NEWS | DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

SOUTHEASTERN REGIONAL OFFICE
61 FORSYTH STREET, SW, ROOM 7T50
ATLANTA, GEORGIA 30303
TELEPHONE: 404-893-4222
Media Contact: Karen Ransom
(404) 893-4220
Internet address: www.bls.gov/ro4/home.htm

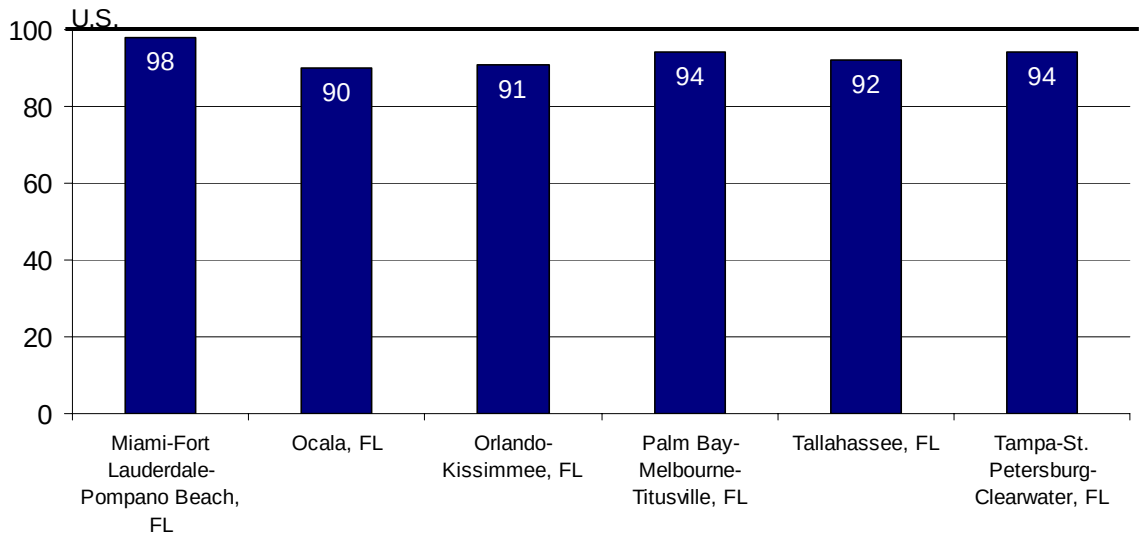
FOR RELEASE:
THURSDAY, SEPTEMBER 18, 2008

Occupational Pay Relatives for Metropolitan Areas in Florida, 2007

The pay relative averaged across all occupations in the Miami-Fort Lauderdale-Pompano Beach, Fla. Metropolitan Statistical Area was 98 in 2007, meaning that pay on average was 2 percent below the national level. In the Ocala area, the pay relative for all occupations was 90, meaning workers earned 10 percent less than the national average, according to the Bureau of Labor Statistics of the U.S. Department of Labor. Regional Commissioner Janet S. Rankin noted that the pay relatives for the six metropolitan areas surveyed in Florida were all significantly lower than the national average. (See table A and chart 1.)

BLS produces occupational pay relatives to facilitate comparisons of occupational pay between metropolitan areas and the United States as a whole. Using data from the National Compensation Survey (NCS) pay relatives—a means of assessing relative pay differences—have been prepared for 2007 for each of the 9 major occupational groups within 77 Metropolitan Statistical Areas, as well as averaged across all occupations for each area.

Chart A. Pay relatives for all occupations in metropolitan areas in Florida, area-to-nation comparisons, National Compensation Survey, July 2007



Area-to-Nation Comparisons

Workers in the Miami-Fort Lauderdale-Pompano Beach area had significantly lower pay levels than the national average in two of the nine occupational groups for which pay relatives were prepared (sales and related and production). In the seven remaining groups, workers registered pay relatives that were not significantly different from the national average.

In the Ocala area, pay relatives were significantly different from the national average in all nine occupational groupings. Workers in seven occupational groups had pay relatives that were significantly lower than the national average. In contrast, the remaining two occupational groups posted pay levels that were significantly higher than the nation as a whole (installation, maintenance, and repair and transportation and material moving).

Workers in the Orlando-Kissimmee area were paid significantly lower than the U.S. levels for three of the nine occupational groups (professional and related; office and administrative support; and construction and extraction). The pay relatives for the remaining six categories were not significantly different from the national average.

Workers in the Palm Bay-Melbourne-Titusville area had significantly lower pay levels than the national average in five of the nine occupational groups. Pay relatives for two occupational groups were significantly higher than the nation as a whole (production and transportation and material moving). In the two remaining occupational groups, workers registered pay relatives that were not significantly different from the nation.

In the Tallahassee area, pay relatives were significantly lower than the national average in eight of the nine occupational groupings. The service occupational group was the only group to register a pay relative not significantly different from the nation.

In the Tampa-St. Petersburg-Clearwater area, significantly lower pay relatives than the U.S. average were recorded in five occupational groups, but the remaining four groups were similar to the nation (sales and related; construction and extraction; installation, maintenance, and repair; and transportation and material moving).

Table A. Pay relatives for major occupational groups in metropolitan areas in Florida, area-to-nation comparisons, National Compensation Survey, July 2007

Metropolitan Area 1/	All occupations	Management, business, and financial	Professional and related	Service	Sales and related
United States	100	100	100	100	100
Miami-Fort Lauderdale-Pompano Beach, FL	98*	104	97	100	95*
Ocala, FL	90*	80*	83*	93*	93*
Orlando-Kissimmee, FL	91*	91	85*	94	101
Palm Bay-Melbourne-Titusville, FL	94*	85*	87*	101	96*
Tallahassee, FL	92*	83*	86*	96	91*
Tampa-St. Petersburg-Clearwater, FL	94*	90*	91*	94*	97

Metropolitan Area 1/	Office and administrative support	Construction and extraction	Installation, maintenance, and repair	Production	Transportation and material moving
United States	100	100	100	100	100
Miami-Fort Lauderdale-Pompano Beach, FL	97	93	96	95*	101
Ocala, FL	91*	81*	106*	92*	103*
Orlando-Kissimmee, FL	88*	90*	91	85	107
Palm Bay-Melbourne-Titusville, FL	88*	92*	103	107*	106*
Tallahassee, FL	91*	81*	88*	93*	93*
Tampa-St. Petersburg-Clearwater, FL	97*	98	94	93*	102

* The pay relative for this area is significantly different from the national average of all areas at the 10 percent level of significance. For additional details, see the Technical Note.
1/ A metropolitan area can be a Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) as defined by the Office of Management and Budget, December 2003.

Area-to-Area Comparisons

Area-to-area pay comparisons are useful in determining the differences in pay levels between two metropolitan areas. This type of comparison requires that the base area be changed from the nation to a specific metropolitan area. For example, when the Miami-Fort Lauderdale-Pompano Beach was the base area (pay relative = 100), average pay for all occupational groups in the Tampa-St. Petersburg-Clearwater area was 4 percent lower than in Miami; and it was 8 percent lower in Ocala. (See table 1.) When Tampa-St. Petersburg-Clearwater is shown as the base area (pay relative = 100) in Table 1, Ocala's average earnings were lower than Tampa-St. Petersburg-Clearwater's by 5 percent and Miami-Fort Lauderdale-Pompano Beach's average earnings were 4 percent more.

What is a pay relative?

A pay relative is a calculation of pay—wages, salaries, commissions, and production bonuses—for a given metropolitan area relative to the nation as a whole. The calculation controls for differences among areas in occupational composition, establishment and occupational characteristics, and the fact that data are collected for areas at different times during the year.

Metropolitan areas often differ greatly in the composition of establishments and occupations that are available to the local workforce. For example, in Brownsville-Harlingen, Texas, the ratio of workers in the typically high-paying management, business, and financial occupational group to the number of workers in all occupations is under 6 percent, whereas nationally this ratio is over 9 percent.[1] In addition to these factors, the NCS collects compensation data for metropolitan areas at different times during the year. Payroll reference dates differ between areas which makes direct comparisons between

[1] Data for this example are based on the May 2005 Occupational Employment and Wage Estimates, http://www.bls.gov/oes/current/oessrcma.htm.

areas difficult. The pay relative approach controls for these differences to isolate the geographic effect on wage determination. To illustrate the importance of controlling for these effects, consider the following example.

The average pay for construction and extraction workers in the New York-Newark-Bridgeport, N.Y.-N.J.-Conn.-Pa. area is $30.42 and the average pay for construction and extraction workers in the entire United States is $20.14.[2] A simple pay comparison can be calculated from the ratio of the two average pay levels, multiplied by 100 to express the comparison as a percentage. The pay comparison in the example is calculated as:

$$(\$30.42 \div \$20.14) \times 100 \cong 151$$

This comparison does not control for differences between the New York-Newark-Bridgeport, N.Y.-N.J.-Conn.-Pa. metropolitan area and the nation in the mix of occupations, industries, and other factors. A more accurate estimate of the geographic effect of wages can be obtained by taking these differences into account. Controlling for differences in occupational composition, establishment and occupational characteristics, and the payroll reference date relative to the nation as a whole, the pay relative for construction and extraction occupations in New York-Newark-Bridgeport, N.Y.-N.J.-Conn.-Pa. is equal to 133.

Using pay relative data

To assist data users with the use of these data, tests have been conducted to determine whether differences between each pay relative and the pay relative for the nation as a whole are statistically significant (that is, the pay for the given occupation in that area is too different from the national average to be accounted for by the randomness of the survey's sample). Similar tests are conducted for the area-to-area comparisons. In all tables, statistically significant pay relatives are denoted with an asterisk (*). More information on significance testing is available in the Technical Note.

Also because of sample variation from year to year, data users are cautioned about inferring that there have been actual changes in underlying economic conditions from changes in the estimated pay relatives between 2006 and 2007. This caution applies even more strongly to estimates by occupational group.

Technical Note

Because the NCS is a sample survey, data are subject to sampling error. For the data presented here, sampling errors are differences that occur between the pay relatives estimated from the sample and the true pay relatives derived from the population. It is important to assess whether differences between each pay relative and the pay relative for the nation as a whole is likely to be a result of sampling error or of true differences in pay levels. To perform this assessment, a test of statistical significance is conducted.

The test constructs a 90-percent confidence interval that assumes the given area's true pay relative is equal to the national average. The confidence interval is constructed so that there is a 90 percent probability the pay relative calculated from any one sample is contained within the confidence interval. If from a single sample a calculated pay relative falls within the confidence interval, then the pay relative is not statistically significant and the hypothesis that the true pay relative is equal to the national average is accepted. However, if the pay relative falls outside of the constructed confidence

[2] Average pay for professional workers in San Francisco and for the United States are based on wage estimates published in the San Francisco–Oakland–San Jose, CA National Compensation Survey, March 2005 and the National Compensation Survey: Occupational Wages in the United States, June 2005, http://www.bls.gov/ncs/ocs/compub.htm.

interval then the pay relative is statistically significant at the 10-percent level. The hypothesis that the given area's pay relative is equal to the pay relative for the nation is rejected and one can conclude with reasonable confidence that the true pay relative is different from the national average.

In addition to sampling error, pay relatives are subject to a variety of sources that can adversely influence the estimates. The NCS may be unable to obtain information for some establishments; there may be difficulties with survey definitions; respondents may be unable to provide correct information, or mistakes in recording or coding the data may occur. Non-sampling errors of these kinds were not specifically measured. However, they are expected to be minimal due to the extensive training of the field economists who gathered the survey data, computer edits of the data, and detailed data review.

Historical pay relative data are available for 1992-1996, 1998, 2002, and 2004-2006. There are several differences between the recent pay relatives and the pay relatives for earlier years, including different industry and occupation classification systems, varying methodology, and different survey designs. These differences limit comparability. The pay relatives for 2004 through 2007 were calculated using the same industry and occupation classification systems, methodology, and survey design. Nonetheless, comparisons between the estimates for the two years should be made only with a high degree of caution.

Pay relatives were estimated using a multivariate regression technique methodology to control for interarea differences. This technique controls for the following ten characteristics:

- Occupational type
- Industry type
- Work level
- Full-time / part-time status
- Time / incentive status
- Union / nonunion status
- Ownership type
- Profit / non-profit status
- Establishment employment
- Payroll reference date

Even accounting for the characteristics used in the current regression analysis, there is still significant wage variation across the areas. The variation is due to differences in wage determinants that were not included in the model. Examples of these determinants include price levels, environmental amenities such as a pleasant climate, and cultural amenities.

The pay relative regression methodology introduces another type of error. Regression models are subject to specification error. The significance test does not specifically measure specification error. However, care was taken to minimize this form of error by an extensive search across specifications for the model that performs best in terms of predictive accuracy.

For more details, see Maury B. Gittleman, "Pay Relatives for Metropolitan Areas in the U.S." *Monthly Labor Review*, March 2005, pp. 46-53, and Parastou Karen Shahpoori, "Pay Relatives for Major Metropolitan Areas," *Compensation and Working Conditions*, Spring 2003.

Table 1. Pay relatives for major occupational groups in metropolitan areas in Florida, area-to-area comparisons, National Compensation Survey, 2007

Base Area (Pay Relative = 100)	Metropolitan Area 1/	All occupations	Management, business, and financial	Professional and related	Service	Sales and related	Office and administrative support	Construction and extraction	Installation, maintenance, and repair	Production	Transportation and material moving
Miami-Fort Lauderdale-Pompano Beach, FL	Ocala	92*	77*	85*	93*	97	93*	87*	111*	97	103
	Orlando	94*	88*	87*	95	105	90*	97	96	90	107
	Palm Bay	96*	82*	89*	101	100	90*	99	108*	113*	105
	Tallahassee	94	80*	88*	96	96	93	87*	92*	98	92*
	Tampa	96*	87*	93*	94*	102	100	105	99	98	101
Ocala, FL	Miami	109*	130*	118*	108*	103	107*	115*	90*	103	97
	Orlando	102	115	103	102	108	97	112*	86*	93	104
	Palm Bay	105*	107	105	109*	103*	97	114*	97	116*	102
	Tallahassee	102	104	104	104	98	100	100	83*	101	90*
	Tampa	105*	113	110*	101	105	107*	121*	89*	101	98
Orlando-Kissimmee, FL	Miami	107*	113*	114*	106	95	111*	103	105	111	94
	Ocala	98	87	97	98	92	103	90*	116*	108	96
	Palm Bay	103	93	102	107	95	100	102	113	125*	99
	Tallahassee	101	91	101	102	91*	103	90*	96	109	87*
	Tampa	103	99	107*	99	97	110*	109	103	109	95
Palm Bay-Melbourne-Titusville, FL	Miami	104*	121*	112*	99	100	111*	101	93*	88*	95
	Ocala	95*	93	95	92*	97*	103	88*	103	86*	98
	Orlando	97	107	98	94	105	100	98	89	80*	101
	Tallahassee	98	97	99	95	96*	103	88*	85*	87*	88*
	Tampa	100	105	105	93*	102	110*	106	92	87*	96
Tallahassee, FL	Miami	106	125*	113*	104	104	107	115*	109*	102	108*
	Ocala	98	96	96	96	102	100	100	121*	99	111*
	Orlando	99	110	99	98	110*	97	111*	104	92	116*
	Palm Bay	102	103	101	105	105*	97	114*	117*	115*	114*
	Tampa	102	109*	106	98	106*	107	121*	108	100	109*
Tampa-St. Petersburg-Clearwater, FL	Miami	104*	115*	107*	106*	98	100	95	101	102	99
	Ocala	95*	89	91*	99	96	93*	83*	112*	99	102
	Orlando	97	101	94*	101	103	91*	92	97	92	106
	Palm Bay	100	95	96	107*	98	91*	94	109	115*	104
	Tallahassee	98	92*	94	102	94*	93	83*	93	100	91*

* The pay relative for this area is significantly different from the average in the metropolitan area at the 10 percent level of significance. For additional details, see the Technical Note at http://www.bls.gov/news.release/ncspay.tn.htm.

1/ A metropolitan area can be a Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) as defined by the Office of Management and Budget, December 2003.

Chart 1. Pay relatives for all occupations in metropolitan areas in Florida, area-to-area comparisons, National Compensation Survey, July 2007