payments, called “personal transfer payments to rest of the world (net),” are recorded in the national income and products accounts as part of personal outlays.

² A special adjustment was made to some components to account for the massive population loss in Louisiana following Hurricane Katrina and the lack of sensitivity of source data and methods to track payments which followed those populations. The adjustment for each of those components and the distribution to states was based on the 2004 per capita estimates for those components in the New Orleans MSA and each state’s share of Katrina’s Louisiana evacuees as reported in the Federal Emergency Management Agency’s *Current Location Report*, a daily tabulation of aid applications from storm victims by current state of residence.

costs are excluded. For Federal programs, the data are typically drawn from the Treasury Department's *Monthly Treasury Statement* or from administrative reports of the Federal agencies that administer the programs. For programs partially funded by the Federal government but administered by state or local governments, the source data are typically drawn from reports by the responsible Federal agencies, based on data reported by the state or local government agencies. For programs operated and funded exclusively by state and local governments, the source data are typically drawn from Census Bureau publications, including *State Government Finances*.³

Retirement and disability insurance benefits

Retirement and disability insurance benefits accounted for almost 36 percent of total transfer receipts at the national level in 2006.

Old-age, Survivors, and Disability Insurance (OASDI) benefits.—These benefits, popularly known as social security, consist mainly of monthly benefits received by retired and disabled workers, dependents, and survivors and of lump-sum benefits received by survivors.

The state estimates of the OASDI benefits consist of the estimates for four categories of these benefits. The estimate for each category is based on calendar year tabulations of the payments from the Social Security Administration (SSA). Due to the lag in availability of those data, estimates for 2006 are extrapolated from the estimates for 2005 by changes in related Census Bureau population estimates. For the retired, dependent and survivors categories the population of those 65 and older was used and for the disabled workers category the civilian population was used.

Railroad retirement and disability benefits.—These benefits are received by retired and disabled railroad employees and their survivors under the Federal program of retirement insurance for railroad employees, who are not covered by OASDI. The state estimates of the benefits are based on fiscal year data from the Census Bureau's annual *CFFR*.

Workers' compensation.—This compensation is received by individuals with employment-related injuries and illnesses and by the survivors of individuals who died of employment-related causes. The compensation is from both Federal and state government administered funds.⁴

The state estimates of compensation received from the Federal fund, which covers only Federal civilian employees, are based on fiscal year data from the Census Bureau's annual *CFFR*.

Compensation received by both public and private employees from state-administered workers' compensation funds consists of compensation received under exclusively state-administered workers' compensation insurance programs, compensation received under state-administered insurance programs that compete with private

³ For detailed information on the methodology used to prepare the national estimates, see U.S. Department of Commerce, Bureau of Economic Analysis, Methodology Paper Series MP-5, *Government Transactions* (Washington, DC: U.S. Government Printing Office, November 1988). This publication is available on BEA's Internet site: Go to www.bea.gov and select "Methodologies."

⁴ Privately administered workers' compensation funds are treated differently. Employer contributions to such funds are counted as a supplement to wages and salaries. Compensation received from the funds does not appear anywhere in personal income.

insurance programs, and compensation received under the state-administered programs for second-injury funds.

The state estimates of workers' compensation are derived from fiscal year data from state workers' compensation funds by the state of work from the Census Bureau's annual *State Government Finances*. These data are adjusted to a place-of-residence basis by BEA.

Other government retirement and disability insurance benefits.—These benefits consist of temporary disability benefits, black lung benefits, and benefits from the Pension Benefit Guaranty Corporation.

Temporary disability benefits are the benefits received by workers who are unemployed because of nonoccupational illnesses or injuries. These benefits are from state-administered programs, which exist only in California, New Jersey, and Rhode Island. The estimate for California is based on calendar year data provided by the California Development Department. The estimates for New Jersey and Rhode Island are based on fiscal year data from the Census Bureau's annual *State Government Finances*.

Black lung benefits are the benefits received by coal miners who are totally disabled by black lung disease (pneumoconiosis) and by the eligible survivors of miners whose deaths were caused by the disease. Individuals whose eligibility was established before July 1973 receive their benefits from the Social Security Administration; those whose eligibility was established since June 1973 receive benefits from the Department of Labor. The state estimates of the benefits received from each agency are based on fiscal year data from the Census Bureau's annual *CFFR*.

Pension Benefit Guaranty benefits are paid by the revolving fund of the Pension Benefit Guaranty Corporation (PBGC) to individuals whose PBGC-insured pensions cannot be paid by the private pension plans that are liable for the benefits.⁵ The state estimates of the benefits are based on calendar year data from the Pension Benefit Guaranty Corporation's *Pension Insurance Data Book*.

Medical benefits

Medical benefits accounted for almost 45 percent of total transfer receipts at the national level in 2006.

Medicare benefits.—These benefits are Federal Government payments made directly or through intermediaries to vendors for care provided to individuals under the Medicare program. The state estimates of the benefits received under the Medicare provisions for Hospital Insurance and Supplementary Medical Insurance (HSMI), are based on estimates of payments by state of residence as reported by the Centers for Medicare and Medicaid Services (CMS). Due to the lag in availability of those data, estimates for 2000-2005 are extrapolated from the estimates for 1999 by weighted changes in Medicare enrollment (as of July of each year) from CMS. Due to the lag in availability of Medicare enrollment data, estimates for 2006 are extrapolated from the

⁵ The NIPA views the PBGC as consisting of two parts: an employee pension fund and a social insurance fund. The former, also known as the trust fund, pays benefits out of the assets and liabilities of terminated pension plans. These benefits are treated like all other pension benefits and hence are not counted as part of transfer receipts or any other component of personal income. The latter part, also known as the revolving fund, deals with the unfunded portion of terminated plans and is financed primarily with premiums paid by employers. It is classified as a social insurance fund and hence the benefits it pays to retirees are treated as a transfer receipt in personal income as discussed in the text.

estimates for 2005 by changes in population of those 65 or older. Estimates for 2006 also include Medicare Prescription Drug Plan (Part D). Lacking data on benefits by state, the national control for Part D was allocated to states by two methods and an average taken. The first method allocates the national control by HSMI benefits (which take into account differences across states in average benefits per enrollee). The second method allocates the national control by the counts from CMS of the number of enrollees in Part D (which takes into account different enrollment rates across states).

Public assistance medical care benefits.—These medical benefits are received by low-income individuals. The benefits consist mainly of the payments made directly or through intermediaries to vendors for care provided to individuals under the federally assisted, state-administered Medicaid program, and State Children’s Health Insurance Program (SCHIP), and under the general assistance medical programs of state and local governments. The state estimates of the payments made under the Medicaid program and SCHIP are based on data from CMS. The state estimates of payments made under the general assistance medical programs are based on data that are obtained from the State departments of social services by CMS.

Military medical insurance benefits.—These benefits are vendor payments made under the TRICARE Management Program, formerly called the Civilian Health and Medical Plan of the Uniformed Services, for the medical care of dependents of active duty military personnel and of retired military personnel and their dependents at nonmilitary medical facilities. The state estimates are based on data from the Department of Defense.

Income maintenance benefits

Income maintenance benefits accounted for almost 10 percent of total transfer receipts at the national level in 2006.

Supplemental Security Income (SSI) benefits.—These benefits are received by low-income persons who are aged, blind, or disabled from both the Federal Government and state governments. The state estimates are based on Social Security Administration tabulations of annual disbursements for two categories of SSI benefits: Basic Federal payments and supplemental state payments. Both of these estimates are based on data that are published in the “Annual Statistical Supplement” to the *Social Security Bulletin*.

Family assistance.—These benefits consist mainly of cash and work-based assistance received by low-income families under the Temporary Assistance to Needy Families (TANF) program. In 1997, this program superseded the state-administered Aid to Families with Dependent Children (AFDC) and emergency assistance programs that received federal matching funds. State estimates of TANF benefits for 1997 through 2006 are based on fiscal year direct data from the web site of the Administration for Children and Families (ACF) of the Department of Health and Human Services.

State estimates through 1996 are based on unpublished quarterly data from ACF. State estimates for AFDC and emergency assistance for 1997 are based on unpublished ACF data for the Federal grants to the states for fiscal year 1997. These data were adjusted to reflect (1) the number of months during calendar year 1997 that the AFDC and emergency assistance programs were in operation in each state, and (2) the fund matching percentage that was required of each state.

Food stamps.—These benefits are measured as the value of the food stamps issued to qualifying low-income households in order to supplement their ability to purchase food. Eligibility is determined by each state's interpretation of Federal regulations; the Food and Nutrition Service of the U.S. Department of Agriculture pays the cost of the stamps. The state estimates are based on tabulations of the value of the distributed stamps from the Department of Agriculture.

Other income maintenance benefits.—These benefits consist of general assistance benefits, foster care adoption assistance, earned income tax credits, energy assistance, and the value of vouchers issued under the Women, Infants, and Children program.

General assistance benefits are the benefits received from state and local governments by low-income individuals and families who do not qualify for help under federally supported programs⁶ and disaster assistance received from the federal-state Other Needs Assistance Program. The state estimates are based on data from the Census Bureau's annual *State and Local Government Finances* except for the disaster assistance portion which is based on direct data from the Federal Emergency Management Agency (FEMA).

Foster care and adoption assistance is received from state and local governments by families that care for foster children or that adopt children under federally aided programs. Both the assistance provided directly to families and the payments made to nonprofit organizations that supervise the programs in some cases are included. The state estimates are based on data from ACF on the Federal grants that are made to the states. The data are adjusted to reflect the fund matching percentage that is required of each state.

Earned income tax credits are Federal income tax refunds to low-income workers, mainly those who have minor children. Eligibility for the tax credits is determined by the size of adjusted gross income, or earned income, and by certain household characteristics. The portion of the credit that is counted as a transfer receipt is calculated as the excess of the tax credit over the tax liability. The state estimates are based on data from the Internal Revenue Service's Historical Table 2 published in the *SOI Bulletin*.

Energy assistance consists of the cash benefits received by needy households and the vendor payments to suppliers to help defray the cost of home heating, cooling, and weatherization under the federally funded and state-administered energy assistance programs. The state estimates are based on data from the Administration for Children and Families.

Women, Infants, and Children (WIC) benefits. This program is fully funded by the Food and Nutrition Service of the U.S. Department of Agriculture and operated mainly through state agencies. The transfers under the program take the form of vouchers issued to low-income women who are pregnant or who have young children; the vouchers are used to purchase supplemental nutritious foods. The state estimates are based on direct data provided by the Food and Nutrition Service.

Unemployment insurance compensation

Unemployment insurance compensation accounted for almost 2 percent of transfer receipts at the national level in 2006.

⁶ The Federal Government neither funds nor regulates these programs.

State unemployment insurance compensation.—These benefits consist mainly of the compensation received by individuals under state-administered unemployment insurance (UI) programs, but they also include the special benefits authorized by Federal legislation for periods of high unemployment.⁷ The provisions that govern the eligibility, timing, and amount of the benefits vary among the states, but the provisions that govern coverage and financing are uniform nationally.

Under the Federal-state UI system, an unemployed individual who lives in one state may be eligible for UI benefits from another state.⁸ Therefore, the estimate for each state is calculated as the total compensation paid by a state minus the payments made by that state to the residents of other states plus the compensation received from other states by the residents of that state. The state estimates are based on the data from the Labor Department's Employment and Training Administration.

Unemployment compensation of Federal employees (UCFE).—These benefits are received by former Federal civilian employees under a Federal program administered by the state employment security agencies. The state estimates are based on data from the Employment and Training Administration.

Unemployment compensation for railroad employees.—These benefits are received by workers who are unemployed because of sickness or because work is unavailable in the railroad industry and in related industries, such as carrier affiliates. This UI program is administered by the Railroad Retirement Board under a Federal program that is applicable throughout the nation. The state estimates are based on data from the Census Bureau's quarterly *FAADS*.

Unemployment compensation for veterans (UCX).—These benefits are received by unemployed veterans who have recently separated from military service and who are not eligible for military retirement benefits; the compensation is paid under a Federal program that is administered by the state employment security agencies. The state estimates are based on data from the Employment and Training Administration.

Other unemployment compensation.—These benefits are Trade Adjustment Allowances received by workers who are unemployed because of the adverse economic effects of international trade arrangements on employment. The state estimates are based on data from the Department of Labor, which administers the program.

Veterans' benefits

Veterans' benefits accounted for about 2.4 percent of total transfer receipts at the national level in 2006.

Veterans' pension and disability benefits.—These benefits are received primarily by veterans with service-connected disabilities and by the survivors of military personnel who died of service-connected causes. In addition, these benefits are received by war veterans who are 65 years old or older, who have nonservice-connected disabilities, who are permanently and totally disabled, and who meet specified income requirements. The state estimates are based on the data from the Department of Veterans Affairs (DVA).

⁷ The programs for Federal civilian employees and for veterans are administered by the states, but the benefits are classified in other subcomponents of unemployment insurance compensation.

⁸ The State of the resident handles the claim and then sends it to the State that is responsible for paying the benefits.

Veterans' readjustment benefits.—These benefits are the allowances for tuition and other educational costs that are received by veterans and by the spouses and the children of disabled and deceased veterans and for automobiles and conveyances, and specially adapted housing for disabled veterans. The state estimates are based on data from the DVA.

Veterans' life insurance benefits.—These benefits are the claims received by beneficiaries of veterans' life insurance policies and the dividends received by policyholders from the five veterans' life insurance programs administered by the DVA. The state estimates are based on data for these benefits from the DVA.

Other assistance to veterans.—Other assistance to veterans consists of assistance received by indigent veterans from state and local governments and bonuses received by veterans from state and local governments. The state estimates of the state and local government assistance and bonuses are based on adjusted fiscal year data from the Census Bureau's annual *State Government Finances*.

Federal education and training assistance

Federal education and training assistance accounted for about 1.0 percent of total transfer receipts at the national level in 2006.

Federal fellowship benefits.—These benefits consist of National Science Foundation (NSF) grants to outstanding science students, subsistence assistance provided to cadets at the six state maritime academies, and all other Federal fellowship benefits. The state estimates of the NSF grants are based on annual NSF tabulations of the number of students receiving fellowships at each institution. The state estimates of the subsistence assistance to the cadets are based on data from the Maritime Administration of the Department of Transportation. The amount of assistance is assigned to the state in which each academy is located. The national estimates of the assistance provided to the recipients of all other Federal fellowships are allocated to states in proportion to the civilian population.

Interest payments on guaranteed student loans.—These payments are made by the Department of Education to commercial lending institutions on behalf of the individuals who receive low-interest, deferred-payment loans from these institutions in order to pay the expenses of higher education. The national estimate is allocated to states in proportion to the number of individuals enrolled in institutions of higher education from the Department of Education.

Higher education student assistance.—This Federal assistance, called Pell Grants, is for an undergraduate education for students with low incomes. The state estimates are based on data from the Census Bureau's annual *CFFR*.

Job Corps benefits.—These benefits are primarily the allowances for living expenses received by economically disadvantaged individuals who are between the ages of 16 and 21 and who are enrolled in designated vocational and educational training programs. These benefits also include the adjustment allowances received by trainees upon the successful completion of their training. National estimates are distributed to states in proportion to a tabulation from the Employment and Training Administration of the amount of allowances and allotments disbursed to enrollees in 1984, the last year for which such data are available.

Other transfer receipts of individuals from governments

Other transfer receipts of individuals from governments accounted for about 0.2 percent of total transfer receipts at the national level in 2006.

Compensation of survivors of public safety officers.—These are payments to the survivors of state and local government employees, such as police officers and fire fighters, who were killed in the line of duty; the payments are made under a Federal program. The amount of the payment is \$100,000 plus an allowance for the increase in consumer prices since 1988. The state estimates are based on fiscal year data from the Census Bureau's annual *CFFR*.

Compensation of victims of crime.—This compensation is received by crime victims and vendors on behalf of crime victims. The national estimate of total compensation is allocated to states in proportion to data provided by the Office of Victims of Crime of the Department of Justice.

Alaska Permanent Fund benefits.—These benefits are the disbursements of property income to the residents of Alaska from the Alaska Permanent Fund. The fund, which is derived from oil revenue, pays a portion of its net property income to every resident. The state estimate is the amount that is paid and that is reported by the Alaska Department of Revenue.

Disaster relief benefits.—These benefits are transient accommodations reimbursement to the victims of disasters, such as hurricanes and earthquakes, from the Federal Emergency Management Agency. In the absence of any pertinent data, the national estimates are allocated to states in proportion to the civilian population.⁹

Radiation exposure compensation.—This compensation for individuals exposed to radiation released during above-ground nuclear weapons tests and uranium mining is made under the Radiation Exposure Compensation Act. The state estimates are based on direct data from the Department of Justice.

Japanese internment redress benefits.—These are benefits made from 1990 to 1997 to American citizens of Japanese descent who were interned during World War II. The state estimates are based on the tabulations of these payments by ZIP Code area from the Department of Justice. These tabulations are summed to states by BEA.

Payment of anti-terrorism judgments.—These are payments from the U.S. Treasury to satisfy certain court judgments against countries found to have sponsored terrorism. In the absence of any pertinent data, the national estimates are allocated to states in proportion to the civilian population.

Compensation of Victims of September 11.—These payments are from a voluntary, federally funded program that provides compensation to eligible individuals or relatives of individuals who were killed or physically injured as a result of the terrorist-related aircraft crashes of September 11, 2001. National estimates are allocated to states in proportion to an Associated Press list of confirmed dead.

Federal educational exchange benefits.—These benefits are received by students who participate in the Fulbright scholarship program and in other international educational exchange programs. The national estimates are allocated to states in proportion to the civilian population.

⁹ The unusually high estimate for 2005 reflects billions of dollars distributed by FEMA directly to the victims of Hurricanes Katrina, Rita, and Wilma. The assistance is largely attributed to Katrina victims and a portion of that estimate was distributed to all states based on the *Current Location Report* from FEMA.

Bureau of Indian Affairs benefits.—These benefits are the payments to American Indians for educational and social services that are not available to them from state or local agencies. The state estimates are based on data from the Bureau of Indian Affairs.

Current Transfer Receipts of Nonprofit Institutions

Current transfer receipts of nonprofit institutions serving individuals from federal, state, and local governments and from business accounted for about 3.1 percent of total transfer receipts at the national level in 2006.

Receipts from the Federal Government

These are mainly receipts of private educational institutions on behalf of the recipients of Federal fellowships, Pell grants, and other education and training programs.¹⁰ They also include receipts of private institutions under National Institutes of Health research initiatives and other programs of the Department of Health and Human Services and under programs of the National Science Foundation, the Corporation for Public Broadcasting, and the Legal Services Corporation.

The national estimate is based on data from the *Monthly Treasury Statement*. Because state-level data are unavailable, the national estimate is allocated to the states in proportion to the civilian population.

Receipts from state and local governments

These receipts consist of payments for job training by state and local governments and payments for educational assistance by state governments.

Workforce Investment Act benefits.—These are receipts of those private nonprofit institutions that provide job training under a work-study program funded by the Federal Government (formerly authorized by the Job Training Partnership Act). The national estimate is based on data from the *Monthly Treasury Statement*. Because state-level data are unavailable, the national estimate is allocated to the states in proportion to the civilian population.

Educational assistance.—This consists of all educational assistance provided to individuals and private nonprofit educational institutions other than that provided under the Workforce Investment Act. The national and state estimates are based on data for state government expenditures for “other education assistance and subsidies” from the Census Bureau’s annual *State Government Finances*.

Receipts from businesses

Receipts from businesses accounted for about 1 percent of total transfer receipts in 2005. These transfer receipts consist mainly of corporate gifts of money, securities, and real property to nonprofit institutions serving individuals. The national estimate is based on data tabulated from Federal corporate income tax returns by the Internal Revenue Service and is allocated to states in proportion to the civilian population.

¹⁰ These receipts exclude payments to private educational institutions for research and development under Federal contracts, which are treated as government purchases.

Current Transfer Receipts of Individuals from Businesses

Current transfer receipts of individuals from businesses accounted for about .9 percent of total transfer receipts at the national level in 2006. These receipts consist primarily of personal-injury liability payments to individuals other than employees. The national estimates are allocated to states in proportion to the civilian population. These receipts also include BEA estimates of net insurance settlements when actual insured losses exceed normal insured losses caused by disasters, such as hurricanes, floods, earthquakes, and the terrorist attacks of September 11, 2001.¹¹

¹¹ See “Disaster Adjustments” in Chapter XII Technical Notes.

Table F.--Relative Importance to Personal Income of Personal Current Transfer Receipts, by Component, United States, 2006

	Millions of dollars	Percent of personal income
Personal income..	10,966,808	100.00
Personal current transfer receipts (\$000)	1,612,935	14.71
Current transfer receipts of individuals from governments	1,548,090	14.12
Retirement & disability insurance benefit	578,681	5.28
Old age, survivors, and disability insurance (OASDI) benefits	544,118	4.96
Railroad retirement and disability benefits	9,518	0.09
Workers' compensation	16,755	0.15
Other government retirement and disability insurance benefits/1/	8,290	0.08
Medical benefits	719,561	6.56
Medicare benefits	402,276	3.67
Public assistance medical care benefits/2/	310,445	2.83
Military medical insurance benefits/3/	6,840	0.06
Income maintenance benefits	160,773	1.47
Supplemental security income (SSI) benefits	40,414	0.37
Family assistance/4/	18,249	0.17
Food stamps	29,399	0.27
Other income maintenance benefits/5/	72,711	0.66
Unemployment insurance compensation	30,898	0.28
State unemployment insurance compensation	29,607	0.27
Unemployment compensation for Fed. Civilian employees (UCFE)	218	0.00
Unemployment compensation for railroad employees	78	0.00
Unemployment compensation for veterans (UCX)	447	0.00
Other unemployment compensation/6/	548	0.00
Veterans benefits	39,065	0.36
Veterans pension and disability benefits	35,204	0.32
Veterans readjustment benefits/7/	2,292	0.02
Veterans life insurance benefits	1,554	0.01
Other assistance to veterans/8/	15	0.00
Federal education and training assistance/9/	15,909	0.15
Other transfer receipts of individuals from governments/10/	3,203	0.03
Current transfer receipts of nonprofit institutions	50,406	0.46
Receipts from the Federal government	11,010	0.10
Receipts from state and local governments/11/	26,676	0.24
Receipts from businesses	12,720	0.12
Current transfer receipts of individuals from businesses/12/	14,439	0.13

Footnotes

1. Consists largely of temporary disability payments, pension benefit guaranty payments, and black lung payments.
2. Consists of medicaid and other medical vendor payments.
3. Consists of payments made under the TriCare Management Program (formerly called CHAMPUS) for the medical care of dependents of active duty military personnel and of retired military personnel and their dependents at nonmilitary medical facilities.
4. Through 1995, consists of emergency assistance and aid to families with dependent children. Beginning with 1998, consists of benefits-- generally known as temporary assistance for needy families-- provided under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. For 1996-97, consists of payments under all three of these programs.
5. Consists largely of general assistance; expenditures for food under the supplemental program for women, infants, and children; refugee assistance; foster home care and adoption assistance; earned income tax credits; and energy assistance.
6. Consists of trade readjustment allowance payments, Redwood Park benefit payments, public service employment benefit payments, and transitional benefit payments.
7. Consists largely of veterans' readjustment benefit payments, educational assistance to spouses and children of disabled or deceased veterans, payments to paraplegics, and payments for autos and conveyances for disabled veterans.

8. Consists largely of state and local government payments to veterans.

9. Consists largely of federal fellowship payments (National Science Foundation fellowships and traineeships, subsistence payments to state maritime academy cadets, and other federal fellowships), interest subsidy on higher education loans, basic educational opportunity grants, and Job Corps payments.

10. Consists largely of Bureau of Indian Affairs payments, education exchange payments, Alaska Permanent Fund dividend payments, compensation of survivors of public safety officers, compensation of victims of crime, disaster relief payments, compensation for Japanese internment, and other special payments to individuals.

11. Consists of state and local government educational assistance payments to nonprofit institutions and other state and local government payments to nonprofit institutions.

12. Consists of personal injury payments to individuals other than employees and other business transfer payments.

All dollar estimates are in current dollars (not adjusted for inflation).

NOTE. Detail may not add to totals due to rounding.

VII. CONTRIBUTIONS FOR GOVERNMENT SOCIAL INSURANCE

Contributions for government social insurance consists of employer contributions for government social insurance and employee and self-employed contributions for government social insurance (formerly called personal contributions for social insurance). It is deducted in the calculation of personal income.

Contributions for government social insurance account for 11 percent of earnings by place of work at the national level in 2006 (table G). Employer contributions for government social insurance is 49 percent of the total in 2006, while employee and self-employed contributions for government social insurance makes up the other 51 percent.

Employer Contributions for Government Social Insurance

Employer contributions for government social insurance account for 5.4 percent of earnings by place of work (table G). These contributions are also a component of supplements to wages and salaries. A complete description of these contributions and the methodology used to estimate them are presented in Chapter III Supplements to Wages and Salaries.

Employee and Self-employed Contributions for Government Social Insurance

Employee and self-employed contributions for social insurance consists of payments by employees, by the self-employed, and by other individuals who participate in the following programs: Old-age, Survivors, and Disability Insurance (OASDI, or social security); Hospital Insurance (HI, or Medicare Part A); Supplementary Medical Insurance (Medicare Part B); Medicare Prescription Drug Plan (Medicare Part D); railroad retirement; state unemployment insurance; temporary disability insurance; and veterans' life insurance. These contributions accounted for about 5.6 percent of earnings by place of work at the national level in 2006 (table G).

Contributions of employees—like their income taxes on wages and salaries—are withheld by their employers from their paychecks. The self-employed, on the other hand, pay their contributions with their quarterly payments of estimated Federal individual income taxes or annually with their federal income tax returns.

Contributions for OASDI and HI

Contributions for OASDI and HI consist of payments by employees and by the self-employed.

Contributions by employees.—These contributions are made by employees in the private sector and by the employees of Federal, state, and local governments who are covered by the OASDI and HI programs.

Most of these employees are covered by both the OASDI and HI programs. However, Federal employees who are covered by the Civil Service Retirement System

and employees of the railroad industry are covered by the HI program but not by the OASDI program.

National estimates of these contributions are based on data from the Social Security Administration and are allocated to states in proportion to wage and salary disbursements. The state estimates are prepared separately for private sector employees, Federal civilian employees, state and local government employees, and military personnel.

State estimates of contributions by private sector employees and by Federal civilian employees are each prepared in proportion to state estimates of wage and salary disbursements for these employees.¹ State estimates of contributions by military personnel are prepared in proportion to state estimates of military wage and salary disbursements excluding pay-in-kind.

State estimates of contributions to OASDI and HI by state and local government employees are based on state estimates for 1987, as reported in the 1987 Census of Government.² The 1987 state estimates were extrapolated to forward by estimates of state and local government wage and salary disbursements adjusted to reflect coverage rates under OASDI and HI for state and local government employees in each particular state. These coverage rates were provided by the Social Security Administration.

Contributions by the self-employed.—All self-employed persons whose annual self-employment income exceeds \$400 are covered by, and are required to contribute to, the OASDI and HI programs. State estimates of these contributions are based on a 1-percent sample published in the Social Security Administration's *Social Security Bulletin Annual Statistical Supplement*.³

Contributions by employees for other social insurance programs

Contributions for railroad employee retirement insurance.—National and state estimates of employee contributions for this federally administered program are based on the wages and salaries that are subject to the contributions. The data used for the state estimates are reported by the Railroad Retirement Board (RRB) on a place-of-residence basis and are converted by BEA to a place-of-work basis using journey-to-work data from the 2000 Census of Population.⁴

Contributions for state unemployment insurance and for temporary disability insurance.—Contributions for state unemployment insurance consist of payments by employees in Alabama (1969-70 and 1975-85), Alaska, New Jersey, and

¹ Before the 1996 comprehensive revisions, these estimates were based on direct sample data provided by the Social Security Administration (SSA). However, SSA discontinued this series because it had become unreliable.

² The data reported in the census are employer contributions. They are assumed to be identical to the employee contributions because the contribution rates for these programs are identical for employers and employees.

³ Because state data are not available until several years after the end of the reference year, the estimates are extrapolated by the change in the state estimates of nonfarm proprietors' income.

⁴ This 'reverse residence adjustment' is necessary because employee and self-employed contributions for government social insurance is by definition on a place of work basis (like wage and salary disbursements). The conversion of place of work components of income to a place of residence basis is discussed below in Chapter VIII Residence Adjustment.

Pennsylvania (1984-88 and 1992-2006). National and state estimates of these contributions are based on unpublished data from the states.

Contributions for temporary disability insurance are the payments by employees to such insurance programs in California, New Jersey, and Rhode Island. National and state estimates of these contributions are based on data from the Census Bureau's annual *State Government Finances* and from the *California Disability Insurance Fund Report*.

Contributions for Supplementary Medical Insurance and for veterans' life insurance

Contributions for Supplementary Medical Insurance.—These contributions are the premiums that are paid by individuals who are enrolled in Medicare's voluntary Supplementary Medical Insurance program (Part B) and, beginning in 2006, in the Medicare Prescription Drug Plan (Part D). The national estimate of these contributions is based on data from the *Monthly Treasury Statement*. The national estimate is allocated to states in proportion to the number of individuals who are enrolled in the programs and whose premiums are not paid by state governments. The enrollment data are provided by the Centers for Medicare and Medicaid Services (CMS), formerly the Health Care Financing Administration.

Contributions for veterans' life insurance.—These contributions are the premiums that are paid by veterans for life insurance under the five life insurance programs administered by the Department of Veterans Affairs (DVA). The national estimate of these contributions is based on unpublished data provided by DVA. Premium data by state from DVA's *Government Life Insurance Programs for Veterans and Members of the Services, Annual Report* are used to allocate the national estimate.

Table G.--Relative Importance to Earnings of Contributions for Government Social Insurance, by Component, United States, 2006

	Millions of dollars	Percent of earnings
Earnings by Place of Work..	8,431,134	100.00
Contributions for government social insurance..	926,092	10.98
Employee and Self-employed Contributions for Government Social Insurance..	474,988	5.63
Contributions to old age, survivors, disability, and hospital insurance..	423,548	5.02
Civilian employee contributions..	373,817	4.43
Military employee contributions..	3,981	0.05
Self employed contributions..	45,750	0.54
Railroad employee retirement contributions..	1,591	0.02
State unemployment insurance and temporary disability contributions..	5,607	0.07
Supplementary medical insurance contributions..	43,833	0.52
Veterans life insurance contributions..	409	(L)
Employer contributions for government social insurance	451,104	5.35
Old age, survivors, and disability insurance, and hospital insurance	377,364	4.48
Unemployment programs (state UI, Federal unemployment tax, RR UI, Federal UI)	43,578	0.52
Railroad retirement	2,762	0.03
Pension Benefit Guaranty	1,698	0.02
Workers' compensation (private)	17,138	0.20
Temporary disability	35	(L)
Federal employee programs (veterans' life insurance, fed. civilian workers' compensation, military medical)	8,529	0.10

Detail may not add to totals due to rounding.

VIII. RESIDENCE ADJUSTMENT¹

Personal income is a measure of income by place of residence. The place of residence of individuals is the state and county in which they live. The place of residence of quasi-individuals is the state and county in which the individuals reside who benefit from the activities of the quasi-individuals or on whose behalf quasi-individuals receive income.²

Accordingly, the residence of military personnel is the state and county in which they live while they are on military assignment, not their permanent or legal state of residence. The income of military personnel on foreign assignment is excluded from the state and local area personal income estimates, because their residence is outside of the territorial limits of the United States.³

The residence of seasonal migrant workers, except those working in Alaska, is the state in which they live while they are working, not their usual place of residence. As discussed further below, the residence of Alaskan seasonal migrant workers is their usual place of residence. The residence of foreign citizens who work for international organizations, foreign embassies, or consulates in the United States is the country of which they are citizens. Thus their income is excluded from the state and local area personal income estimates.

These definitions of residence differ slightly from some of those used by the Census Bureau, which provides data used in the preparation of the residence adjustment estimates and the estimates of population that are used to calculate per capita personal income. For example, the residence of seasonal migrant workers is sometimes reported to the Census Bureau as their usual place of residence rather than the state in which they are living and working on April 1 when the decennial census of population is taken.

The source data for some components of personal income—personal current transfer receipts, dividends, interest, and rent, and proprietors' income—are recorded, or treated as if they were recorded, on a place-of-residence basis.⁴

Most of the source data for the remaining three components, which amounted to more than 60 percent of personal income in 2006, are recorded by place of work. These components are wage and salary disbursements, supplements to wages and salaries, and contributions for government social insurance. Therefore, these place-of-work estimates are adjusted so that they will be on a place-of-residence basis and so that the income of

¹ For information on the special treatment of the 2005 residence adjustment estimates for the parishes in Louisiana that lost population due to Hurricane Katrina see David G. Lenze, "Local Area Personal Income for 2005," *Survey of Current Business* 87 (May 2007):26-34.

² "Quasi-individuals" consist of nonprofit institutions that primarily serve individuals, private noninsured welfare funds, and private trust funds.

³ State and local estimates of military wages and salaries for 2001-2006 do not show a large decrease for Army and Air Force troops sent to Afghanistan and Iraq. The Department of Defense is reporting active duty regular military strength according to the troops' home bases and reserve strength according to the state of the reservists' bases. For more information see the section "Differences in geographic scope and in classifications between the NIPA and the state and county estimates" in Chapter I Introduction.

⁴ For specific information about the source data for the estimates of the major components, see the section "Geographic characteristics of the source data" in Chapter I Introduction.

the recipients whose place of residence differs from their place of work will be correctly assigned to the state of residence of the recipients.

Correctly assigning the place of residence of the recipient of the income is more important for the state estimates than for the national estimates. For the state estimates, the income of individuals who commute to work between states is especially important for those states with substantial portions of their economies in metropolitan areas that extend across state boundaries—for example, the Washington-Arlington-Alexandria, DC-VA-MD-WV metropolitan statistical area.

The state estimates of the residence adjustment are prepared for net labor earnings—or “income subject to adjustment”—of interstate commuters and for the wages of border workers. Income subject to adjustment is defined as wage and salary disbursements plus supplements to wages and salaries minus contributions for government social insurance. Estimates of the residence adjustment by industry cannot be published because not all of the source data on which it is based are available by industry.

Interstate Commuters

The derivation of state residence adjustment estimates uses the interstate commuting flows identified in the most recent county estimates. State-to-state commuting ratios were calculated by summing the county-to-county interstate flows to yield state-to-state flows. Each flow for the state of residence was then divided by the “income subject to adjustment” (ISA) of the corresponding state of work from the most recent county estimates. Those ratios were then applied to state estimates of ISA for 2004-2005 to create interstate “gross flows.” The 2005 ratios were also used for 2006.

In what follows residence adjustment procedures for intercounty commuters are discussed first. This is followed by a discussion of procedures for border workers.

Intercounty commuters

The 2001 county estimates of the residence adjustment were calculated as part of a complete benchmark revision of the personal income and employment estimates. Briefly, using journey to work data from the 2000 Census of Population, each earnings inflow to a given county was divided by the corresponding amount paid to all those working in the source county. Each earnings outflow from the given county was divided by the corresponding amount paid to all those working in that county. These benchmark ratios are then applied to the income subject to adjustment (ISA) for 2001 and subsequent years to generate gross inflows and outflows. The sum of the outflows from a given county is subtracted from the sum of inflows to that county to yield the net residence adjustment for intercounty commuters. More complete details follow.

The county estimates for 2001 were derived in three steps. First, a provisional estimate for each county was prepared using intercounty commuting data from the 2000 Census of Population.⁵ Second, the provisional estimates for some counties were modified. Third, the modified provisional estimates for some counties were adjusted.

⁵ The benchmark year had to be 2001 instead of 2000 because 2001 is the first year that BEA estimates earnings and employment using the North American Industry Classification System (NAICS), the

Provisional estimates for 2001.—The procedure used to prepare the provisional estimates of the county residence adjustment for 2001 is illustrated by the following example for a two-county area that comprises counties f and g . The example is easily generalized to the calculation of estimates for more complex areas.

The provisional 2001 estimate of the residence adjustment for county f (RA_f) was calculated as the total 2001 inflows of the income subject to adjustment to county f from county g ($IN_{f.}$) minus the total 2001 outflows of the income subject to adjustment from county f to county g ($OUT_{f.}$).

$$RA_f = IN_{f.} - OUT_{f.}$$

The estimates of $IN_{f.}$ and $OUT_{f.}$ were prepared in industrial detail.⁶ The inflow ratio ($I_{f,k}$) is the share of total wages in a particular industry k in county g that were earned by residents of county f . It was used in the estimation of industry-level inflows to county f . Analogously, the outflow ratio ($O_{f,k}$) is the share of wages in industry k in county f that were earned by residents of county g . It was used in the estimation of industry-level outflows from county f . Both $I_{f,k}$ and $O_{f,k}$ were calculated from journey-to-work (JTW) data on the number of wage and salary workers (W) and their average wages (A) by county of work for each county of residence from the 2000 Census of Population.

$$I_{f,k} = \frac{\text{wages earned in } g \text{ by residents of } f}{\text{total wages earned in } g}$$

$$= \frac{(W_{(f \rightarrow g),k})(A_{(f \rightarrow g),k})}{(W_{(f \rightarrow g),k})(A_{(f \rightarrow g),k}) + (W_{(g \rightarrow g),k})(A_{(g \rightarrow g),k})}$$

$$O_{f,k} = \frac{\text{wages earned in } f \text{ by residents of } g}{\text{total wages earned in } f}$$

$$= \frac{(W_{(g \rightarrow f),k})(A_{(g \rightarrow f),k})}{(W_{(g \rightarrow f),k})(A_{(g \rightarrow f),k}) + (W_{(f \rightarrow f),k})(A_{(f \rightarrow f),k})}$$

classification system used (with some modification) by the 2000 Census of Population. BEA's estimates of earnings and employment for 2000 are based on the 1987 Standard Industrial Classification (SIC).

⁶ The inflows and outflows of wages and salaries and of supplements to wages and salaries were estimated for private industries by NAICS sectors and for the public sector by Federal civilian, military, and state and local governments. The inflows and the outflows of personal contributions were estimated at a more aggregated level because estimates of employee and self-employed contributions for government social insurance by private-sector employees are not made by industry.

Where two subscripts are used with an arrow, the first subscript identifies the place of residence, and the second identifies the place of work. For example, $W_{(f \rightarrow g),k}$ is the number of workers in industry k who lived in county f but who worked in county g .

The industry-level inflows to county f from county g ($IN_{f,k}$) were calculated as the inflow ratio multiplied by the corresponding income subject to adjustment (ISA) in industry k in county g ($ISA_{g,k}$). The industry-level outflows from county f to county g ($OUT_{f,k}$) were calculated as the outflow ratio multiplied by the ISA in industry k in county f ($ISA_{f,k}$).

$$IN_{f,k} = (I_{f,k})(ISA_{g,k})$$

$$OUT_{f,k} = (O_{f,k})(ISA_{f,k})$$

Summing the inflows for all industries yields the total inflows to county f (IN_f), and summing the outflows for all industries yields total outflows from county f (OUT_f).

$$IN_f = \sum_{k=1}^N IN_{f,k}$$

$$OUT_f = \sum_{k=1}^N OUT_{f,k}$$

Modifying the provisional 2001 estimates.—The provisional 2001 estimates of the residence adjustment for some counties were modified in three cases. These modifications were made to the overall residence adjustment, not to the flows by industry.

Cluster county adjustment. In the first case, the estimates for each of the over 1200 counties that are in urban clusters that have high rates of commuting among their constituent counties (mostly multicounty metropolitan areas) were modified to incorporate the 1999 distribution of wages and salaries from the 2000 Census.⁷ The estimates for these counties were modified because in numerous cases, the geographic coding by place of work of the JTW data and that of the source data for BEA's wages and salaries are inconsistent.⁸

⁷ A BEA cluster county is one county in a group of counties that has a high rate of commuting with other counties in the group. BEA clusters are based mostly on official metropolitan area definitions. The 1999 distribution of wages and salaries reflects the place of residence of the income recipients on April 1, 2000, not their place of residence when they received the wages and salaries.

⁸ For example, the source data may attribute too much of the wages of a multi-establishment firm to the county in which a firm's main office is located; the source data for the wages of the personnel employed on a military base that extends across county boundaries may attribute the wages to one county, but the JTW data may attribute these wages to the other county.

First, for each county in each cluster the provisional estimate of the residence adjustment for wages was added to place-of-work wage and salary disbursements to obtain a provisional estimate of place-of-residence wage and salary disbursements.⁹ Second, the provisional place-of-residence estimates of wages for the counties in each cluster were summed to a total estimate for the cluster. Third, the total estimate for each cluster was allocated to the counties of the cluster in proportion to the 1999 wage-and-salary distribution from the 2000 Census in order to produce the modified estimates of wages and salaries by county of residence. Fourth, the estimate of the modified residence adjustment for each county in the cluster was calculated as the modified estimate of place-of-residence wages minus the provisional estimate of place-of-residence wages plus the provisional estimate of the residence adjustment.

The difference between the modified estimate of the residence adjustment and the provisional estimate of the residence adjustment was expressed as a flow between pairs of counties in the same cluster in order to facilitate the extrapolation of the 2001 residence-adjustment estimates to subsequent years. In the simplest situation—a two-county cluster—the additional flow was assumed to be from the county with the negative difference to the county with the (exactly offsetting) positive difference. The flows were then divided by the appropriate ISA to form the cluster county adjustment ratio.

Adjacent county adjustment. In the second case, the provisional estimate of the residence adjustment for each county in 136 pairs of adjacent counties that are not in a cluster was modified because the 2001 provisional place-of-residence estimate of wages for one of the counties exceeded the place-of-residence measure of wages from the 2000 Census by a substantial amount and because the census measure for the other county exceeded the provisional estimate by a similar substantial amount. In order to facilitate the extrapolation of the 2001 residence-adjustment estimates to subsequent years, these adjacent-county modifications were also expressed as intercounty flows and converted to a ratio by dividing by ISA.

Alaskan seasonal worker adjustment. In the third case, the provisional 2001 estimates of the residence adjustment for eight county equivalents (boroughs and Census areas) in Alaska were modified to account for the large amounts of ISA received by seasonal workers from out of state. The provisional estimates yielded place-of-residence estimates of wages and salaries that were so much higher than the comparable decennial census data that they could not be an accurate reflection of only the wages of the permanent residents. In order to remove the excess amounts, the JTW-data-based outflows from these county equivalents to selected large counties in Washington, Oregon, and California were judgmentally increased. In order to facilitate the extrapolation of the 2001 residence adjustment estimates to subsequent years, these modifications to the eight county equivalents in Alaska were also expressed as intercounty flows and converted to a ratio by dividing by ISA.

A preliminary estimate of net intercounty commuting flows was then made by summing the gross inflows, deducting the sum of the gross outflows and adding the adjustments for cluster counties, adjacent counties, and Alaskan seasonal workers. The net flows for cluster counties receive one further adjustment as discussed next; the net flows for other counties are final.

⁹ The net residence adjustment that is used for this calculation includes only the intercounty flows for wages and salaries.

IRS Adjustment.—The preliminary net intercounty commuting flows for cluster counties were adjusted using county tabulations of wages, salaries, and tips reported on individual income tax return Form 1040 from the Individual Master File of the Internal Revenue Service (IRS). The change from 1999 to 2001 in each county's share of its cluster's total IRS wages was used to extrapolate that county's share of its cluster's residence-adjusted income subject to adjustment (RAISA).¹⁰ The extrapolated shares were then multiplied by the cluster's RAISA to obtain an estimate of county RAISA. The difference between RAISA and ISA is the secondary estimate of the net flow for that county.

The final estimate of the net intercounty commuting flow is a weighted average of the preliminary and secondary estimates. The preliminary estimate is weighted 70% and the secondary estimate 30%.

Procedure for the income of intercounty commuters, 2002-present.—A similar set of procedures was used to estimate the intercounty commuting flows for the years since 2001. The cluster county, adjacent county, and Alaskan seasonal worker adjustment ratios along with the inflow and outflow ratios computed for 2001, were applied to each subsequent year's income subject to adjustment to prepare a preliminary estimate of net intercounty commuting flows. As before, the net flows for cluster counties are only a preliminary estimate; the net flows for other counties are the final estimate. The IRS adjustment was then applied to the preliminary net flows for cluster counties to prepare the secondary estimates. The final estimate of the net intercounty commuting flows for cluster counties is a weighted average of the preliminary and secondary estimates. The preliminary estimate is weighted 60% in 2002 and declines 10 percentage points per year in subsequent years.

Procedure for the income of intercounty commuters, 1990-2000.— The county estimates of residence adjustment for 1990-2000 were developed using journey-to-work (JTW) data on intercounty commuting from both the 1990 and 2000 Census of Population. Estimates for the earlier years were based more heavily on the 1990 JTW data, while the later years were based more on the 2000 JTW data. First, inflow and outflow ratios (the percentage of wages in a county that were earned by residents of other counties) were developed from both the 1990 and 2000 JTW data. The 1990 JTW ratios were based on the Standard Industrial Classification (SIC), while 2001 JTW ratios were developed from the 2000 JTW data at an all-industry level.¹¹

The inflow and outflow ratios for 1990 and 2001 were multiplied by income subject to adjustment estimates for 1990-2000 to derive two sets of estimates of gross commuting flows between counties. These commuting flows were averaged such that the earlier years were weighted more heavily by the 1990 ratios, while the later years were

¹⁰ Residence-adjusted income subject to adjustment (RAISA) equals income subject to adjustment (ISA) plus residence adjustment.

¹¹ JTW ratios for 2001, instead of 2000 ratios, were developed because the 2000 JTW data is based on the North American Industry Classification System (NAICS), while BEA's 2000 income and employment data is based on the Standard Industrial Classification (SIC). The first year that BEA has income and employment estimates available that are based on NAICS sectors is for 2001. For this reason, 2001, instead of 2000, became the benchmark year to apply the new 2000 JTW commuting data.

All-industry JTW ratios for 2001 were developed to apply to BEA income subject to adjustment (ISA) data because BEA estimates of income and employment for 1990-2000 are based on SIC definitions of industries.

weighted more heavily by the 2001 ratios. The commuting flow data was then summed to the county level to determine provisional net flows.¹²

As above, the provisional net flows were modified by the cluster county, adjacent county, and Alaskan seasonal worker adjustments.

The IRS adjustment was then applied to the preliminary net flows for cluster counties. First, ratios of residence-adjusted income subject to adjustment (RAISA) to IRS wages were calculated for 1990 and 2001 for each cluster county. Second, the 1990 and 2001 ratios were used to develop weighted RAISA/IRS ratios for 1990-2000 for each cluster county based on the difference amount between the 1990 and 2001 ratios. The difference amount was weighted throughout the decade to capture the relative growth over time. Third, the weighted ratios for 1990-2000 were multiplied with the actual 1990-2000 IRS wage estimates to create adjusted IRS wages for the cluster counties.

Next, each cluster county's relative share of adjusted IRS wages for 1990-2000 within its BEA county cluster was calculated. This relative share for each cluster county was multiplied with its county cluster total of RAISA to derive adjusted RAISA estimates for each cluster county for 1990-2000.

The final residence adjustment estimates for 1990-2000 for cluster counties were calculated by subtracting total income subject to adjustment (ISA) from the adjusted RAISA estimates.

Border Workers

The residence adjustment for the income earned by border workers accounts for the inflows of the wages and salaries earned by U.S. residents who commute to work in Canada and the outflows of the wages and salaries earned by Canadian and Mexican residents who commute to work in the United States.¹³

The national estimates of inflows and outflows of the wages and salaries of border workers are prepared in the context of the balance of payments accounts.¹⁴ The state

¹² The core counties in large urban areas (i.e. Cook County, Illinois) often have negative net flows. This is a result of the large number of people who work in the core county but reside in nearby counties. These "outflows" from the core county often exceed the "inflows" of income that residents of the core county earn in other counties.

¹³ Foreign workers can be classified in three groups: border workers, migrants, and resident aliens. Border workers live in one country and work in another country. They commute to work on a daily or weekly basis. Migrant workers live and work for part of a year in a foreign country but return to their home country for the rest of the year. Resident aliens live and work in a foreign country permanently (that is, for a period longer than a year). No distinction is made between legal and illegal presence. The estimates of state and county personal income count the income of migrants in the state and county in which they work. This treatment differs from how the balance of payments accounts treats their income—it is treated as an export of compensation. The estimates of state and county income and the balance of payments accounts agree in the treatment of the income of border workers and resident aliens. The income of resident aliens is counted in the income of the state and county in which they work. The income of border workers is excluded—through the residence adjustment in the state and county personal income estimates and by classification as an export in the case of the balance of payment accounts.

¹⁴ For further information on the treatment and measurement of the income of foreign workers in the balance of payment accounts see *The Balance of Payments of the United States: Concepts, Data Sources, and Estimating Procedures* (May 1990), pp. 56 and 58; Christopher L. Bach, "U.S. International Transactions, Revised Estimates for 1974-96," *Survey of Current Business* 77 (July 1997):52-53; Christopher L. Bach, "U.S. International Transactions, Revised Estimates for 1982-98," *Survey* 79 (July

estimates of the inflows and the outflows of the wages and salaries of border workers are allocations of the national control totals. The allocated inflows are added to, and the allocated outflows are subtracted from, the estimates of the net residence adjustment for the income of interstate commuters to obtain the final residence adjustment estimates.

The national estimate of the inflows of the wages and salaries earned by U.S. residents who commute to work in Canada are assigned to Michigan, New York and the New England region on the basis of fragmentary information from the Immigration and Naturalization Service of the Department of Justice. The New England portion is allocated to the border counties of Maine, New Hampshire, and Vermont in proportion to data for employment in the forest product industries.

The national estimates of the outflows of the wages and salaries earned by residents of Mexico and Canada who commute to work in the United States are allocated to states in proportion to data from the Immigration and Naturalization Service.

1999):70; and Christopher L. Bach, "Annual Revision of the U.S. International Accounts, 1992-2002," *Survey* 83 (July 2003):44-45.

IX. PERSONAL CURRENT TAXES

Personal current taxes are payments, net of refunds, made by persons that are not chargeable to business expense.¹ Personal current taxes consist of taxes on income, including realized net capital gains, taxes on personal property, payments for motor vehicle licenses, and several miscellaneous taxes, licenses, and fees. Social security and Medicare taxes are excluded from personal current taxes. They are treated as an employer (or employee or self-employed) contribution for government social insurance. Personal current taxes also exclude taxes on real property, sales taxes, and certain penalty taxes. Taxes on real property paid by persons, except those primarily engaged in the real estate business, are treated as a business expense that is deducted from both gross monetary rental income and gross imputed rental income in the derivation of net rental income. Real property taxes paid by persons primarily engaged in the real estate business are also treated as a business expense and are deducted in the derivation of proprietors' income. Sales taxes are included in personal consumption expenditures. Penalty taxes such as the penalty tax on early IRA withdrawals are treated as a personal current transfer payment to government.

Personal current taxes are measured on a payments basis (that is, when paid) except for withheld taxes (largely taxes on wages and salaries) which are measured on an accrual basis.

The state estimates of personal current taxes are described in four sections: (1) personal current taxes to the Federal Government, (2) personal current taxes except personal property taxes to state governments, (3) personal current taxes except personal property taxes to local governments, and (4) personal property taxes to state and local governments.

Personal Current Taxes Paid to the Federal Government

Personal current taxes to the Federal Government consists of individual income tax payments, including tax payments on the income retained by fiduciaries on behalf of individuals. These payments accounted for 78 percent of total personal current taxes at the national level in 2006 (table H). The national estimates of personal current taxes and refunds are based mainly on data from the Treasury Department's *Monthly Treasury Statement*, supplemented with data on withheld social security taxes from the Social Security Administration and any refundable income tax credits.²

Individual income taxes

These payments are income taxes, net of refunds, paid by individuals. Gross payments are the sum of the income taxes that are withheld, usually by employers, from

¹ In the 2003 benchmark revision, personal nontaxes were renamed personal current transfer payments to government and are now included in personal outlays. Therefore, disposable personal income is now equal to personal income minus personal current taxes. Personal current transfer payments to government consist mainly of donations, fines and forfeitures.

² The refundable portion of an income tax credit, such as the earned income credit and the child tax credit, is treated as a personal current transfer receipt.

wages and salaries, the quarterly payments of estimated taxes on income that is usually not subject to withholding, and final settlements, which are additional tax payments that are made when the tax returns for a year are filed or as a result of audits.

Current methodology.—The state estimates of tax payments and refunds are prepared in three steps. First, estimates of net income tax payments are prepared using tabulations of data reported on individual income tax returns and published in the spring edition of the Internal Revenue Service's (IRS) quarterly *Statistics of Income Bulletin*. Since 1996, the first approximation of net income tax payments is calculated for each state as³

$$NTP = IT - (EITC - XEITC)$$

where:

NTP = Net income tax payments

IT = Income tax, including the alternative minimum tax, less all tax credits except the earned income credit. It excludes Social Security taxes on self-employment as well as certain penalty taxes.

EITC = Earned income credit

XEITC = Excess, or refundable, portion of *EITC*.

The 2006 state estimates of net income tax payments are extrapolations of the 2005 estimates using relative changes in wage and salary disbursements.

Second, estimates of refunds of income tax payments are prepared. For each state, the first approximation of tax refunds, *REFⁿ*, for year *n* is calculated as

$$REF^{\ n} = OPT^{\ n-1} - XEITC^{\ n-1} - RCC^{\ n-1}$$

where:

OPT = Overpayment of taxes

RCC = Refundable Child Credit.⁴

The national estimate is then allocated to states in proportion to the first approximations.

Third, estimates of the gross income taxes are calculated as the sum of net income tax payments and refunds.

³ The first approximation for 2001 was further adjusted to account for the large difference in the income taxes receipts and income tax liabilities. Income tax receipts were \$994.5 billion in 2001 compared to income tax liabilities of \$831.2 billion, a difference of 16.4 percent.

⁴ The child credit was originally authorized by the Taxpayer Relief Act of 1997 (Public Law 105-34) and accelerated and permanently extended in the child tax credit provisions in the Economic Growth and Tax Reconciliation Act of 2001, which sunsets on December 31, 2019. In tax year 2005 there were approximately \$15.0 billion in refundable child credits.

Method for earlier years.—For 1990-95 for each state, the first approximation of net income tax payments was calculated as

$$NTP = TTL - (EITC - XEITC) - SSSE$$

where:

TTL = Total tax liability before the earned income tax credit

SSSE = Social Security taxes on self-employed income.

TTL was used because the item *IT* was not available. Total Tax Liability includes items such as the penalty tax on early IRA withdrawals, which are treated as a personal current transfer payment to government. However, source data were available to adjust *TTL* only for the Social Security taxes on self-employed income.

Current taxes on income retained by fiduciaries.

These are taxes that are paid on the income that is received and retained by fiduciaries on behalf of individuals. Because state-level data for these taxes are unavailable, the national estimates are allocated to states in proportion to the sum of the dividends, taxable capital gains, and taxable interest received by individuals, as published in the *Statistics of Income Bulletin*.

Personal Current Taxes except Personal Property Taxes Paid to State Governments

Personal current taxes (other than personal property taxes) paid by individuals to state governments consist of payments of individual income taxes, motor vehicle and operator license taxes, and other license taxes. These payments accounted for about 20 percent of personal current taxes at the national level in 2006 (table H). The national estimates as well as the state and local estimates are based mainly on data from the Census Bureau's *Quarterly Summary of State and Local Government Tax Revenue*. Quarterly tax estimates are annualized and controlled to Census' *State Government Finances* fiscal year estimates.

The state estimates of individual income taxes net of refunds are based on the data from the Census Bureau's *Quarterly Summary of State and Local Government Tax Revenue*, *State Government Finances*, and *State Government Tax Collections (SGTC)*. Current year estimates are based mainly on quarterly data for the net individual income tax collections of each state government. These data are supplemented by data from individual states.⁵

The national estimate of personal current taxes for motor vehicle and operator licenses is distributed by state mainly by data from Census Bureau's *SGTC* supplemented by Federal Highway Administration data. The motor vehicle license fees paid by

⁵ The *Quarterly Summary of State and Local Tax Revenues* contains preliminary estimates of quarterly taxes for local property taxes and state taxes by type of tax. For some states, these quarterly estimates prove to be inconsistent with the fiscal year estimates reported in *SGTC*.

business are excluded from the *SGTC* data with state-specific ratios determined from Federal Highway Administration data for 1996.

Personal current taxes for other licenses consist of the estimates of the fees that are paid to state government agencies for hunting and fishing licenses for personal, rather than commercial, use and the estimates of the fees for other noncommercial licenses, such as those for the registration of pleasure boats and aircraft. The state estimates of these license taxes are based on data for both the noncommercial and the commercial taxes from *SGTC*.⁶

Personal Current Taxes except Personal Property Taxes Paid to Local Governments

Personal current taxes (other than personal property taxes) paid by persons to local governments consist of individual income taxes, payments for motor vehicle registration and licenses, and payments of miscellaneous taxes. These payments accounted for over 2.0 percent of total personal current taxes at the national level in 2006 (table H). The national estimates are based mainly on data from *State and Local Government Finances*.

State estimates are based on data from the quinquennial *Census of Governments*. Data from the annual *State and Local Government Finances* are used to interpolate between census years and extrapolate from the last census. The annual estimates for local governments in New York and the District of Columbia are based on quarterly income tax data from the State of New York and the Census Bureau's quarterly data for the District of Columbia. Estimates for the remaining localities with local income tax were estimated using *2005 State and Local Government Finances* and judgmental trends.⁷

The estimates of taxes levied by local governments on owners or operators of motor vehicles—including the registration and inspection of the vehicles but excluding personal property taxes—are based on data from *State and Local Government Finances*.⁸

Miscellaneous taxes consist largely of fees for marriage licenses, the registration of pleasure boats, and licenses for pets. Estimates of these fees and taxes are based on data for local government "Other taxes" from *State and Local Government Finances*.

Personal Property Taxes Paid to State and Local Governments

These payments consist of taxes on the tangible and intangible personal property of individuals. These payments accounted for about 0.5 percent of total current taxes at the national level in 2006 (table H). The national estimates of these payments are based on data from *State and Local Government Finances*.

⁶ These data consist of the payments by both individuals and businesses, and the payments by individuals cannot be distinguished from those by businesses. Thus, the state estimates reflect the assumption that the geographic distribution of the payments by businesses and by individuals is the same as the national split.

⁷ The Census Bureau suspended the local government finance survey for FY2002-2003 and produced only national estimates of local finances. Therefore, there is no state level local Census data for FY2003.

⁸ See footnote 7.

The state estimates of personal property taxes paid to state and local governments are combined because the data to allocate these payments to each level of government are not available. The national estimate for state and local personal property taxes was distributed to the states using unpublished IRS estimates for personal property taxes, claimed by individuals who itemize deductions on their Federal individual income tax returns and selected state sources.

Table H.--Personal Income, Disposable Personal Income, and Personal Current Taxes by Component for the United States, 2006

	Millions of dollars	Percent of personal current taxes
Personal income..	10,966,808	.
Less: Personal current taxes..	1,352,961	.
Equals: Disposable personal income..	9,613,847	.
Personal current taxes..	1,352,961	100.00
Personal current taxes to the Federal government..	1,051,811	77.74
Income taxes (net of refunds)..	1,051,811	77.74
Income taxes (gross)..	1,247,941	92.24
Less: Refunds..	196,130	14.50
Personal current taxes to State governments..	267,266	19.75
Income taxes..	251,861	18.62
Motor vehicle licenses..	13,938	1.03
Other taxes /1/..	1,467	0.11
Personal current taxes to local governments..	27,401	2.03
Income taxes..	23,227	1.72
Motor vehicle licenses..	739	0.05
Other taxes..	3,435	0.25
State and local personal property taxes..	6,483	0.48

Footnotes

1. Consists largely of hunting and fishing taxes and other license taxes.

NOTE.-- Detail may not add to totals due to rounding.

X. QUARTERLY ESTIMATES OF STATE PERSONAL INCOME

Quarterly estimates of state personal income begin with the first quarter of 1948. They are presented seasonally adjusted at annual rates. After seasonal adjustment, cyclical and other short-term changes in the states' economies stand out more clearly. Annual rates show the value that would be registered if the seasonally adjusted rate of activity measured for a quarter were maintained for a full year. The quarterly estimates are presented at annual rates so that the quarterly and the annual estimates may easily be compared.

Revision schedule for the quarterly estimates

The quarterly personal income estimates are revised on a regular schedule to incorporate source data that are more complete, more detailed, or otherwise more appropriate than the data that were available when the estimates were initially prepared and to incorporate updated seasonal factors. They are also revised to keep them consistent with revisions to personal income estimates in the National Income and Product Accounts (NIPA), to which they are controlled, and to annual state estimates, which incorporate more detailed and more reliable source data than the quarterly estimates.¹

The first, or 'preliminary,' estimates for a quarter are prepared 3 months after the end of the quarter. The 'second' estimates for that quarter are prepared 3 months later. The estimates for that quarter continue to be revised every March and September in conjunction with the regularly scheduled revisions of the annual estimates (see table I).²

The estimates for the quarters of years for which annual estimates have been prepared are distributed from the annual estimates; the estimates for quarters after the last annual estimate are extrapolated from that estimate.³

¹ The quarterly state estimates of wages and salaries are controlled to—that is they are made to sum to—the NIPA estimates of wages and salaries after adjusting for coverage differences, such as the exclusion of wages and salaries of U.S. citizens stationed abroad. See "Differences in geographic scope and in classifications between the NIPA and the state and county estimates" in Chapter I Introduction.

² For additional information, see Robert L. Brown, Bruce T. Grimm, and Marian B. Sacks., "The Reliability of the State Personal Income Estimates," *Survey of Current Business* 70 (December 2003): 52-66.

³ Two *distribution* techniques are used: One uses seasonally adjusted monthly or quarterly source data as the indicator series, and the other uses an indicator series generated from the relationships between the annual estimates for each state and the Nation. For the latter technique, the indicator series is a weighted average of the "fitted values" from bivariate regressions of the annual state estimates on the corresponding national estimate and a simple proportionate share of the national estimate. Weights are based on the coefficient of determination (R^2) from the regression:

$$X_S^q = R^2(\hat{X}_S^q) + (1 - R^2)\left(\frac{Y_S^t}{Y_N^t} Y_N^q\right)$$

The quarterly estimates are prepared in three steps. First, quarterly indicator series are prepared for the components for which state-level quarterly or monthly source data are available. Second, initial approximations of the quarterly estimates are prepared by distributing and extrapolating the annual estimates with the indicator series or according to the trend in the annual estimates (see footnote 4). Third, the initial approximations are used to allocate proportionately national control totals to states. Dual allocation is used to distribute annual estimates to quarters.⁴

After the second quarterly estimates are prepared, little new state-level quarterly source data become available. Therefore, the initial approximations of the revised quarterly estimates incorporate quarterly source data that are generally the same as the data used for the second quarterly estimates. The revised estimates differ from the second estimates mainly in their adjustment for consistency with revised national quarterly estimates and state annual estimates and in their adjustment for revised seasonal factors.

Control totals for the quarterly estimates

Quarterly national control totals for most components of state personal income are mainly derived from estimates of the corresponding component in the National Income and Product Accounts.⁵ Two methods are used to prepare the national controls:

For years in which detailed annual state estimates have been made, the quarterly national control totals for a component are derived from the distribution of annual sum-of-the-states estimates. Quarterly NIPA estimates are used as the indicator series for the distribution. For quarters after the last annual state estimate, national control totals for most components of personal income are extrapolated using the percent change in the quarterly NIPA estimates.

Exceptions to these general procedures are made in the case of wage and salary disbursements and farm proprietors' income:

where X_S^q is the state indicator series, \hat{X}_S^q is the "fitted value" for state S in quarter q of year t, Y_N^q is the national estimate for quarter q of year t, Y_S^t is the state estimate for year t, and Y_N^t is the national estimate for year t. \hat{X}_S^q comes from solving, with quarterly-frequency data, a set of annual-frequency regressions estimated using rolling 7-year sample periods:

$$\hat{X}_S^q = \hat{a}^t + \hat{b}^t Y_N^q$$

where \hat{a}^t, \hat{b}^t are the estimated slope and intercept from the regression with the sample period centered on year t (for the latest three years, the seven most recent observations are used).

Two *extrapolation* techniques are used: One uses the seasonally adjusted monthly or quarterly source data as the indicator series, and the other uses a slightly modified version of the weighted average formula:

$$X_S^q = R^2 (\hat{X}_S^q) + (1 - R^2) \left(\frac{Y_S^{t-1}}{Y_N^{t-1}} Y_N^q \right)$$

Notice that the ratio used in the second term refers to the previous year (t-1) whereas q refers to the current year (t) and that the "fitted value," \hat{X}_S^q , uses estimates $\hat{a}^{t-1}, \hat{b}^{t-1}$.

⁴ See "Dual allocation" in Chapter XII Technical Notes.

⁵ There is no national control total for the residence adjustment.

Control totals for the quarterly estimates of wages and salaries.—In March, source data for wages and salaries that were not available when the NIPA estimates were prepared are sometimes used in the preparation of the control totals for the state estimates of wages and salaries.⁶ The annual NIPA estimates of wage and salary disbursements for the most recent year are compared to an alternative annual estimate. The alternative is based primarily on BLS tabulations of wages and salaries of employees covered by unemployment insurance for the first three quarters and on a BEA estimate for the fourth quarter (based on CES data as described below). If the two series for the sum of all industries do not differ substantially, the NIPA estimates of wage and salary disbursements are used to prepare the control totals for the state quarterly estimates. Otherwise, the national control totals are derived for each industry using the alternative annual estimates.

Control totals for the quarterly estimates of farm proprietors' income.— For the preliminary and second state quarterly estimates, an annual estimate of farm proprietors' income for the current year is forecast using U.S. farm income forecasts from the U.S. Department of Agriculture (USDA). This annual control is then distributed using the average of quarterly NIPA estimates, if available, and assuming that income is constant for the other quarters.

Sources and methods for quarterly personal income by component

Quarterly state-level source data are available to prepare preliminary and second estimates of three personal income components: nonfarm wage and salary disbursements, farm proprietors' income, and state unemployment insurance (UI) benefits. The estimates of wage and salary disbursements are then used to estimate four other components of personal income: supplements to wages and salaries, construction proprietors' income, employee and self-employed contributions for government social insurance, and the residence adjustment. Quarterly estimates of the remaining five components of personal income: dividends, interest, and rent; personal current transfer receipts excluding state UI benefits; farm wages; pay of military reserves; and nonfarm proprietors' income excluding the construction industry are extrapolations of annual trends in state shares of the nation.⁷

Wage and salary disbursements.⁸—The preliminary quarterly estimates of wages and salaries for most NAICS sectors are extrapolated from estimates for the previous quarter by the percent change in employment using data from the Current Employment Statistics (CES) survey of the Bureau of Labor Statistics (BLS) multiplied

⁶ The difference in the availability of the data for the estimates of wages and salaries is especially important because the revision to the national control totals of wages and salaries that are used in the preparation of the state estimates of wages and salaries in March sometimes foreshadows the direction and size of the revision to the NIPA estimates in June.

⁷ These five components account for 39 percent of personal income for the nation.

⁸ Wage and salary disbursements to private employees are estimated for all NAICS sectors. In addition, separate estimates are made for durable and nondurable manufacturing and for rail transportation and all other transportation and warehousing. Wage and salary disbursements to public employees are estimated for civilian employees of the federal government, active duty military, military reserves, and state and local government. All of these categories will be referred to as industries or NAICS sectors.

by a scaling factor.⁹ The CES monthly employment data by NAICS sector are averaged to quarters and seasonally adjusted by BEA.

The scaling factors are the estimated coefficients from a set of regressions (one for each state) of state-specific wage growth computed from the most recent or latest set of BEA estimates on a set of preliminary state-specific wage growth rates defined as the unscaled state-specific percent change in CES employment. State-specific percent change in employment equals total percent change less the national percent change.¹⁰

The second quarterly estimates for these industries incorporate state payroll data from the Quarterly Census of Employment and Wages (QCEW) that are compiled in the administration of the state unemployment insurance system. The QCEW is a nearly complete census of wages and includes exercised stock options and other lump-sum payments that are not captured in the CES earnings data. The wage data are summed by NAICS sector and seasonally adjusted by BEA.

The wage and salary disbursements of farms, for both the preliminary and the second quarterly estimates, are based on trend extrapolation from the annual estimates. The preliminary estimate for the forestry, fishing, related activities and other industry is also based on trend extrapolation, but the second estimate is based on QCEW data.

Quarterly national payrolls from the Department of Transportation and annual State employment from the Railroad Retirement Board are used to prepare both the preliminary and second estimates of wage and salary disbursements in the railroad industry.

The number of personnel and average pay by service from the Department of Defense and payroll data from the Coast Guard are used to prepare both the preliminary and second estimates of wage and salary disbursements of active duty military personnel. The wages and salaries of military reserves are estimated by trend extrapolation.

Wage and salary disbursements to civilian employees of the Federal government, for both the preliminary and the second quarterly estimates, are based on CES employment data.

Supplements to wages and salaries.—Separate estimates are prepared of the two components of supplements to wages and salaries: (1) employer contributions for employee pension and insurance funds and (2) employer contributions for government social insurance. A national estimate of each of these components is available from the NIPA to prepare national quarterly control totals as described above. The NIPA, however, does not have quarterly estimates by industry. Annual state estimates by industry are therefore distributed to quarters as follows. Quarterly wage and salary disbursements for a given industry in a given state are scaled proportionately to sum to that state and industry's annual employer contributions for employee pension and

⁹ The CES survey collects monthly data (on form BLS 790) on employment. This survey of about 400,000 nonagricultural establishments across the United States is conducted by the state employment security agencies and coordinated by the Bureau of Labor Statistics. The data are released about 3 weeks after the end of the month. The data for average hourly earnings exclude bonus payments and several other forms of wages and salaries. The Survey is conducted for the pay period that includes the 12th of each month and is benchmarked annually to the Quarterly Census of Employment and Wages (QCEW), also from BLS.

¹⁰ The regressions are estimated at the all-industry level. The same scaling factor is used for each industry within a state. See Jeremy J. Nalewaik, "Using efficiency tests to reduce revisions in panel data: The case of wage and salary estimates for U.S. states," BEA Working Paper WP2004-09, November 2004. This paper is available on the BEA website <http://www.bea.gov/bea/regional/articles.cfm?section=papers>.

insurance funds (or employer contributions for government social insurance). These scaled wages are the initial approximations of quarterly employer contributions by state and industry. The initial approximations for a given quarter and given state are then summed over all industries. Dual allocation is used to reconcile these all-industry initial approximations with annual state control totals and quarterly national control totals of employer contributions. The result is a set of quarterly control totals for each state. A second dual allocation is then used to reconcile the quarterly initial approximations by industry for a given state with the state's quarterly and annual control totals by industry.

Quarterly employer contributions by state and industry are extrapolated using the percent change in wage and salary disbursements for that state and industry. The resulting initial approximations are then adjusted proportionately so that the sum over all states and industries equals the national control totals for employer contributions.

Farm proprietors' income.—Quarterly estimates of three components of farm proprietors' income are prepared separately: farm subsidies; farm proprietors' income excluding subsidies; and special adjustments for unusual occurrences, such as natural disasters. The quarterly state estimates of farm subsidies are based on annual trends. Annual estimates of farm proprietors' income excluding subsidies are distributed to quarters and extrapolated using monthly USDA data on cash receipts from the sale of farm products (summed to quarters) as the indicator series. Quarterly estimates of the special adjustments are based on state-level information from the USDA.

Nonfarm proprietors' income.—Annual estimates of construction proprietors' income is distributed to quarters and extrapolated using construction wage and salary disbursements as the quarterly indicator. National estimates of the rest of nonfarm proprietors' income is allocated by industry to states using shares of the nation from the annual state estimates. The most recent annual state shares are used to extrapolate to quarters for which there is no annual estimate.

Personal current transfer receipts.—The annual estimates of state (UI) benefits are distributed to quarters and extrapolated using monthly state UI benefits data from the Employment and Training Administration of the Department of Labor as the quarterly indicator after the data have been summed to quarters and seasonally adjusted by BEA. The quarterly estimates for all other personal current transfer receipts are based on trend distribution and extrapolation of the annual estimates.

Employee and self-employed contributions for government social insurance.—Annual estimates of employee and self-employed contributions for government social insurance are distributed to quarters and extrapolated using the estimates of wage and salary disbursements (discussed above) summed over all industries as the quarterly indicator.

Dividends, interest, and rent.—Both the preliminary and the second quarterly estimates of property income—personal dividend income, personal interest income, and rental income of persons—are derived from the trends in the annual state estimates.

Residence adjustment.—Three components of personal income—wage and salary disbursements, employer contributions for employee pension and insurance funds, and employee and self-employed contributions for social insurance—are subject to adjustment for residence. After preparing estimates of these components, as described above, they are combined into an aggregate called income subject to adjustment (employer contributions are added to wages and employee and self-employed

contributions are subtracted). The income subject to adjustment of each state is multiplied by a set of gross outflow ratios representing the proportion of the income subject adjustment in state *i* that is earned by residents of state *j*.¹¹ The outflows from state *i* to all other states are summed to yield gross outflows from *i*. The inflows to state *i* from all other states are summed to yield gross inflows to state *i*. Lastly, the residence adjustment for state *i* is computed as gross inflows to state *i* less gross outflows from that state.

¹¹ See Chapter VIII Residence Adjustment.

Table I--Preparation and Revision Schedule for Quarterly State Personal Income

--Estimates prepared in Year n + 1--

	Preliminary	Second	Revised
December	3rd Quarter Year n	2nd Quarter Year n	
March	4th Quarter Year n	3rd Quarter Year n	All Quarters Years n-3 through n-1
June	1st Quarter Year n+1	4th Quarter Year n	
September	2nd Quarter Year n+1	1st Quarter Year n+1	All Quarters Years n-2 through n

XI. EMPLOYMENT

Introduction

BEA's estimates of state employment consist of the number of wage and salary jobs, sole proprietorships, and general partners. The employment estimates are available annually beginning with 1969.

The state employment estimates are a complement to the place-of-work earnings estimates. Earnings are estimated on both a place-of-work basis, by North American Industry Classification System (NAICS) three-digit subsector beginning in 1990 and by Standard Industrial Classification (SIC) two-digit industry for 1969 to 2001, and on a place-of-residence basis for the sum of all industries. The employment estimates are designed to conform conceptually and statistically with the place-of-work earnings estimates; the same source data—generally from administrative records—are used for both the earnings and employment estimates whenever possible. The earnings estimates reflect the scale and industrial structure of a state's economy rather than the income of the state's residents. Therefore, the employment estimates measure the number of jobs in a state, instead of the number of workers who perform the jobs. The characteristics of the state employment estimates follow from this concept and from the characteristics and limitations of the available source data.

The state employment estimates are not fully consistent with the national estimates that are normally published in the August issue of the *Survey of Current Business*.¹ The state estimates are prepared only on a full-time and part-time basis, while the national estimates are prepared on both a full-time and part-time basis and on a full-time equivalent basis. The state estimates exclude overseas jobs—mainly Federal civilian and military employment of U.S. citizens abroad—and border worker adjustments—the addition of U.S. persons commuting to work abroad and subtraction of foreign commuters and seasonal workers in the United States—that are included in the national estimates. Finally, the state estimates include all sole proprietorships and general partners—approximating a full-time and part-time basis, whereas the national estimates of the number of proprietors count only persons whose principal occupation is their self-employment—approximating a full-time equivalent basis of measurement.

Employment estimates measure the number of jobs.—Employment can be measured either as a count of workers or as a count of jobs. In the former case, an employed worker is counted only once; in the latter case, all jobs held by the worker are counted. The state employment estimates are a count of the number of jobs, so that, as with the earnings estimates, a worker's activity in each industry and location of employment is reflected in the measure.

Treatment of part-time jobs.—State employment is estimated on a full-time and part-time basis because of the limitations of the available source data. State level data

¹ See Eugene P. Seskin and Shelly Smith, "Annual Revision of the National Income and Product Accounts," *Survey of Current Business* 87 (August 2007): 6-29.

that separate part-time jobs and wages from full-time jobs and wages, which are needed to prepare full-time equivalent measures, are not available. An average earnings measure can be calculated from the BEA state employment and earnings estimates. Average earnings reflects the extent of part-time employment in the given state and industry, as well as more basic factors such as hourly wage rates.

Geography.—State employment estimates, like wage and salary estimates, are measured by place-of-work—the job location—instead of by place of residence—where the worker lives. Thus the estimates are more representative of the state’s industrial base than of the activities of the residents of the state. For nonfarm proprietors’ employment, the only available annual data are classified by tax filing address, which is usually the filer’s residence. BEA assumes that place-of-work and place-of-residence are identical for nonfarm proprietors.

Temporal dimension.—The estimates of wage and salary employment are annual averages of twelve monthly observations for the year. This gives a job which lasts only part of the year a lesser weight than a year-round job. In contrast, the estimates of nonfarm proprietors’ employment are counts of the number of proprietors active during any portion of the year. This is because the available source data do not indicate the portion of the year that the businesses are in operation.

Wage and Salary Employment

Wage and salary employment is a measure of the average annual number of full-time and part-time jobs in each state by place of work. All jobs for which wages and salaries are paid are counted. Although compensation paid to jurors, expert legal witnesses, prisoners, and justices of the peace (for marriage fees), is counted in wage and salary disbursements, these activities are not counted as jobs in wage and salary employment. Corporate directorships are counted as self-employment.

The following description of the sources and methods used in estimating wage and salary employment is divided into two sections: Employment in industries covered by unemployment insurance (UI) programs, and employment in industries not covered by UI.²

Employment in industries covered by the UI programs

The estimates of about 94 percent of wage and salary employment are derived from tabulations of quarterly unemployment insurance (UI) contribution reports (Form ES-202) filed with state employment security agencies. Employers subject to UI laws usually submit reports for each operating establishment, classified by county and industry. However, in some cases, an employer may group very small establishments

² The relevant UI programs are state UI, which covers most private sector and state and local government employment, and Unemployment Compensation for Federal Employees. The agency administering the UI program for railroad employees compiles data differently from the state UI program, and there is no employment reporting under the UI program for persons leaving the military services; accordingly, railroads and the military services are treated as noncovered industries in the estimation of state employment.

into a single “statewide” report without county designation. Each quarter, the state employment security agencies submit the tabulations to the Bureau of Labor Statistics (BLS), which provides the data to BEA. The tabulated data (called the Quarterly Census of Employment and Wages, QCEW) consist of monthly employment and quarterly wages by county by NAICS six-digit detail (beginning in 2001) or by SIC four-digit detail (through 2001).³

BEA adds several million administrative records received from the states and the District of Columbia to its database annually. The records are checked for major errors by several computerized edit routines. One edit routine analyzes the current quarter county data for invalid industry codes, duplicate records, and records that contain no data. Another edit routine calculates expected county-level average employment and average wages on a quarterly basis, based on percentage changes for that quarter in the previous two years. If the difference between the actual numbers and the estimated numbers exceeds established limits, the record is identified for further review. Anomalies that remain unreconciled after reviewing comments and other supporting data are referred back to BLS for further investigation.

The basic procedure for preparing the state estimates of wage and salary employment for each UI-covered industry is to average the 12 monthly QCEW employment observations and to allocate the national total in proportion to the averaged series. However, QCEW employment does not precisely meet the statistical and conceptual requirements for BEA’s employment estimates. Consequently, the data must be adjusted to meet the requirements more closely. The necessary adjustments affect both the industrial and geographic patterns of state employment.

Adjustment for industry nonclassification.—The industry detail of the QCEW tabulations regularly shows minor amounts of employment that have not been assigned to an industry. The industrial classification scheme used by BEA for its estimates does not allow for a not-elsewhere-classified category. Therefore, for each state, the amount of QCEW employment in this category is distributed among the covered industries in proportion to the industry-classified employment. The amounts involved in this adjustment are quite small—about 0.2 percent of total employment nationally. No error is introduced into the total employment estimate for a state because the adjustment involves only an apportionment within a state of the amount reported for that state.

Misreporting adjustment.—An adjustment is made to the QCEW data for misreporting of private sector employment. At the national level, the estimate for each industry is made in two parts: One for the underreporting of employment on UI contribution returns filed by employers and one for the employment of employers that fail to file UI contribution returns. The source data necessary to replicate this methodology below the national level are not available. Instead, the national adjustment for each industry is allocated to the state in proportion to QCEW employment.

³ The monthly employment observations represent the number of employees receiving wages for the pay periods that include the 12th day of the month. The QCEW tabulations reflect the 1972 SIC for years up to 1987 and the 1987 SIC for 1988 through 2000. Beginning in 2001, QCEW tabulations reflect 2002 NAICS.

Adjustments for noncovered segments of UI-covered industries.—BEA makes adjustments to add the employment of several noncovered segments. If relevant source data are not available, the national adjustments are allocated to states in proportion to the QCEW employment of the affected industry or industries. Examples of BEA adjustments for noncovered segments of UI-covered industries are as follows:

- Some insurance solicitors and real estate agents are omitted from UI coverage because they are paid solely by commissions. The national estimates for these two segments are allocated to states in proportion to QCEW employment in each industry.
- Establishments of railroad carrier affiliates and railway labor organizations are covered by the Railroad Unemployment Insurance system rather than by state UI. The state adjustments are based on data provided by the Railroad Retirement Board.
- Corporate officers in Washington State are omitted from UI coverage. The Washington Employment Security Department provides BEA with estimates of the number of corporate officers by NAICS six digit by county.
- Some nonprofit organizations are exempt from UI coverage because they have fewer than four employees. The national estimates are allocated to states in proportion to the QCEW employment of each industry.
- Students and the spouses of students who are employed by the institutions of higher education in which the students are enrolled are generally omitted from UI coverage. State estimates of the noncovered student employment of private, state government, and local government institutions are based on the differences between the relevant QCEW employment data and alternative employment data that include student employment. The alternative data are reported annually by the Census Bureau in *County Business Patterns* for the private institutions and on the Census Bureau's State and Local Government Employment and Payroll web site.
- UI coverage of local government employees excludes elected officials and members of the judiciary. The national estimates are allocated to states in proportion to QCEW state and local government employment.

Geographic adjustments for government employment.—In several cases, BEA has determined that the QCEW reports attribute government employment to the wrong states; the best available information is used to remedy these deficiencies. Examples of how BEA adjusts the government employment are as follows:

- The QCEW tabulations of Federal civilian employment assign all of the employment of the U.S. Congress and its staff to the District of Columbia, although members of Congress employ some of their staff in home district offices. BEA assumes that this home district employment accounts for 25 percent of total congressional employment and reassigns that portion of the total to the states in proportion to their congressional representation.

Employment not covered by the UI programs

Railroads.—The railroad industry is covered by its own unemployment insurance program, which is administered by the Railroad Retirement Board (RRB), rather than by the state UI system. Data suitable for estimating state employment of railroads are available from the RRB only on a place-of-residence basis.⁴ Because BEA's employment estimates are designed to conform conceptually and statistically to the place-of-work earnings estimates, the RRB data are adjusted to a place-of-work basis by using journey-to-work data from the 2000 Census of Population. The national totals for all railroad companies combined are allocated to states in proportion to the adjusted RRB series.

Private households.—For this largely noncovered industry—mainly domestic servants—the national employment estimates are allocated to states in proportion to place-of-work private household employment from the Census journey-to-work data.

Farm labor contractors.—This industry is classified in support activities for agriculture and forestry rather than in farms. The UI coverage in Arizona and California is complete enough to permit the use of the QCEW data for state estimates, but most state UI programs only partially cover this industry. For these states, the state estimates of farm labor contractor employment are based on the geographic distribution of expenditures for contract labor reported in the Census of Agriculture.

Private elementary and secondary schools.—Private elementary and secondary schools are treated as a noncovered industry because religiously affiliated elementary and secondary schools, which account for most of the employment in this industry, remain largely outside the scope of the UI program. The state estimates of private elementary and secondary school employment are primarily based on the employment reported annually by the Census Bureau's *County Business Patterns* (CBP). The CBP data are tabulated from the administrative records of the social security program—Old-Age, Survivors, Disability, and Hospital Insurance—and are more complete for elementary and secondary schools than the data prepared under the UI program. The social security program, although exempting nonprofit religious organizations—including schools—from mandatory coverage, has elective coverage provisions that have resulted in broad participation among religiously affiliated elementary and secondary schools.

In about half of the states, the UI coverage of elementary and secondary schools is complete enough to permit the use of QCEW data as the basis for the state employment estimates. For the other states, the state estimates are based on the best available series of private elementary and secondary school employment chosen from data published by state departments of education, data from the U.S. Department of Education's 2004 survey of private elementary and secondary schools, or data from CBP.

Religious organizations.—The Federal Unemployment Tax Act permits states to exclude religious organizations from mandatory UI coverage. Although most state UI laws do have some provisions for elective coverage, less than 10 percent of the national total employment of religious organizations obtain coverage. Therefore, the state

⁴ RRB provides these data to BEA summed to ZIP-code area totals; BEA assigns these data to counties.

estimates of the employment of religious organizations are based on CBP data. The CBP data are adjusted proportionately to sum to the BEA national employment totals for this industry.

Military.—State military employment is measured as the number of military personnel assigned to active duty units that are stationed in the state plus the number of military reserve unit members. The estimates of active duty employment for the Army, Air Force, Navy, Marine Corps, and Coast Guard are based on the annual averages of 12 monthly observations, for a given year, from reports received from each branch of service. Navy personnel assigned to ships and other mobile units and Marines assigned to Fleet Marine Force units are measured according to the units' home ports rather than their actual locations as of the reporting date.

The measure of employment of the military Reserves—including the National Guard—is confined to members of reserve units that meet regularly for training. The state estimates are based on fiscal year—ending September 30—tabulations of military reserve strength provided by the Army, Air Force, Navy, Marine Corps, and Coast Guard.⁵

Other.—U.S. residents employed in the United States by international organizations and by foreign embassies and consulates are classified in an “other” industry. “Other” differs from “rest-of-the-world”—the corresponding category in the national employment estimates—in that “rest-of-the-world” also includes the net flow of international border workers—i.e., U.S. residents working across the border in Canada and foreign residents working in the United States. U.S. residents working in Canada and Mexico are not reflected in the county employment estimates.

State estimates of “other” employment are made by allocating the national totals for all years to states in proportion to estimated 1968 administrative expenses of international and foreign organizations operating in the United States. The administrative expenses series was prepared by the BEA.

Alternative measures of wage and salary employment

Current Employment Statistics. The Bureau of Labor Statistics (BLS)—in cooperation with state employment security agencies—prepares the Current Employment Statistics (CES)—a set of state and local area wage and salary employment estimates—that is similar to the BEA estimates. Both are job-count measures of full-time and part-time employment on a place-of-work basis. The CES estimates are based on a monthly sample survey—using Form BLS-790—of nonagricultural establishments with employees. The sample for UI-covered industries is drawn from all establishments reported in employers' UI contributions returns, and the monthly sample-based series for covered industries is benchmarked annually to QCEW employment; thus both the BEA and the CES series are grounded on the same set of administrative records data. A detailed description of the sampling and estimating methodologies for the CES estimates is presented in the “Explanatory Notes” of BLS's monthly *Employment and Earnings*.

⁵ The payroll tabulations include only regularly scheduled training duty; National Guard service during natural disasters, riots, and the like is not included.

The CES estimates are more timely than the BEA estimates; preliminary BLS estimates are released with a one-month lag. By contrast, the BEA estimates are prepared only as annual averages and are released at the state level nine months after the reference year.

The BEA series is somewhat broader in its coverage than the CES series. The BEA series includes industries—agriculture, forestry, fishing, and hunting; private households; the military; and “other”—that CES excludes.⁶ A misreporting adjustment is unique to the BEA series. However, the CES series includes, within the scope of its coverage, all the noncovered segments of UI-covered industries for which BEA makes explicit adjustments.

The BEA estimates of wage and salary employment are accompanied by a self-employment series that is consistent with the wage and salary employment series as much as the available source data allow. No self-employment series is available in conjunction with the CES employment estimates.

At the national and state levels, the BEA estimates of wage and salary employment are available at the NAICS three-digit subsector beginning with 1990 and by SIC two-digit level for 1969-2001. By contrast, the CES estimates for the nation (in *Employment and Earnings*) are available in more detail: At the state level the CES estimates are presented only at the NAICS sector or SIC division (“one-digit”) level; however, more detailed estimates are available from some of the state employment security agencies.

County Business Patterns. Another measure of state employment by place of work is the employment data published in the Census Bureau’s *County Business Patterns* (CBP). It differs in source data and coverage from BEA’s employment and QCEW employment.

The CBP data are derived from Census Bureau business establishment surveys and Federal administrative records.

The coverage of the CBP data differs from that of the QCEW data primarily because the CBP data exclude most government employees, while the QCEW data cover civilian government employees.⁷ CBP data also exclude several private industries covered at least in part by the QCEW: crop and animal production; rail transportation; insurance and employee benefit funds; trusts, estates, and agency accounts; and private households. However, the CBP data cover the employees of educational institutions, membership organizations, and small nonprofit organizations in other industries more completely than the QCEW data.⁸ In addition, the CBP data reports employment for the

⁶ More precisely, the CES excludes all of NAICS sector 11 (agriculture, forestry, fishing, and hunting) except logging (1133).

⁷ The CBP data cover only those government employees who work in government hospitals, federally chartered savings institutions and credit unions, retail liquor stores, wholesale liquor establishments and university publishers. QCEW data in most states exclude state and local elected officials, members of the judiciary, state national and air national guardsmen, temporary emergency employees, and those in policy and advisory positions.

⁸ Some religious elementary and secondary schools are not covered by QCEW because of a 1981 Supreme Court decision stating “schools operated and supported by churches and not separately incorporated [are] held exempt from unemployment compensation taxes.” College students (and their spouses) employed by the school in which they are enrolled and student nurses and interns employed by hospitals as part of their

month of March only; the QCEW employment data are quarterly and annual averages of monthly data.

Beginning in 2001, QCEW includes employees of Indian tribal governments and enterprises in local government. These employees were previously included in the relevant private industries.⁹ In the CBP data, these employees are still classified in private industries.

Nonfarm Self-Employment

The BEA state estimates of nonfarm self-employment consist of the number of sole proprietorships and the number of individual general partners.¹⁰ The nonfarm self-employment estimates resemble the wage and salary employment estimates in that both measure jobs—as opposed to workers—on a full-time and part-time basis. However, because of limitations in source data, two important measurement differences exist between the two sets of estimates. First, the self-employment estimates are largely on a place-of-residence basis rather than on the preferred place-of-work basis. Second, the self-employment estimates reflect the total number of sole proprietorships or partners active at any time during the year—as opposed to the annual average measure used for wage and salary employment.

National totals

For each NAICS three-digit subsector (or SIC two-digit industry in years prior to 2001), the national total of nonfarm self-employment equals the sum of the number of sole proprietorships and the number of individual general partners.

Sole proprietorships.—Income from a nonfarm sole proprietorship is reported on Schedule C—*Profit, or Loss, from Business or Profession*—of Internal Revenue Service (IRS) Form 1040—*U.S. Individual Income Tax Return*. A schedule is filed for each business operated by the filer and the industry of the proprietorship reported. In addition, corporate directors—who are not officers in the corporation—use Schedule C to report their director’s fees. BEA uses the number of Schedule Cs filed (including those filed by corporate directors) as its measure of the number of sole proprietorships. The national estimate of the number of nonfarm sole proprietorships in each NAICS three-digit subsector is based on a sample of these schedules.¹¹ In the absence of IRS data for the most recent years, the number of proprietorships is extrapolated forward using prior years’ growth rates.

Partners.—A preliminary national estimate of the number of nonfarm partners by NAICS three-digit subsector is based on a sample of returns of IRS Form 1065—*U.S.*

training are also excluded from QCEW. While QCEW coverage varies, half of the states only include nonprofit organizations with four or more employees during twenty weeks in a calendar year.

⁹ For example, employees of casinos owned by tribal councils were included in the North American Industry Classification System subsector “Amusement, Gambling, and Recreation Industries.”

¹⁰ Partners can be individuals, corporations, partnerships, estates, trusts, limited liability companies, tax-exempt organizations, or individual retirement arrangements. They can be either general or limited.

¹¹ When a husband and wife jointly operate a nonfarm sole proprietorship (e.g. a restaurant) and file a joint income tax return, only one will be counted as a proprietor.

Partnership Return of Income. One Form 1065 is filed by each business partnership. The number of partners—including corporations and other legal entities as well as individuals—and the industry of the business are indicated on the form.

The preliminary estimate of the number of partners by industry is adjusted by using relationships from two special tabulations of partnership tax data provided by the IRS. The first tabulation, available annually, is of the number of limited partners—generally at the NAICS sector level. The second tabulation, available for 1986 only, is the number of partners by SIC division by type—including individuals, corporations, other partnerships acting as partners, and fiduciaries—in partnerships with 10 or fewer partners.

The adjustment of the preliminary estimate is at the NAICS sector level. The preliminary estimates of the number of partners are summed to the appropriate industry totals. The number of limited partners from the first IRS special tabulation is subtracted from the preliminary estimate to yield the number of general partners. Next, the 1986 ratio of the number of individual partners to the total number of partners is calculated for each industry from the second IRS special tabulation. This ratio is multiplied by the number of general partners in the industry in each year to yield the number of individual general partners. Finally, the NAICS sector totals of the number of individual general partners are allocated to the three-digit subsectors in proportion to the number of partnerships to yield the final estimate of partners.

In the absence of IRS data for the most recent years, the number of partners is extrapolated forward using prior years' growth rates.

State estimates

Preliminary state estimates of self-employment are also based on tabulations of the number of nonfarm sole proprietorships filing IRS Schedule C, Form 1040 and on the number of nonfarm general partners as reported on IRS Schedule B, Form 1065. However, the entire population of returns is used (rather than just the sample used for the national estimates) and slightly different data from the forms are available for states. Specifically, data are available on the number of partners in each partnership and the type of partnership. Up to four partners in each partnership are counted except limited partnerships which are assumed to have a single general partner.¹² Tabulations are prepared by NAICS three-digit subsector. The national estimates of sole proprietorships and partners are combined to form an estimate of total self-employment and allocated to states in proportion to the preliminary state estimate of total self-employment. In the absence of IRS data for the most recent years, the state allocators for prior years are used.

Farm Self-Employment

Farm self-employment is defined as the number of non-corporate farm operators, consisting of sole proprietors and partners. A farm is defined as an establishment that produces, or normally would be expected to produce, at least \$1,000 worth of farm products—crops and livestock—in a typical year. Because of the low cutoff point for this definition, the farm self-employment estimates are effectively on a full-time and part-

¹² Up to 500 partners are counted in law and accounting firms.

time basis. The estimates are consistent with the job-count basis of the estimates of wage and salary employment because farm proprietors are counted without regard to any other employment. The distinction between place-of-work and place-of-residence is not significant because most farmers live on or near their land. Similarly, because of the annual production cycle of most farming, the distinctions between the point-in-time, the average annual, and the any-activity temporal concepts of employment measurement are not significant.

National and State Estimates

Both the national and state estimates of farm self-employment are prepared by the application of a series of ratios to the annual estimates of the number of all farms prepared by the National Agricultural Statistics Service (NASS), U.S. Department of Agriculture (USDA). For the BEA national estimates, the ratios are drawn from the USDA's annual Agricultural Resource Management Study (ARMS), previously the Farm Costs and Returns Survey (FCRS); for the state estimates, the ratios are drawn from the quinquennial Census of Agriculture. The census ratios are interpolated between census years, and the ratios from the last census are used for each subsequent year.¹³ The sequence of estimating steps for the national totals and the preliminary state estimates is as follows:

1. The number of non-corporate farms is derived as the product of the NASS number of all farms and the ratio of the number of non-corporate farms to all farms.
2. The number of sole-proprietor farms is derived as the product of the number of non-corporate farms (step 1) and the ratio of the number of sole-proprietor farms to non-corporate farms.
3. The number of partnership farms is derived as the product of the number of non-corporate farms (step 1) and the ratio of the number of partnership farms to non-corporate farms.
4. The number of farm partners is derived as the product of the number of partnership farms (step 3) and the ratio of the number of farm partners to partnership farms. The 1992 FCRS-based ratio is used for each subsequent year because BEA has not received a survey-based number of farm partners since 1992. In addition, the national annual ARMS-based ratios are used for the state—as well as the national calculations—because the number of farm partners is not available from the Census of Agriculture.
5. Total farm self-employment (final for the nation; provisional for the states) is derived as the sum of the number of sole-proprietor farms (step 2) and the number of farm partners (step 4).

Finally, the national totals are allocated to states in proportion to the provisional state estimates (the allocators developed in step 5).

¹³ The most recent Census of Agriculture in use for the BEA employment estimates is that for 1997.

XII. TECHNICAL NOTES

Allocation procedures

Allocation procedures impart to the state (or county) estimates the characteristics of the national (or state) estimates that are not reflected in the available state-level (or county-level) source data; for most components of personal income, the state and county source data are less comprehensive and less reliable than the data that are available for the national estimates.¹ In addition, these procedures allow the use of state and county data that are related to, but that do not precisely match, the component being estimated. For example, state control totals of unemployment compensation are allocated to counties of some states in proportion to direct payments data provided their employment security agencies. For the states not providing such data, the control totals are allocated in proportion to the number of unemployed persons estimated by the Bureau of Labor Statistics.

Before allocating a national estimate of some component of personal income it is adjusted for any definitional or classificatory differences from the state estimates. The adjusted national estimates are used as “control totals” for the state estimates.

In the allocation procedures, the national or state control total for a component is allocated to states or counties in proportion to each state’s or county’s share of related data. In many cases the related data are modified or augmented before the allocation by preliminary estimation—for example, by the summation of wages, tips, and pay-in-kind, by the multiplication of wages and the number of employees, or by interpolation or extrapolation.

Because the allocation procedures use the national control totals for the state estimates, and state control totals for county estimates, their use yields an additive system in which the county estimates sum to the state estimates which in turn sum to the national estimate.

The allocation procedure used to estimate a component of state personal income is

$$Y_s = (Y_n) \left(\frac{X_s}{X_n} \right)$$

where Y_s is the estimator (that is, the statistical procedure used to derive an estimate) of the component of personal income for state s , Y_n is the national estimate of the component (which is used as the control total for the state estimates of the component), X_s is the value for state s from the data related to the component, and X_n is the sum over all states of the related data ($X_n = \sum_s X_s$).

¹ However, the national estimates of most components of wages and salaries and personal current transfer receipts, which together account for about 71 percent of personal income, are based mainly on the sum of source data that *are* available by state. Therefore, the use of the allocation procedures to prepare the state estimates of these components results in estimates that do not differ greatly from the source data.

In cases in which the national estimate is calculated as the sum of the state data plus an amount A_n for which state data are unavailable, the allocation procedure may be represented by two equations:

$$A_s = (A_n) \left(\frac{X_s}{X_n} \right)$$

$$Y_s = X_s + A_s$$

where A_s is the state estimator of the portion of Y for which state data are unavailable. In effect, Y_s is the composite estimator consisting of X_s , the best possible direct estimator (100 percent sample) of the portion of Y for which state data are available, plus A_s , the indirect estimator of the portion of Y for which state data are unavailable.

For example, the national estimates of wages and salaries for many industries consist of the sum of state data plus a few small adjustments, which taken together (A_n) are allocated to the states in proportion to the state data. The small allocated amount for each state (A_s) is added to the state datum (X_s) to yield the state estimate (Y_s).

Disaster Adjustments

The estimates of personal income and several of its components have been adjusted for various disasters: Hurricanes Andrew and Iniki in 1992, the Midwest floods and the East Coast storms in 1993, the Northridge Earthquake in 1994, Hurricane Opal in 1995, Hurricane Floyd in 1999, Tropical Storm Allison in 2001, the terrorist attacks of September 11, 2001, Hurricanes Charley, Frances, Ivan, and Jeanne in 2004, and Hurricanes Katrina, Rita, and Wilma in 2005.

The extensive damage caused by these disasters necessitated adjustments to rental income of persons—a component of dividends, interest, and rent—and proprietors' income to reflect uninsured losses of property owned by household enterprises.² Business payments to persons, a component of personal current transfer receipts, were adjusted to reflect net insurance settlements for damage to consumer durable goods.³ Other effects of the disaster are embedded in BEA's source data and are not identified.

A disaster has two effects on personal income. It increases both the consumption of fixed capital and business transfer payments. As discussed below, damage to the property of household enterprises affects proprietors' income and rental income. They are reduced by the amount of uninsured losses measured by consumption of fixed capital less business transfer payments. Damage to consumer durable goods affects only personal current transfer receipts. It is raised by the amount of the insured losses for these goods. In the personal income account, the consumption of fixed capital is an expense that is subtracted in the calculation of proprietors' income and rental income of persons. The damage or destruction of fixed capital (residential and nonresidential) by disasters, such as hurricanes, is recorded as an increase in the consumption of fixed

² Household enterprises are proprietorships, partnerships, tax exempt cooperatives, and owner-occupied housing.

³ These settlements are called net because they consist of actual benefits less normal benefits. Normal, or expected, losses are deducted from the premiums that policyholders pay for insurance.

capital.⁴ The damage or destruction of consumer durable goods (such as cars, boats, and household appliances) does not affect the consumption of fixed capital, because the purchases of these goods are treated as consumption, not investment.

Property insurance is also an expense that is subtracted in the calculation of proprietors' income and the rental income of persons. The recent comprehensive revision of the national income and product accounts introduced a distinction between the level of losses that normally occur and the extraordinary losses that occur during major disasters.⁵ Normal, or expected, losses are deducted from the premiums that policyholders pay for insurance.⁶ Extraordinary losses (claims) are recorded as business transfer payments from the insurance industry to persons or to other industries.

National estimates of the effects of disasters on proprietors' income, rental income of persons, and current personal transfer receipts are distributed to states on the basis of reports of insured losses by state from private sources and on the basis of grants for disaster housing assistance by state from the Federal Emergency Management Agency.

Disclosure-avoidance procedures

Like other statistical agencies, the Bureau of Economic Analysis (BEA) is legally required to safeguard the confidentiality of the information that it receives. In addition, like other agencies, it must balance its responsibility to avoid disclosing confidential information with its responsibility to release as much information as possible. It balances these responsibilities by presenting the estimates for regions, states, and local areas only at the North American Industry Classification System (NAICS) subsector level or Standard Industrial Classification (SIC) two-digit level, even though it receives source data at the NAICS four- and five-digit industry levels or SIC three- and four-digit levels.

Most of the data series that BEA receives from other agencies are not confidential. The agencies summarize their data by program, county, or state, so that each record, or data cell, contains data for enough individuals or establishments to preclude the identification of data for a specific individual or establishment and, therefore, to preclude disclosure of confidential information.⁷

However, the Quarterly Census of Employment and Wages (QCEW, formerly known as ES-202 data) tabulations that BEA receives from the Bureau of Labor Statistics (BLS) include records that would disclose confidential information. The confidential

⁴ The methodology used to estimate consumption of fixed capital does not account for losses due to disasters (see U.S. Bureau of Economic Analysis, *Fixed Assets and Consumer Durable Goods in the United States, 1925–99* (Washington, DC: U.S. Government Printing Office, September 2003)). In general, an adjustment for a disaster is made if the cost of the damage exceeds 0.25 percent of total private consumption of fixed capital.

⁵ See Brent R. Moulton and Eugene P. Seskin, "Preview of the 2003 Comprehensive Revision of the National Income and Product Accounts: Changes in Definitions and Classifications," *Survey of Current Business* 83 (June 2003): 17–34.

⁶ Purchases of property and casualty insurance services are measured as premiums plus premium supplements less normal losses and dividends paid to policyholders.

⁷ For a list of some of the agencies that provide data to BEA, see "Sources of the data" in Chapter I Introduction.

information on wages and salaries for some business firms is identifiable from the state and county estimates of wages and salaries that are derived from the QCEW data.⁸

To prevent either the direct or the indirect disclosure of the confidential information, BEA uses the BLS state and county nondisclosure file. BEA uses as many BLS nondisclosure cells as possible, but cannot use some of them for various reasons. The most important reasons are that the industry structure published by BEA does not exactly match the NAICS subsector or SIC two-digit detail provided by BLS and that BEA does not use QCEW data for the farm sector. When BEA drops BLS nondisclosure cells, other cells must be selected to prevent the disclosure of confidential information. In order to determine which estimates should be suppressed, the total wages and salaries file and the wages-and-salaries-nondisclosure file are used to prepare a multidimensional matrix. This matrix is tested, and the estimates that should be suppressed are selected.⁹

Dual allocation

Dual allocation is a statistical procedure that forces the elements of a matrix to sum to column and row control totals. It is used to adjust, for instance, a preliminary estimate of income by state and industry so that sum of income in an industry across all states equals a national control total for that industry and simultaneously the sum of income in a state across all industries equals a control total for that state. It is also used to adjust a preliminary estimate of quarterly state personal income so that it is consistent with both national control totals by quarter and annual state control totals.

Specifically, dual allocation subtracts the sum of the algebraic values in a row from the row control total. It divides this difference by the sum of the absolute values in the row and then multiplies the resulting ratio by the absolute value of each element in the row and adds the result to the algebraic value of that element. This procedure is repeated for each row and then a parallel procedure is repeated for each column. The whole process is repeated five times.

After the fifth repetition, any differences between the row and column control totals and the output matrix row and column sums are eliminated by a process called feathering. This is accomplished by selecting the first column with a non-zero difference and the first non-zero row difference with the same sign. The smaller of the two differences is subtracted from the element in that row and column and from the final row and column sums. This procedure forces the difference between either the final row sum and its corresponding control total or the final column sum and its corresponding control total to zero.

Before performing any subtraction, the element in the row and column selected is checked for a zero value and to see if the subtraction would cause a change in the element's sign. If either of these tests is true, the next non-zero row difference with like sign is selected.

The entire feathering process is repeated until all differences between final column sums and column control totals have been forced to zero. At this point the row sums and row control totals will also be equal.

⁸ For specific information, see Chapter II Wage and Salary Disbursements.

⁹ In this test, computer programs impose a set of rules and priorities on this matrix so that the estimates that should be suppressed are selected until indirect disclosure is impossible.

Imputation

One of the principles of the national income and product accounts (NIPA) is that they reflect market transactions. In a few instances, a comprehensive account of total income and production requires BEA to impute a value or a transaction. This keeps the NIPA invariant to how certain activities are carried out. For instance, some transactions, such as the provision of food, lodging, and clothing to employees have an element of barter—food is bartered for labor (at least in part). In this case, imputation involves placing a market value on the food employees received so that the estimate of their total compensation is comprehensive and invariant to changes in the proportions received in cash and in kind. In other transactions, such as the rental of housing to an owner-occupant, no transaction appears in the records of the economy. In this case, imputation involves constructing a transaction between a producer and a consumer (who happen to be the same person) and placing a market value on the housing services exchanged. If the imputation were not made, then housing output and consumption would fall if a household purchased the house it had been renting. A third type of imputation is the attribution of the income of one sector or legal form of organization to another. For instance, the NIPA attributes the property income life insurance carriers earn on annuity reserves to the persons who own the annuities.

The imputations that affect personal income include: (a) pay-in-kind, (b) employer-paid health and life insurance premiums, (c) the value of food and fuel produced and consumed on farms, (d) the net rental value of owner-occupied housing, (e) the net margins on owner-built housing, (f) the value of depositor services furnished without payment by financial intermediaries except life insurance carriers, (g) premium supplements for property and casualty insurance, and (h) the interest received from life insurance carriers.¹⁰ These imputations accounted for over 9 percent of personal income at the national level in 2006.

Imputed pay-in-kind is added to the estimates of wage and salary disbursements so that all the earnings of employees who receive part of their wages in pay-in-kind will be included in personal income. This imputation is an estimate of the value of the food, lodging, clothing, and other goods and services that are received by employees from their employers as partial or full payment for their services.

The *imputation for employer-paid health and life insurance premiums* is included in employer contributions for employee pension and insurance funds, a component of supplements to wages and salaries.

The *imputed value of food and fuel produced and consumed on farms* is included in farm proprietors' income so that that measure reflects the income from all of the production of noncorporate farms.

¹⁰ See table 7.12, "Imputations in the National Income and Product Accounts," *Survey* 85 (August 2005): 168-169. There are other imputations such as the imputation of an employer contribution for government social insurance equal to the benefits paid by the Unemployment Compensation for Federal Employees and Unemployment Compensation for Ex-Service Members, military medical insurance (TRICARE), and federal workers' compensation programs. These are pay-as-you-go, self-insurance programs in contrast to the funded insurance programs.

The *imputed net rental value of owner-occupied housing* is included in the rental income of persons. The imputation assumes that the owner-occupants are in the rental business and that they are renting the houses in which they live to themselves: As tenants, they pay rent to the landlords (that is, to themselves); as landlords, they collect rent from their tenants (that is, from themselves), they incur expenses, and they may have a profit or a loss from the rental business.

The *imputed net margin on owner-built housing* is included in proprietors' income, classified in the construction industry. It represents the net income of individuals from the management of the construction or renovation of their own dwellings and is included in the measure of the output of structures.

The *imputed value of depositor services furnished without payment by financial intermediaries except life insurance carriers* is included in personal interest income. The value of depositor services is received by persons from depository institutions, that is, from commercial banks, mutual savings banks, savings and loan associations, credit unions, and regulated investment companies. It is an estimate of the value of the services (such as checking and record keeping) that these institutions provide to persons without an explicit charge.¹¹

Premium supplements for property and casualty insurance is the property income that property and casualty insurance carriers earn on reserves held to pay claims. This income is deemed to be paid out to policyholders and then paid back as premium supplements even though in actuality the insurance companies retain the property income. The income is recorded as a component of personal interest income.¹²

Also included in personal interest income is the *imputed interest received from life insurance carriers*. It consists of the property income life insurance carriers earn on life insurance and annuity reserves. This income is deemed to be paid out to policyholders and then paid back as premium supplements even though in actuality the insurance companies retain the property income. It is attributed to policyholders in order to include it in personal saving, rather than in business saving, and when the income is earned, rather than when it is distributed.

Interpolation and extrapolation

Interpolation and extrapolation are used to prepare the first approximations of some components of personal income for the years in which direct source data are unavailable. Both procedures use the data for these components for benchmark years—the years for which the best data are available—and both frequently use other data that are related to the benchmark-year data for the components.

Interpolation is used to derive the first approximation of estimates for years that are between benchmark years. For example, if data for wages and salaries for an industry were available only from the decennial censuses of population but employment data were available annually from another source, the first approximations of wages and salaries for 1981-89 could be interpolated from the wages and salaries data for 1980 and 1990, the two census benchmark years, and from the employment data for 1980-90.

¹¹ See "Measuring the Services of Commercial Banks in the NIPAs," *Survey* 83 (September 2003):33-44.

¹² See "Measuring the Services of Property-Casualty Insurance in the NIPAs," *Survey* 83 (October 2003): 10-26.

Extrapolation is used to derive first approximations for years that are beyond the most recent benchmark year. For example, the first approximations of wages for 1991-99 might be extrapolated from the census benchmark data for 1990 and from the employment data for 1990-99. The estimates based on extrapolation are usually superseded by revised estimates when benchmark data become available for a more current year. For the preceding example, the estimates for 1991-99 would be superseded by estimates based on interpolation when census benchmark data became available for 2000.

Both interpolation and extrapolation are illustrated in the following examples. In the first two examples, interpolation is used to derive the first approximations of wages and salaries for an industry in areas A, B, and C for the years 2 and 3 that are between the benchmark years 1 and 4. In the third example, extrapolation is used to derive the approximations for year 5.

In the first example, “straight-line interpolation” is used to derive the first approximations for years 2 and 3 from the data for benchmark years 1 and 4.¹³ The first approximations for year 2 equals the amount for year 1 plus one-third of the increase from year 1 to year 4; the preliminary estimate for year 3 equals the amount for year 1 plus two-thirds of the increase.

Wages and salaries in thousands of dollars

	Year 1 (benchmark)	Year 2 (interpolation)	Year 3 (interpolation)	Year 4 (benchmark)
Area A	28	34	40	46
Area B	34	43	53	62
Area C	74	81	87	94

In the second example, interpolation with a related series of data, the indicator series, is used to derive the first approximations for years 2 and 3 from the benchmark data for years 1 and 4 and from the indicator series for all four years. The data for wages and salaries are the benchmark data, the employment data are the indicator series, and the average wages (computed as wages and salaries divided by employment) are the interpolation ratios.¹⁴ This method of interpolation is illustrated in three steps.

¹³ Straight-line interpolation assumes that the magnitude of the annual change is the same in each year in the interpolated time series, subject to modification by the adjustment to the national control totals. Straight-line interpolation is used as the default option, when no annual source data related to the income series are available.

¹⁴ Using an indicator series for interpolation between two benchmark years assumes that any change in the relationship between the data for the income component for the benchmark years and the data from the indicator series for the benchmark years occurs uniformly over time. This relationship is embodied in the interpolation ratios, which in this example are the average wages. For this procedure, straight-line interpolation of the benchmark-year interpolation ratios is used to calculate the ratios for the intervening years. A benchmark-year interpolation ratio is the ratio of the datum for an income component for the benchmark year to the datum for the same year from the annual indicator series. The interpolation ratios for the intervening years are multiplied by the data for those years from the indicator series to yield the interpolated series for those years.

First, average wages for years 1 and 4 are calculated from the wage and employment data for those years. Wages for each year are divided by the number of employees for the year to yield the average wages of the employees.

Employment and average wages

	Year 1		Year 4	
	Employment	Average Wages in dollars	Employment	Average wages in dollars
Area A	4	7,000	4	11,500
Area B	6	5,667	10	6,200
Area C	11	6,727	10	9,400

Second, straight-line interpolation is used to derive average wages for years 2 and 3 from average wages for years 1 and 4.

Average wages in dollars

	Year 1 (benchmark)	Year 2 (interpolation)	Year 3 (interpolation)	Year 4 (benchmark)
Area A	7,000	8,500	10,000	11,500
Area B	5,667	5,845	6,022	6,200
Area C	6,727	7,618	8,509	9,400

Third, the interpolated average wages for each year are multiplied by the employment data for each year to yield the first approximations.

Employment and wage approximations

	Year 2		Year 3	
	Employment	Wages in thousands of dollars	Employment	Wages in thousands of dollars
Area A	5	43	4	40
Area B	7	41	9	54
Area C.....	10	76	9	77

In the third example, extrapolation with an indicator series is used to derive the first approximations of wages for year 5 from average wages for year 4—used here as the extrapolation ratios—and employment data for year 5.¹⁵ The average wages are multiplied by employment to yield the first approximations of wages for year 5.

¹⁵ Using an indicator series for extrapolation assumes that the relationship between the data for the income component for the latest benchmark year and the data from the indicator series for that year remains unchanged in the subsequent years.

First approximations of wages for year 5

	Year 4	Year 5	
	Average Wages in dollars	Employment	Wages in thousands of dollars
Area A.....	11,500	5	58
Area B.....	6,200	12	74
Area C.....	9,400	9	85

After interpolation or extrapolation is used to calculate the first approximations of a component of personal income, the approximations are adjusted proportionately to sum to the component's control total.

NAICS Earnings and Employment by Industry, 1990-2000

The QCEW data that BEA uses to estimate earnings and employment by industry have been compiled on the basis of the 2002 edition of the North American Industry Classification System (NAICS) since 2001. Prior to then the Standard Industrial Classification System (SIC) was used. The income tax return data BEA uses to estimate earnings and employment have been compiled on a NAICS basis since 1998 and on an SIC basis in earlier years.

BEA developed state estimates of earnings and employment by industry 1990-2000 on a NAICS basis in the following fashion using the reconstructed NAICS-based data prepared by the Bureau of Labor Statistics (BLS), an SIC-NAICS bridge matrix also prepared by BLS, *County Business Patterns* data from the Census Bureau, and BEA's earnings and employment estimates published on an SIC basis. The conversion of wage and salary employment and disbursements will be discussed in substantial detail first. Then a briefer account of the conversion of wage supplements, and nonfarm proprietors' income and employment follows.

Since BEA does not publish industry detail for government employment and earnings, the switch from SIC to NAICS did not affect the government sector estimates. The following discussion applies only to private sector employment and earnings.

Reconstructed BLS Data.

BEA obtained reconstructed BLS data for states at both a 2-digit and a 4-digit level of aggregation.¹⁶ BEA edited this data when it discovered data missing at irregular intervals or large inconsistencies with other data sets. In addition, because the reconstructed BLS data classified Native American establishments in the private sector, BEA removed their employment and wages to be consistent with the current classification of such establishments in the local government sector. This was done on the basis of a file BLS previously provided BEA of Native American Establishments 1990-2000.

¹⁶ There were only a few suppressions in the 2-digit data. These few missing values were estimated using simple methods such as replacing the missing value for state i in year t with the average of that state's industry in years $t-1$ and $t+1$.

The 2-digit reconstructed BLS data were then adjusted proportionately so that the sum of all industries for a given state equaled BEA's total for that state. The reconstructed BLS data, adjusted in this fashion, summed over all states by industry were then designated the 2-digit national controls by industry. The 2-digit reconstructed BLS data adjusted in this fashion were used to control the estimation of missing values at the 4-digit level of aggregation.

There were many suppressions in the 4-digit reconstructed BLS state data. When BLS suppressed an industry it gave no indication of whether employment and wages for the industry were zero or whether they were positive but not discloseable. In order to determine whether employment and wages were zero and to estimate employment and wages when it was determined that they were positive, BEA used *County Business Patterns* data.

County Business Patterns Data.

County Business Patterns data is on a NAICS basis 1998-2000 and on a SIC basis 1990-97.¹⁷ Missing values in the *County Business Patterns* data had to be estimated before the data could be used. Although *County Business Patterns* suppresses many industries, it provides an employment range for these industries. If no employment range is given, employment is zero. Working at the 4-digit NAICS level and 4-digit SIC level, BEA estimated missing employment values as either zero or the midpoint of the employment range. Missing wage values were estimated as the product of the midpoint employment and the average wage for that industry from an adjacent year, if available. If wages for an industry in a particular state were suppressed for all years, then the average wage for that industry from the state's region was substituted. If wages for that industry were suppressed in all states in the region for a particular year, the average wage for that industry for the closest region was substituted. An estimate of Native American employment and wages was removed from the data using the BLS file mentioned above.

The *County Business Patterns* data for 1990-97 on a 4-digit SIC basis were then converted to 4-digit NAICS industries using the SIC-NAICS bridge matrix for 2001Q1. In converting the QCEW from SIC to NAICS in first quarter of 2001, BLS retained the existing SIC codes for establishments when they assigned new NAICS codes. This dual coding permitted the construction of a bridge matrix which shows how much of employment and wages in a given SIC code was transferred to each NAICS code. BLS prepared a bridge matrix only for 2001Q1 and only at the national level of aggregation.

Balancing the 4-digit BLS Reconstructed Data.

The 4-digit *County Business Patterns* data, adjusted in this manner from SIC to NAICS, were then used to replace missing values in the BLS reconstructed data (as adjusted in the manner described above). Industries at the 4-digit level for a given state were then summed and compared to the 2-digit control for that state. Values of 4-digit industries with preliminary estimates based on the *County Business Patterns* data were

¹⁷ Since *County Business Patterns* used the 1997 edition of NAICS for the 1998-2000 data it had to be converted to the 2002 edition of NAICS. This affected only the construction, wholesale trade, and information industries. The *County Business Patterns* estimates for these industries for 1998-2000 were replaced with 2003 estimates. This did not have much of an effect on the final results of the conversion because no construction and wholesale trade industries were missing in the reconstructed BLS data and relatively few information industries were missing.

then adjusted proportionately in order to balance the sum of the 4-digit industries with the 2-digit control. Values for 4-digit industries based on the BLS reconstructed data were not changed.

Since the 2-digit BLS reconstructed data had already been controlled to BEA's existing state totals, the sum of all 4-digit BLS reconstructed data with missing values replaced in this fashion also equal BEA's existing state data. The sum of each 4-digit industry across all states was deemed to be the national estimate.

Employment and wages in industries with less than \$10 million in wages, but these amounts are included in aggregates. The 4-digit estimates were summed to 3-digit for publication purposes.

Wage Supplements. State control totals of wage supplements by program (e.g. employer contributions to pension and profit-sharing funds, employer contributions for Old Age, Survivors, and Disability Insurance, etc.) were distributed to NAICS industries in proportion to their wage and salary disbursements, except in a few instances in which there was a very high correspondence between the NAICS and SIC definitions of an industry (e.g. railroads). In those cases the estimate for the SIC industry was used for the NAICS industry and the balance of the other industries was distributed in proportion to wage and salary disbursements.

Nonfarm proprietors' income and employment. Nonfarm proprietors' income and employment was converted from SIC to NAICS using the 3-digit SIC-NAICS bridge matrix for wages. Different data sources are used to estimate farm proprietors' and they were not affected by the new industrial classification system. The bridge matrix was used to convert data 1990-97 previously compiled on a SIC basis.¹⁸ Data for 1998 onwards are available on a NAICS basis. Ad hoc adjustments were made to force the sum of industries within a state to equal the all-industry state total originally compiled on a SIC basis. Ad hoc adjustments were also made to ensure that the transition from 1997 data converted on the basis of the bridge matrix to 1998 data compiled on the NAICS basis was reasonable. Since no independent national estimates on a NAICS basis are available, the sum of each industry across all states is the new national estimate for that industry.

Earnings and Employment by place of Work. Because the quality of the conversion of the individual components of earnings varied widely, they were not published separately. Rather, earnings by place of work, defined as wage and salary disbursements plus wage supplements plus proprietors' income, was published as an aggregate and for 3-digit NAICS industries. In addition, total employment consisting of wage and salary employment plus proprietors' employment was published as an aggregate and for 3-digit industries.

¹⁸ Adjustments for disasters and the income of nonfarm tax-exempt cooperatives were removed before the conversion and added back to the appropriate industries after the conversion.

The Underground Economy

The term ‘underground economy’ can encompass a wide variety of illegal activities such as theft and prostitution as well as legal activities conducted “off the books” or by illegal immigrants. BEA’s estimates of the underground economy are limited to adjustments made to the amounts reported on various tax returns to correct for underreporting and for returns that were not filed but should have been. The adjustments that are made do not distinguish between the reasons for misreporting, whether to evade taxes or because of a misinterpretation of the instructions.

The two most important tax returns used in the estimation of personal income are those used in the administration of the unemployment insurance system and the federal income tax. Employers must report wages and salaries paid to state employment security agencies and individuals must report their wages and other income to the Internal Revenue Service.

Misreporting adjustments are made for four components of personal income: (1) wage and salary disbursements, (2) nonfarm proprietors’ income, (3) personal interest income, and (4) rental income of persons.

BEA published a series of three articles in the May, June, and July 1984 issues of the *Survey of Current Business* that describe its framework for measuring the underground economy in the National Income and Product Accounts (NIPA).¹⁹ Although some things have changed since their publication, the articles still provide a reliable overview of the issues involved.

The data used to prepare the NIPA misreporting adjustments for personal income are not available for states and counties. The NIPA estimates are therefore allocated to states and counties in proportion to Quarterly Census of Employment and Wages payroll (in the case of wage and salary disbursements) and in proportion to gross receipts or sales less returns and allowances as reported on IRS Form 1040 Schedule C and Form 1065 (in the case of nonfarm proprietors’ income). Details are in the respective chapters. The NIPA estimates of misreported rental income and net interest income are allocated to states and counties in the same fashion as reported income.

The magnitudes of the NIPA misreporting adjustments are given in table J.

¹⁹ Carol S. Carson, “The Underground Economy: An Introduction,” *Survey of Current Business* 64 (May 1984):21-37; Robert P. Parker, “Improved Adjustments for Misreporting of Tax Return Information Used to Estimate the National Income and Product Accounts, 1977,” *Survey of Current Business* 64 (June 1984):17-25; and Carol S. Carson, “The Underground Economy: An Introduction,” *Survey of Current Business* 64 (July 1984):106-17.

**Table J.—NIPA Adjustments for Misreporting of Tax Return Information in
Personal Income, 2004**
(Billions of dollars, except as noted)

	Amount	Misreported	Percent Misreported
Wages and salaries	5,392.1	115.3	2.1
Nonfarm proprietors' income	874.9	356.7	40.8
Rental income of persons	127.0	2.2	1.7
Net interest	890.8	-15.8	-1.8
Personal Income	9,731.4	458.4	4.7

Source: Mark A. Ledbetter, "Comparison of BEA Estimates of Personal Income and IRS Estimates of Adjusted Gross Income," *Survey of Current Business*, 86 (November 2006):33

XIII. GLOSSARY

Allocation procedures.—Allocation procedures are used in the estimation of state and county personal income because the available state and county data for many of components of personal income may not be as comprehensive or as reliable as the national data. A national estimate of a component is allocated to states in proportion to their shares of an economic, or allocating, series that is a measure of the component or that is related to the component that is being allocated; the state estimates are then allocated to counties. For example, the national estimate of personal dividend income received by individuals is allocated to states—and the state estimates are allocated to counties—in proportion to dividends reported by individuals on their Federal income tax returns. *See also “Allocation procedures” in Chapter XII Technical Notes.*

Annual rates.—The quarterly estimates of state personal income are presented at annual rates, which show the value that would be registered if the seasonally adjusted rate of activity measured for a quarter were maintained for a full year. Annual rates are used so that periods of different lengths—for example, quarters and years—may be easily compared. *See also Seasonal adjustment.*

BEA economic areas.—A set of geographic areas, defined in terms of counties, that exhaust the area of the Nation. Each of the BEA economic areas consists of one or more economic nodes—metropolitan or micropolitan statistical areas that serve as regional centers of economic activity—and the surrounding counties that are economically related to the node.¹ *See also Geographic areas.*

Capital consumption adjustment (CCAdj).—The capita consumption adjustment is the difference between private consumption of fixed capital (CFC) and private capital consumption allowances. Private CFC is a charge for the using up of private fixed capital. It is based on studies of prices of used equipment and structures in resale markets.² Private capital consumption allowances consist of tax-return-based depreciation charges for corporations and nonfarm proprietorships and of historical-cost depreciation, calculated by BEA, for farm proprietorships, rental income of persons, and nonprofit institutions. In personal income, CFC is used in the estimation of proprietors’ income—both farm and nonfarm—and rental income of persons.

Compensation.—Compensation is the income accruing to employees as remuneration for their work. As a component of personal income, compensation is the sum of wage and salary *disbursements* and supplements to wages and salaries; as a component of Gross Domestic Product by state, compensation is the sum of wage and salary *accruals* and supplements to wages and salaries. The difference between disbursements and accruals is typically very small and arises when employees receive

¹ For a description of the economic areas and the methodology used to define them, see Kenneth P. Johnson and John R. Kort, “2004 Redefinition of the BEA Economic Areas,” *Survey of Current Business* 84 (November 2004): 68-75. This article and a list of the economic areas and their constituent counties and county equivalents are available on BEA’s Web site at <http://www.bea.gov>.

² For further information, see Arnold J. Katz and Shelby W. Herman, “Improved Estimates of Fixed Reproducible Tangible Wealth,” *Survey* 77 (May 1997): 69-92; and Barbara M. Fraumeni, “The Measurement of Depreciation in the U.S. National Income and Product Accounts,” *Survey* 77 (July 1997): 7-23.

retroactive wage payments. Such payments are recorded in wage and salary accruals when earned and in wage and salary disbursements when paid.

Contributions for government social insurance.—Contributions for government social insurance is deducted from earnings in the derivation of personal income. It consists of payments by employers, employees, the self-employed, and other individuals who participate in the following government programs: Old-age, Survivors, and Disability Insurance; Medicare; unemployment insurance; railroad retirement; pension benefit guarantee; veterans' life insurance; publicly-administered workers' compensation; military medical insurance; and temporary disability insurance. *See also Employer contributions for employee pension and insurance funds and Employee and self-employed contributions for government social insurance.*

Corporate business.—Corporate business consists of entities required to file Federal corporate tax returns (Internal Revenue Service (IRS) Form 1120 series) and the following entities: Mutual financial institutions and cooperatives subject to Federal income tax, private noninsured pension funds, nonprofit organizations that primarily serve businesses, Federal Reserve banks, and federally sponsored credit agencies. *See also Sectors and legal form of organization.*

County.—Counties consist of counties and county equivalents, such as the parishes of Louisiana, the boroughs and census areas of Alaska, the independent cities of Maryland, Missouri, Nevada, and Virginia, and the District of Columbia. The estimates for Kalawao County, Hawaii and the small independent cities of Virginia—generally those with fewer than 100,000 residents—are combined with those for adjacent counties. *See also Geographic areas.*

County equivalents.—*See County.*

Disclosure-avoidance procedures.—*See "Disclosure-avoidance procedures" in Chapter XII Technical Notes.*

Disposable personal income.—Disposable personal income is personal income less personal current taxes. It is personal income that is available for spending and saving. *See also Personal income and Personal current taxes.*

Dual allocation.—*See "Dual allocation" in Chapter XII Technical Notes.*

Earnings by place of work.—Earnings by place of work is the sum of three components of personal income—wage and salary disbursements, supplements to wages and salaries, and proprietors' income. . *See also Net earnings by place of residence and Net labor earnings.*

Employment.—Employment is a count of jobs, full-time plus part-time, by place of work. Full-time and part-time jobs are given equal weight. Employees, sole proprietors, and general partners are included, but unpaid family workers and volunteers are not.

Employee and self-employed contributions for government social insurance.—Employee and self-employed contributions for government social insurance (formerly called personal contributions for government social insurance) consist of the contributions, or payments, by employees, by the self-employed, and by other individuals who participate in the following government programs: Old-age, Survivors, and Disability Insurance (social security); Hospital Insurance (Medicare Part A); Supplementary Medical Insurance (Medicare Part B); Medicare Prescription Drug Plan (Medicare Part D); unemployment insurance; railroad retirement; veterans' life

insurance; and temporary disability insurance. These contributions are excluded from personal income by definition, but the components of personal income upon which these contributions are based—mainly wage and salary disbursements and proprietors' income—are presented gross of these contributions. *See also Earnings by place of work, Net labor earnings, and Personal income.*

Employer contributions for employee pension and insurance funds.—Employer contributions for employee pension and insurance funds consists of employer payments to private and government employee retirement plans, private group health and life insurance plans, privately administered workers' compensation plans, and supplemental unemployment benefit plans. It was formerly called other labor income.

Employer contributions for government social insurance.—Employer contributions for government social insurance is a component of earnings and compensation. It consists of employer payments under the following Federal and state and local government programs: Old-age, Survivors, and Disability Insurance (OASDI); Hospital Insurance (HI); unemployment insurance; railroad retirement; pension benefit guaranty; veterans' life insurance; publicly-administered workers' compensation; military medical insurance; and temporary disability insurance. These contributions are excluded from personal income by definition, but as part of supplements to wages and salaries, they are included in earnings by place of work and compensation.

ES-202.—The reporting form used by the Quarterly Census of Employment and Wages (QCEW). *See also Quarterly Census of Employment and Wages.*

Extrapolation.—*See “Interpolation and extrapolation” in Chapter XII Technical Notes.*

Farm income.—Farm income is the sum of wage and salary disbursements, employer contributions for employee pension and insurance funds, and proprietors' income in the farm industry (crop production and animal production only—NAICS subsectors 111 and 112). It comprises the net income of sole proprietors, partners, and hired laborers arising directly from the current production of agricultural commodities, both livestock and crops, and specifically excludes the income of non-family farm corporations.

Fiduciary.—Fiduciaries are individuals or legal entities that serve as administrators or trustees of private trust funds (including estates) and are classified as persons in the National Income and Product Accounts. A fiduciary is required to report the income that the private trust fund receives on behalf of the beneficiaries of the estate or trust to the Internal Revenue Service.

Geographic areas.—The estimates of personal income are prepared for the following geographic areas: counties, metropolitan areas, micropolitan areas, BEA Economic Areas, states, and regions.—*See also County, Metropolitan areas, BEA Economic Areas, and Regions.*

Government enterprise.—Government enterprises are government agencies that cover a substantial portion of their operating costs by selling goods and services to the public and that maintain separate accounts. *See also Sectors and legal form of organization.*

Income subject to adjustment.—Income subject to adjustment is the sum of wage and salary disbursements and supplements to wages and salaries less contributions for government social insurance.

Imputation.— An imputation constructs a transaction or places a market value on a transaction so that the measurement of personal income and its components is invariant to how certain activities are carried out, or attributes the income of one sector or legal form of organization to another. *See also “Imputation” in Chapter XII Technical Notes.*

Interpolation.—*See “Interpolation and extrapolation” in Chapter XII Technical Notes.*

Inventory valuation adjustment (IVA).—The inventory valuation adjustment is made in the estimation of nonfarm proprietors’ income to reflect the difference between the cost of inventory withdrawals as valued in the source data used to determine profits and the cost of withdrawals valued at replacement cost. It is needed because inventories as reported in the source data are often charged to cost of sales (that is, withdrawn) at their acquisition (historical) cost rather than at their replacement cost (the concept underlying the NIPAs). As prices change, companies that value inventory withdrawals at acquisition cost may realize profits or losses. Inventory profits, a capital-gains-like element in profits, result from an increase in inventory prices, and inventory losses, a capital-loss-like element in profits, result from a decrease in inventory prices. Inventory profits or losses equal the IVA with the sign reversed. No adjustment is needed to farm proprietors’ income because inventories reported in the source data are measured on a current-market basis that approximates current replacement cost.

Local areas.—Local areas consist of counties, metropolitan areas, micropolitan areas and BEA economic areas. *See also Geographic areas.*

Metropolitan areas.—A metropolitan area consists of a large population nucleus together with adjacent communities having a high degree of economic and social integration with the nucleus. Metropolitan areas are defined for Federal statistical purposes by the Office of Management and Budget.³ In New England metropolitan areas are defined in terms of both cities and towns and in terms of counties. BEA uses the county-based definitions. Metropolitan areas consist of metropolitan statistical areas, metropolitan divisions, and combined statistical areas. *See also Geographic areas.*

Net earnings by place of residence.—Net earnings by place of residence is earnings by place of work less contributions for government social insurance plus an adjustment to convert it from a place of work to a place of residence basis. *See also Earnings by place of work.*

Net labor earnings.—Net labor earnings is the sum of wage and salary disbursements and supplements to wages and salaries less contributions for government social insurance. This measure, also known as “income subject to adjustment,” is used in the residence adjustment procedure for both the annual and the quarterly estimates of state personal income and for the annual county estimates. *See also Earnings by place of work.*

North American Industry Classification System (NAICS).—NAICS is an industry classification system that classifies economic units that have similar production processes in the same industry. This is a supply-based or production-oriented economic concept. Statistics Canada, Mexico’s Instituto Nacional de Estadística Geografía e Informática (INEGI), and the Economic Classification Policy Committee (ECPC) of the United States, acting on behalf of the Office of Management and Budget, created a

³ The list of the metropolitan areas and their constituent counties and county equivalents is available on BEA’s Web site at <http://www.bea.gov>.

common classification system that replaced the existing classification systems of each country, the Standard Industrial Classification (1980) of Canada, the Mexican Classification of Activities and Products (1994), and the Standard Industrial Classification (1987) of the United States. NAICS is used in the presentation of state and local area estimates of earnings and employment by industry from the year 2001 forward. It is used by BEA for the estimates of the private sector only, although it is designed to cover both public and private earnings and employment activities. *See also Standard Industrial Classification.*

Other labor income.—*See Employer contributions for employee pension and insurance funds.*

Other private business.—Other private business consists of tax-exempt cooperatives and all entities required to report rental and royalty income on Schedule E of IRS Form 1040 (*Supplemental Income and Loss*). *See also Sectors and legal form of organization.*

Partnership.—A partnership is an unincorporated business association required to file IRS Form 1065 (*U.S. Return of Partnership Income*). *See also Sectors and legal form of organization.*

Pay-in-kind.—Pay-in-kind is an imputed component of wage and salary disbursements. The estimates of pay-in-kind reflect the value of the food, lodging, clothing, and miscellaneous goods and services received by employees from their employers as full or partial payment for services performed. *See also “Imputation” in Chapter XII Technical Notes.*

Per capita personal income.—This measure of income is calculated as the total personal income of the residents of an area divided by the population of the area. Per capita personal income is often used as an indicator of the character of consumer markets and of the economic well-being of the residents of an area. *See also “Per capita personal income” in Chapter I Introduction.*

Personal current taxes.—Personal current taxes are payments, net of refunds, made by persons that are not chargeable to business expense. Personal current taxes consist of taxes on income, including realized net capital gains, taxes on personal property, payments for motor vehicle licenses, and several miscellaneous taxes, licenses, and fees. Social security and Medicare taxes are excluded from personal current taxes. They are treated as an employer (or employee or self-employed) contribution for government social insurance. Personal current taxes also exclude taxes on real property, sales taxes, and certain penalty taxes. Taxes on real property paid by persons, except those primarily engaged in the real estate business, are treated as a business expense that is deducted from both gross monetary rental income and gross imputed rental income in the derivation of net rental income. Real property taxes paid by persons primarily engaged in the real estate business are also treated as a business expense and are deducted in the derivation of proprietors' income. Sales taxes are included in personal consumption expenditures. Penalty taxes such as the penalty tax on early IRA withdrawals are treated as a personal current transfer payment to government.

Personal current transfer receipts.—Personal current transfer receipts (formerly called transfer payments) are benefits received by persons for which no current services are performed. It consists of benefits received by individuals and nonprofit institutions that primarily serve individuals from Federal, state, and local governments and from

businesses. Benefits received by individuals from government include retirement and disability insurance benefits, medical benefits (mainly Medicare and Medicaid), income maintenance benefits, unemployment insurance compensation, veterans' benefits, and Federal education and training assistance. Benefits received by nonprofit institutions from government exclude payments by the Federal Government for work under research and development contracts. Benefits received by persons from businesses consist primarily of compensation for personal injury, corporate gifts to nonprofit institutions, and net insurance settlements when actual insured losses exceed normal losses (as in disasters).

Personal dividend income.—Personal dividend income consists of payments in cash or in other assets, excluding the corporation's own stock, made by corporations located in the United States or abroad to persons who are U.S. residents. Personal dividend income includes the net income of S Corporations received by individuals as well as their receipt of dividends from C Corporations. Personal dividend income does not include interest from regulated investment companies reported as dividends on individual income tax returns. The dividend income of noninsured pension funds is imputed to persons and counted as part of personal dividend income.

Personal income.—Personal income is the income received by persons from participation in production, plus transfer receipts from government and business, plus government interest (which is treated like a transfer receipt). It is defined as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance. Because the personal income of an area represents the income that is received by, or on behalf of, all the persons who live in that area, and because the estimates of some components of personal income (wage and salary disbursements, supplements to wages and salaries, and contributions for government social insurance) are made on a place-of-work basis, state personal income includes an adjustment for residence. The residence adjustment represents the net flow of compensation (less contributions for government social insurance) of interstate commuters. *See also Contributions for government social insurance; Personal current transfer receipts; Personal dividend income; Personal interest income; Persons; Proprietors' income with inventory valuation and capital consumption adjustments; Rental income of persons with capital consumption adjustment; Residence adjustment; Residence, place of; Supplements to wages and salaries; and Wage and salary disbursements.*

Personal interest income.—Personal interest income is the interest income (monetary and imputed) of persons from all sources. The property income earned on the reserves that property, casualty, and life insurance carriers hold to pay claims and the interest income of noninsured pension funds is imputed to persons and counted as part of personal interest income.

Persons.—Persons consist of individuals and quasi-individuals that serve individuals or that act on behalf of individuals. Quasi-individuals consist of nonprofit institutions that primarily serve individuals, private noninsured welfare funds, and private trust funds.

Population.—Number of individuals (both civilian and military) who reside in an area as of July 1. *See also Residence, place of.*

Property income.—Property income is another name for income received in the form of dividends, interest, rents, and royalties.

Proprietors' income with inventory valuation and capital consumption adjustments.—Proprietors' income with inventory valuation and capital consumption adjustments is the current-production income (including income in kind) of sole proprietorships, partnerships, and tax-exempt cooperatives. Corporate directors' fees are included in proprietors' income. Proprietors' income excludes dividends and monetary interest received by nonfinancial business and rental income received by persons not primarily engaged in the real estate business; these incomes are included in dividends, net interest, and rental income of persons, respectively. *See also Capital consumption adjustment and Inventory valuation adjustment.*

Quarterly Census of Employment and Wages (QCEW).—The Quarterly Census of Employment and Wages is a program of the Bureau of Labor Statistics (BLS) which collects data from the administration of the state unemployment insurance system. The data originate from employers' quarterly contributions reports filed on form ES 202 with state employment security agencies. The data, which are provided to BEA by the BLS, include quarterly wages and monthly employment by county and industry. *See also ES-202 and Wage and salary disbursements.*

Quasi-individuals.—Quasi-individuals consist of nonprofit institutions that primarily serve individuals, private noninsured welfare funds, and private trust funds. *See also Persons.*

Regions.—BEA developed a regional classification of the states and the District of Columbia in the mid-1950s.⁴ The eight regional classifications, Far West, Great Lakes, Mideast, New England, Plains, Rocky Mountain, Southeast, and Southwest, are based on the homogeneity of the states in terms of economic characteristics, such as the industrial composition of the labor force, and in terms of demographic, social, and cultural characteristics. *See also Geographic areas.*

Rental income of persons with capital consumption adjustment.—Rental income of persons with capital consumption adjustment is the net income of persons from the rental of real property except for the income of persons primarily engaged in the real estate business, the imputed net rental income of owner-occupants of housing, and the royalties received by persons from patents, copyrights, and rights to natural resources. The rental income of noninsured pension funds is imputed to persons and counted as part of rental income of persons with capital consumption adjustment. *See also Capital consumption adjustment and Proprietors' income.*

Residence adjustment.—The residence adjustment is the net flow of net labor earnings of interarea commuters. The state and county estimates of personal income are presented by the state and county of residence of the income recipients. However, the source data for most of the components of wage and salary disbursements, supplements to wages and salaries, and contributions for government social insurance are on a place-of-work basis. Consequently, a residence adjustment is made to convert the estimates

⁴See Charles Schwartz, Robert Graham, Henry Shryock, and Morris Ullman, (1955) *Description of Commerce Department's Proposed New Regional Classification of States*. A list of the regions and their constituent states is available on BEA's Web site at <http://www.bea.gov>.

based on these source data to a place-of-residence basis.⁵ See also *Net labor earnings and “Geographic characteristics of the source data” in Chapter I Introduction.*

Residence, place of.—The place of residence of an individual is the state and county in which he or she lives. The residence of military personnel is the state and county in which they live while they are on military assignment, not their permanent or legal state and county of residence. The residence of seasonal migrant workers, except those working in Alaska, is the state and county in which they live while they are working; this may differ from the usual state and county of residence they report on the decennial census of population. See also *Personal income, Persons, and Residence adjustment.*

Seasonal adjustment.—The quarterly estimates of state personal income are adjusted, where appropriate, to remove from the time series of the source data the average effect of variations that normally occur at about the same time and in about the same magnitude each year—for example, weather and holidays. After seasonal adjustment, cyclical and other short-term changes in the economy stand out more clearly. For the income components for which no state-level quarterly source data are available, the quarterly series are estimated from the trend in the annual state estimates, and the resulting estimates are on a seasonally adjusted basis. See also *Annual rates.*

Sectors and legal form of organization.—In the national income and product accounts (NIPAs), gross domestic product and other major aggregates are presented in terms of three economic sectors: Business, household and institution, and general government. Businesses are classified into five categories, generally according to legal form of organization: Corporations, sole proprietorships, partnerships, other private business, and government enterprises. **Corporate business** consists of entities required to file Federal corporate tax returns (IRS Form 1120 series) and the following entities: Mutual financial institutions and cooperatives subject to Federal income tax, private noninsured pension funds, nonprofit organizations that primarily serve businesses, Federal Reserve banks, and federally sponsored credit agencies. **Sole proprietorships** are all entities that are required to file IRS Schedule C (*Profit or Loss from Business*) or Schedule F (*Farm Income and Expenses*).⁶ **Partnerships** are all entities required to file Federal partnership income tax returns, IRS Form 1065 (*U.S. Partnership Return of Income*). **Other private business** consists of tax-exempt cooperatives and all entities that are required to report rental and royalty income on IRS Schedule E (*Supplemental Income and Loss*).⁷ **Government enterprises** are government agencies that cover a substantial portion of their operating costs by selling goods and services to the public and that maintain separate accounts.⁸

⁵ In BEA’s state and local data tables, each of the components of net labor earnings—wage and salary disbursements, supplements to wages and salaries, and contributions for government social insurance—is presented by place of work. The residence adjustment is estimated for net labor earnings, and that statistic is presented by place of residence.

⁶ Also included in sole proprietorships are similar entities operated by individuals who do not meet the reporting requirements.

⁷ Also included in other private business are entities with rental and royalty income whose individual owners who do not meet the reporting requirements.

⁸ For further information, see U.S. Department of Commerce, Bureau of Economic Analysis, *Methodology Paper Series MP-5, Government Transactions* (Washington, DC: U.S. Government Printing Office, November 1988). This publication is available on BEA’s Internet site: Go to www.bea.gov and select “Methodologies.”

Sole proprietorship.—A sole proprietorship is any entity required to file IRS Schedule C (*Profit or Loss from Business*) or Schedule F (*Farm Income and Expenses*). *See also Sectors and legal form of organization and Proprietors' income with inventory valuation and capital consumption adjustments.*

Standard Industrial Classification (SIC).—The SIC is an establishment-industry classification system that was prepared by the Office of Management and Budget for use by all federal statistical agencies.⁹ The SIC is used in the presentation of the state and local area estimates of earnings by industry through 2001 for states and 2000 for counties. It is used by BEA for the estimates for the private sector only, although it is designed to cover both public and private economic activities. In the SIC, establishments are classified by the primary activity in which they are engaged, and each establishment is assigned an industry code.¹⁰ *See also North American Industry Classification System.*

Supplements to wages and salaries.—Supplements to wages and salaries consists of employer contributions for government social insurance and employer contributions for employee pension and insurance funds.

Tax-exempt cooperative.—A tax-exempt cooperative is a nonprofit business organization that is collectively owned by its members. Although tax-exempt cooperatives are incorporated, in the NIPAs these institutions are classified in the other private business sector, and their income is classified as part of proprietors' income. *See also Sectors and legal form of organization.*

Transfer payments.—*See Personal current transfer receipts.*

Wage and salary disbursements.—Wage and salary disbursements consists of the monetary remuneration of employees (including the salaries of corporate officers, commissions, tips, bonuses, and severance pay); employee gains from exercising nonqualified stock options; distributions from nonqualified deferred compensation plans; and an imputation for pay-in-kind (such as the meals furnished to the employees of restaurants). It reflects the amount of wages and salaries disbursed, but not necessarily earned (or accrued), during the year. This component is measured before deductions, such as social security contributions, union dues, and voluntary employee contributions to defined contribution pension plans, such as 401(k) plans. *See also Pay-in-kind.*

⁹ See Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual, 1997*, National Technical Information Service order no. PB 87-100012. The Manual is available on the Web site of the Occupational Safety and Health Administration: Go to www.osha.gov/oshstats/sicser.html.

¹⁰ Establishments, as defined in the SIC, are economic units, generally at a single physical location, where business is conducted or where services or industrial operations are performed.

XIV. APPENDIX

Concordance between BEA industry descriptions and NAICS codes

Line	BEA Industry Description	NAICS Code
0000	Total	...
0081*	Farm	111-112
0082*	Nonfarm	...
0090	Private	113-814
0100	Forestry, fishing, related activities, and other	113-115
0101	Forestry and logging	113
0102	Fishing, hunting, and trapping	114
0103	Agriculture and forestry support activities	115
0104	Other	**
0200	Mining	21
0201	Oil and gas extraction	211
0202	Mining (except oil and gas)	212
0203	Support activities for mining	213
0300	Utilities	22
0400	Construction	23
0401	Construction of buildings	236
0402	Heavy and civil engineering construction	237
0403	Specialty trade contractors	238
0500	Manufacturing	31-33
0510	Durable goods manufacturing	321,327-339
0511	Wood product manufacturing	321
0512	Nonmetallic mineral product manufacturing	327
0513	Primary metal manufacturing	331
0514	Fabricated metal product manufacturing	332
0515	Machinery manufacturing	333
0516	Computer and electronic product manufacturing	334
0517	Electrical equipment and appliance manufacturing	335
0518	Motor vehicles, bodies & trailers, and parts mfg.	3361-3363
0519	Other transportation equipment manufacturing	3364-3369
0521	Furniture and related product manufacturing	337
0522	Miscellaneous manufacturing	339
0530	Nondurable goods manufacturing	311-316,322-326
0531	Food manufacturing	311
0532	Beverage and tobacco product manufacturing	312
0533	Textile mills	313
0534	Textile product mills	314
0535	Apparel manufacturing	315
0536	Leather and allied product manufacturing	316
0537	Paper manufacturing	322
0538	Printing and related support activities	323

Line	BEA Industry Description	NAICS Code
0539	Petroleum and coal products manufacturing	324
0541	Chemical manufacturing	325
0542	Plastics and rubber products manufacturing	326
0600	Wholesale trade	42
0700	Retail Trade	44-45
0701	Motor vehicle and parts dealers	441
0702	Furniture and home furnishings stores	442
0703	Electronics and appliance stores	443
0704	Building material and garden supply stores	444
0705	Food and beverage stores	445
0706	Health and personal care stores	446
0707	Gasoline stations	447
0708	Clothing and clothing accessories stores	448
0709	Sporting goods, hobby, book and music stores	451
0711	General merchandise stores	452
0712	Miscellaneous store retailers	453
0713	Nonstore retailers	454
0800	Transportation and warehousing	48-49
0801	Air transportation	481
0802	Rail transportation	482
0803	Water transportation	483
0804	Truck transportation	484
0805	Transit and ground passenger transportation	485
0806	Pipeline transportation	486
0807	Scenic and sightseeing transportation	487
0808	Support activities for transportation	488
0809	Couriers and messengers	492
0811	Warehousing and storage	493
0900	Information	51
0901	Publishing industries, except Internet	511
0902	Motion picture and sound recording industries	512
0903	Broadcasting, except Internet	515
0904	Internet publishing and broadcasts	516
0905	Telecommunications	517
0906	ISPs, search portals, and data processing	518
0907	Other information services	519
1000	Finance and insurance	52
1001	Monetary authorities - central bank	521
1002	Credit intermediation and related activities	522
1003	Securities, commodity contracts, investments	523
1004	Insurance carriers and related activities	524
1005	Funds, trusts, and other financial vehicles	525
1100	Real estate and rental and leasing	53
1101	Real estate	531
1102	Rental and leasing services	532

Line	BEA Industry Description	NAICS Code
1103	Lessors of nonfinancial intangible assets	533
1200	Professional and technical services	54
1300	Management of companies and enterprises	55
1400	Administrative and waste services	56
1401	Administrative and support services	561
1402	Waste management and remediation services	562
1500	Educational services	61
1600	Health care and social assistance	62
1601	Ambulatory health care services	621
1602	Hospitals	622
1603	Nursing and residential care facilities	623
1604	Social assistance	624
1700	Arts, entertainment, and recreation	71
1701	Performing arts and spectator sports	711
1702	Museums, historical sites, zoos, and parks	712
1703	Amusement, gambling, and recreation	713
1800	Accommodation and food services	72
1801	Accommodation	721
1802	Food services and drinking places	722
1900	Other services, except public administration	81
1901	Repair and maintenance	811
1902	Personal and laundry services	812
1903	Membership associations and organizations	813
1904	Private households	814
2000	Government and government enterprises	...
2001	Federal, civilian	...
2002	Military	...
2010	State and local	...
2011	State government	...
2012	Local government	...

* In Tables SA05, SA06, and SA07 farm has a line code of 0081 and nonfarm has a line code of 0082. In Tables SA25 and SA27 farm has a line code of 0070 and nonfarm has a line code of 0080.

** "Other" consists of U.S. residents employed by international organizations and foreign embassies and consulates in the United States.

Concordance between BEA industry descriptions and SIC codes

<u>Line</u>	<u>BEA Industry Description</u>	<u>SIC Code</u>
0000	Total	...
0081*	Farm	01-02
0082*	Nonfarm	...
0090	Private	
0100	Agricultural services, forestry, fishing & other	
0110	Agricultural services	07
0120	Forestry, fishing, and other	
0121	Forestry	08
0122	Fishing	
0123	Other	**
0200	Mining	B
0210	Metal mining	10
0220	Coal mining	12
0230	Oil and gas extraction	13
0240	Nonmetallic minerals, except fuels	14
0300	Construction	C
0310	General building contractors	15
0320	Heavy construction contractors	16
0330	Special trade contractors	17
0400	Manufacturing	D
0410	Durable goods	
0413	Lumber and wood products	24
0417	Furniture and fixtures	25
0420	Stone, clay, and glass products	32
0423	Primary metal industries	33
0426	Fabricated metal products	34
0429	Industrial machinery and equipment	35
0432	Electronic and other electric equipment	36
0435	Motor vehicles and equipment	371
0438	Other transportation equipment	372-379
0441	Instruments and related products	38
0444	Miscellaneous manufacturing industries	39
0447	Ordnance	
0450	Nondurable goods	
0453	Food and kindred products	20
0456	Tobacco products	21
0459	Textile mill products	22
0462	Apparel and other textile products	23
0465	Paper and allied products	26
0468	Printing and publishing	27
0471	Chemicals and allied products	28

Line	BEA Industry Description	SIC Code
0474	Petroleum and coal products	29
0477	Rubber and miscellaneous plastics products	30
0480	Leather and leather products	31
0500	Transportation and public utilities	E
0510	Railroad transportation	40
0520	Trucking and warehousing	42
0530	Water transportation	44
0540	Other transportation	41, 45-49
0541	Local and interurban passenger transit	41
0542	Transportation by air	45
0543	Pipelines, except natural gas	46
0544	Transportation services	47
0560	Communications	48
0570	Electric, gas, and sanitary services	49
0610	Wholesale trade	F
0620	Retail trade	G
0621	Building materials and garden equipment	52
0622	General merchandise stores	53
0623	Food stores	54
0624	Automotive dealers and service stations	55
0625	Apparel and accessory stores	56
0626	Home furniture and furnishings stores	57
0627	Eating and drinking places	58
0628	Miscellaneous retail	59
0700	Finance, insurance, and real estate	H
0710	Depository and nondepository institutions	60, 61
0730	Other finance, insurance, and real estate	62-65, 67
0731	Security and commodity brokers	62
0732	Insurance carriers	63
0733	Insurance agents, brokers, and services	64
0734	Real estate	65
0735	Combined real estate, insurance, etc.	
0736	Holding and other investment offices	67
0800	Services	I
0805	Hotels and other lodging places	70
0810	Personal services	72
0815	Private households	88
0820	Business services	73
0825	Automotive repair, services, and parking	75
0830	Miscellaneous repair services	76
0835	Amusement and recreation services	79
0840	Motion pictures	78
0845	Health services	80
0850	Legal services	81
0855	Educational services	82

Line	BEA Industry Description	SIC Code
0860	Social services	83
0865	Museums, botanical, zoological gardens	84
0870	Membership organizations	86
0875	Engineering and management services	87
0880	Miscellaneous services	89
0900	Government and government enterprises	...
0910	Federal, civilian	...
0920	Military	...
0930	State and local	...
0931	State government	...
0932	Local government	...

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