

# Comprehensive Revision of Local Area Personal Income

## New Statistics for 2008

## Revised Statistics for 1969–2007

By David G. Lenze

COUNTY personal income growth in 2008 ranged from –48 percent in Slope County, ND, to 54 percent in Faulk County, SD. For the nation, personal income grew 2.9 percent. In 2007, county personal income growth ranged from –15 percent in McPherson, NE, to 81 percent in Sully, SD; nationally, personal income grew 5.5 percent. Inflation, as measured by the national price index for personal consumption expenditures, was 3.3 percent in 2008 and 2.7 percent in 2007.

The county personal income estimates presented here complete the successively more detailed series of data releases depicting the geographic distribution of the nation's personal income for 2008. A national estimate was released on February 2, 2009, state estimates were released in March 2009, and estimates for metropolitan statistical areas (MSAs) were released in August 2009. The county estimates provide the first glimpse of property income and transfer receipts in nonmetropolitan counties in 2008 and a more detailed look at the distribution of economic activity and sources of income within multicounty MSAs.<sup>1</sup>

The estimates discussed in this article are the result of the most recent comprehensive revision of the local area personal income accounts, which was released in April 2010. In comprehensive revisions, various improvements in methodologies, classifications, definitions, and concepts are introduced into BEA's economic accounts to ensure that the accounts continue to reflect the evolving American economy. This comprehensive revision incorporated changes that were adopted as part of the comprehensive revisions of the national income and product accounts and state personal income accounts, which were released in July and October 2009, respectively.

This article discusses the patterns and sources of growth in 2008 in nonmetropolitan counties, the newly organized counties in Alaska, the source data used to prepare the estimates, and details of the comprehensive revision of local area personal income and employment statistics. A separate box discusses al-

ternative measures of county employment and wages (see page 30).

### Growth in Nonmetropolitan Counties

Nonmetropolitan counties tend to be sparsely populated areas with a strong presence of industries that specialize in the acquisition and use of natural resources—activities such as mining and farming.

For statistical purposes, nonmetropolitan counties are those counties that are not part of an MSA. As defined by the Office of Management and Budget (OMB), an MSA has at least one urbanized area of 50,000 or more residents plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. MSAs are defined in terms of whole counties. By these criteria, there are 2,031 nonmetropolitan counties and 1,081 metropolitan counties in the United States.

Nonmetropolitan counties are often rural and distant from large urban areas, but not always. In addition, not all counties with small populations and large agricultural sectors are nonmetropolitan counties. With only 973 residents and 66 percent of personal income arising in the farm sector, Hayes County, NE, fits the common notion of a rural county. It is also nonmetropolitan according to the OMB definition. On the other hand, Delta County, TX, with just 5,455 residents, is metropolitan, one of the constituent counties in the Dallas-Fort Worth-Arlington, TX, MSA. Its strong commuting ties with the urban core is reflected in the fact that gross commuters' earnings inflows amounted to 66 percent of net earnings by place of residence in 2008. Stark County, IL, is also a metropolitan county, one of the five counties constituting the Peoria, IL, MSA, despite its small population (6,074 residents) and strong farm presence. Farming accounted for 45 percent of earnings in 2009 in Stark County.

Overall, the nonmetropolitan share of the nation's earnings in natural resources in 2008 was much larger than its share of the nation's earnings in other industries. Nonmetropolitan counties accounted for 11 percent of U.S. earnings, but they accounted for 39 percent of national earnings in the natural resources sector (table A). The nonmetropolitan share of

1. Estimates of county compensation for 2008 were released in December 2009.

manufacturing earnings (15 percent), government earnings (14 percent), and transportation earnings (13 percent) are also relatively high. In contrast, relatively little, about 4 percent, of earnings in the information, finance, and professional services industries comes from nonmetropolitan counties. Those activities were concentrated in metropolitan counties.

In 2008, personal income growth slowed less in the nonmetropolitan portion of the United States than it did in the metropolitan portion. On average, personal income growth slowed from 5.8 percent in 2007 to 4.5 percent in 2008 in nonmetropolitan counties, while growth in metropolitan counties slowed from 5.5 percent to 2.7 percent.

Personal income growth slowed in 61 percent of the nation's nonmetropolitan counties and fell in 90 nonmetropolitan counties. In most of the 90 counties where personal income declined, the farm sector income accounted for the entire drop. Coincidentally, the farm sector also accounted for the bulk of the personal income growth in the fastest growing nonmetropolitan counties.

The different industrial compositions of metropolitan and nonmetropolitan areas provide insights into the faster earnings growth in the nonmetropolitan portion of the country, where earnings grew 3.7 percent in 2008, compared with the metropolitan portion, where earnings grew 1.9 percent. Not only did farm earnings grow at a faster pace in nonmetropolitan counties than in metropolitan counties (22 percent, compared with 4 percent), farming's greater importance in nonmetropolitan economies meant that it contributed 1.1 percentage points to nonmetropolitan earnings growth and a negligible amount to metropol-

itan earnings growth (table B). Mining and government grew at roughly the same rates in both metropolitan and nonmetropolitan counties, but those industries' greater importance in nonmetropolitan counties translated into slightly larger contributions to earnings growth.

### Per capita personal income

Personal income per person in nonmetropolitan counties in 2008 ranged from \$140,275 in Loving County, TX, to \$12,558 in Buffalo County, SD. Dividends, interest, and rent (property income) was the source of most of Loving's income and amounted to \$77,000 per person. Buffalo's per capita income was held down by several factors, including a small number of jobs relative to the county's population and a relatively large proportion of those jobs being held by nonresident commuters. Property income was less than \$1,500 per person.

### Economic Stimulus Act of 2008 rebates

In BEA's personal income statistics, the income tax rebates authorized by the Economic Stimulus Act of 2008 for individuals who pay no income taxes (or for whom the rebate exceeded the amount of the income

**Table A. Industrial Structure of Metropolitan and Nonmetropolitan Portions of the United States for 2008**

|  | Earnings by place of work<br>(billions of dollars) |                      | Industry's share of<br>area's total earnings<br>(percent) |                      | Non-<br>metropolitan<br>area's share<br>of national<br>earnings<br>(percent) |
|--|--|----------------------|---|----------------------|--|
|  | Metropolitan                                       | Non-<br>metropolitan | Metropolitan  | Non-<br>metropolitan |  |
| Natural resources <sup>1</sup> .....                   | 129.8  | 82.4                 | 1.6   | 8.6                  | 38.8   |
| Construction .....                                     | 498.1  | 60.5                 | 6.1   | 6.3                  | 10.8   |
| Manufacturing .....                                    | 842.0  | 150.1                | 10.3  | 15.7                 | 15.1   |
| Wholesale and retail trade .....                       | 950.0  | 107.2                | 11.6  | 11.2                 | 10.1   |
| Transportation, warehousing, and<br>utilities .....    | 330.8  | 51.1                 | 4.0   | 5.3                  | 13.4   |
| Information .....                                      | 296.0  | 10.9                 | 3.6   | 1.1                  | 3.5  |
| Finance and insurance .....                            | 657.1  | 29.3                 | 8.0   | 3.1                  | 4.3  |
| Real estate and rental and leasing .....               | 147.2  | 11.4                 | 1.8   | 1.2                  | 7.2  |
| Professional and business services <sup>2</sup> .....  | 1,394.7  | 63.6                 | 17.1  | 6.6                  | 4.4  |
| Education, health care, and social<br>assistance ..... | 952.2  | 102.2                | 11.6  | 10.7                 | 9.7  |
| Leisure, hospitality, and other <sup>3</sup> .....     | 640.2  | 81.9                 | 7.8   | 8.5                  | 11.3   |
| Government .....                                       | 1,337.8  | 208.4                | 16.4  | 21.7                 | 13.5   |
| Local government .....                                 | 680.7  | 119.2                | 8.3   | 12.4                 | 14.9   |
| <b>Total</b> .....                                     | <b>8,175.9</b>                                     | <b>959.0</b>         | <b>100.0</b>  | <b>100.0</b>         | <b>10.5</b>  |

1. Consists of farm; forestry, fishing, and related activities; and mining.

2. Consists of professional and technical services; management of companies and enterprises; and administrative and waste services.

3. Consists of arts, entertainment and recreation; accommodation and food services; and other services, except public administration.

**Table B. Percent Change and Contribution to Growth in Earnings by Place of Work for Metropolitan and Nonmetropolitan Portions of the United States for 2008**

|   | Percent change from<br>preceding year |                      | Contribution to growth<br>in total earnings<br>(percentage points) <sup>1</sup> |                      |
|---|---------------------------------------|----------------------|---|----------------------|
|   | Metro-<br>politan                     | Nonmetro-<br>politan | Metro-<br>politan   | Nonmetro-<br>politan |
| Farm, forestry, fishing, and related activities ..... | 4.0                                   | 22.2                 | 0.02  | 1.06                 |
| Mining .....  | 17.1                                  | 17.2                 | 0.15  | 0.45                 |
| Oil and gas extraction .....                          | 20.7                                  | 18.2                 | 0.11  | 0.11                 |
| Mining (except oil and gas) .....                     | 2.9                                   | 11.3                 | 0.00  | 0.12                 |
| Support activities for mining .....                   | 15.0                                  | 22.7                 | 0.03  | 0.22                 |
| Utilities .....                                       | 4.5                                   | 6.2                  | 0.03  | 0.07                 |
| Construction .....                                    | -7.9                                  | -7.2                 | -0.53   | -0.51                |
| Manufacturing .....                                   | -0.4                                  | -0.7                 | -0.05   | -0.11                |
| Durable-goods manufacturing .....                     | -1.2                                  | -1.4                 | -0.08   | -0.14                |
| Nondurable-goods manufacturing .....                  | 1.0                                   | 0.4                  | 0.04  | 0.03                 |
| Wholesale trade .....                                 | 2.3                                   | 6.1                  | 0.12  | 0.21                 |
| Retail trade .....                                    | -0.9                                  | 1.0                  | -0.06   | 0.08                 |
| Transportation and warehousing .....                  | 1.6                                   | 3.2                  | 0.05  | 0.13                 |
| Information .....                                     | 1.0                                   | 0.4                  | 0.04  | 0.00                 |
| Finance and insurance .....                           | -0.5                                  | 4.0                  | -0.04   | 0.12                 |
| Real estate and rental and leasing .....              | -6.1                                  | -1.5                 | -0.12   | -0.02                |
| Professional and business services .....              | 3.4                                   | 4.4                  | 0.57  | 0.29                 |
| Waste management and remediation services .....       | 4.8                                   | 7.6                  | 0.01  | 0.02                 |
| Educational services .....                            | 6.6                                   | 5.0                  | 0.10  | 0.04                 |
| Health care and social assistance .....               | 6.1                                   | 5.7                  | 0.59  | 0.55                 |
| Arts, entertainment, and recreation .....             | 5.1                                   | 4.9                  | 0.06  | 0.03                 |
| Accommodation .....                                   | 1.7                                   | 3.5                  | 0.01  | 0.04                 |
| Food services and drinking places .....               | 2.3                                   | 2.6                  | 0.05  | 0.06                 |
| Other services, except public administration .....    | 4.0                                   | 4.4                  | 0.14  | 0.20                 |
| Government .....                                      | 5.0                                   | 4.6                  | 0.79  | 0.99                 |
| Federal, civilian .....                               | 3.6                                   | 3.8                  | 0.11  | 0.11                 |
| Military .....  | 7.8                                   | 8.3                  | 0.13  | 0.15                 |
| State government .....                                | 5.3                                   | 4.7                  | 0.16  | 0.21                 |
| Local government .....                                | 4.9                                   | 4.2                  | 0.39  | 0.52                 |
| <b>Total earnings</b> .....                           | <b>1.9</b>                            | <b>3.7</b>           | <b>1.95</b>   | <b>3.69</b>          |

1. An industry's contribution to growth in total earnings equals the dollar change in that industry's earnings divided by earnings for all industries in the previous year times 100.

taxes they did pay) are treated as personal current transfer receipts.<sup>2</sup> These rebates amounted to \$5.7 billion for the nonmetropolitan portion of the United States in 2008, compared with \$24.1 billion for the metropolitan portion. In some nonmetropolitan counties, these rebates were a large contributor to growth. In Starr County, TX, for example, such rebates contributed 2.5 percentage points to personal income growth of 8.8 percent. Because the eligibility criterion for the rebate was similar to that for the earned income tax credit, the state estimates of the rebate were allocated to counties using BEA's estimates of the earned income tax credit.

### Homeowner assistance payments

The 2007 and 2008 local area personal income estimates for Louisiana and Mississippi reflect the receipt of federal payments to rebuild residences destroyed or damaged by Hurricanes Katrina and Rita in 2005. These payments, arising from homeowner assistance programs initiated at the end of 2006, are counted as part of the property income component (dividends, interest, and rent) of personal income. The bulk of the payments were received by persons living in counties on or near the coast.<sup>3</sup>

In 2008, the amounts distributed declined in most Louisiana and Mississippi counties. This reduced personal income growth by as much as 16 percentage points in Hancock County, MS, and 8 percentage points in St. Bernard Parish, LA, (table C). While these counties were among the 20 fastest growing counties in 2007 because of the federal payments, in 2008, Hancock County was among the 20 slowest growing counties, and St. Bernard Parish was among the 100 slowest growing counties.

### Data for Newly Organized Areas

Skagway Borough was incorporated on June 30, 2007, as Alaska's 17<sup>th</sup> organized borough. Unlike most of the lower 48 states, Alaska is subdivided politically into boroughs that cover the entire state. Seventeen of these

2. BEA does not publish separate estimates of economic stimulus rebates by county; they are combined with several other transfer receipts on line 290 "other transfer receipts of individuals from governments" in "Table CA35 Personal Current Transfers Detail" on BEA's Web site.

3. Louisiana's Road Home Program and Mississippi's Homeowner Assistance Program are special housing programs financed through Community Development Block Grants from the U.S. Department of Housing and Urban Development. In personal income, this assistance is treated as a housing subsidy, a component of the rental income of persons, rather than as a transfer receipt, because owner-occupied housing is regarded as a household enterprise. A profit (net rental income) is imputed to these enterprises and defined as space rent plus subsidies less various expenses such as net interest and taxes. County estimates of the homeowner assistance payments were based on data obtained from the state agencies administering the programs. For a detailed derivation of rental income of persons, see lines 133-140 in table 7.12 in the national income and product accounts on BEA's Web site.

**Table C. Homeowner Assistance Payments for Selected Areas**

|                             | Homeowner assistance payments<br>(millions of dollars) |      | Contribution to personal<br>income growth<br>(percentage points) |       |
|-----------------------------|--|------|--|-------|
|                             | 2007   | 2008 | 2007   | 2008  |
| <b>Louisiana parishes</b>   |  |      |  |       |
| Allen .....                 | 8  | 7    | 1.5  | (*)   |
| Ascension .....             | 34   | 3    | 1.1  | -0.9  |
| Beauregard .....            | 15   | 15   | 1.7  | 0.1   |
| Calcasieu .....             | 300  | 153  | 5.1  | -2.3  |
| Cameron .....               | 39   | 40   | 19.0   | 0.6   |
| East Baton Rouge .....      | 146  | 3    | 0.9  | -0.9  |
| Iberia .....                | 30   | 18   | 1.3  | -0.5  |
| Jefferson .....             | 1,372  | 319  | 8.1  | -5.7  |
| Jefferson Davis .....       | 14   | 13   | 1.7  | -0.1  |
| Orleans .....               | 1,734  | 938  | 13.6   | -5.4  |
| Plaquemines .....           | 76   | 71   | 9.8  | -0.6  |
| Pointe Coupee .....         | 6  | (*)  | 1.0  | -0.8  |
| St. Bernard .....           | 352  | 244  | 36.6   | -7.9  |
| St. Charles .....           | 41   | 16   | 2.4  | -1.4  |
| St. Helena .....            | 8  | 6    | 2.9  | -0.5  |
| St. James .....             | 9  | 8    | 1.6  | -0.2  |
| St. John the Baptist .....  | 43   | 15   | 3.1  | -1.9  |
| St. Tammany .....           | 738  | 153  | 8.4  | -5.9  |
| Tangipahoa .....            | 69   | 36   | 2.3  | -1.0  |
| Terrebonne .....            | 61   | 64   | 1.8  | 0.1   |
| Vermilion .....             | 55   | 32   | 3.9  | -1.5  |
| Washington .....            | 32   | 15   | 3.0  | -1.4  |
| <b>Mississippi counties</b> |  |      |  |       |
| Hancock .....               | 401  | 122  | 32.7   | -16.2 |
| Harrison .....              | 492  | 154  | 8.7  | -5.2  |
| Jackson .....               | 503  | 122  | 13.1   | -8.3  |

\* Less than \$500,000 or 0.05 percent in absolute value

NOTE: The contribution of homeowner assistance payments to county personal income growth equals the annual change in the payments divided by personal income in the previous year times 100.

boroughs are organized, and one is unorganized (chart 1). For statistical purposes, BEA and other federal agencies subdivide the unorganized borough into 11 census areas. Skagway Borough had been part of the Skagway-Hoonah-Angoon Census Area. The remainder of that census area was renamed the Hoonah-Angoon Census Area (chart 2). Starting with data for 2008, BEA will publish separate estimates for Skagway Borough and the Hoonah-Angoon Census Area. For earlier years, data only for the old census area are available.

Although the new borough is small—only 905 persons lived there in 2008—it is not the smallest county; there are 28 counties in the U.S. with smaller populations. There were also 756 wage and salary jobs in Skagway, for a jobs to population ratio of 0.84.

The Port of Skagway is a popular cruise destination during the summer, and much of the borough's economic activity is related to tourism. It has a relatively large "arts, entertainment, and recreation" industry, accounting for nearly 14 percent of earnings (table D). Only eight counties in the United States have a larger arts, entertainment, and recreation industry (as a share of total earnings). Similarly only eight counties have a larger retail trade industry. In short, almost half of Skagway's earnings comes from four industries: retail trade (17 percent), arts (14 percent), transportation

(10 percent), and accommodations (7 percent). These four industries account for only 16 percent of earnings in the nonmetropolitan portion of the United States.

However, Skagway has no farming. In fact, Skagway lacks earnings in seven industries that account for 14 percent of earnings in the nonmetropolitan portion of the United States. and its health care sector accounts

**Table D. Select Economic and Demographic Statistics for Two New Alaskan Areas for 2008**

|   | Skagway Borough | Hoonah-Angoon Census Area | U.S. non-metropolitan portion |
|---|-----------------|---------------------------|-------------------------------|
| Personal income (millions of dollars).....            | 56.7            | 83.1                      | .....                         |
| Population (persons) .....                            | 905             | 2,182                     | .....                         |
| Per capita personal income (dollars).....             | 62,685          | 38,066                    | 31,098                        |
| Wage and salary employment (jobs).....                | 756             | 792                       | .....                         |
| Average wages per job (dollars).....                  | 38,702          | 31,448                    | 33,417                        |
| <b>Earnings by industry (percent of total)</b>        |                 |                           |                               |
| Farm .....  | 0.0             | 0.0                       | 4.6                           |
| Forestry, fishing, and related activities.....        | 0.0             | (D)                       | 1.0                           |
| Mining .....  | 1.3             | (L)                       | 3.0                           |
| Utilities .....                                       | 0.0             | (D)                       | 1.2                           |
| Construction .....                                    | 14.1            | (D)                       | 6.3                           |
| Manufacturing.....                                    | 3.3             | 1.8                       | 15.7                          |
| Wholesale trade.....                                  | 0.0             | (D)                       | 3.5                           |
| Retail trade .....                                    | 17.2            | 10.7                      | 7.7                           |
| Transportation and warehousing .....                  | 10.1            | 2.7                       | 4.1                           |
| Information .....                                     | (D)             | (D)                       | 1.1                           |
| Finance and insurance .....                           | (D)             | (D)                       | 3.1                           |
| Real estate and rental and leasing.....               | (D)             | (D)                       | 1.2                           |
| Professional, scientific, and technical services..... | (D)             | (D)                       | 3.5                           |
| Management of companies and enterprises .....         | 0.0             | 0.0                       | 0.9                           |
| Administrative and waste services .....               | (D)             | (D)                       | 2.3                           |
| Educational services .....                            | 0.0             | 0.6                       | 0.9                           |
| Health care and social assistance .....               | 0.4             | 2.4                       | 9.8                           |
| Arts, entertainment, and recreation.....              | 13.7            | (D)                       | 0.7                           |
| Accommodation and food services .....                 | 7.4             | (D)                       | 3.2                           |
| Other services, except public administration.....     | 3.3             | (D)                       | 4.6                           |
| Government and government enterprises.....            | 21.7            | 43.6                      | 21.7                          |
| Federal, civilian.....                                | 9.4             | 21.0                      | 2.9                           |
| Military .....  | 0.0             | 1.8                       | 1.9                           |
| State and local.....                                  | 12.3            | 20.8                      | 16.9                          |

(D) Data are suppressed to avoid the disclosure of confidential information but are included in total earnings.  
 (L) Less than \$50,000 but included in total earnings.

**Acknowledgements**

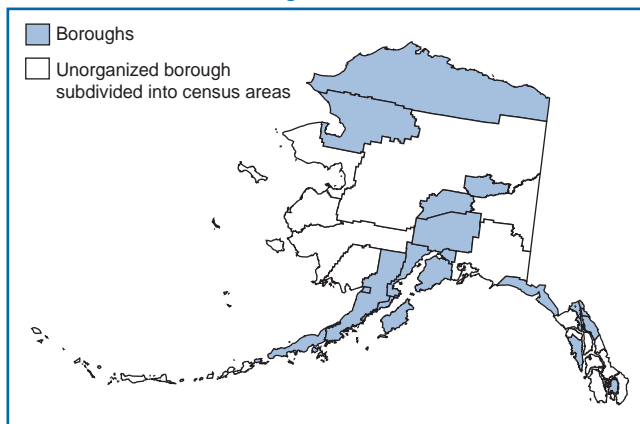
The annual estimates of local area personal income were prepared by the Regional Income Division under the direction of Sharon C. Carnevale, Chief. Robert L. Brown and James M. Zavrel were major contributors. Joel D. Platt, Associate Director for Regional Economics, provided general guidance. The preparation of the estimates was a divisionwide effort.

The estimates of nonfarm wages and salaries and supplements to wages and salaries were prepared by the Regional Compensation Branch under the supervision of Sharon C. Carnevale, Chief. Major responsibilities were assigned to Elizabeth P. Cologer, John D. Laffman, Michael G. Pilot, John A. Rusinko, and James M. Scott. Contributing staff members were Peter Battikha, Michael L. Berry, Susan P. Den Herder, Terence J. Fallon, Tina C. Highfill, Russell C. Lusher, Paul K. Medzerian, Nathan D. Patterson, Ross A. Stepp, and Melanie N. Vejdani.

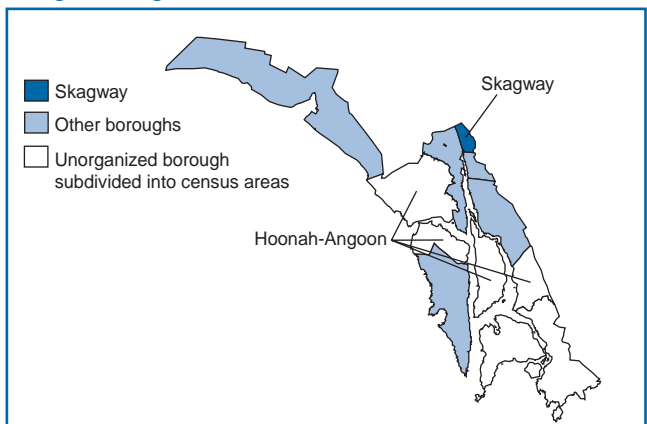
The estimates of farm wages and salaries, farm supplements to wages and salaries, proprietors' income, property income, personal current transfer receipts, contributions for government social insurance, and the adjustment for residence were prepared by the Regional Income Branch under the supervision of Mauricio Ortiz, Acting Chief. Major responsibilities were assigned to Carrie L. Litkowski, Toan A. Ly, Brian J. Maisano, and James P. Stehle. Contributing staff members were, Daniel R. Corrin, Michelle A. Harder, Carla R. Jenkins, Andy K. Kim, W. Tim McKeel, Linda M. Morey, and Troy P. Watson.

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**Chart 1. Alaska Boroughs and Census Areas**



**Chart 2. Skagway, Hoonah-Angoon, and Neighboring Areas**



for only 0.4 percent of earnings, compared with 10 percent average in the nonmetropolitan portion.

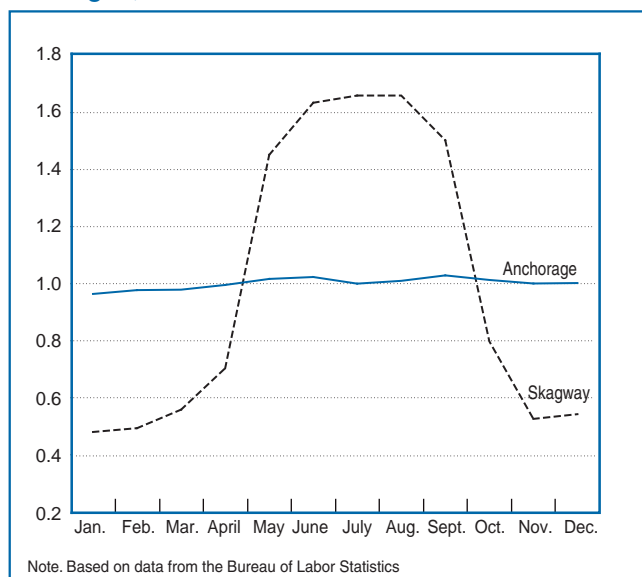
In one respect Skagway is similar to other nonmetropolitan counties. It has a relatively large government sector, which accounted for nearly 22 percent of earnings in 2008.

Per capita income in Skagway, at \$62,685, is double the U.S. nonmetropolitan average. This partly reflects a higher average wage per job, \$38,702, in Skagway, compared with \$33,417 in the typical nonmetropolitan county. It also reflects a relatively high price level.<sup>4</sup> But it also reflects a very high jobs to population ratio (employment rate) of 0.84 vs. a 0.39 nonmetropolitan average.

Not only does Skagway have a high employment rate, the seasonal pattern of employment in Skagway is striking (chart 3). During the peak June to August season, there are three times as many jobs as during the trough season of November to March. This contrasts sharply with the Anchorage Borough, where the number of jobs has very little seasonal variation. In 2008, wage and salary employment in Skagway peaked at 1,229 jobs, enough for every resident of Skagway to be employed and for many of them to hold two jobs. More likely, many of these jobs were held by seasonal residents. To the extent that this happened, the borough's per capita income overstates the average for

4. Regional price parities are available for states, metropolitan areas, and the nonmetropolitan portions of states for 2005 and 2006 in Bettina H. Aten and Roger J. D'Souza, "Regional Price Parities: Comparing Price Level Differences Across Geographic Areas," *SURVEY OF CURRENT BUSINESS* 88 (November 2008): 64–74.

**Chart 3. Employment by Month Relative to Annual Average Employment, Skagway and Anchorage Boroughs, 2008**



year-round residents.<sup>5</sup>

The remainder of the census area from which Skagway was detached is quite different. It has more than twice the population (2,182) than Skagway. Its per capita income of \$38,066 and its jobs to population ratio of 0.36 are much closer to the national nonmetropolitan average than Skagway's. The Glacier Bay National Park and Preserve is located in the Hoonah-Angoon Census Area. About half of the census area's employment is governmental, including the National Park Service and the state's Department of Fish and Game. The civilian federal government accounts for 21 percent of earnings in Hoonah-Angoon, compared with 3 percent for nonmetropolitan United States. The retailing industry, which accounts for 11 percent of earnings is also relatively large.

### Source Data

The primary 2008 county-level data used by BEA to prepare the estimates of local area personal income presented in this article were wage and salary data from the Bureau of Labor Statistics, benefits paid by the Social Security Administration, Medicaid payments from state departments of social services, population data from the Census Bureau, and farm crop production, cash receipts, government payments, and livestock data from the Department of Agriculture.<sup>6</sup> State-level price data for 2008 were also used to prepare the estimates of local area farm income.

Because 2008 county-level Medicare enrollment data (used to estimate Medicare benefits) were not available, the 2008 county Medicare enrollment shares were assumed to be the same as the 2007 shares.

New 2008 county-level data for various transfer receipts from the Consolidated Federal Funds Report and Federal Assistance Award Data System were used to prepare estimates of some components of personal current transfer receipts. New county-level estimates of income reported on 2007 federal income tax returns from the Internal Revenue Service were used to prepare the estimates of property income and the residence adjustment. Those data are ordinarily used to estimate nonfarm proprietors' income, but they were not used for the 2007 estimates.

5. BEA adjusts the wage and salary disbursements paid by establishments within a county to reflect the place of residence of workers. The adjustment is based primarily on journey-to-work data from the Census of Population. The journey to work data reflect commuting patterns in March and works well so long as there is no strong seasonal variation in commuting.

6. For details about the estimation methodology and data sources, see *Local Area Personal Income and Employment Methodology* on BEA's Web site.

## Comprehensive Revision of Local Area Personal Income

On April 22, 2010, the Bureau of Economic Analysis released the results of the comprehensive revision of the local area personal income accounts; the results of the previous comprehensive revision were released in May 2004.<sup>7</sup> Local area personal income statistics were revised back to 1969.

In a comprehensive revision various improvements in methodologies, classifications, definitions, and concepts are introduced into BEA's economic accounts so that they continue to reflect the evolving American economy.

The comprehensive revision of the local area accounts incorporates changes that were adopted as part of the comprehensive revision of the national income and product accounts released in July 2009 and the comprehensive revision of state personal income re-

leased in October 2009.<sup>8</sup>

The rest of this section will first discuss the magnitude of revisions and then describe the improvements in methodologies, classifications, and definitions as well as the statistical improvements.

### Magnitude of revisions

For many counties, the picture of personal income that is shown by the revised estimates is similar to the picture shown by the previous estimates, but for many other counties, the picture is substantially different, particularly in the last 10–15 years (table E). For example, in 1969, almost all of the revisions to county personal income were less than 1 percent in absolute value. In 1984, the vast bulk of the revisions were still less than 1 percent, but several hundred revisions were

7. See Jeffrey L. Newman, "Comprehensive Revision of Local Area Personal Income," *SURVEY* 84 (June 2004): 67–96.

8. See Eugene P. Seskin and Shelly Smith, "Improved Estimates of the National Income and Product Accounts: Results of the 2009 Comprehensive Revision," *SURVEY* 89 (September 2009): 15–35 and Robert L. Brown, "Regional Quarterly Report: Comprehensive Revision," *SURVEY* 89 (November 2009): 71–78.

### Data Availability

This article presents summary estimates of personal income and per capita personal income for 2006–2008. More detailed estimates for 1969–2008 are also available.

The following annual estimates for counties, metropolitan statistical areas, micropolitan statistical areas, metropolitan divisions, combined statistical areas, and BEA economic areas are available at [www.bea.gov/regional/reis](http://www.bea.gov/regional/reis):

- Personal income, per capita personal income, and population for 1969–2008
- County income and employment summary (featuring the derivation of personal income, including nonfarm personal income, and employment totals for a continuous time series), for 1969–2008
- Compensation of employees by industry by North American Industry Classification System (NAICS) subsectors for 2001–2008 and by Standard Industrial Classification System (SIC) two-digit industries for 1998–2000
- Personal income by major source and earnings by NAICS subsectors for 2001–2008 and by SIC two-digit industries for 1969–2000
- Full-time and part-time employment by NAICS sectors for 2001–2008 and by SIC division-level industries for 1969–2000
- Regional economic profiles (featuring a selection of personal income and employment data) for 1969–2008
- Personal current transfer receipts by major pro-

gram for 1969–2008

- Farm income and expenses (including the major categories of gross receipts and expenses for all farms and for measures of farm income) for 1969–2008
- The counties with the highest and lowest per capita personal incomes in 2008
- Total wage and salary disbursements, total wage and salary employment, and average wage per job for 1969–2008
- Gross commuters' earnings flows for 1990–2008
- BEARFACTS, a narrative about an area's personal income that uses current estimates, growth rates, and a breakdown of the sources of personal income

In addition, the entire set of estimates for all areas will be available in May 2010 on a DVD-ROM. To order the DVD-ROM Regional Economic Information System, 1969–2008 (product number RCN-0955), call BEA's Regional Economic Information System at 202-606-5360, fax 202-606-5322, or e-mail [reis@bea.gov](mailto:reis@bea.gov).

The local area personal income estimates 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. For a list of the members of the group on BEA's Web site, go to [www.bea.gov/regional/docs/usergrp.cfm](http://www.bea.gov/regional/docs/usergrp.cfm)

For more information, call BEA's Regional Economic Information System at 202-606-5360, fax 202-606-5322, or e-mail [reis.remd@bea.gov](mailto:reis.remd@bea.gov).

between 1 percent and 5 percent. In 1997, most of the revisions were in the 1 percent to 5 percent range, but in 84 counties, the revisions 5 percent or more. In 2007, most of the revisions were again in the 1 percent to 5 percent range; however, more than a third were 5 percent or more, and the personal income of 259 counties was revised by 10 percent or more.

There were two changes in classifications and definitions, one involving a new treatment of disasters, and the other involving a new treatment of the wages of U.S. workers in international organizations.

**Table E. Revisions to County Personal Income for Selected Years**

| Revision<br>(absolute value) | Number of counties |       |       |       |
|------------------------------|--------------------|-------|-------|-------|
|                              | 1969               | 1984  | 1997  | 2007  |
| 0.0–0.9 percent .....        | 3,088              | 2,432 | 1,156 | 287   |
| 1.0–4.9 percent .....        | 21                 | 669   | 1,870 | 1,712 |
| 5.0–9.9 percent .....        | 0                  | 4     | 65    | 853   |
| 10.0 percent or more.....    | 0                  | 0     | 19    | 259   |

### New treatment of disasters

The treatment of disasters was changed to better reflect the distinctions between current transactions and capital transactions. Under the new treatment, disaster-related damages to fixed assets, which were previously treated as depreciation and thus an expense to proprietors' income and rent, are now recorded as "other changes in the volume of assets." Disaster-related insurance payouts are removed from personal current transfer receipts and are now recorded as capital transfers.

The effect of this change is most obvious in the personal income estimates of the counties devastated by Hurricane Katrina and other storms in 2005 (table F).

Personal income now grows more smoothly in the affected counties. For instance, the personal income of Orleans Parish was revised up 185 percent in 2005, changing its 2004–2005 growth rate from –63 percent to 2 percent and changing its 2005–2006 growth rate from 140 percent to –14 percent.

### New treatment of wages of U.S. workers in international organizations

The treatment of wages earned by U.S. residents from employment at international organizations, foreign embassies, and foreign consulates located in the United States was changed in the local area personal income accounts to improve consistency with the treatment of other border workers and with the national income and product accounts. These wages are now classified as outside of the domestic economy. Therefore, they have been removed from domestic wages and added as an adjustment for residence from outside the United States into the county where the employees live. The change reduces county wages and salaries, but the adjustment for residence is increased by the same amount. Total personal income for the county is not affected. The District of Columbia accounted for \$1 billion, or nearly half, of this reclassification. Twelve other counties were affected to a lesser extent (table G).

### Other statistical improvements

There were also several statistical improvements to the local area personal income accounts. Some of these improvements (such as for misreported income and for rental income of persons) involve source data that are not available for individual counties. However, these improvements are implicitly incorporated into the county estimates through the use of the state

**Table F. Effect of the Change in Treatment of Disasters on Personal Income of Selected Parishes in Louisiana for 2005 and 2006**

|                      | Millions of dollars |                            | Percent revision, 2005 | Millions of dollars              |               | Percent change |                            |               |                            |
|----------------------|---------------------|----------------------------|------------------------|----------------------------------|---------------|----------------|----------------------------|---------------|----------------------------|
|                      | Revised, 2005       | Previously published, 2005 |                        | 2005 revision due to             |               | Revised, 2005  | Previously published, 2005 | Revised, 2006 | Previously published, 2006 |
|                      |                     |                            |                        | Change in treatment of disasters | Other changes |                |                            |               |                            |
| Allen .....          | 507.6               | 438.9                      | 15.6                   | 42.2                             | 26.4          | 5.3            | –3.4                       | 0.5           | 10.6                       |
| Beauregard .....     | 812.7               | 695.5                      | 16.8                   | 91.3                             | 25.8          | 6.5            | –6.1                       | 3.7           | 18.2                       |
| Calcasieu .....      | 5,409.7             | 4,385.2                    | 23.4                   | 962.6                            | 61.8          | 9.3            | –10.7                      | 8.3           | 33.0                       |
| Cameron .....        | 204.2               | 38.2                       | 434.0                  | 158.2                            | 7.7           | 5.3            | –78.9                      | 0.2           | 383.5                      |
| Iberville.....       | 824.6               | 710.9                      | 16.0                   | 125.6                            | –11.8         | 11.2           | –5.7                       | 4.4           | 23.2                       |
| Jefferson.....       | 15,689.1            | 10,841.5                   | 44.7                   | 4,372.2                          | 475.4         | 3.8            | –25.5                      | 7.6           | 50.2                       |
| Jefferson Davis..... | 741.9               | 612.5                      | 21.1                   | 91.6                             | 37.8          | 8.8            | –4.4                       | 7.1           | 23.7                       |
| Orleans.....         | 14,902.4            | 5,234.0                    | 184.7                  | 9,645.6                          | 22.8          | 2.4            | –63.4                      | –14.4         | 140.0                      |
| Plaquemines .....    | 787.9               | 240.6                      | 227.5                  | 532.6                            | 14.8          | 7.1            | –66.4                      | –1.6          | 213.2                      |
| St. Bernard.....     | 1,420.3             | 29.3                       | 4,753.6                | 1,386.1                          | 4.9           | –17.2          | –98.2                      | –32.4         | 3,031.3                    |
| St. Charles.....     | 1,531.6             | 1,360.5                    | 12.6                   | 134.0                            | 37.0          | 10.5           | –0.1                       | 11.0          | 23.0                       |
| St. Tammany .....    | 7,879.2             | 6,045.3                    | 30.3                   | 1,622.8                          | 211.1         | 8.9            | –13.6                      | 10.9          | 40.5                       |
| Tangipahoa .....     | 2,688.7             | 2,365.1                    | 13.7                   | 230.1                            | 93.5          | 9.4            | –0.5                       | 12.7          | 24.4                       |
| Terrebonne .....     | 2,976.6             | 2,702.4                    | 10.1                   | 226.2                            | 48.0          | 12.1           | 3.3                        | 16.9          | 26.3                       |
| Vermilion .....      | 1,289.0             | 1,040.6                    | 23.9                   | 180.6                            | 67.8          | 8.4            | –7.8                       | 11.0          | 30.9                       |
| Washington .....     | 1,007.0             | 805.8                      | 25.0                   | 178.8                            | 22.4          | 7.5            | –11.6                      | 5.1           | 28.3                       |

**Table G. Revisions to Wage and Salary Disbursements, for Selected Counties for 2007**

| County or county equivalent | Millions of dollars |                      | Percent revision | Millions of dollars |                                  |                           |           |
|-----------------------------|---------------------|----------------------|------------------|---------------------|----------------------------------|---------------------------|-----------|
|                             | Revised             | Previously published |                  | Revision due to     |                                  |                           |           |
|                             |                     |                      |                  | Cafeteria plans     | Rest of world wages <sup>1</sup> | Mis-reporting adjustments | All other |
| Los Angeles, CA.....        | 227,515             | 224,832              | 1.2              | 4,335               | -21                              | -1,848                    | 218       |
| San Francisco, CA.....      | 44,460              | 44,401               | 0.1              | 577                 | -43                              | -529                      | 55        |
| Miami-Dade, FL.....         | 50,552              | 49,630               | 1.9              | 1,416               | -9                               | -479                      | -6        |
| Cook, IL.....               | 149,631             | 147,887              | 1.2              | 2,922               | -31                              | -1,392                    | 246       |
| Orleans, LA.....            | 8,894               | 8,759                | 1.5              | 212                 | -21                              | -91                       | 35        |
| Bronx, NY.....              | 10,094              | 10,225               | -1.3             | 0                   | -43                              | -103                      | 14        |
| Kings, NY.....              | 19,448              | 19,786               | -1.7             | 0                   | -94                              | -279                      | 34        |
| New York, NY.....           | 246,708             | 250,233              | -1.4             | 0                   | -604                             | -3,629                    | 708       |
| Queens, NY.....             | 23,761              | 23,972               | -0.9             | 0                   | -102                             | -165                      | 56        |
| Richmond, NY.....           | 3,929               | 3,971                | -1.0             | 0                   | -9                               | -40                       | 7         |
| Philadelphia, PA.....       | 35,302              | 35,637               | -0.9             | 0                   | -9                               | -422                      | 95        |
| Harris, TX.....             | 118,598             | 119,598              | -0.8             | 0                   | -21                              | -1,007                    | 28        |
| District of Columbia.....   | 52,451              | 53,820               | -2.5             | 0                   | -958                             | -510                      | 99        |

1. Wages of U.S. residents who work for international organizations, foreign embassies, and foreign consulates.

estimates as control totals for the county estimates.

**Improved estimates of wages and salaries that incorporate new information on employee “cafeteria plans.”** Under cafeteria plans, employees may use a portion of their salaries on a pretax basis to pay for health insurance and to contribute to “flexible spending arrangements,” which reimburse them for medical care and dependent care expenses. Estimates for 1985 forward were developed for the 28 states that do not report employees’ contributions to these plans as wages in the Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages.<sup>9</sup> The primary source data used for the estimates are from the Agency for Healthcare Research and Quality’s Medical Expenditure Panel Survey-Insurance Component.

**Improved estimates of the industry distribution of private employer contributions for old age, survivors, and disability insurance (OASDI).** The improved estimates of employer contributions now incorporate state- and industry-level data on the distribution of employment by hourly wage rate intervals from the BLS Occupational Employment Survey and data on the distribution of employment by hours worked per week by industry from the Current Population Survey. A method was developed to adjust

9. The states are Alaska, Arizona, Arkansas, California, Colorado, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Louisiana, Maine, Maryland, Mississippi, Missouri, Nebraska, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, Wisconsin, and Wyoming.

the industry distribution of employer contributions to OASDI to account for the annual limit of taxable wages set by law, which was \$102,000 in 2008. Wages above this limit are not taxed. This change lowered compensation in high-wage industries and raised compensation in low-wage industries for 1998 forward. This change, however, did not affect personal income as contributions to government social insurance are subtracted in the calculation of personal income.

Improved estimates of nonfarm proprietors’ income and wages and salaries. Nonfarm proprietors’ income and wage and salary disbursements now incorporate updated “misreporting adjustments”—adjustments for underreporting and nonreporting of income—using recent national data from the Internal Revenue Service and the Census Bureau.

**Updated source data for farm proprietors’ income.** Estimates of farm proprietors’ income now incorporate national and state data prepared by the Economic Research Service of the U.S. Department of Agriculture (USDA). In addition, 2002 and 2007 Census of Agriculture data, including a tabulation of data by legal form of ownership that is used to remove corporate farm income, are now used in the estimation of farm proprietors’ income.

**Improved estimates of farm self-employment.** Farm self-employment is defined as the number of noncorporate farm operators, consisting of sole proprietors and partners. In 1974, the USDA set the definition of a farm 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. Starting with estimates for 2002, BEA adjusts this \$1,000 threshold for inflation using the “All Farm Index: Prices Received and Prices Paid” from the National Agricultural Statistics Service. BEA then obtained from USDA special tabulations of Census of Agriculture data on the number of farms, by type of organization, having sales above the inflation-adjusted thresholds.

**Updated national source data for imputed rental income of persons with the capital consumption adjustment.** The estimates of imputed rent for 1992 forward now incorporate newly available data from the 2001 Residential Finance Survey, which were extrapolated using the data from the BLS Consumer Expenditure Survey.



### Alternative Measures of County Employment and Wages

Three widely used measures of county employment and wages by place of work are (1) employment and payroll in the County Business Patterns (CBP) series from the Census Bureau, (2) employment and wages from the Quarterly Census of Employment and Wages (QCEW) program from the Bureau of Labor Statistics (BLS), and (3) wage and salary disbursements and employment from the Bureau of Economic Analysis (BEA). These measures differ in source data and coverage.

The CBP data are derived from Census Bureau business establishment surveys and federal administrative records. The QCEW data are tabulations of monthly employment and quarterly wages of workers who are covered by state unemployment insurance programs or by the unemployment insurance program for federal employees.<sup>1</sup> The BEA estimates of employment and wages are primarily derived from the BLS data; the estimates for industries that are either not covered or not fully covered in the QCEW are also based on supplemental data from other agencies, such as the Department of Defense, the U.S. Department of Agriculture, and the Railroad Retirement Board.

The coverage of the Census Bureau data differs from that of the BLS data primarily because the Census Bureau data exclude most government employees and because the BLS data cover civilian government employees.<sup>2</sup> The CBP data also exclude several private industries that are partly covered 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 BLS data.<sup>3</sup> In addition, the Census Bureau reports employment only for the month of March; the BLS employment data are quarterly and annual averages of monthly data.

In 2001, both BLS and BEA began to include employees of Indian tribal councils in local government. These employees were previously included in the relevant private industries.<sup>4</sup> In the Census Bureau data, these employees are still classified in private industries.

BEA estimates of employment and wages differ from the BLS data because BEA adjusts the estimates to account for employ-

ment and wages that are not covered or that are not fully covered by the unemployment insurance programs. BEA adds estimates of employment and wages to the BLS data to bridge small gaps in coverage for nonprofit organizations that do not participate in the unemployment insurance program (in several industries), for students and their spouses employed by colleges or universities, for elected officials and members of the judiciary, for interns employed by hospitals and by social service agencies, and for insurance agents classified as statutory employees. In addition, BEA uses supplemental source data to estimate most, or all, of the employment and wages for the following: farms, farm labor contractors and crew leaders, private households, private elementary and secondary schools, religious membership organizations, rail transportation, and military. BEA also adjusts for employment and wages subject to unemployment insurance, but not reported by employers. Other adjustments to wages include estimates for unreported tips, judicial fees paid to jurors and witnesses, compensation of prison inmates, and marriage and license fees paid to justices of the peace.<sup>5</sup>

The Census Bureau released 2007 data for total employment and payrolls for counties on its Web site on July 30, 2009. BLS released county data on total employment and average weekly pay for 2008 on its Web site on July 21, 2009. BEA released preliminary estimates for 2008 and revised estimates for 2006–2007 of total wage employment and total wage and salary disbursements for counties on its Web site on December 21, 2009.

5. For a detailed description of the sources and methods used to prepare the estimates, go to [www.bea.gov/regional/methods.cfm](http://www.bea.gov/regional/methods.cfm).

#### National Estimates of Wages and Salaries in the BEA County Estimates and Payrolls and Wages From the Census Bureau and the BLS

|   | [Billions of dollars] |         |         |
|---|-----------------------|---------|---------|
|   | 2006                  | 2007    | 2008    |
| Total payroll, Census Bureau .....  | 4,792.0               | 5,027.0 | n.a.    |
| Plus: Differences in coverage:  |                       |         |         |
| Civilian government wages, BLS <sup>1</sup> .....                                     | 903.3                 | 951.2   | n.a.    |
| Other differences, net <sup>2</sup> .....   | -2.7                  | 39.9    | n.a.    |
| Equals: Total wages, BLS .....  | 5,692.6               | 6,018.1 | 6,142.2 |
| Plus: Adjustments by BEA:   |                       |         |         |
| For unreported wages and unreported tips on<br>employment tax returns .....           | 81.3                  | 87.7    | 91.1    |
| For wages and salaries not covered or not fully<br>covered by unemployment insurance: |                       |         |         |
| Private .....   | 179.6                 | 183.7   | 187.8   |
| Government .....  | 108.5                 | 113.2   | 119.5   |
| Other adjustments <sup>3</sup> .....  | -1.7                  | -1.9    | -2.6    |
| Equals: Wage and salary disbursements, BEA <sup>4</sup> .....                         | 6,060.3               | 6,400.7 | 6,538.0 |

1. BLS wages were adjusted to remove the wages of Indian tribal councils because these data were already included in the Census Bureau's total payroll data.

2. Includes differences of coverage in private education, membership organizations, and government.

3. Consists of adjustments to the wage and salary estimates to remove employees of U.S. companies stationed overseas and to reflect updates to QCEW data.

4. The national total of county estimates of wage and salary disbursements consists of the earnings of persons who live in the United States and of foreign residents working in the United States. The BEA regional total differs from the national estimate; see the box "Personal income in the NIPAs and State Personal Income," Survey 89 (November 2009): 72.

n.a. Not available

John D. Laffman

Tables 1 through 3 follow.

1. The QCEW data account for 94 percent of BEA's wages and salaries.

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

3. The BLS data do not cover certain religious elementary and secondary schools, because a Supreme Court decision exempts some of these schools from unemployment compensation taxes. The BLS data also exclude college students (and their spouses) who are employed by the school in which they are enrolled and student nurses and interns who are employed by hospitals as part of their training. In half of the states, the BLS data only include nonprofit organizations with four or more employees during 20 weeks in a calendar year.

4. For example, employees of casinos owned by tribal councils were included in "Amusement, Gambling, and Recreation Industries."