ECONOMIC ANALYSIS PROGRAM

BEBR

2012
Florida Price Level Index

91   93   95   97   99   100   103

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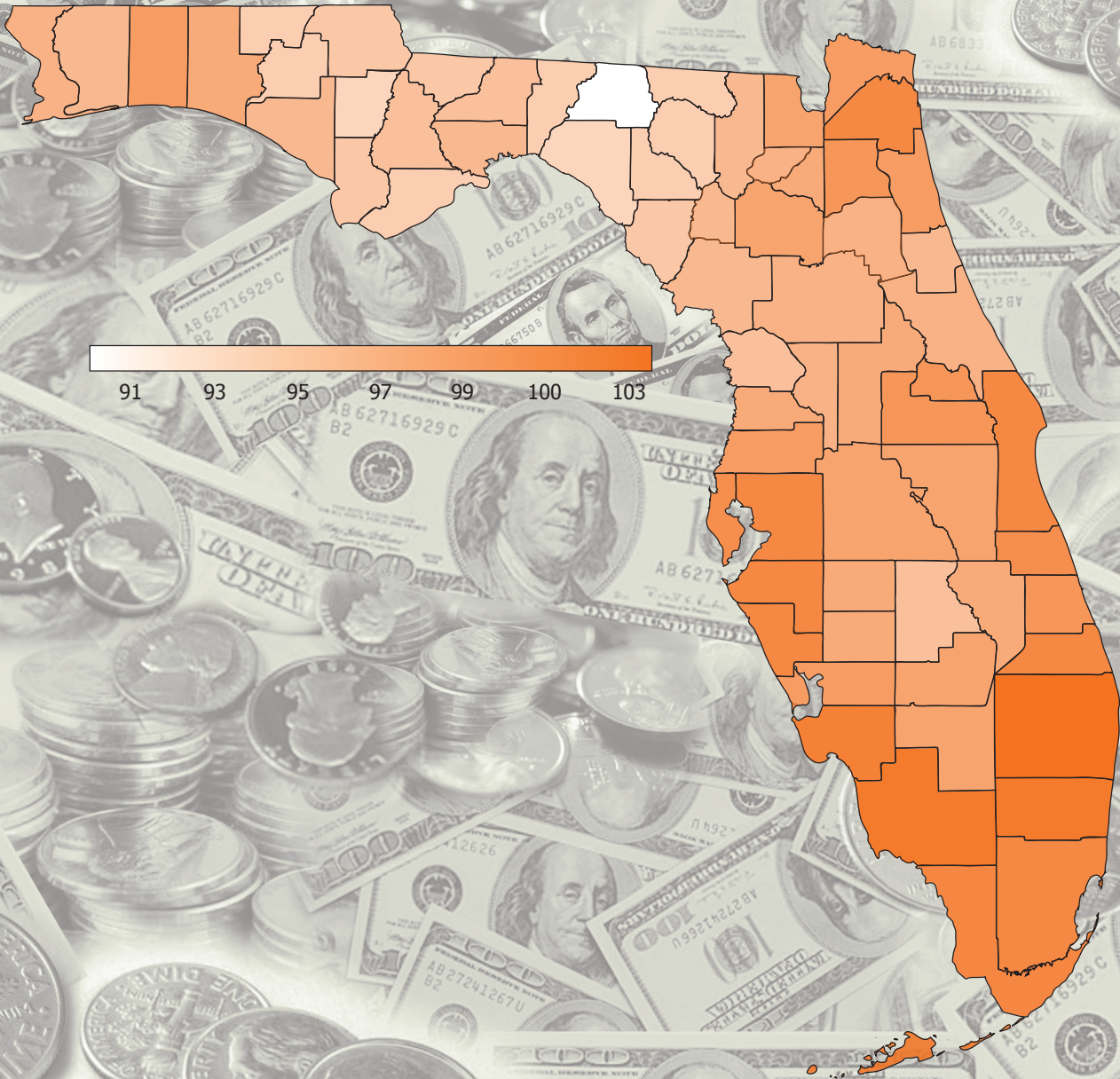
University of Florida
Bureau of Economic and Business Research

Economic Analysis Program
James F. Dewey, Director
David A. Denslow, Senior Research Economist
Eve Irwin, Research Coordinator

Phoebe Wilson, Publications Specialist

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http://www.bebr.ufl.edu or http://www.fldoe.org/fefp/

2012 Florida Price Level Index

The Florida Price Level Index (FPLI) was established by the Legislature as the basis for the District Cost Differential (DCD) in the Florida Education Finance Program. In this role, the FPLI is used to represent the costs of hiring equally qualified personnel across school districts. Since 1995, and at the request of the Legislature, the Bureau of Economic and Business Research (BEBR) at the University of Florida has performed an ongoing review of the methodology of the FPLI and has made appropriate recommendations to improve it. Since 2000, BEBR has also been responsible for calculating the FPLI. To denote its intended use as an adjustment factor for school personnel costs, the index presented in this report is referred to as the FPLI for School Personnel, or FPLI_SP. Note that this is a cross-sectional measure that compares the relative wage levels among Florida's 67 counties and is not designed to measure inflation from one year to the next.

Results

The table on this page presents the index for 2012, which is constructed so that the population-weighted average is 100. The median Floridian, ranked by county FPLI_SP, lives in Sarasota County, with an index value of 101.22. That is, less than half of the state's residents live in counties with index values that are greater than 101.22, less than half in counties with index values that are less than 101.22, and the rest live in Sarasota County. The 10 counties with index values over 101.22 together account for 48.6 percent of the state's population and the 56 counties with index values below 101.22 together account for 49.4 percent of the state's population. The map on the cover

displays the distribution of the FPLI_SP across the state. Index values tend to be highest in the southern portion of the state. When population in and around urban areas reaches the high levels seen in south Florida, workers encounter high house prices, long commutes, or both, for which they must be compensated in the form of higher wages. Of course, factors other than housing prices affect wages in a market economy, so relative wages do not track relative housing prices exactly.

About the FPLI

Use of the FPLI in the DCD assumes districts must offer salaries that will support similar standards of living to attract equally qualified personnel. It further assumes that the FPLI measures the relative costs of maintaining a given standard of living across Florida's counties—that is, the FPLI is used as a Cost of Living Index (COLI) in the DCD.

The Consumer Price Index (CPI), constructed by the U.S. Bureau of Labor Statistics (BLS) using the concept of a COLI as a framework, is perhaps the best known example of a price index.[1] Indeed, use of the FPLI to index costs from one Florida county to the next parallels the use of the CPI by the Federal Government to index Social Security funds from one year to the next. The CPI calculation, however, is not static—the BLS continually evaluates and improves its methods. Numerous adjustments are made to measured price data to make the CPI more appropriate in its intended use as a COLI for comparisons across time

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[1]Question 4 under "Frequently Asked Questions" at the CPI homepage, http://www.bls.gov/cpi/home.htm, discusses this point. Chapter 17 of the *BLS Handbook of Methods*, which may be accessed at the same web site, contains more detail.

Florida Price Level Index for School Personnel			
County	2012	2011	2010
Alachua	97.81	97.53	97.33
Baker	97.06	97.23	97.16
Bay	94.27	94.81	95.57
Bradford	96.50	96.66	96.55
Brevard	101.09	101.18	101.02
Broward	103.05	103.01	102.76
Calhoun	90.12	90.63	91.36
Charlotte	98.28	98.78	98.72
Citrus	93.66	94.04	94.10
Clay	99.11	99.28	99.17
Collier	103.92	101.91	102.46
Columbia	94.96	95.48	96.07
Miami-Dade	101.34	101.73	101.53
DeSoto	96.72	97.14	97.08
Dixie	92.44	92.17	92.36
Duval	101.47	101.64	101.52
Escambia	95.32	95.36	95.63
Flagler	94.04	94.94	96.16
Franklin	91.36	91.92	91.84
Gadsden	92.94	93.74	94.05
Gilchrist	94.58	94.30	95.36
Glades	97.59	96.18	96.12
Gulf	92.06	92.08	92.06
Hamilton	91.77	91.31	91.73
Hardee	96.05	96.21	95.70
Hendry	97.61	97.11	97.05
Hernando	96.72	97.00	96.90
Highlands	93.62	94.09	94.04
Hillsborough	101.37	101.65	101.55
Holmes	91.71	91.04	91.04
Indian River	100.15	98.67	98.98
Jackson	92.27	92.39	92.26
Jefferson	91.15	91.38	92.50
Lafayette	91.01	90.75	90.96
Lake	96.43	96.95	97.49
Lee	102.15	102.67	102.61
Leon	93.87	94.08	94.39
Levy	94.42	94.15	93.96
Liberty	93.68	90.86	91.29
Madison	89.82	90.13	90.82
Manatee	101.85	102.02	101.48
Marion	95.51	95.83	96.28
Martin	101.76	99.30	99.16
Monroe	102.96	104.03	103.16
Nassau	98.71	98.88	98.76
Okaloosa	98.20	97.48	97.49
Okeechobee	96.90	95.55	96.01
Orange	99.88	100.42	100.98
Osceola	97.95	98.10	98.64
Palm Beach	104.90	103.78	103.55
Pasco	98.65	98.93	98.84
Pinellas	100.11	99.89	99.60
Polk	97.87	98.48	98.98
Putnam	95.33	95.50	95.39
St. Johns	98.05	98.23	98.11
St. Lucie	99.73	98.15	99.06
Santa Rosa	94.68	93.98	93.99
Sarasota	101.22	99.66	99.49
Seminole	99.33	99.35	99.64
Sumter	95.65	95.49	96.39
Suwannee	91.65	93.78	93.32
Taylor	90.86	92.32	92.85
Union	95.42	95.58	95.47
Volusia	95.78	96.19	96.13
Wakulla	94.74	92.94	91.96
Walton	96.70	97.33	97.46
Washington	91.24	91.10	91.83

periods at a given location.[2] BEBR's work on the FPLI since 1995 has been aimed at making it more accurate and appropriate in its use as a COLI for comparisons across locations at a given point in time.

At a given location, factors other than the monetary costs of goods and services purchased in the marketplace that significantly affect the compensation needed to maintain a given standard of living are nearly the same from one year to the next. Variations in climate from year to year, for example, can usually be ignored when estimating changes in the cost of living. Across locations, however, such factors as climate, cultural and recreational opportunities, and services and taxes vary widely. In turn, variations in these factors affect workers' standards of living and thus the ability of employers—including school districts—to hire personnel. Thus, a COLI intended to make comparisons across space must allow for variation in such factors.[3] Beginning with the 2003 FPLI, BEBR has used data on private market wages to construct an index of the relative compensation required to attract equally qualified workers across Florida's school districts. Referred to as the FPLI_SP, this index is more appropriate for comparing the costs of hiring equally qualified personnel for identical jobs across locations at a given point in time.[4]

Across areas, other things being equal, places that are more productive, and thus more attractive to firms, will have higher wages and prices, while places that are more pleasant in which to live, and thus more attractive to workers, will have lower wages and higher prices. Consequently, a simple weighted average of the relative prices of purchased goods and services is inferior to the FPLI_SP as a COLI in a spatial context. In areas that are otherwise less attractive to live in, relative wages will exceed relative prices, while in areas that are otherwise more attractive to live in, relative prices will exceed relative wages.

Within areas, firms that must locate closer to the urban core must pay higher wages than firms free to locate near suburban or outlying areas. That is because those who work at firms located in the urban core must either pay higher housing costs or endure longer commutes. Further, the larger the difference between real estate costs in the urban core and in suburban and outlying areas, the larger this pay difference will be. Therefore, types of jobs that tend to be concentrated farther from the urban core will show less difference in average wages between cities with high housing costs and cities with low housing costs than types of jobs that tend to be concentrated nearer the urban core. Therefore, BEBR controls for occupational centrality in constructing the FPLI. Similarly, productivity in some occupations may be more sensitive than average to city size or city income, and BEBR also controls for these affects.

In calculating the FPLI_SP, BEBR first uses statistical techniques to estimate a raw index of wages for comparable workers employed in jobs of comparable centralization of employment across counties. Wage data for this calculation consist of average wages for over 700 occupations across Florida's 67 counties. Although data for each specific occupation are not available for all 67 counties, observations for a great many individual occupations are available in even the smallest counties. The Labor Market Information division of Florida's Department of Economic Opportunity collects these data as part of the U.S. Bureau of Labor Statistics' Occupational Employment Statistics (OES) Survey. Measures of occupational centralization are calculated from the US Census Public Use Microdata Sample and are used to capture differing adjustments across occupations with differing propensities to locate near the urban core.

Once the raw index has been calculated, additional techniques are then used to smooth statistical variation. First, BEBR generates predicted values for each county based on the correlation between the raw index and other observable characteristics that affect or are correlated with labor market outcomes, including population and the prices of housing and goods and services consumed by workers. BEBR then calculates a weighted average of this predicted index and the raw index for each county, placing more weight on the raw index the higher the precision with which it is estimated and more weight on the predicted value the higher the precision with which it is estimated. Second, wages in nearby counties cannot differ too much from one another without inducing workers to commute from the low wage county to the high wage county. Therefore BEBR applies geographic smoothing to ensure differences in the index estimates for nearby counties are not inconsistent with their geographic proximity.

Summary

This report presented the 2012 FPLI_SP and the methodology used in its calculation. The index uses extensive data on wages, occupational location, and the prices of goods and services to estimate the relative wage level needed to maintain a given standard of living for occupations comparable to school personnel across Florida's counties. Although many things affect counties' FPLI_SP position, counties that are urban tend to have higher values.

[2] Links to documentation for many hedonic adjustments may be found at http://www.bls.gov/cpi/home.htm.
[3] In terms of the CPI methodology adapted to a spatial context, this would be analogous to a full hedonic adjustment to the price of land across space to reflect all factors affecting standards of living that are determined with choice of residential location.
[4] In the 2003 FPLI Report, what is now designated as the FPLI_SP was named the Low Centrality FPLI_A.