

Comprehensive Revision of Local Area Personal Income

New Statistics for 2012 and Revised Statistics for 2001–2011

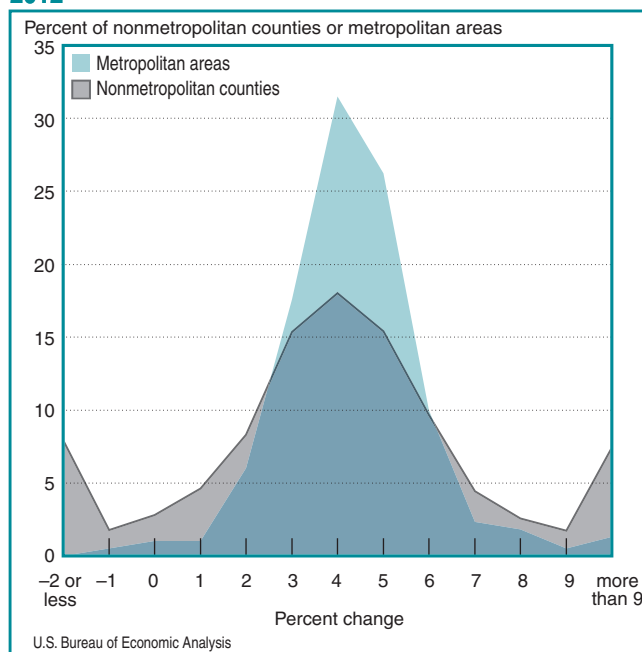
By David G. Lenze

PERSONAL INCOME grew more slowly (3.7 percent) in the nonmetropolitan portion of the United States in 2012 than in the metropolitan portion (4.2 percent).¹ Growth ranged from –33.4 percent in Hamilton County, Kansas, to 52.3 percent in Williams County, North Dakota, but most counties and metropolitan statistical areas (MSAs) grew at rates between 2.0 percent and 6.0 percent (chart 1). Inflation, as measured by the national price index for personal consumption expenditures, was 1.8 percent in 2012.

The local area personal income estimates presented in this article continue the successively more detailed series of data releases from the Bureau of Economic Analysis (BEA) depicting the geographic distribution of the nation's production and income for 2012. National estimates of personal income and gross domestic product (GDP) for 2012 were released in January 2013, followed by state personal income estimates in March, state GDP estimates in June, and metropolitan

1. Personal income, which is measured in current dollars, is the sum of net earnings by place of residence, property income, and personal current transfer receipts.

Chart 1. Distribution of Personal Income Growth Rates, 2012



area GDP estimates in September. The local area personal income estimates provide the first glimpse of personal income and compensation by industry in nonmetropolitan counties for 2012 and a more detailed look at the industrial composition of economic activity within multicounty MSAs. The geographic picture of 2012 will be completed with the release of real personal income for states and metropolitan areas in April 2014.

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 November 2013. In comprehensive revisions, manifold improvements in concepts, definitions, classifications, and statistical methods are introduced into BEA's economic accounts to ensure that the accounts continue to accurately describe 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 (NIPAs) and state personal income accounts, which were released in July and September 2013, respectively. It also introduced new and updated county-level source data as well as certain new data sources that have never been used before.

This article discusses the patterns and sources of income growth for 2012 in nonmetropolitan counties. It complements the discussion of the patterns and sources of production growth for 2012 in metropolitan areas in the October issue of the *SURVEY OF CURRENT BUSINESS*.² This article also highlights the fluctuating boundary between the metropolitan and nonmetropolitan portions of the United States by examining in detail the counties affected by the revised MSA definitions released by the Office of Management and Budget (OMB) earlier this year. In addition, the article provides details about the comprehensive revision of local area personal income statistics and summarizes the major data sources used to prepare the estimates. A box discusses alternative measures of county wages.

2. See Sharon D. Panek, Jacob R. Hinson, and Frank T. Baumgardner, "Gross Domestic Product by Metropolitan Area," *SURVEY* 93 (October 2013): 105–141.

Growth in Nonmetropolitan Counties

For statistical purposes, nonmetropolitan counties are those counties that remain after MSAs have been delineated. As defined by 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 1,967 nonmetropolitan counties and 1,146 metropolitan counties in the United States.³

Not surprisingly, all nonmetropolitan counties are sparsely populated. They range from Loving County Texas, with a population of 71 and a population density of 0.1 persons per square mile, to Litchfield County Connecticut, with a population of 187,530 and density of 206 persons per square mile.⁴ The converse is not true; that is, not all metropolitan counties are densely populated. For instance, there are 95 metropolitan counties with a population density below 100 persons per square mile and with less than 30,000 residents, none of whom live in an urbanized area. Evidently, these counties are metropolitan because by the OMB definition, there is a high degree of social and economic integration with the core of an MSA as measured by commuting ties. In other words, these counties are metropolitan because their residents commute to work in another metropolitan county, not because they have an urban character.

The nonmetropolitan portion of the country accounted for slightly less than 10 percent of the nation's

earnings in 2012, but reflecting the rural affinity of much mining and farming, the nonmetropolitan portion of the United States accounted for almost 37 percent of national earnings in natural resource industries (table A). The nonmetropolitan area also accounted for 14.7 percent of manufacturing earnings, 12.6 percent of transportation earnings, and 12.1 percent of government earnings. In contrast, relatively little—less than 4.0 percent—of earnings in the information, finance, and business services industries was generated in nonmetropolitan counties.

Not only did the nonmetropolitan portion grow more slowly than the metropolitan portion of the United States in 2012, its 3.7 percent personal income growth rate was a substantial slowdown from its 6.4 percent growth in 2011 (table B). Most of the slowdown was attributable to net earnings, which grew

Table A. Industrial Structure of Metropolitan and Nonmetropolitan Portions of the United States for 2012

	Earnings by place of work (billions of dollars)		Industry's share of area's total earnings (percent)		Nonmetropolitan share of national earnings (percent)
	Metro-politan	Nonmetro-politan	Metro-politan	Nonmetro-politan	
Natural resources ¹	187.0	108.9	2.1	11.3	36.8
Construction	460.9	56.5	5.2	5.9	10.9
Manufacturing	829.2	142.9	9.4	14.9	14.7
Wholesale and retail trade	986.6	102.3	11.1	10.6	9.4
Transportation, warehousing, and utilities	360.0	52.0	4.1	5.4	12.6
Information	303.5	10.2	3.4	1.1	3.3
Finance and insurance	664.5	26.3	7.5	2.7	3.8
Real estate and rental and leasing	171.1	10.2	1.9	1.1	5.6
Business services ²	1,562.4	61.6	17.6	6.4	3.8
Education, health care, and social assistance	1,133.8	105.9	12.8	11.0	8.5
Leisure, hospitality, and other ³	690.8	76.8	7.8	8.0	10.0
Government and government enterprises	1,510.9	207.1	17.1	21.6	12.1
Local	791.2	124.2	8.9	12.9	13.6
Total	8,860.7	960.7	100.0	100.0	9.8

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

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

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

3. Personal income statistics are available for 3,113 of the 3,143 counties identified by Federal Information Processing Standards (FIPS) codes. BEA combines some small counties (mostly in Virginia but also in Hawaii) with larger nearby counties. For details see the appendix to the *Local Area Personal Income Methodology* available on the BEA Web site.

4. Population densities are from the Census Bureau's American Factfinder and refer to 2010; population refers to 2012. The Census Bureau uses two population density thresholds in the delineation of urban areas: 1,000 persons per square mile and 500 persons per square mile.

Table B. Personal Income Change by Component for U.S. Metropolitan and Nonmetropolitan Portions

	Percent change				Contribution to percent change in personal income (percentage points)			Dollar change (millions of dollars)			
	Personal income	Net earnings ¹	Dividends, interest, and rent	Transfer receipts	Net earnings ¹	Dividends, interest, and rent	Transfer receipts	Personal income	Net earnings ¹	Dividends, interest, and rent	Transfer receipts
2010–2011											
United States	6.1	6.2	10.6	1.3	4.0	1.8	0.2	756,229	500,134	226,078	30,017
Metropolitan portion	6.0	6.1	10.6	1.3	4.0	1.8	0.2	662,027	437,056	200,091	24,880
Nonmetropolitan portion	6.4	7.5	10.3	1.3	4.3	1.8	0.3	94,202	63,078	25,987	5,137
2011–2012											
United States	4.2	4.3	5.5	2.2	2.8	1.0	0.4	549,502	367,526	130,630	51,346
Metropolitan portion	4.2	4.4	5.5	2.3	2.9	1.0	0.4	490,611	332,244	114,712	43,655
Nonmetropolitan portion	3.7	3.9	5.7	2.0	2.2	1.0	0.5	58,891	35,282	15,918	7,691

1. Earnings by place of work net of contributions for government social insurance and net of the residence adjustment.

only 3.9 percent in 2012, down from 7.5 percent in 2011. Property income (dividends, interest, and rent), which accounted for 18 percent of personal income, also grew substantially slower (5.7 percent) in 2012 than in 2011 (10.3 percent) in nonmetropolitan counties. Transfer receipts, which accounted for 24.5 percent of personal income, accelerated slightly to 2.0 percent growth in 2012 from 1.3 percent in 2011.

Earnings growth by industry provides additional insight into the reasons for these disparities in personal income growth rates (chart 2 and table C). Farm earnings for the United States fell 1.2 percent in 2012 after growing 38.9 percent in 2011. Like farming, government earnings growth was weak in 2012, growing 0.6 percent, but unlike farming, government earnings growth was also weak in 2011, growing 0.4 percent. In contrast to farming and the public sector, manufacturing earnings grew at a much higher, 4.3 percent rate in 2012, after growing 5.6 percent in 2011.

Per capita personal income (personal income divided by population) in nonmetropolitan counties in 2012 ranged from \$116,978 in Williams County, North Dakota, to \$17,922 in Telfair County, Georgia. Net earnings was the source of most of the income in Williams County and amounted to \$100,138 per person. Mining (which includes oil and gas extraction) accounted for 43 percent of earnings in Williams County. The high level of per capita personal income in Williams County is a recent phenomenon. As recently as 2007, per capita personal income in the county was slightly below the national average (chart 3). By 2012, it was more than twice as large.

In contrast, per capita personal income in Telfair County has stagnated and in 2012 was 2.4 percent below the level for 2001. Net earnings per person in Telfair County was only \$8,324. Transfer receipts were

Chart 3. Per Capita Personal Income

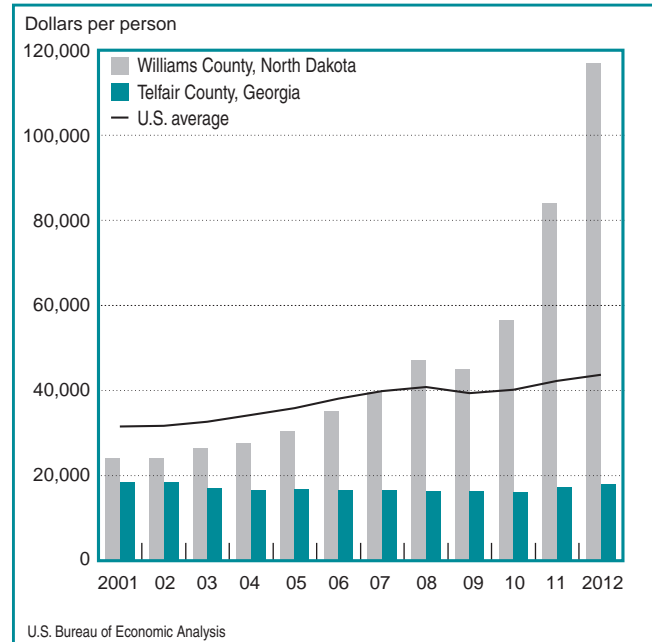
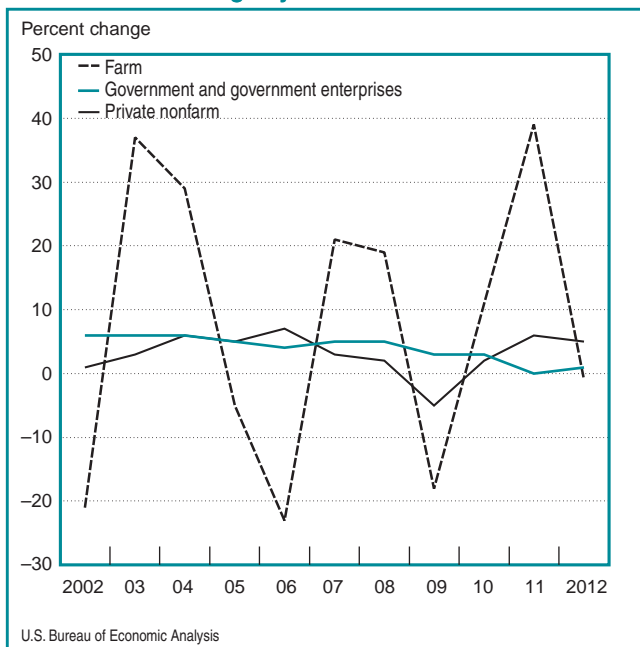


Table C. Growth of U.S. Earnings by Industry

	Percent change		Dollar change (millions of dollars)	
	2011	2012	2011	2012
Private	5.9	5.1	426,595	389,652
Farm	38.9	-1.2	28,278	-1,250
Nonfarm	5.5	5.1	398,317	390,902
Forestry, fishing, and related activities	-2.9	8.2	-756	2,112
Mining	38.0	11.7	41,494	17,623
Utilities	5.8	0.0	4,335	35
Construction	3.0	6.4	14,381	31,124
Manufacturing	5.6	4.3	49,374	40,056
Durable goods manufacturing	6.2	4.7	34,555	27,616
Nondurable goods manufacturing	4.5	3.6	14,819	12,440
Wholesale trade	6.2	5.5	27,863	26,151
Retail trade	3.9	3.6	21,309	20,230
Transportation and warehousing	8.4	5.4	24,436	16,919
Information	4.2	4.3	12,225	12,822
Finance and insurance	1.0	3.0	6,591	19,894
Real estate and rental and leasing	18.6	6.4	26,789	10,837
Professional, scientific, and technical services	7.2	6.4	61,568	58,747
Management of companies and enterprises	7.0	9.0	15,344	21,253
Administrative and waste management services	7.2	6.1	24,877	22,472
Educational services	3.8	4.9	5,744	7,736
Health care and social assistance	3.0	4.1	29,773	42,133
Arts, entertainment, and recreation	3.7	4.9	3,558	4,952
Accommodation and food services	6.8	7.2	18,297	20,533
Other services, except public administration	3.4	4.5	11,115	15,273
Government and government enterprises	0.4	0.6	7,588	10,243
Federal, civilian	2.4	-0.3	6,963	-815
Military	-0.6	-0.7	-902	-1,001
State government	1.2	1.6	4,186	5,616
Local government	-0.3	0.7	-2,659	6,443
Total	4.8	4.2	434,183	399,895

Chart 2. U.S. Earnings by Sector



also an important source of personal income in 2012, amounting to \$6,862 per person. The low level of per capita personal income in Telfair County reflects a relatively large proportion of the population (20.6 percent) living in group quarters with little income, including the inmates of a state prison.

Revised Metropolitan Statistical Area (MSA) Definitions

The OMB revised its definitions of metropolitan statistical areas in February 2013. In doing so, it designated 23 new MSAs, merged 5 separate MSAs with adjacent MSAs, and changed 3 MSAs to micropolitan status (the new MSAs are highlighted in chart 4).⁵ The net result was to raise the number of MSAs to 381. In the process of redefining the MSAs, 101 counties converted from nonmetropolitan status to metropolitan, and 36 metropolitan counties reverted from metropol-

itan to nonmetropolitan status. This raised the metropolitan population of the United States 1.1 percent and reduced the nonmetropolitan population 5.7 percent.

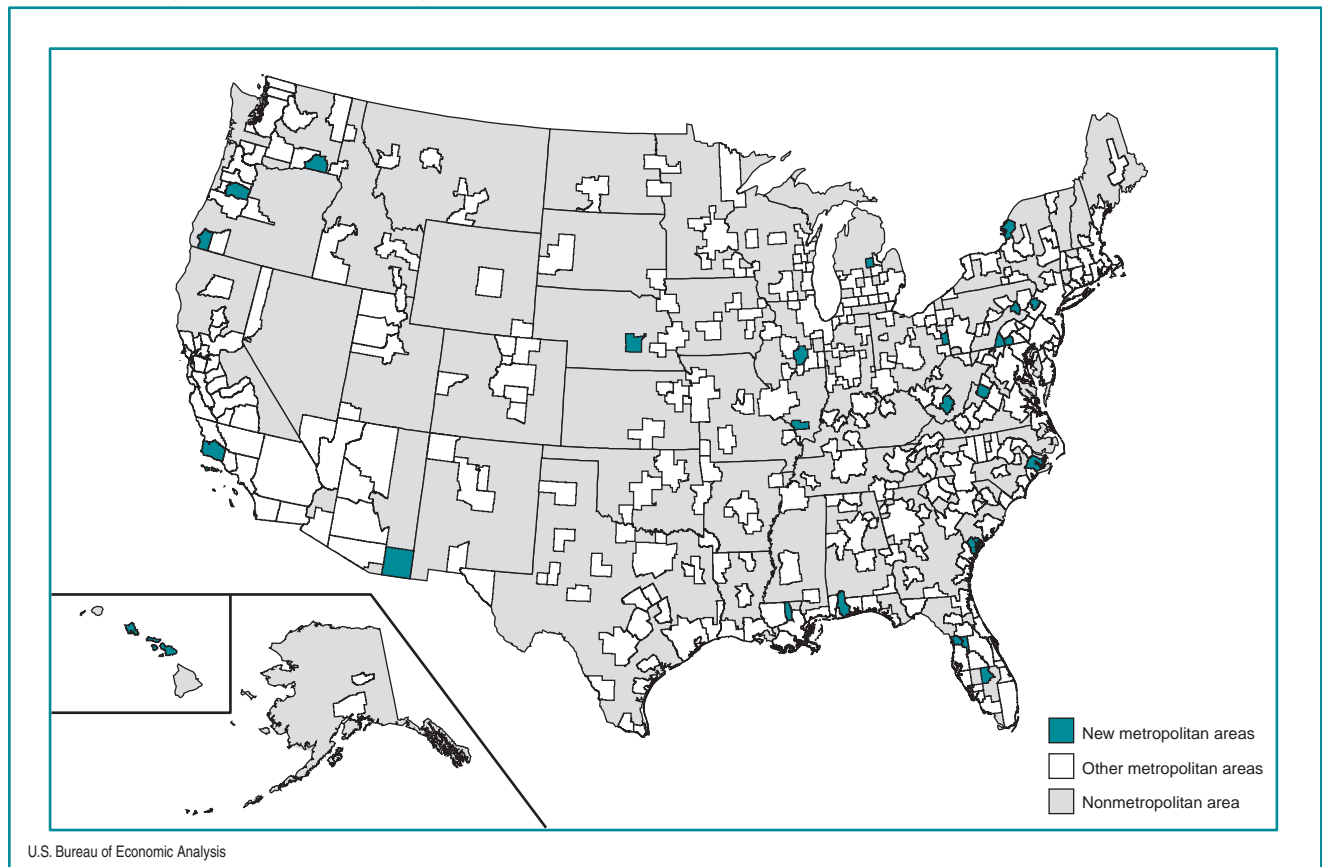
When OMB redefines its MSAs, BEA rebuilds the entire time series for the MSAs so that the local area data in the interactive tables on the BEA Web site use the same definition for every year in the time series. This is easily done because MSAs are defined in terms of counties. For example, when OMB first defined the Gainesville, FL MSA it consisted of the single county of Alachua. The current definition of the Gainesville, FL MSA consists of Alachua and Gilchrist counties. BEA's estimates of personal income for the Gainesville, FL MSA also consist of the same two counties for every year that data are available.

The populations of the new MSAs range from 63,399 residents to 193,882 residents. Evidently, they have crossed the demographic threshold required for metropolitan status, but in some respects their average incomes and industrial composition continue to resemble nonmetropolitan areas.

On average, per capita personal income in the new MSAs was \$37,165 in 2012, only 5.2 percent above the \$35,324 nonmetropolitan average and 17.8 percent below the \$45,188 metropolitan average. Seven of the new MSAs have per capita personal incomes below the

5. The three MSAs that changed to micropolitan statistical areas are (1) Danville, VA; (2) Holland-Grand Haven, MI; and (3) Sandusky, OH. The five MSAs that merged with other MSAs are (1) Palm Coast, FL, which is now part of the Deltona-Daytona Beach-Ormond Beach, FL MSA; (2) Pascagoula, MS, which is now part of the Gulfport-Biloxi-Pascagoula, MS MSA; (3) Poughkeepsie-Newburgh-Middletown, NY, which is now part of the New York-Newark-Jersey City, NY-NJ-PA MSA; (4) Anderson, IN, which is now part of the Indianapolis-Carmel-Anderson, IN MSA; and (5) Anderson, SC, which is now part of the Greenville-Anderson-Mauldin, SC MSA.

Chart 4. Metropolitan and Nonmetropolitan Areas



nonmetropolitan average, and two have per capita incomes above the metropolitan average.

As noted above, metropolitan areas tend to have relatively large professional services, finance, and information industries, compared with nonmetropolitan areas. However, among the new MSAs, only California, MD, had a professional services industry as large as the metropolitan average in 2012.⁶ Professional services accounted for 26.4 percent of earnings in California, MD, compared with 10.6 percent for the metropolitan average. Only Hammond, LA, had a finance sector as

6. The magnitudes of the professional services industry in Hilton Head Island, SC, and in The Villages, FL, are unknown because of nondisclosure rules.

Data Availability

All of the local area personal income data presented in this article, along with much additional detail, are available in interactive data tables on the BEA Web site. Data are available for counties, metropolitan statistical areas (MSAs) and other combinations of counties at www.bea.gov.

The data for 2001–2012, the years covered by the North American Industrial Classification System (NAICS), have been revised to be consistent with the comprehensive revisions of the national income and product accounts and the state personal income accounts. Data for 1969–2000, the years covered by the Standard Industrial Classification (SIC), are scheduled to be revised in the spring of 2014. Unrevised data for 1969–2000 remain in the interactive tables as a convenience, but users are advised that these data are not comparable with the more recent estimates.

The impact of sequestration and reduced fiscal year 2013 funding levels for the Bureau of Economic Analysis (BEA) have required reductions in the Bureau's local area personal income (LAPI) program. Effective with this release, the following statistical detail will not be updated or made available: (1) local area employment by industry; (2) detailed statistics on personal current transfer receipts; (3) detailed statistics on farm income and expenses; and (4) statistics for BEA Economic Areas. In addition, industry detail on compensation and earnings has been reduced from 108 industries to 25 industries. The loss of statistical detail has a significant effect on the interactive data tables available to the public. For an explanation of the specific LAPI tables eliminated or modified by sequestration and reduced fiscal year 2013 funding levels, please see: www.bea.gov/_pdf/sequestration_fact_sheet_with_appendix.pdf.

For further information about the statistics, contact the Regional Income Division at 202–606–5360, or e-mail reis@bea.gov.

large as the metropolitan average. Finance accounted for 8.3 percent of earnings in Hammond, LA compared with 7.5 percent for the metropolitan average. And only Staunton, VA, had an information sector as large as the metropolitan average.⁷ Information accounted for 4.0 percent of earnings in Staunton, VA, compared with 3.4 percent for the metropolitan average.

On the other hand, nonmetropolitan areas tend to have relatively large farming, manufacturing, and government sectors. Farming in Grand Island, NE (13.2 percent of earnings) and Walla Walla, WA (11.1 percent) exceeded the 6.0 percent average for nonmetropolitan counties in 2012. Manufacturing in Midland, MI (26.6 percent), Albany, OR (23.9 percent), Gettysburg, PA (19.4 percent), Chambersburg, PA (18.5 percent), Staunton, VA (18.0 percent), Grand Island, NE (17.0 percent), and East Stroudsburg, PA (15.0 percent) exceeded the 14.9 percent average for nonmetropolitan counties. Government earnings exceeded the nonmetropolitan average of 21.6 percent in 10 of the new MSAs.

Comprehensive Revision

On November 21, 2013, BEA released the initial results of its latest comprehensive, or benchmark, revision of the local area personal income statistics; the results of the previous comprehensive revision were released in April 2010.⁸

The first installment of the 2013 revision, consists of new and revised statistics for the years covered by the North America Industry Classification System (NAICS); that is, from 2001 through 2012. Additional revisions, covering 1969–2000 for the years covered by the Standard Industrial Classification (SIC) are scheduled to be released in the spring of 2014.

Especially noteworthy in the 2013 comprehensive revision was the introduction of county-level data to improve the estimates of the Medicare benefits and Supplemental Nutritional Assistance Program benefits, two components of personal current transfer receipts.

The 2013 local area personal income comprehensive revision incorporated the changes that were adopted as part of the comprehensive revisions of the national income and product accounts (NIPAs), which was released in July 2013 and of the state personal income accounts which were released in September.⁹

7. The magnitude of the information industry in New Bern, NC, is unknown because of nondisclosure rules.

8. See David G. Lenze, "Comprehensive Revision of Local Area Personal Income," SURVEY 90 (May 2010): 22–30.

9. See Robert Kornfeld, "Initial Results of the 2013 Comprehensive Revision of the National Income and Product Accounts," SURVEY 93 (August 2013): 6–17 and David G. Lenze, "Regional Quarterly Report: Comprehensive Revision," SURVEY 93 (November 2013): 48–58.

The rest of this section will describe briefly the magnitude of the revisions and then describe the improvements in source data and statistical methods.

Magnitude of revisions

For many counties, the picture of personal income shown by the revised estimates is similar to the picture shown by the previous estimates (table D). More than 80 percent of the revisions in every year were less than 5 percent in absolute value. For example, in 2001, 41 percent of the revisions to county personal income were less than 1 percent and 57 percent were between 1 percent and 5 percent. Only 56 of the 3,110 counties were revised 5 percent or more. For the most recent years, there were more large revisions—143 counties were revised 10 percent or more in 2011—but this of-

ten reflects the replacement of preliminary estimates of certain components of personal income based on simple extrapolations with estimates based on recently released source data.

Medicare benefits

Previously, county estimates of Medicare benefits were extrapolated from a benchmark set of estimates based on reimbursements for hospital and medical expenses by county for 1995 from the Centers for Medicare and Medicaid Services (CMS). The 1995 estimates were extrapolated to the present by the change in Medicare enrollment (as of July of each year), also from CMS. As part of the comprehensive revision, the estimates of Medicare benefits are now based on fee-for-service per capita expenditure data by county from CMS. These data, which are available annually, are combined with annual Medicare enrollment by county to obtain an estimate of total Medicare benefits.

Table D. Revisions to County Personal Income, 2001–2011

Revision (absolute value)	Number of counties										
	2001	2002 ¹	2003	2004	2005	2006	2007	2008 ²	2009 ³	2010	2011
0.0–0.9 percent	1,289	1,361	1,158	894	794	741	937	1,346	635	883	662
1.0–4.9 percent	1,765	1,686	1,823	2,082	2,156	2,158	2,015	1,611	2,195	1,976	1,890
5.0–9.9 percent	50	55	121	127	147	191	140	126	245	218	418
10.0 percent or more	6	9	9	8	14	21	19	29	38	36	143
Total	3,110	3,111	3,111	3,111	3,111	3,111	3,111	3,112	3,113	3,113	3,113

1. For 2002 forward, the number of counties includes Broomfield County, CO.

2. For 2008 forward, the number of counties reflects the division of Skagway-Hoonah-Angoon Census Area into the Skagway Borough and the Hoonah-Angoon Census Area.

3. For 2009 forward, the number of counties reflects the division of the Wrangell-Petersburg Census Area into the Petersburg Census Area and the Wrangell City and Borough.

Supplemental Nutritional Assistance Program (SNAP) benefits

The basic local area data source for SNAP benefits are payments data from various state departments of social services. Formerly, when payments data were not available, the county distribution of benefits was held constant. As part of the comprehensive revision, the number of benefit recipients by county from the U.S. Census Bureau were used in the allocation of the state total when county payments data were unavailable.

Acknowledgments

The Regional Income Division of the Bureau of Economic Analysis (BEA), under the direction of Mauricio Ortiz, Chief, prepared the annual estimates of local area personal income. Joel D. Platt, Associate Director for Regional Economics, provided general guidance. The preparation of the revised estimates was a division-wide effort.

The Compensation Branch, under the supervision of John A. Rusinko, Chief, prepared the estimates of non-farm wages and salaries, supplements to wages and salaries, and personal current tax receipts. Major responsibilities were assigned to Peter Battikha, Michael L. Berry, Elizabeth P. Cologer, John D. Laffman, David G. Lenze, Paul K. Medzerian, and Joseph L. Stauffer. Contributing staff members were Susan P. Den Herder, Terence J. Fallon, Michael W. Jadoo, Russell C. Lusher, Nathaniel R. Milhous, Michael A. Reid, and Ross A. Stepp.

The Regional Income Branch prepared the estimates of nonfarm proprietors' income, property income, personal current transfer receipts, contributions for government

social insurance, and the adjustment for residence. Major responsibilities were assigned to Brian J. Maisano, Lisa C. Ninomiya, James P. Stehle, and Matthew A. von Kerczek. Contributing staff members were Suet M. Boudhraa, Andy K. Kim, Toan A. Ly, W. Timothy McKeel, Linda M. Morey, Anand N. Seeram, and Troy P. Watson.

The Farm Income and Employment Section, under the supervision of James M. Zavrel, Assistant to the Division Chief, prepared the estimates of farm wages and salaries, farm supplements to wages and salaries, and farm proprietors' income. Major responsibilities were assigned to Carrie L. Litkowski. Contributing staff members were Daniel R. Corrin and Michelle A. Harder.

The Data and Administrative Systems Group assembled the public use tabulations and data files and prepared the tables. Major responsibilities were assigned to Jeffrey L. Newman, Michael J. Paris, and Callan S. Swenson. Contributing staff members were Brooke N. Huotari, Monique B. Tyes, Melanie N. Vejdani, and Jonas D. Wilson.

Personal contributions for veterans life insurance

Formerly, state estimates of personal contributions for veterans life insurance (a component of contributions for government social insurance) were allocated to counties in proportion to the veteran population from the Census of Population. The veteran population for 2000 was held constant for all subsequent years. As part of the comprehensive revision, state estimates of contributions for veterans' life insurance were allocated to counties using the 2006–2010 American Community Survey "5-year" estimates of the veteran population, centered on 2008, the midpoint of the estimation interval. This allocator will be held constant for subsequent years until new, nonoverlapping 5-year estimates are available.

Home Affordable Mortgage Program principal reduction

This recently enacted federal program, a response to the subprime mortgage crisis, helps eligible home owners with loan modifications on their home mortgage debt. In lieu of direct data on benefits, the state estimates are allocated to counties on the basis of Federal Reserve Bank of New York data on the number of mortgage debtors, per debtor mortgage debt balance and percent of mortgage debt in delinquency.

Miscellaneous components of personal income

Formerly, the state estimates of a number of small components of personal income for which no county-level source data are available (for example, temporary disability benefits, a component of personal current transfer receipts) were allocated to counties on the basis of civilian population. As part of the comprehensive revision, these components are now allocated to counties using household population, that is, total population excluding persons living in group quarters such as prisons. State estimates of the recently enacted Temporary High Risk Health Insurance premium reduction are also allocated to counties on the basis of household population.

Residence adjustment

Estimates of wage and salary flows across the borders of the United States were substantially revised in 2011 as part of the annual revision of the international transactions accounts.¹⁰ Because of the magnitude of the revisions and the number of years affected, the introduction of these revised national estimates into the regional personal income accounts was delayed until

the comprehensive revision. These wage flows are part of the residence adjustment in the local area personal income accounts. They account for wage and salary flows between Canada, Mexico, and the United States. In addition, they account for the inflows of wages and salaries earned by U.S. residents employed by certain international organizations (such as the United Nations, the International Monetary Fund, and the World Bank) and by foreign embassies and consulates located within the geographic borders of the United States.

Changes in statistical methods

There were also several statistical improvements to the local area personal income accounts. Some of these improvements (such as for employer contributions for pensions and health insurance) involve state and national source data that are not available for individual counties. However, these improvements are implicitly incorporated into the county estimates, which must sum to the state and national estimates.

Source Data

The primary 2012 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, Medicare enrollment and fee-for-service expenditure data from the Centers for Medicare and Medicaid Services, and Medicaid payments from state departments of social services. In addition, tabulations of 2011 federal income tax returns from the Internal Revenue Service were used, primarily for dividends, interest, nonfarm proprietors' income, and the residence adjustment.¹¹

Other 2012 county-level data used by BEA to prepare estimates of various components of local area personal income include the following:

- Farm cash receipts, government payments, crop production, and livestock inventories by county for 2012 from the U.S. Department of Agriculture were used in the estimation of local area farm income.
- The number of full-time military and coast guard personnel by county for 2012 from the Departments of Defense and Homeland Security was used in the estimation of military earnings.
- County-level data for 2012 from the Federal Assistance Award Data System were used to prepare estimates of some components of personal current transfer receipts.
- Household population by county for 2012 from the Census Bureau was used to allocate state estimates of a few small components of personal income.

10. See Mai-Chi Hoang and Erin M. Whitaker "Annual Revision of the U.S. International Transactions Accounts," SURVEY 91 (July 2011): 58.

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

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.¹ 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.² 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.³ 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.⁴ 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 employment and wages that are not covered or 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.⁵

The Census Bureau released 2011 data for total employment and payrolls for counties on its Web site on April 2013. BLS released county data on total employment and average weekly pay for 2012 on its Web site on September 9, 2013. BEA released preliminary estimates for 2012 and revised estimates for 2010–2011 of total wage employment and total wage and salary disbursements for counties on its Web site on November 21, 2013.

5. For a detailed description of the sources and methods used to prepare the estimates, visit www.bea.gov/regional/methods.cfm.

National Totals of BEA County Estimates of Wages and Salaries and CBP Payrolls and QCEW Wages

[Billions of dollars]

	2010	2011	2012
Total CBP payrolls.....	4,941.0	5,164.9	n.a.
Plus: Differences in coverage:			
QCEW civilian government wages ¹	1,031.6	1,033.7	n.a.
Other differences, net ²	3.1	18.7	n.a.
Equals: Total QCEW wages.....	5,975.7	6,217.3	6,490.6
Plus: BEA adjustments:			
For unreported wages and unreported tips on employment tax returns.....	69.7	78.1	80.8
For wages and salaries not covered or not fully covered by unemployment insurance:			
Private.....	194.6	205.4	217.5
Government.....	131.6	130.7	131.0
Other BEA adjustments ³	-2.9	-3.2	-2.8
Equals: BEA estimates of wages and salaries ⁴	6,368.6	6,628.3	6,917.2

n.a. Not available

1. Adjusted to remove the wages of Indian tribal councils that are included in the Census Bureau's total payroll data.

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

3. Adjusted to remove wages and salaries of employees of U.S. companies stationed overseas and to reflect updates to QCEW data.

4. Consists of the earnings of persons who live in the United States and of foreign residents working in the United States. The regional total differs from the national estimate; see "Personal income in the NIPAs and State Personal Income," SURVEY OF CURRENT BUSINESS 93 (November 2013): 57.

NOTE: Details may not equal totals due to rounding.

Michael Jadoo

1. The QCEW data account for 93 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."