

Wage and Salary Disbursements

Wage and salary disbursements are defined as the monetary remuneration of employees. This remuneration includes the compensation of corporate officers; commissions, tips, and bonuses; voluntary employee contributions to certain deferred compensation plans, such as 401(k) plans; and receipts in kind, or pay-in-kind, that represent income (see "Imputation" in the "Technical Notes").

Wage and salary disbursements are measured before deductions, such as social security contributions and union dues, 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.

Wage and salary disbursements accounted for over 57 percent of total personal income at the national level in 2001 (see table A, which also shows the relationship of the major components of wages and salaries to total personal income).

The State and county estimates of about 98 percent of wages and salaries for approximately 90 private industries, for Federal Government civilian employees, and for State and local government employees are based on the data that are summarized by county and by NAICS six-digit industry on form ES-202 by the State employment security agencies (ESA's). These data are assembled by the Bureau of Labor Statistics (BLS) of the Department of Labor (see table B, for the relationship between the data published by BLS and the national wages and salaries in the BEA county estimates). The summarized data are from quarterly State unemployment insurance (UI) contribution reports that are filed with an ESA by the employers in the industries that are covered by, and subject to, that State's UI laws. Under most of these laws, wages and

salaries include bonuses, tips, and the cash value of meals and lodging provided by the employer--that is, pay-in-kind.¹

The estimates of wages and salaries for a few industries are based on the ES-202 data that are available and on other data, because these three industries--agricultural services, private education, and religious membership organizations--are only partially covered by State UI programs. The ES-202 data for each of these industries are divided into the fully covered portion and the incompletely covered portion. The estimates are then calculated as the sum of (1) the fully covered portion, which is based on the ES-202 data, and (2) the incompletely covered portion, which is primarily based on other data.

The estimates of wages and salaries for industries that are not covered by UI programs or that are fully covered in only a few States are primarily based on data other than ES-202 data. The data on which these estimates are based are specified in the relevant section.

The sources of data and the methods that are used to prepare the estimates of wage and salary disbursements are described in two sections: Wages and salaries that are covered by the UI programs and wages and salaries that are not covered by the UI programs.

Wages and salaries covered by the UI programs

The estimates of wages and salaries that are covered by the State UI programs or by the UI program for Federal civilian employees are based on ES-202 data for quarterly wages and salaries, or payrolls. However, these data do not precisely meet BEA's statistical and

1. State UI laws require employers to estimate (if applicable) the cash value of pay-in-kind and to add the estimate to the cash pay in their report of their payrolls. However, because employers are not required to distinguish between the two types of pay in their reports, it is doubtful that many comply with this requirement.

Among the covered industries, pay-in-kind is significant only in water transportation, eating and drinking places, and hotels and other lodging places.

conceptual requirements; therefore, the data must be adjusted. These adjustments affect both the industrial and the geographic patterns of State and county personal income.

Adjustment for industry nonclassification.--The industry detail of the ES-202 data regularly shows minor amounts of payroll--only about 0.2 percent of total payrolls nationally--that have not been assigned to any industry. The industrial classification scheme used by BEA does not permit this not-elsewhere-classified category. Therefore, for each State and county, the amount in this category is distributed among the industries in proportion to the industry-classified ES-202 payrolls. Because this adjustment only apportions the amount reported for a county within that county, no error is introduced into the total estimate for the county.

Adjustment for statewide reporting.--A State UI contribution report is usually filed for each establishment by industry and by county; however, a report may be filed by an employer for a group of very small establishments by State, not by county. Therefore, county data are unavailable for these establishments.

The State totals of the wages and salaries reported for these statewide units for an industry are allocated to counties in proportion to the distribution of the wages and salaries for the industry that is reported by county. The statewide totals are allocated for each private-sector industry and for five government components--Federal civilian, State education, State noneducation, local education, and local noneducation.

Adjustments for misreported wage and salary data.--An estimate of the wages and salaries that were misreported in the UI contribution reports is added to the ES-202 data for each private industry. Because State and county data are unavailable, the national estimate for each

industry is allocated to States and counties in proportion to the ES-202 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, 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: Taxicabs, which is part of local and interurban passenger transit; eating and drinking places; hotels and other lodging places; amusement and recreation services; and personal services. For each of these industries, the national estimate of the unreported tips is allocated to States and counties in proportion to the ES-202 payroll data for the industry.

Further, the wages and salaries that employees contribute to tax-deferred thrift savings plans--such as 401(k) plans--are omitted from the UI contribution reports of some employers in some States, although this form of underreporting is diminishing. Beginning with 1996, Alaska employers are no longer required to include the voluntary savings contributions with reported wages and salaries, but only the reported wages and salaries of the State government appear to have been affected by this change so far.

Adjustments for Federal civilian payrolls.--Large proportions of the ES-202 data for the wages and salaries of the civilian employees of some Federal Government agencies in New York and Wisconsin are reported by State, not by county. Therefore, the county estimates of the wages and salaries of these employees are derived from employment data provided by the Office of Personnel Management (OPM).

2. 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.

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The State estimates of the wages and salaries of the civilian employees of the Postal Service in New York is allocated to the counties in the State in proportion to the OPM employment data for the agency.

In addition, in the ES-202 payroll 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 are allocated to States in proportion to their congressional representation. The State estimates of this adjustment--together with the State estimates of wages and salaries for all Federal civilian employees--are allocated to counties in proportion to the ES-202 payroll data or the OPM employment data.

Adjustment for a component of State government payrolls.--The geographic coding of the ES-202 data for the noneducation component of State government payrolls appears to attribute too much of the payrolls to the counties of the State capitals in six States. Therefore, data from the 1990 Census of Population are used in the preparation of the county estimates of the wages and salaries for these employees.

The 1991-2001 county estimates of the wages and salaries for the noneducation component for Illinois, Michigan, New Jersey, Rhode Island, Tennessee, and Wisconsin are based on data for the wages and salaries of State government employees in noneducation by place of work; these data are derived from unpublished tabulations of journey-to-work data from the census.

Beginning in 2001, wage and salary estimates for the establishments of American Indian Tribal Councils are included in the local government component. Prior to 2001, these estimates were included in the relevant private industry components. For example, wages and salaries

that were earned in casinos owned by tribal councils before 2001 were included in the Standard Industrial Classification services component "Amusement and Recreational Services."

Adjustments for elements that are excluded from the ES-202 data.--The ES-202 payroll data for some industries exclude small portions of the wages in those industries either because the employing establishments are not covered by the UI programs or because a portion of the establishments' payrolls are not subject to UI reporting. The following procedure is used to prepare the State and county estimates for the industries that include these noncovered elements.

A national estimate of each element is prepared, and then it is allocated to States on the basis of the best available related economic series. The State estimate of the element is added to the ES-202 payroll data for the industry of the element in order to augment the State data on which the State estimates for that industry are based. Then, the national estimate for the industry is allocated to States in proportion to the augmented ES-202 data.

Because county data for the noncovered elements are unavailable, the State estimates are allocated to the counties in proportion to the unaugmented ES-202 data.

This procedure is used to prepare the State and county estimates of the following elements in the following industries:

- Payrolls of railroad carrier affiliates, which are classified in transportation services, and payrolls of railway labor organizations, classified in membership organizations other than religious;
- Payrolls of nonprofit organizations that are exempt from UI coverage because they have fewer than four employees--in printing and publishing, miscellaneous manufacturing, credit agencies

other than banks, real estate, holding and other investment companies, hotels, and membership organizations other than religious;

- Wages and salaries of students employed by the institutions of higher education in which they are enrolled, which are classified in private education, State government education, and local government education;
- Pay-in-kind of the members of religious orders who teach at private colleges and universities but who do not receive cash wages;
- Pay-in-kind of workers in private hospitals who do not receive cash wages (mainly interns, student nurses, and members of religious orders);
- Salaries of elected officials and members of the judiciary in State and local governments;
- Salaries of corporate officers in Washington State;
- Commissions received by insurance solicitors and real estate agents; and
- Allowances paid to Federal civilian employees in selected occupations for uniforms.

Wages and salaries not covered by the State UI programs

The estimates of wages and salaries for eight industries are primarily based on data other than ES-202 data. The ES-202 data are inadequate for five industries--farms, farm labor contractors, private households, private elementary and secondary schools, and religious membership organizations--because these industries are extensively covered by State UI programs in only a few States. The ES-202 data are unavailable for three industries--railroads, military, and "other"--because these industries are not covered by State UI programs.³ Consequently, the wages and salaries of all eight industries are treated as if they were not covered by State UI programs. In

3. Military and "other" are BEA classifications.

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 each of these industries except farm labor contractors, railroads, and "other."

Farms.--The estimates of wages and salaries for farms consist of the cash wages and the pay-in-kind of hired farm labor, including the salaries received by the owner-operators of farm sole proprietorships, partnerships, and family-held corporations. The State estimates of the cash wages of hired farm labor are based on the estimates of farm labor expenses that are prepared by the Department of Agriculture. In order to prepare the county estimates, the estimates for most States are allocated to counties by distributions of the wages paid to farm employees from the 1997 Census of Agriculture.

However, farm employees have either mandatory UI coverage or almost complete voluntary coverage in the following States: Arizona, California, Connecticut, Delaware, Florida, Hawaii, Massachusetts, New Jersey, Rhode Island, and Washington. Therefore, the county estimates of cash wages for these States are derived from ES-202 data.

The State estimates of pay-in-kind are based on estimates prepared by the Department of Agriculture. The State estimates are allocated to counties in proportion to the number of hired farm workers who worked 150 days or more in 1997 from the 1997 census.

Farm labor contractors.--This industry is classified in agricultural services. Farm labor contractors and their employees are only partially covered by UI laws in most States. However, in Arizona and California all the employees in this industry are covered.

The State and county estimates for most States are based on the data for contract farm labor expenses from the 1992 and 1997 Censuses of Agriculture. For Arizona and California, the estimates are based on the ES-202 payroll data.

Railroads.--The 1991-2001 estimates of the wages and salaries of railroad employees are based mainly on data provided by the Railroad Retirement Board (RRB), which administers the Railroad Unemployment Insurance and Retirement systems. The railroad industry is not covered by State unemployment insurance, and the RRB does not require railroads to submit employment and wage data by establishment. However, the RRB does collect data from each railroad company on its total payroll, and, for each railroad company employee, on the wages and salaries that are subject to the railroad UI and retirement tax. The State and county of residence of each employee can also be identified in the RRB records.

The 1991-2001 estimates of railroad wages and salaries by State and county of employee residence are based on the sum of the wages of employees whose wages do not exceed the ceiling for RRB taxation plus estimates of the wages of the employees with wages above the ceiling. To estimate the latter, the national total of the wages of railroad employees receiving below-ceiling wages--summed from the RRB employee data--is subtracted from the national total of the payrolls of all railroad companies--summed from the RRB company data--to yield the total of the wages of the employees with above-ceiling wages. This total is allocated to States and counties in proportion to the number of employees receiving above-ceiling wages, as determined from the RRB employee data.

To be consistent with the estimates of wages and salaries for other industries, the State and county estimates of railroad wages and salaries are converted to a place-of-work basis. This is accomplished through the use of unpublished journey-to-work (JTW) data for railroad

employees from the 1990 Census of Population. From these data, the proportion of the wages of railroad employees who lived in a county but worked in another, specified county was calculated. Each of these proportions was multiplied by the corresponding 1991-2000 place-of-residence wage estimates to calculate the intercounty flows of wages due to commuting; each of these flows was subtracted from the county of residence and added to the county of work to adjust the place-of-residence wage estimates to a place-of-work basis.

The 2001 State and county estimates of railroad wages and salaries reflect the geographic distribution of the 2000 estimates.

Private households.--The national estimates of cash wages for private households is allocated to States--and the State estimates, to counties--in proportion to the series prepared from unpublished 1990 Census JTW data. Summations of these data by place of work were used as the allocators for 1990. The 1990 summations for the States were extrapolated to 1991-2001 by the annual change in the civilian population, but the 1990 county summations were used as the county allocators for the 1991-2001 estimates.

The national estimates of pay-in-kind are allocated to States and counties by a place-of-work series for private household employment that is derived from the JTW data.

Private elementary and secondary schools.--In about half of the States, the county estimates of both cash wages and pay-in-kind are derived from the best available series chosen from (1) data on employment in private elementary and secondary schools published by the State departments of education, (2) employment data from the U.S. Department of Education's

1998 Survey of private elementary and secondary schools, or (3) relevant wage data from the Census Bureau's annual County Business Patterns (CBP).⁴

In the other States, the UI coverage is complete enough so that the ES-202 data can be used as the basis for the county estimates. In these States, the ES-202 distribution of wages and salaries is the basis for the estimates of cash pay, and the ES-202 distribution of employment is the basis for the estimates of pay-in-kind.

The State estimates of cash wages are based on the CBP data, which are the data with the most uniform national coverage. The State estimates of pay-in-kind reflect the number of full-time teachers in religious orders from the Official Catholic Directory (OCD).⁵

Religious membership organizations.--The State estimates of cash wages are based on CBP data, and the estimates of pay-in-kind are based on OCD data. However, the CBP county data are too frequently suppressed to avoid disclosure of information about individual organizations to be useful; therefore the State estimates are allocated to counties in proportion to the distribution of the civilian population.

4. The CBP data are tabulated from the administrative records of the old-age, survivors, and disability insurance program. This program exempts nonprofit religious organizations, such as many of these schools, from mandatory coverage, but its provisions for elective coverage have resulted in the participation of most of these schools and many of the other religious organizations.

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 number of teachers does not distinguish between those who receive cash wages and those who receive only pay-in-kind, nor does it distinguish between those who teach in elementary and secondary schools and those who teach in colleges and universities.

Military.--The estimates of wages and salaries for the military consist of the estimates of the cash wages (including allowances) of full-time military personnel and of the members of the military Reserves including the National Guard and of the estimates of the pay-in-kind provided to enlisted personnel.⁶

The county estimates of wages and salaries are derived from source data from the Department of Transportation for the Coast Guard and from the Department of Defense for each of the other services. For military bases that extend across county boundaries, source data by county are available only for Forts Benning, Gordon, and Stewart, Georgia; for Wright-Patterson Air Force Base, Ohio; and for Quantico Marine Corps Base, Virginia; the data for each of the other intercounty bases are assigned to the county that contains the base headquarters.

The State estimates of cash wages for full-time military personnel, which are based mainly on payroll data, are allocated to counties in proportion to the number of personnel for the Coast Guard and to the county payroll estimates prepared by the Department of Defense for each of the other services.

The State estimates of cash pay for the Reserves are based on payroll data. Because county payroll data are unavailable, the State estimates are allocated to counties in proportion to the distribution of the civilian population.

The national estimate for the pay-in-kind of the full-time personnel of each service is allocated to States and counties in proportion to the number of enlisted personnel. The national estimate of the pay-in-kind of the Reserves is allocated to States and counties in proportion to the estimates of cash pay.

6. Officers do not receive pay-in-kind. The imputation for clothing is limited to standard issue clothing; it does not include clothing and equipment for special or unusual duties.

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Other.--This category consists of the wages and salaries of U.S. residents who are employed in the United States by international organizations and by foreign embassies and consulates.⁷ The national estimate is allocated to States and to counties in proportion to estimates of the administrative expenditures of these organizations in 1968.⁸

7. This category corresponds to a portion of the rest-of-the-world category in the national estimates, which also includes the addition of the wages and salaries of U.S. residents who commute to work in Canada and the subtraction of the wages and salaries of foreign residents who work in the United States.

8. The estimates of the expenditures for 1968 were prepared by the Balance of Payments Division of BEA.

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Table A.--Relative Importance to Personal Income of Wage and Salary Disbursements, by Component, United States, 2001

	Millions of dollars	Percent of personal income
Personal Income /1/..	8,677,490	100.00
Wage and salary disbursements/2/..	4,947,350	57.01
Farm..	18,393	0.21
Forestry, fishing, related activities and other/3/..	12,842	0.15
Mining..	32,427	0.37
Utilities..	39,647	0.46
Construction..	276,316	3.18
Manufacturing..	710,537	8.19
Durable goods manufacturing..	470,825	5.43
Wood product manufacturing..	17,600	0.20
Nonmetallic mineral product manufacturing..	21,041	0.24
Primary metal manufacturing..	25,786	0.30
Fabricated metal product manufacturing..	62,991	0.73
Machinery manufacturing..	62,089	0.72
Computer and electronic product manufacturing..	113,814	1.31
Electrical equipment and appliance manufacturing..	22,425	0.26
Transportation equipment manufacturing..	98,102	1.13
Furniture and related product manufacturing..	18,994	0.22
Miscellaneous manufacturing..	27,983	0.32
Nondurable goods manufacturing..	239,712	2.76
Food manufacturing..	50,066	0.58
Beverage and tobacco product manufacturing..	9,550	0.11
Textile mills..	9,961	0.11
Textile product mills..	5,456	0.06
Apparel manufacturing..	9,979	0.11
Leather and allied product manufacturing..	1,756	0.02
Paper manufacturing..	26,481	0.31
Printing and related support activities..	28,314	0.33
Petroleum and coal products manufacturing..	7,884	0.09
Chemical manufacturing..	58,292	0.67
Plastics and rubber products manufacturing..	31,973	0.37
Wholesale trade..	285,057	3.29
Retail trade..	356,105	4.10
Transportation and Warehousing..	165,916	1.91
Air transportation..	32,128	0.37
Rail transportation..	12,383	0.14
Water transportation..	2,791	0.03
Truck transportation..	48,709	0.56
Transit and ground passenger transportation..	8,645	0.10
Pipeline transportation..	4,265	0.05
Scenic and sightseeing transportation..	704	0.01
Support activities for transportation..	20,150	0.23
Couriers and messengers..	19,297	0.22
Warehousing and storage..	16,844	0.19

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Information..	209,122	2.41
Publishing industries, except Internet..	61,960	0.71
Motion picture and sound recording industries..	17,811	0.21
Broadcasting, except Internet..	18,260	0.21
Internet publishing and broadcasting..	3,233	0.04
Telecommunications..	73,550	0.85
ISPs, search portals, & data processing..	32,602	0.38
Other information services..	1,706	0.02
Finance and insurance..	375,226	4.32
Real estate and rental and leasing..	70,568	0.81
Professional and technical services..	431,297	4.97
Management of companies and enterprises..	120,940	1.39
Administrative and waste services..	196,738	2.27
Educational services..	68,473	0.79
Health care and social assistance..	448,149	5.16
Arts, entertainment, and recreation..	47,390	0.55
Accommodation and food services..	144,057	1.66
Other services, except public administration..	138,002	1.59
Government and government enterprises..	800,148	9.22
Federal, civilian..	132,601	1.53
Military..	54,074	0.62
State and local..	613,473	7.07

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.

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Table B.--National Wages and Salaries in the Bureau of Economic Analysis
County Estimates and Wages from the Bureau of Labor Statistics

	[Billions]			
		Line	2000	2001
Total wages, BLS /1/...		1	4,587.7	4,695.1
Plus: Adjustments made by BEA:				
For unreported wages and unreported tips on employment tax returns...		2	112.9	118.1
For selected industries /2/...		3	116.3	117.5
Other /3/...		4	17.4	16.7
Equals: Wage and salary disbursements, BEA...		5	4,834.3	4,947.4

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

2. Consists of the difference between estimates from more comprehensive source data and BLS wages and salaries for agriculture, forestry and fishing; railroad transportation; health services; educational services; social services; membership organizations; private households; and the Federal Government.

3. Consists of wages and salaries for the insurance agents, for the students and their spouses employed by public colleges or universities, for the nonprofit organizations not participating in the UI program, and of other adjustments.

BEA Bureau of Economic Analysis

BLS Bureau of Labor Statistics